ADDIS ABABA UNIVERSITY

COLLEGE OF DEVELOPMENT STUDIES

CENTER FOR ENVIRONMENT AND SUSTAINABLE DEVELOPMENT

CONTRIBUTION OF URBAN PRODUCTIVE SAFETY NET PROGRAM TO HOUSEHOLDS' LIVELIHOOD IMPROVEMENT AND ENVIRONMENTAL PROTECTION IN ADDIS ABABA: CASE STUDY OF ADDIS KETEMA AND ARADA SUB CITIES

BY

MISGANA ABATE

A THESIS SUBMITTED TO

CENTER FOR ENVIRONMENT AND SUSTAINABLE DEVELOPMENT

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BY
MISGANA ABATE

ADVISOR: DR. TAMIRAT TEFERA (PH.D.)

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Addis Ababa University

School of Graduate Studies

This is to certify that the thesis entitled "Contribution of Urban Productive Safety Net Program to Households' Livelihood Improvement and Environmental Protection in Addis Ababa: Case Study of Addis Ketema and Arada Sub Cities" is submitted in partial fulfillment of the requirement for the degree of master of art in Environment and Sustainable Development from Addis Ababa University, and is a record of original research carried out by Misgana Abate Halallo, Id. N^{o} GSR/3339/09, under my supervision, and no part of the thesis has been submitted for any other Degree or Diploma. The assistance and help received during the courses of this investigation have been duly acknowledged. Therefore, I recommend it to be accepted as fulfilling the thesis requirement.

Major Advisor _____ Signature _____ Date _____

Addis Ababa University

School of Graduate Studies

This is to certify that the thesis prepared by Misgana Abate, entitled "Contribution of Urban Productive Safety Net Program to Households' Livelihood Improvement and Environmental Protection in Addis Ababa: Case Study of Addis Ketema and Arada Sub Cities" and submitted in partial fulfillment of the requirement for the degree of master of art in Environment and Development complies with the regulations of the University and meets the accepted standards with respect to originality and quality.

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Chair of Department or Graduate Program Coordinator

Abstract

Poverty had been considered as a problem of mainly rural areas of Ethiopia. However, it has become a phenomenon in the urban areas, too. This thesis has studied the contribution of Urban Productive Safety Net Program (UPSNP) to improvement of livelihoods of beneficiary households and the environmental protection in Addis Ketema and Arada sub cities of Addis Ababa. Cross-sectional research design and mixed approach are employed to gather data. Semi-structured interviews, focus group discussions, observation and household survey are deployed to collect data. 329 household samples are drawn randomly from woredas of the sub cities. Thematic, descriptive statistics and binary logit model are used for analyzing the data. Though it is difficult to address the poor households from poverty and food insecurity within a short period, UPSNP has contributed to the improvement of the income and food condition of the beneficiary households. 60.5% of the beneficiaries are still under poverty having <16.34 ETB per adult equivalent per day. Though the cash transfer is inadequate to meet the income need of households, the program has provided a stable and additional income source for the households who are mostly engaged in jobs with low and varying earnings. Moreover, the cash transfer has become more important for those households that have a few or no income earning members. Likewise, the regression result also indicates that the cash transfer has significant and positive effect on the income-poverty status of the households. The other factors associated were household size, economically inactive members and income from other livelihoods. The cash transfer has also improved the food security of households. It has contributed in increasing the number of meals taken per day and the food access through purchasing. 86% of the respondents are food insecure, mainly (76.9%) being moderately food insecure. The reason of remaining in food insecurity for most beneficiaries could be due to their short (one year) duration in the program. Besides, the beneficiaries' low and varying income earnings as well as inflation have negatively affected the households' food access and stability. As per the regression result, UPSNP's cash transfer has positive and significant relationship with food access. Other variables like sex, marital status, variation of income, household size and income earned from other means of living have significant effect on food access. UPSNP has involved in environmental cleaning, urban greenery, watershed management and urban agriculture activities enhancing the quality, safety and esthetics of the environment. The study recommends the adjustment of the amount of cash transfer for the beneficiaries based on the current living condition as well as improving the working conditions of the public workers.

Key words: UPSNP, Food In/Security/Food Access, Income-Poverty, Environment, Perception

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Misgana Abate

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List of Acronyms and Abbreviations

AE	Adult Equivalent
CLRM	Classical Linear Regression Model
CSA	Central Statistical Agency
DFID	Department for International Development
DS	Direct Support
EDHS	Ethiopia Demographic and Health Survey
EDRI	Ethiopia Development Research Institute
ETB	Ethiopian Birr
FANTA	Food and Nutrition Technical Assistance
FAO	Food and Agriculture Organization
FDRE	Federal Democratic Republic of Ethiopia
FGDs	Focus Group Discussions
GDP	Gross Domestic Product
HFIAP	Household Food Insecurity Access Prevalence
HFIAS	Household Food Insecurity Access Scale
HH	Household
HHH	Household Head
HICE	Household Income and Consumption Expenditure
ILO	International Labor Organization
MoFED	Ministry of Finance and Economic Development
MoUDH	Ministry of Urban Development and Housings
No	Number
NPL	National Poverty Line
NSPP	National Social Protection Policy
OECD	Organization for Economic Co-operation and Development
PPP	Purchasing Power Parity
PSNP	Productive Safety Net Program
PW	Public Work
SD	Standard Deviation

SLF	Sustainable Livelihood Framework
SPSS	Statistical Packages for Social Science
SSN	Social Safety Net
UJCFSA	Urban Job Creation and Food Security Agency
UN	United Nations
UPSNP	Urban Productive Safety Net Program
UPSNP-PAD	Urban Productive Safety Net Program - Project Appraisal Document
UPSNP-PIM	Urban Productive Safety Net Program - Program Implementation Manual
USAID	United States Agency for International Development
USD	United States Dollar
VIF	Variance Inflation Factor
WB	World Bank
WFP	World Food Program
WWII	World War II

Glossary for Local Terms

Debal– a person who is living with other person by sharing payment of house rent

Enset- a large non-woody plant which is in the banana family having huge paddle-shaped leaves with tightly overlapping leaf bases

Iddir- an association established among neighbors or workers to raise funds that will be used during emergencies, such as death within these groups and their families.

Iquib- an association established by a small group of people in order to provide substantial rotating funding for members in order to improve their lives and living conditions

Kabbo- a 1 to 30 team leader in the public work of Urban Productive Safety Net Program

Kebele house - government rental houses with a monthly rental below 100 ETB

Ketena- a sub division under woreda, and is governed by woreda council

Machid- a hand-held reaping-hook with curved blades used for cutting grasses, harvesting grain crops

Ternafi- a person who supervises and communicates the 1 to 30 team leaders (*kabboes*)

Woreda- a sub division under sub city which is the smallest administrative unit in Ethiopia

Ye' habesha gomen - a collard green having dark green and broad leaves which are eaten either being boiled or directly cooked

CHAPTER ONE: INTRODUCTION

1.1 Background of the Study

Safety net is one component of social protection with an aim to address poverty and vulnerability to poverty. Safety nets are programmes designed to provide people who are vulnerable to poverty, living in poverty or who are facing food insecurity and other forms of deprivation with predictable and reliable support through food, cash or vouchers (WFP, 2017). According to Subbarao, *et al*. (1996) and Devereux (2002) as cited in Khan, *et al*. (2013), safety net programs can be provided conditionally or unconditionally in-kind, or through cash or vouchers by the public sector (state, donors, NGOs) or by private actors (individual or group charity, informal household arrangements etc.).

Social safety nets had their earlier roots in Latin America (1980s) and Eastern Europe (1990s) which led the International Monetary Fund (IMF) and the World Bank (WB) to highlight the importance of social safety net as means to address vulnerable groups. According to Rahman, *et al*. (2011), the first cash transfer program to the poor started in 1994 during the Mexican crisis (Tequila Crisis), and the first conditional cash transfer program in 1995 in Brazil, which has now been expanded in many countries. There has been an increase in interest and growing in number of countries introducing safety net programs. Social safety nets are currently available to individuals and families in 131 developing and emerging countries (Banerji & Gentilini, 2013).

Ethiopia is taken as economically fast growing Sub-Saharan country; in spite of this, the country is still immersed in widespread poverty though there is record of reducing extreme poverty in recent years. Despite the substantial declining of poverty over the past five years, poverty remains high at 29.6 percent (MoFED, 2012) and to 23.5 % in 2015[1]. The MoFED report states that, according to the 2010/11 HICES, the proportion of poor people (poverty head count index) in the country is estimated to be 29.6% in 2010/11; while the proportion of the population below the poverty line stood at 30.4% in rural areas, it is estimated to be 25.7% in urban areas.

According to the 2016 report of Ministry of Urban Development and Housing (MoUDH), though there is low level of urbanization, there is high rate of urban growth in the big and small cities of

1 https://knoema.com/atlas/Ethiopia/Poverty-rate-at-national-poverty-line

Ethiopia. Urbanization is considered as an essential element to make Ethiopia a middle income status by 2025. Following the rapid urbanization, poverty has become intensified in urban centers. 11 percent of Ethiopia's poor lived in cities in 2000, but this rose to 14 percent in 2011. However, poverty rates in the two largest cities of Addis Ababa and Dire Dawa are much higher than this trend would predict (World Bank, 2015).

One of the problems to be mentioned in Ethiopia is food insecurity. There are 8.3 million chronically food insecure households in 319 *woredas* of Ethiopia (MoLSA, 2012). Significant number of the urban poor is unemployed and underemployed facing food insecurity. Since 2005, the Productive Safety Net Program (PSNP) has been serving as a tool to provide social protection to the poor and chronically food insecure rural households. It had substituted emergency food aid with a more predictable safety net to address chronic and seasonal hunger. As stated in USAID (2015), the program is currently implemented in eight regions of Ethiopia: Afar, Amhara, Dire Dawa, Harari, Oromia, Somali, Southern Nations, Nationalities and Peoples Region (SNNPR), and Tigray, and covers a caseload of approximately 7.9 million individuals (expected to reach 10 million in the coming years as the recurrent transitory caseload is absorbed into the PSNP).The program has reduced food gap and improved diet diversity at household level, enhanced access to social services and stabilized assets.

In order to reach the poorest part of urban population, the Ethiopian government developed a five-year phase (2016/2017-2020/21) Urban Productive Safety Net Programme (UPSNP) in urban areas to address poverty and vulnerability of urban poor living below the poverty line. As a pilot project, it has started its implementation in 11 major cities to address 604,000 beneficiaries in the first phase (2016-2020). The 11 major cities are the two City Administrations (Addis Ababa and Dire Dawa) and one major city/town from the nine regional states (Adama, Assaita, Asosa, Dessie, Gambella, Hawassa, Harar, Jigjiga, and Mekele) in collaboration with other stakeholders and the World Bank. The long-term program framework has an objective of reaching 4.7 million poor in 972 urban areas (MoUDH PIM, 2016).

Thus, the main objective of this study is to assess the improvements that UPSNP has brought on livelihood of the urban poor households of Addis Ababa that are under the support of the program. In addition, the research has taken into study the physical environment improvement following the program's public works. These include urban greenery development, watershed

management activities, solid waste management activities, environmental cleaning activities, and infrastructure development. In the study, the environment is taken in the context of sanitation, greenery and social infrastructure (such as latrines, water, drainages, road, health and educational centers). Hence, the contribution of the program to Addis Ababa city's environment is included in the study.

1.2 Statement of the Problem

Ethiopia is mentioned as the fast urbanizing Sub-Saharan country, and it is also predicted to have an increasing urban population in the future. According to MOFED (2006), the rate of urbanization had increased at 4.4% rate due to high rate of rural to urban migration and increase in the number of urban centers. It is predicted that the urban population grow by 3.98% and 42.1% of the total population to be in urban areas by 2050 (MOFED, 2006).

Addis Ababa, an urban center and capital of Ethiopia, has been attaining an economic development which consequently has led to huge inflow from rural centers. According to Population Census Commission (2008) as cited by Leulsegged (2011), even though there are more than 900 urban centers in Ethiopia, Addis Ababa consisted of about 23% of the total urban population in the country. It is with a population of over 3 million, which is 25% of the country's urban population (World Bank Group, 2015).

According to Anderson, *et al*. (2015), the government of Ethiopia had main objective of reducing poverty focusing on rural population. Through the deployment of poverty reduction programs, there have been successful stories in addressing poverty of the rural population. Since 2005, the PSNP has been transferring cash and/or food to smooth household consumption and protect households' assets and destitution due to recurrent droughts.

According to UN Habitat (2007) as cited in Ephrem (2015), some authors claim that 70% to 80% of population living in Addis Ababa was living at or below subsistence level. Though Addis Ababa is attaining fast economic growth, the number of poor residents is increasing simultaneously, which indicates the necessity of poverty reduction intervention in this city. Slum and informal settlements brought a great deal of challenge to the city, which is considered to be the core problem that affects the livelihood and the state of the urban environment (Dubbale, *et al*., 2010).

Until recent times, less intervention was made on the urban population which is suffering from intensifying unemployment, poverty and housing shortage. Hence, the FDRE government has designed program that could improve the conditions of urban centers. More specifically, the recently declared FDRE's Urban Productive Safety Net Program (UPSNP) document clearly stated "Focus on people living below the poverty line" and "livelihood support aims to diversify and improve household level income in the long run" as core principles (MOUDH, 2015).

The program has come with an objective of improving the livelihood conditions of the urban poor. It is launched on September 2016 starting its implementation in the major cities/towns of the regional states, as well as in Addis Ababa and Dire Dawa. 604,000 urban poor in these cities are targeted to get support. Out of this, three-fourth of the beneficiaries are planned to be from Addis Ababa taking into account the large size and the relatively high poverty rate records of the city. Addis Ababa is facing extensive urban poverty, joblessness, inadequate housing, severe overcrowding and congestion and underdeveloped infrastructure. Moreover, mounting social ills such as begging, homelessness and youth delinquency are grim realities of life in the city (Dubbale, *et al*., 2010).

Studies are made concerning the Productive Safety Net Program in the rural areas of Ethiopia. To mention some, Tamene (2017) studied the contribution of Productive Safety Net Program on Household Food Security in Tach Gayint *Woreda*, South Gonder. Hermela (2016) had made study on the role of PSNP on household resilience in Dodota District of Oromiya region. Tesfaye (2015) studied the effect of Ethiopia's PSNP on livestock holdings of rural households. Studies on livelihood, poverty, food security and environment in the urban areas of Ethiopia had been undertaken. For instance, Tesfaye (2016) studied Urban HIV and AIDS Nutrition and Food Security Project participants in Dessie, Yibrah Hagos (2014) studied on economic impact of PSNP on poverty in Tigrai National Regional State. Leulsegged, *et al*. (2011) examined the Impact of Urbanization of Addis Abeba City on Peri-Urban Environment and Livelihoods. Degefa (2008) studied the urban poor food security situation of Berta Gibi and Gemachu safar in Addis Ababa city. Ethiopian Development Research Institute (EDRI) (2017) had generated baseline and first year data points that would aid the impact evaluation of different components of the UPSNP.

The researchers are focusing on the areas of the situation of poverty and food security in urban areas of the country, effects of urbanization on the environment, rural PSNP and its impact on food security, asset protection (livestock holding), or resilience. Since the UPSNP is a recently implemented program, there is limitation in studies undertaken on it. Therefore the study fills the gaps on this area of study: Urban Productive Safety Net Program as well as in relation to beneficiaries' livelihood improvement and environmental protection in Addis Ababa, specifically Addis Ketema and Arada sub cities. Therefore, analyzing this area of study is a rational move since poverty in urban center is becoming a wide spread phenomenon. The question of: "What is the contribution of UPSNP to livelihood's improvement?" and "What is the contribution of UPSNP to environmental protection?" are studied in the thesis.

1.3 Objectives of the Study

1.3.1. General Objective

The general objective of the study is to study the contribution of Urban Productive Safety Net Program to households' livelihood improvement and environmental protection in *woreda* 5 of Addis Ketema and *woreda* 1 of Arada sub cities, Addis Ababa.

1.3.2. Specific Objectives

The study has the following specific objectives to attain.

1) To examine the contribution of UPSNP to improvement of food access of beneficiary households
2) To analyze the contribution of the UPSNP to improvement of beneficiary households' income-poverty status
3) To investigate the role of UPSNP on environmental protection (sanitation, greenery and social infrastructure)
4) To assess the perception of beneficiaries towards the program's delivery of support and implementation

1.4 Scope of the Study

Having objective of studying the contribution of UPSNP to households' livelihood and environment, the spatial scope of the study is delimited to the boundary of the Addis Ababa city, *woreda* 1 of Arada sub city and *woreda* 5 of Addis Ketema sub city. Besides, the study covers the time period between 2017 and 2018. Thus, the cross-sectional data variables that can affect the contribution of the program to households' livelihood improvement within this one year are studied. The unit of observation of the study is the first round beneficiary households residing in *woreda* 1 of Arada sub city and *woreda* 5 of Addis Ketema sub city. The thematic scope of the study is beneficiary households' food access status, income-poverty status, environmental improvement and perception of the beneficiaries towards the program.

The UPSNP tries to address food insecurity through conditional or unconditional cash transfers as a means to access food. Hence, the study emphasis on food access status of the households to explain the food security condition of beneficiaries after receiving cash transfer. The income condition of the households after receiving cash transfer from UPSNP is assessed to explain their income-poverty status. The environment enhancement activities (physical environment sanitation and greenery and social infrastructure development activities) of the program carried out through the public works are studied to understand the role of the program in protecting the environment of the study sites. Finally, the beneficiaries' perception towards the program is assessed to understand the beneficiaries' satisfaction level regarding the delivery of support and implementation of the program from their own point of view.

1.5 Significance of the Study

The study offers important information regarding the contribution of Urban Productive Safety Net Program to household's livelihood and environment. In addition, it provides a quantified assessment of the contribution of UPSNP to household's food security/ access and income-poverty status improvement. The results from this analysis can give valuable insights into the prospects of extending the program to other non-beneficiary *woredas* in Addis Ababa and other urban areas. Besides, the paper can be a useful reference material for academic researchers who would like to do a more in-depth analysis of the program.

1.6 Limitations of the Study

In the process of conducting this research, the researcher encountered challenges such as time and budget constraints. Since the Urban productive safety net program is a recently implemented program, the researcher had faced challenge in finding related studies done on the study topic. The other limitation of the study was the challenge in collecting the actual amount of households' monthly income due to variation in the amount of monthly income obtained through casual wage and petty trade earning. Estimation was used to calculate the households' monthly income in order to minimize the effect of the challenge.

1.7 Ethical Consideration

The study had taken into consideration the ethics of research. Before proceeding to conduct the study, official letter from the university was taken to be provided to the concerned bodies to receive permission. While contacting respondents, the purpose of the study was explained at the beginning of conversation. Their full consent was first checked before starting interviews or discussions. Besides, they were informed that their information would be kept confidential, and would be used for the study purpose. The study is committed to present response as it is without misinterpretation or exaggeration.

1.8 Organization of the Thesis

The thesis is organized into five parts. Part one is the Introduction section which consists of the study's background, statement of the problem, objectives, significance, scope, limitations and ethical consideration of the study. The second section is the Literature Review where related concepts and literatures related with the study are reviewed. Theoretical, empirical and analytical frameworks of the study are also incorporated in this section. The third chapter of the thesis describes the Research Methodology of the study. It includes description of the study area, research design, sampling technique, sample size, source and type of data, data collection and data analysis methods. The fourth chapter presents the Results and the Discussion; whereas, the last chapter forwards Conclusions and Recommendations drawn from the findings of the study.

CHAPTER TWO: LITERATURE REVIEWS

2.1.Definition of Terms and Concepts

2.1.1. Poverty

2.1.1.1.Definition of Poverty

Scholars debate how to measure and define poverty. But poverty's definition typically falls into one of three categories. Poverty is most frequently defined in objective, absolute term that is, individuals are in poverty when they have less than a defined amount. Poverty can also be defined in objective, relative terms that is, an individual has less compared with what others have. Third, poverty can be subjective that is, a combination of absolute and relative measures. For example, individuals are in poverty if they feel they do not have enough money to make ends meet (Goedhart, *et al*., 1977 as cited in De Vita and Farrell, 2014).

Vandenberg (2006) as cited in Tesfaye (2016) defined poverty as a condition in which people lack satisfactory material resources (food, shelter, clothing, housing); are unable to access basic services (health, education, water, sanitation); and are constrained in their ability to exercise rights, share power and lend their voices to the institutions and processes which affect the social, economic and political environments in which they live and work.

With a slight modification, MOFED (2013) defined poverty as a deprivation of well-being. Lack of income and assets to attain basic necessities, lack of access to education and other basic services, and vulnerability to adverse shock are the main causes of poverty. Therefore poverty is characterized by the inability of individuals and households to acquire sufficient resources to satisfy their basic needs.

2.1.1.2.Dimensions of Poverty

Poverty is universally recognized as a multidimensional phenomenon, one which extends far beyond a lack of income to encompass the deprivation of the capabilities necessary to live in dignity (Sepúlveda, & Nyst, 2012). According to Muzzini (2008), dimensions of poverty are divided into two named as monetary and non-monetary. The monetary is only one among several measures of deprivation related to income; whereas, the non-monetary measurements are

deprivation of decent living conditions, access to basic services, a minimum level of educational attainment and adequate safety nets. The non-monetary measurements are equally important measures of human well-being as the monetary one. The researcher also indicated that over-reliance on the monetary dimension of poverty may risk under-estimating the true extent of poverty in the urban context, where living conditions can be made harsher by diseconomies of agglomeration, such as congestion, environmental degradation and crime, theft and disorder. On the contrary, a good understanding of the non-monetary dimensions of poverty can provide policy-makers with more entry points for anti-poverty interventions. For example, the monetary poverty can be addressed by tackling non-monetary aspects of poverty, such as improvements in housing quality and better access to basic services.

2.1.2. Livelihood

2.1.2.1.Livelihood and Livelihood Capitals

Usually livelihood is termed as job, work, or source of income. Chambers and Conway (1992) had defined livelihood as: which comprises the capabilities, assets (stores, resources, claims and access) and activities required for a means of living. Adopting Chambers and Conway's definition, DFID (2001) defined livelihood to be sustainable when it can cope with and recover from stresses and shocks and maintain or enhance its capabilities and assets both now and in the future, while not undermining the natural resource base.

Livelihood capitals determine the livelihood opportunity and livelihood security of households. Assets are resources which households draw to generate income, meet their basic needs, manage risk, and cope with stresses and shocks. According to the sustainable livelihood framework, after (Scoones, 1998), there are five types of assets namely: human, physical, social, financial, and natural.

Human assets are the amount and quality of knowledge and labor available in a household[2]. Human asset refers to the livelihood knowledge and capabilities possessed by individuals, in addition to the intangible character traits (ambition, drive, persistence, etc.) and health status that determine how effectively individuals apply their knowledge and capabilities to livelihood

2 http://atha.se/content/sustainable-livelihoods-framework

activities (USAID, 1992). This asset is essential in order to use the other kinds of assets that exist.

Financial assets are financial resources, savings, credit, insurance, remittances, pensions, cash transfers from social welfare programs, and assets held as a store of value (livestock or jewelry) (USAID, 1992). Income from the sale of labor is often one of the most important assets for the urban poor and one which they tend to prioritize (Farrington, 2002).

Physical asset- As stated in USAID (1992), physical asset refers to goods and infrastructures such as housing, tools (land, machinery, tools, and draft animals), household equipment (jewelry, furniture, electronics, appliances, or animals) and public infrastructures (roads, production equipment and technologies, communication facilities, ports, etc.). People may own, rent or have access to physical assets. Housing is normally one of the most important assets for poor urban households as it is used both for shelter and reproductive purposes and for productive or income-generating purposes (renting out rooms or using the space as a workshop area) (Moser, 1998 as cited in Ephrem, 2015).

Social asset is generated by the household's connections in a social network, and the trust, reciprocity, and resource-sharing qualities of those connections (USAID, 1992). It refers to the social networks that people can get in order to achieve livelihood. The social resources include networks, social claims, social relations, affiliations and associations. These are networks of mutual support which people can mobilize to access, for example, loans, childcare, food, accommodation and information about employment and opportunities (Moser, 1998; Dersham and Gzirishvili, 1998 as cited in Ephrem, 2015).

Natural assets are the physical environment and the natural resources such as land, water, wildlife, biodiversity, and forests that households control to enhance their livelihood (USAID, 1992). According to Farrington (2002), natural resources are generally less used in the livelihood strategies of the urban poor, as they tend to be less available, especially in large urban centers. However, especially in peri-urban areas where traditionally rural communities are being progressively absorbed into the urban fabric and are dependent both on agricultural and non-agricultural activities. In addition, some natural resources are routinely used by poor urban residents, e.g. rivers that may be used for washing and even drinking.

Therefore, livelihood security is defined as adequate and sustainable access to income and resources to meet basic needs (including adequate access to food, potable water, health facilities, educational opportunities, housing, and time for community participation and social integration) (Frankenberger, 1996). It is a precondition for the existence of food security. Households having stable resources and incomes that allow them to acquire their basic necessities have a secured livelihood.

2.1.2.2.Food Security

The Food and Agriculture Organization of the United Nations (FAO) defines food security as "food security exists when all people, at all times, have physical, social and economic access to sufficient, safe and nutritious food that meets their dietary needs and food preferences for an active and healthy life" (FAO, 2008). Those who do not fulfill the conditions stated in the definition are considered as food insecure.

Food security is broken down into four more easily measurable sub-components: Food availability, food access, food utilization, and stability.

Food Availability- It is the physical existence of adequate and appropriate food. The level of food production, stock levels and net trade determines food availability. Sufficient quantities of appropriate, necessary types of food from domestic production, commercial imports, commercial aid programs, or food stocks are consistently available to individuals or within their reach (USAID, 1992).

Food Access- According to USAID (1992), it refers to the resources the households have to obtain foods, either through own production or through purchase. Hence, food access is largely related to household income and own production. Level of household income, expenditure, markets and prices determine the level of food access.

Food Utilization is related to utilization of food through adequate diet, clean water, sanitation, and health care, to reach a state of nutritional well-being for which all physiological needs are met. Broadly, utilization refers to the actual food; how it is stored, prepared, and consumed; and what nutritional benefits derived from consumption (FAO, 2008; USAID, 1992).

Food Stability refers to the ability to access and utilize appropriate levels of nutritious food over time (USAID, 1992). It denotes the time-frame ("at all time") of food security. Inadequate access to food on a periodic basis reflects food insecurity. Different factors such as, political instability, adverse weather conditions, unemployment and food price determine the food stability.

Food insecurity is defined as the opposite of food security. Food insecurity can be chronic or transitory depending on the duration of occurrence. Long term food deficit leads to chronic food insecurity, whereas, the short term food insecurity is called transitory. The transitory food security two categories named as cyclical and temporary food insecurity. Cyclical/seasonal food insecurity happens on predictable basis, whereas, temporary food insecurity occurs as a result of unpredictable circumstances.

As per Burchi and De Muro (2012), at the beginning of 1980s Amartya Sen's entitlement approach contributed to shift the focus from national food availability to people's access to food. The above writers described Sen's entitlements depending on the set of commodities the person can have access to through trade and production, i.e. the "exchange entitlement mapping" (Sen 1981: 435). Sen proposed that food security is a matter of who has access to food, which means who can acquire food from own production or purchase on the market rather than availability of sufficient food in a region or a country (Degefa, 2008).

In the study, the food security refers to the food access status of the beneficiary households. In the study context, food access refers to access by beneficiary households to adequate and appropriate food at all times for an active and healthy life through means of incomes to purchase or own production. So food insecurity means the inability of households to purchase adequate and appropriate food at all times.

2.1.2.3.Urban Impoverishment

Income has a crucial role in determining the livelihood security of households in urban areas. The urban people are highly dependent on the market to purchase food unlike the rural who can obtain food through own production. Besides, food expenditure accounts more than half of urban expenses. Thus, programs aiming at reducing the cost of food for the urban poor (such as food aid, food subsidies, urban agriculture, technology, and food policies to reduce the cost of food) are likely to be particularly important for urban livelihoods. Similarly, employment is essential

because urban dwellers need money for most of their basic needs (Ruel and Garrett, 2004 as cited in Ephrem, 2015).

The context of poverty varies in rural and urban areas. The nature and feature of poverty is remarkably different between rural and urban centers.

> *Urban areas are characterized by more diversified and heterogeneous socioeconomic environments, including as shaped by migration patterns; poverty is more dynamic and transitory; informal social safety nets and social networks are weaker, with limited extended families and more single parents; urban economies are more complex, market-based and integrated, including with higher sensitivity to prices fluctuations; the poor face higher opportunity and transaction costs; violence and crime are more widespread, while infrastructure and sanitary services face significant challenges, including raising public health risks. (Banerji & Gentilini, 2013: p 22)*

Thus, due to the distinctive features of urban area, urban poverty has different manifestation as compared to the rural.

Between 1990 and 2008, the share of urban poverty increased from 17.9 percent to 24.4 percent (Banerji & Gentilini, 2013). According to UN-HABITAT (2008a) as cited in Ephrem (2015), urban growth combined with limited employment opportunities in cities is leading to a more rapid increase in poverty in urban areas than in rural areas. A massive 43 percent of Africa's urban populations live below the poverty line. African urban poverty is clearly manifested in the large number of poor people living in slums and slum-like conditions in cities across the continent lacking access to secure shelter, basic services and to the political system (Ephrem 2015).

The proportion of the population below the poverty line stood at 30.4% in rural areas, it is estimated to be 25.7% in urban areas according to the 2010/11 Household Income, Consumption and Expenditure (HICE) survey. Ethiopia's poverty status shows reduction in poverty rate both in rural and urban parts of the country. Poverty rate at national poverty line of Ethiopia fell

gradually from 45.5 % in 1995 to 23.5 % in 2015[3]. Urban poverty declined from 25.7 percent in 2010/11 to 22 percent in 2012/13; this represents a 14 percent reduction in the poverty rate across all cities (MoUDH, 2015; HCES, 2010/11; and Progress report on the GTP, 2012/13 as cited in MoUDH, 2015).

As stated in MoUDH (2015) using the Household Income, Consumption and Expenditure Survey (HICES) and Welfare Monitoring Survey (2010/11), those groups that are considered as urban poor in Ethiopia include:

i. **The urban destitute** includes the homeless, beggars and street children. This group is the most visible face of urban poverty having 2.7% of the poorest percent of urban household. (Source: HICES and Welfare Monitoring Survey, 2010/11)

ii. **The disabled and elderly with limited family support**

This group comprises the disabled and elderly that are unable to work, and do not have working member in their households. It consists of 6.6% of the urban poor. (Source: HICES and Welfare Monitoring Survey, 2010/11)

iii. Families who need more work

This group covers the large group of Ethiopian urban poor with little work or is in low-quality employment. Their status ranges within unemployment or temporary employment (marginal self-employment, and low wage employment). This group of people constitutes about 41.7% of the urban population of the country. (Source: HICES and Welfare Monitoring Survey, 2010/11)

iv. Families in marginal self-employment

This implies to members of the households who are engaged in self-employment activities that do not make much money. The activities include petty trade. 23.8% of the urban poor are grouped under this group. (Source: HICES and Welfare Monitoring Survey, 2010/11)

v. Families in low-wage employment

3 https://knoema.com/atlas/Ethiopia/Poverty-rate-at-national-poverty-line

As per HICES and Welfare Monitoring Survey (2010/11), this infers families that are engaged in low-wage employment in which individuals of households have wage jobs and are fully employed but they do not earn enough to cover the needs of their household. Employment is in services, manufacturing, and construction, etc.... Nearly 24.6% of the urban poor of Ethiopia are categorized under this group.

The urban poor are food insecure mainly because of their low income status. They cannot meet their households' basic need with the income they get from different livelihood activities. The low income status results due to unemployment or underemployment of the urban poor. Those who are employed have wage jobs while others engage in marginal self-employment activities such as petty trade with less earning to attain their basic needs of their households.

Unemployment and underemployment are common issues in Ethiopia. The rate of unemployment is higher in urban areas and among women both in urban and rural areas. According to the 2011 urban employment and unemployment survey, the overall unemployment rate in urban areas is 18.0 per cent of which 11.4 per cent are male and 25.3 per cent are female. The urban employment and unemployment survey indicated a high youth unemployment rate, 27.9 per cent and 18.3 per cent for age group 20-24 and 25-29 respectively (MoLSA, 2012:2). As per MoUDH PAD (2015), the overall unemployment rate in urban areas is 17.1 percent, but this is higher in Addis Ababa (23.6 %). It is also stated that almost a third (31 %) of those working in Addis Ababa report being underemployed. Yet those with the lowest levels of education are more often engaged in informal self-employment, out of necessity, rather than being unemployed looking for a wage job. These individuals can be thought of as choosing self-employment not because it is more profitable but because the cost of being unemployed while searching for waged employment is too high relative to the expected benefit (WB, 2015).

2.1.2.4.Urban Food Insecurity/ Food Access

Food security in urban and rural areas has different context. For instance, the rural household attain the level of food availability is determined by production factors; whereas, supply factors (competitive retail network, existence of safety nets like public distribution system coupled with the supply position of the state that usually decides the food security status) determine the level of food availability in the urban.

Concerning the food access in urban areas, finance is a critical factor that ensures food security. Urban areas are mostly dependent on the food market to purchase their food. Thus, their income status determines their level of food access. Food insecurity especially in terms of access to healthy diets has featured as one of the multiple developmental concerns related to the negative experience of urbanization in Sub-Saharan Africa (Legwegoh, 2012).

The urban poor, often pay more for food purchases than do wealthier urban counterparts, as they are obliged to buy small quantities of food daily because they do not have the resources or living conditions which permit them to purchase and store large quantities of food at home (Maxwell, D. Levin, C., Amer- Klemesu, M., Morris, S. and Ahiadeke, C., 2000 as cited in Ekpenyong, 2015). Since urban residents are mostly buyers of food, urban poor are usually exposed to inadequate and unhygienic food leading to unhealthy food consumption.

The proportion of food poor people (food poverty head count index) in Ethiopia is estimated to be 33.6% in 2010/11 while it stood at 34.7% in rural areas and 27.9% in urban areas. The food poverty gap index is estimated to be 10.5 % while it is 11.1 % for rural areas and 7.3 % for urban areas. Similarly, the national food poverty severity index stood at 0.046 with rural food poverty severity index (0.05) being slightly higher than that of urban areas (0.029) (MoLSA, 2012:2). The figures show that the urban is less food insecure than the rural; however, there is slight difference which reflects the rise of food insecurity in the urban parts of the country.

2.1.3. Urban Environment

Urban ecosystems include green and blue areas in city (e.g. parks, private gardens, rivers, ponds and riverbanks) and the environmental services they provide (such as food, fuel, clean water, and clean air and hazards mitigation). Local and regional ecosystems provide important functions that benefit urban residents including providing a habitat for biodiversity, primary productivity, storm water absorption and retention, air pollution removal and heat mitigation (Bolund and Hunhammar, 1999). Stocks of natural resources and a host of regulating cycles and support mechanisms underlie the social and economic capacity to support human development and well-being (Felix, *et al*., 2011). Hence, the presence of functional urban ecosystems represents significant economic and health benefits, while their absence implies costs for both citizens and government (UN-HABITAT, 2017). Thus, the wellbeing of human depends on the ecosystems and their environmental services.

Addis Ababa is expanding in height and width which has consequently brought modification of landscapes and land covers in and around the city. As the UN-HABITAT describes the state of the city, it is experiencing a decrease in the critical functions of its ecosystem services which compromises the health and wellbeing of the city residents and their future livelihoods with an increasing built up area.

More importantly, the downward trend in Addis Ababa's ecosystems significantly weakens the resilience to stress and shocks of the whole urban system (such as urban food insecurity and vulnerability to droughts or floods) and worsens the likely impacts of climate change related hazards on the city (McPhearson, *et al*., 2013).

In this study, the environment concept is seen in the context of sanitation (solid and liquid waste management), greenery (urban green spaces and urban agriculture) and social infrastructures (water supply, latrines, health and education and road facilities).

a) Urban Sanitation

Rapid and unguided urbanization with informal settlements negatively affect the surrounding physical environment of urban areas. Most of the urban areas lack proper drainage and sewerage systems in place and households' access to water, latrines and waste management practices are among the factors that determine the sanitations of urban areas. Improper waste disposal is the most common environmental related problem including water, soil, and air pollution of urban and peri-urban areas, thereby communities become highly vulnerable to various health problems (Leulsegged, 2011).

Having a rapid urbanization, Addis Ababa's water supply and sanitation, waste management and housing are continuing to be serious problems (Dubbale, *et al*., 2010). As stated in UN-HABITAT (2017), the rapid and uncontrolled demographic growth and spatial expansion in Addis Ababa has resulted in considerable damage to the environment which today is suffering from high levels of water and air pollution, soil degradation and contamination.

The solid waste of Addis Ababa is disposed on open sites, drainage channels, rivers, valleys, and on the streets. River water pollution is caused by inappropriate liquid waste disposal from residents' sewage lines and industrial wastes. Only 7.2% of the liquid waste is disposed in

appropriate way and the remaining 92.8% is disposed inappropriately in to rivers and rainwater channels (WSA, 2010 as cited in Leulsegged, 2011).

b) Urban Greenery

Urban green areas and forestry contributes to health and wellbeing of communities by mitigating national and global climate change, purifying air, and reducing flooding. Urban environments in Ethiopia are frequently controlled by built up areas which obviously covers the biggest expanse of its land surface, because of deforestation driven by urban expansion that was carried out for several decades coupled by weak interventions made to develop and conserve city parks and greeneries (MoUDH-ESMF, 2015). The vegetation cover in most of the eleven cities is dominated by eucalyptus mixed with some indigenous species and ornamental trees. As stated in UN- HABITAT (2017), the built environment growth continues at a rapid rate per year, consuming more and more open space while the remaining ecosystems become ever more polluted. The threshold value of minimum green space per capita has been defined by the World Health Organization as $9m^2$. Addis Ababa scores poorly in this respect with between 0.4 and the 0.9 m^2 per capita.

c) Urban Agriculture

Different dimensions are used to define urban agriculture by different authors. According to Veenhuizen (2006), urban agriculture can be defined as the growing of plants and the raising of animals for food and other uses within and around cities and towns, and related activities such as the production and delivery of inputs, and the processing and marketing of products. Urban farmers usually specialize in production of vegetables, milk and milk products, eggs and meat which are perishable and high commercial value agricultural products. Mougeot (2003) stated the lead feature of urban agriculture distinguishing it from rural agriculture is its integration into the urban economy and ecological system. As stated in MoUDHC-ESMF (2015), there is now growing consensus that urban agriculture is an important contributor to sustainable urban growth and development, as well as to people's livelihoods by providing alternative food source for the producing urban poor and may supply to the town markets to some extent.

d) Urban Social Infrastructures

Social infrastructure refers to the community facilities, services and networks that help individuals, families, groups and communities meet their social needs, maximize their potential for development, and enhance community wellbeing[4]. It has direct or indirect impact on the quality of life of people. Rapid population growth put challenges on infrastructure and resources. The rapid growth of urban population both natural and through migration, has put heavy pressure on public utilities like housing, sanitation, transport, water, electricity, health, education and so on (Rai,2017). One of the urban poor areas' top developmental challenges continues to be the shortage of physical infrastructure which impedes economic growth.

Water facility: According to UN-HABITAT (2017), in Addis Ababa only 50% of the 475,000m^3 of water pumped into the network every day is reaching the taps. It is further explained that around 50-55% of the population of Addis Ababa has to buy water from shops at high cost or access unsafe water from unprotected wells and rivers. Moreover, it is the poor in particular who can only access unsafe water.

Latrine facility: Access to latrines facilities influence the quality of life of residents. According to UN-HABITAT (2017), although significant improvements have been achieved over the past decade, the depth of the sanitation crisis - particularly access to basic toilet facilities remain a threat to public health. According to the 2012 CSA Welfare Monitoring Survey, an estimated 72.27% of Addis Ababa residents are without access to adequate toilet facilities because the personal hygiene infrastructure of the city is highly inadequate.

Electricity: As stated in UN-HABITAT (2017), in Addis Ababa city 61.8% and 36.7% of the study participants reported access to metered private and metered shared electricity supply, respectively as per the 2016 report of Bureau of Finance and Economic Development. In Addis Ababa even though the use of electricity as a source of lighting has remained relatively stable, power supply to cover both lighting, cooking and refrigeration remain inadequate. Most urban poor are using charcoal and wood for cooking than modern electric cooking appliances. In addition to this the increase in demand, power outages have become a regular phenomenon in Addis Ababa (UN-HABITAT, 2017).

Education facility: According to the report of Addis Ababa city Bureau of Education (2014/2015), there is significant increase in education coverage at all levels with the net

4 http://shodhganga.inflibnet.ac.in/bitstream/10603/34369/10/7%20chapter%201%20introduction.pdf

enrolment rate. Addis Ababa with 80 % level of literacy, over 20 % of Addis Ababa's population is more than secondary level education. In addition to impressive achievement in enrolment at all levels, the city has also shown significant improvement in educational infrastructure that, in turn, improved accessibility. With increased expansion of school facilities, over-crowding in each class has reduced significantly (UN-HABITAT, 2017).

Health facility: Health is one of the key determinants of an individual's ability to use his/her own labor to access income. Provision of urban health services is important indicator of a city's ability to improve the quality of life of its residents. As UN-HABITAT (2017) stated, 2012/3 report prepared by the Ministry of Health points out that, as per the 2012, the national health infrastructure has increased by 3,245 health centers and four hospitals, raising its service coverage to 92%. However, Addis Ababa for the same year has only expanded its health infrastructure with 62 health centers, bringing services coverage to 62%.

Private and public hospitals, health centers and health posts account for 79.4% of health coverage in the city of Addis Ababa. Compared to the national coverage, Addis Ababa city falls behind by 14.2%. On the other hand, private vendors dominate the distribution of pharmaceutical products. Public pharmacies only deliver 13.71% of the service for the city's residents (UN HABITAT, 2017).

Road facility: The availability of road infrastructures plays a key role in transporting people and goods, and in city development. As stated in MoUDHC-ESMF (2015), a pilot-scale study conducted (between 26 January and 28 February 2004) on the ambient air quality of Addis Ababa indicated that air pollution related to fossil fuel combustion such as airborne lead and carbon monoxide were better as compared to other African cities such as Cairo. Dust problem is one of the major causes of air quality problems in the cities of Ethiopia. Thus, the cobblestone road construction contributes to the betterment of air quality problems related to dust.

2.1.4. Urban Productive Safety Net Program (UPSNP)

2.1.4.1.Development of UPSNP in Ethiopia

Safety net program is one components of social protection. According to Ministry of Labor and Social Affairs (2012), social protection is a set of formal and informal intervention that aim to

reduce social and economic risks, vulnerabilities and deprivations for all people and facilitates equitable growth. It consists of safety nets, social insurance, health insurance, livelihood and employment schemes, and improving basic services.

Safety net program is designed to provide people who are vulnerable to poverty, living in poverty or who are facing food insecurity and other forms of deprivation with predictable and reliable support through food, cash or vouchers (World Food Program, 2017). According to Subbarao, *et al*. (1996) and Devereux (2002) as cited in Khan, *et al*. (2013), safety net programs can be provided conditionally or unconditionally in-kind, or through cash or vouchers.

World Bank together with other development partners initiated the productive safety net program to address food insecurity. The Productive Safety Net Program (PSNP) has been operating in Ethiopia since 2005 in the rural parts of the country. Implemented in the second largest country of the continent, PSNP remains the largest safety net program in Africa (MOA, 2016). It has been serving as a major tool for social protection by providing cash or food transfers, or both to food insecure households, protecting assets, and creating community assets through direct and indirect/ public work activities supports. As stated in the MOA, the public work activities involves those who are able-bodied participating them in development activities such as water and soil management, construction of health posts, roads, schools. Thus, more than smoothening households' consumption, the program tries to enhance communities' livelihood by empowering households, building their resilience to shocks and stresses, and improving communities' physical environment and infrastructure.

The Ethiopian government extended the Productive Safety Net in to urban areas to alleviate food insecurity since 2016. Within the framework of the National Social Protection Policy, the Ministry of Urban Development and Housing has developed Urban Food Security and Job Creation Strategy (MoUDH PIM, 2016). As stated in MoUDH (2016), the Urban PSNP (UPSNP) has the objective of reducing poverty and vulnerability among the urban poor living below the poverty line over a period of 10 years in a series of five-year phases. The project is supported by World Bank to start its pilot implemetation in 11 cities including the nine regional capitals (Adama, Assayita, Asosa, Dessie, Gambella, Hawassa, Harari, Jijiga, and Mekele), and the administrative cities (Dire Dawa and Addis Ababa). Three-fourth of the beneficiaries will be from Addis Ababa due to its large size and relatively high poverty rate record.

2.1.4.2.Components of UPSNP

To provide income support and increase employability of beneficiaries, UPSNP has three-phase integrated model or pathway. According to the MoUDH PIM (2016), beneficiaries receive conditional transfers followed by life skills training and guidance on the employment pathways (self-employment and wage employment) during the first phase; they will continue to receive conditional transfers, training and job-matching services to increase employability in the second phase; whereas, they will have the option to continue to receive a small amount of conditional transfers to supplement income derived from employment secured as a result of program support or through other means in the third phase. Therefore, after three years the public work beneficiaries will graduate from the program; however, they may choose to graduate earlier.

The three components of UPSNP are Safety Net Support, Livelihood Services, and Institutional Strengthening, Project Management and Coordination.

a) Safety Net Support

This component provides conditional and unconditional safety net transfers. The unconditional (direct) transfers are two types named as permanent and temporary unconditional transfers.

Permanent unconditional transfer is for those who are unable to take part in work because of different reasons. Those eligible for permanent unconditional transfers who would like to receive these transfers register and provide verification of age (above 65 years only) or of their disability or chronic illness that prevents them from being able to perform a co-responsibility for the transfer (MoUDH, 2016). It targets the chronically ill, the elderly and people with disabilities, and urban destitute.

Temporary unconditional transfer is for those who are unable to work due to pregnancy, lactation (having a child less than one-year-old) and injury or illness. As per the PIM (2016), the households will provide verification of pregnancy or other temporary factors that prevent them from participation in public work.

Conditional transfer is given to those who are able bodied to perform work. These clients get cash transfer by participating in public works. This group constitutes an estimated 84 percent of

total program beneficiaries (MoUDH, 2016). Thus, the majority of the program's beneficiaries are those receiving cash after engaging in public work activities.

b) Livelihood Support

As per MoUDH (2016), those beneficiaries, who have interest to enhance their work, will get livelihood support that enables them to graduate from the program and promote moving out of poverty. The target groups for these interventions are individuals in households receiving conditional transfers who desire more and higher-paid work and a few numbers of beneficiaries who have a business skill directly involve in livelihood activities (MoUDH, 2016).

c) Institutional Strengthening and Program Management

This component will support the development and strengthening of project systems for targeting, monitoring and evaluation and management information system, payments, and citizens' engagement including social accountability and grievances redress mechanism. It will also finance capacity building (human resource, training, administrative, physical capacity) and strengthening program management (MoUDH, 2016).

2.1.4.3.Contributions of UPSNP

UPSNP has the intention of improving the livelihoods' of the beneficiaries which is stated in its manual. UPSNP supports the development of assets of the beneficiaries in a number of ways. In short, it contributes to the financial assets by providing cash payments for days worked and grants as required, to human assets by promoting functional literacy classes among adults and helping parents send their children to school instead of work, to social assets by building clients' confidence to engage in community affairs and strengthen their social the network, to natural/physical assets by undertaking watershed managements for the development of natural resources (MoUDH PIM, 2016). When describing the specific role of the program, it tries to improve the food security and income condition of households as well as the living environment of communities to address livelihood insecurity of the urban poor.

Food Security- The program uses a combination of safety nets and livelihood services to attain sustainable food security and poverty reduction among the urban poor living below poverty level. According to the UPSNP manual (MoUDH, 2016), regular and predictable cash transfers

are provided which consequently smoothen and improve the quality of consumption and reduce food gaps of the urban households. Besides, the life skill trainings that are provided to the clients will improve their employability and financial assets which will enhance their food security status in the future.

Income-Poverty Status - The cash transfer obtained directly or indirectly from the program is one income source for the beneficiaries. In addition, the program's second component targets on providing livelihood support to those who are engaged in public works. In other words, it increases employment and livelihood opportunities for them. Livelihood trainings will give them opportunity to involve in self-employment or employment into better jobs. As per MoUDH (2016), the financial supports that will be granted after graduation allow them to engage in better work opportunities so that they will generate private income.

Environment Enhancement- Beneficiaries with conditional transfer participate in public works engaging in physical environment activities. The public work activities stated in MoUDH (2016) are urban beautification and greenery activities, integrated watershed management activities, urban agriculture, environmental cleaning and construction/rehabilitation of social infrastructure (such as latrines, schools, health centers, roads) activities.

2.2.Theories Related to Development, Poverty, and Social Protection/Social Safety Net

There has been different thinking in understanding poverty and underdevelopment by various theorists and thinkers. Various approaches had been introduced and applied to alleviate poverty and enhance development. Social protection, being one means of addressing extreme poverty especially by state, is discussed in relation to some approaches below.

The Basic-Need Approach

The basic needs theory, formulated by International Labor Organization (ILO) and World Bank (WB), emerged in 1976 emphasizing on the importance of satisfying people's basic need rather than focusing on economic growth of a country. It directed focus on the need or deficiency of poor people. Thus, aids in the form of donation are recommended to bring the poor above poverty line. As the poor gets out of poverty, aggregate demand level increases, supply of basic

goods and services increases, and improve individuals' participation in the process (Degefa, 2008).

The Right-Based Approach

In the late 1990s, the United Nations Development Program (UNDP) began to raise awareness about rights-based approach viewpoint to development. As stated in Sepúlveda and Nyst (2012), poverty and discrimination are inherently linked, each being a cause and consequence of the other which makes poverty a major human rights issue. People living in poverty experience discrimination because they are poor. According to this approach, the focus of poverty alleviation efforts is fundamentally shifted from a charity or needs-based approach, towards a concentration on rights and entitlements, which in turn give rise to obligations on the part of the State to ensure that all individuals are able to enjoy access to a minimum essential level of economic, social and cultural rights, including an adequate standard of living, equally and without discrimination.

Based on the right-based approach, there is a symbiotic relationship between human rights and social protection. As per the office of the United Nations High Commissioner for Human Right stated, social protection can play a fundamental role in addressing the needs of people living in extreme poverty, tackling inequality and realizing human rights[5]. By transferring resources to those living in extreme poverty and allowing beneficiaries to generate income, protect their assets and accumulate human capital, social protection programs have the potential to contribute to the realization of a number of economic, social and cultural rights, such as the right to an adequate standard of living – including the right to adequate food, clothing, and housing –as well as the rights to education and health (Sepúlveda and Nyst, 2012).

The Empowerment Approach

Since 1980s, the empowerment development has come up with the idea of empowering the poor socially, politically and psychologically. As stated in World Bank (2002) empowering poor men and women requires the removal of formal and informal institutional barriers that prevent them from taking action to improve their wellbeing—individually or collectively—and limit their choices.

[5] https://www.ilo.org/wcmsp5/groups/public/dgreports/nylo/documents/genericdocument/wcms_227152.pdf

Empowerment and pro-poor growth form a virtuous cycle by mutually reinforcing economic, social and political aspects of empowerment allowing people to move out of poverty through participating in, contributing to and benefitting from growth processes on terms which recognize the value of their contributions, respect their dignity and make it possible for them to negotiate a fairer distribution of the benefits of growth (OECD, 2012). The poor should be involved in the decision making of matters affecting them directly. Therefore, they will be part of the process in improving their living conditions (DFID, 2001). As per OECD (2012), without empowerment chronic poverty persists and people are incorporated into a political economy in which they are either excluded from growth or they contribute to wealth creation without themselves gaining from it. In other word, empowering poor people is essential for pro-poor growth. The approach can imply that social protection should facilitate the empowerment of people in poverty, where the state support empowerment processes through all of its social protection provision: planning, management and delivery.

The Sustainable Livelihood Framework (SLF)

Since 1990s the Sustainable Livelihood Framework (SLF) has become dominant approach to undertake interventions by international agencies. It is considered as a more comprehensive and integrated approach to address poverty. Unlike more traditional approaches that have sought to tackle poverty by identifying and addressing needs of poor people, the SL approach seeks to improve their lives by building on what they have — their assets (UNDP, 1999 as cited by Majale, 2002). Farrington (2002) stated the approach's heavy stress on the assets and the strategies the poor employ to make a living, rather than, as with previous development approaches, focusing on their needs or deficiencies. The sustainable livelihoods approach (SLA) seeks to gain an accurate and realistic understanding of people's strengths (assets or capital endowments) and how they endeavour to convert these into positive livelihood outcomes (Moser, 2005). As stated in Sustainable Livelihoods Support Office (1999) as cited in Majale (2002), the SL approach aims to help poor people achieve lasting livelihood improvements — sustainable livelihoods — measured using poverty indicators that they, themselves, define.

The approach has been used for several years in the rural context and there is increasing interest in adapting it to the urban context (DFID, 2001). As per Majale (2002), many researchers affirm that the SLF provides a useful conceptual base for understanding urban poverty and the situation

of people living in poverty in urban settlements, and is an effective tool for analyzing the impact of regulations on their livelihoods. The value of the SL approach is that it encourages a broad systematic view of the factors that cause urban poverty — whether these are adverse trends or shocks, basic lack of assets, or poorly functioning policies and institutions — and to investigate the relationship between them.

As stated in Moser (2005), Department for International Development (DFID) has used SLF as an operational model/tool to develop the Sustainable Livelihood programme containing a number of core principles: people-centered, responsive and participatory, sustainability, working at multiple levels, conducted in partnerships, and dynamic – responding flexibly to changes in people's situation.

The framework includes the vulnerability context (the trends, shocks, and local cultural practices which affect livelihoods) in which people operate. Within this context, people have access to various assets or poverty reducing factors which gain their meaning and value through the prevailing social, institutional and organizational environment (Majale, 2002). Structures (organizations from government through to the private sector) and processes (police, laws, rules of the game and incentives) determine who gains access to which types of assets (Moser, 2005).

As Majale stated, the viability and effectiveness of livelihood strategies, the ways in which people combine and use assets in pursuit of beneficial livelihood outcomes that meet their own livelihood objectives, are influenced by the availability and accessibility of assets, services and opportunities which can be positively enhanced or adversely undermined by ecological factors, social structures or institutional processes. As per DFID (2000), the SL framework describes what development dedicated to poverty reduction should focus on to create sustainable livelihoods for the poor. Thus, based on SLF, social protections should have successful strategies which serve to improve and consolidate poor people's access to and control over assets, thereby improving their livelihoods, and helping to make them less vulnerable to shocks and stresses.

In general, based on the basic-need approach, social protection should focus on the need or deficiency of poor people to bring the poor above poverty line. According to right-based approach, by transferring resources to those living in extreme poverty, social protection programs contribute to the realization of rights. In the empowerment approach, social protection should facilitate the empowerment of people living in poverty through provision of support such

as in planning, management and delivery of support. Lastly, based on the SLF, social protections should have successful strategies in order to create sustainable livelihoods for the poor. This study has used the DFID's Sustainable Livelihood Framework for extracting the analytical framework of the study which will be described in the analytical part of the study.

2.3.Empirical Reviews on Contribution of Productive Safety Net

Plenty of studies on contribution of social safety net (SSN) program had been conducted in different parts of the world. For instance, a study had been carried out in Bangladesh, Comilla district (2014), the role of SSN on income generation and food consumption of poor people. The findings show that SSN program has positive effect on the livelihood pattern and income generation of the very poor people in Comilla district. About 68.0% beneficiaries reported that their food intake has been increased; the place of treatment changes from local doctor to government; 82.1% of respondents could meet their clothing needs getting SSNPs money; 50.5% beneficiaries were able to earn 6000-8000 tk. monthly which is counted as a regular income which had increased their purchasing power (Akter, 2013). On the contrary, about 73.8% beneficiaries could not get the money properly, and the amount is not enough for them to maintain their family for about 85.4% respondents.

Mutuku's study focusing on public works programmes as a component of broader social protection programmes in Kenya (2014) revealed that 58 % felt that the wage rate was very low as compared to the urban cost of living. The wage rate paid was perceived by respondents as very poor. Majority (44 %) expressed that they earned an estimated total monthly income (wage rate and earnings from other sources like business) of Ksh.5000 to 10000 (USD. 63 to 126) that was perceived as low to improve livelihoods. In general, the analysis indicate that livelihood improvement was poor though considering other aspects like the overall situation the public workers felt that livelihoods improvement was fair.

There are a number of researches conducted in Ethiopia related to Productive Safety Net Program (PSNP) in relation to poverty, food security, asset holding and resilience of households. Teklay (2009) had tried to analyze and link poverty, the impact of the PSNP on poverty and creating capability. When concluding, the study assured the contribution of the PSNP in increasing income and consumptions of poor Ethiopians. However, the programs impact on developing the capability of the poor seemed unlikely.

Using panel data from household surveys in 2002, 2005 and 2007 in the Amhara region, Andersson, *et al*. (2009) had studied PSNP's impact on livestock and tree holdings of rural households. They found that households that participated in the program increased the number of trees planted, but there was no increase in their livestock holdings. We found no evidence that the PSNP protects livestock in times of shock. Shocks appear to lead households to disinvest in livestock, but not in trees.

Yitagesu (2014) studied the impact of PSNP on the food security among Keberibeyah *woreda* of Somali region. Results show that PSNP has positive impact on improving assets building particularly on livestock, production and consumer durable assets since joining the program as well as on the working behavior of the community through its public work project. Though water and soil development project have been undertaking through public work project, it is not satisfactory in terms of their quantity as well as quality. The study states that the program slightly touches food consumption status of beneficiary households, because it is not insured that all members reliably gain access to sufficient quantity and quality of food to enjoy a healthy and active life.

Philipp Maier (2014) studied the impact of Productive Safety Net Program on food security and vulnerability among beneficiary households in Tigray, Amhara, Oromiya and Southern Nations, Nationalities and Peoples' Region (SNNPR). As the study results show the PSNP in Ethiopia has a positive impact on the availability of food particularly during the lean season, when food needs are greatest. The annual food gap has decreased among PSNP households, while for non-PSNP households a slight increase has been reported (Maier, 2014). However, no significant impact could be found in regard to daily consumption of food (measured by a threshold of 1,800 kilocalories per day per person). There are no clear improvements found over time concerning the caloric availability and consumption of households. The program has been confronting implementation challenges mainly limited capacities of local governments in terms of human resources and technical expertise and the implications of rising food prices during 2008.

PSNP's impact on households' response to drought was studied in regions of Amhara, Oromiya, Tigray and the Southern Nations, Nationalities, and Peoples' (SNNP). The researchers stated that receiving mean PSNP transfers reduces vulnerability to drought by 57%. It significantly

improves household's recovery trajectory, implying a significant increase in resilience for beneficiaries (Knippenberg & Hoddinott, 2016).

2.4.Knowledge /Research Gap

As presented above in the theoretical and empirical reviews, most of the studies have focused on the social safety net in urban areas of other part of the world (other than Ethiopia) and specifically in rural areas of Ethiopia. They have studied the contribution of safety net to households' food security, income generation, alleviating poverty, asset holdings and resilience of households. Since the safety net program is newly implemented in Ethiopia, there is limitation in researches carried out in this study topic. It has been more than one and a half years that the Urban PSNP has started its intervention in 11 major cities of Ethiopia, Addis Ababa being one of them. Therefore, studying the improvement of beneficiary households in their income-poverty status and food security/ food access after joining the program has paramount importance in generating information about their status change as well as serving as a baseline for assessing the program's impact after some year in the future. Besides, it has further importance in allowing the program implementers to understand the real situation of the beneficiaries and to take appropriate measures for effective implementation of the program in Addis Ababa as well as other cities of Ethiopia. In this case, it will be possible to properly alleviate poverty and vulnerability of the urban poor. So, this study tries to fill the knowledge gap answering the UPSNP's contribution to improve livelihood of beneficiary households and environmental protection specifically in Addis Ababa, Arada (*woreda* 1) and Addis Ketema (*woreda* 5) sub cities.

2.5. Analytical Framework

The study has used the Sustainable Livelihood Framework (SLF) of Department for International Development (DFID) as its analytical framework. Many researchers affirm that, as per Majale (2002), the SLF provides a useful conceptual base for understanding urban poverty and the situation of people living in poverty in urban settlements, and is an effective tool for analyzing the impact of regulations on their livelihoods.

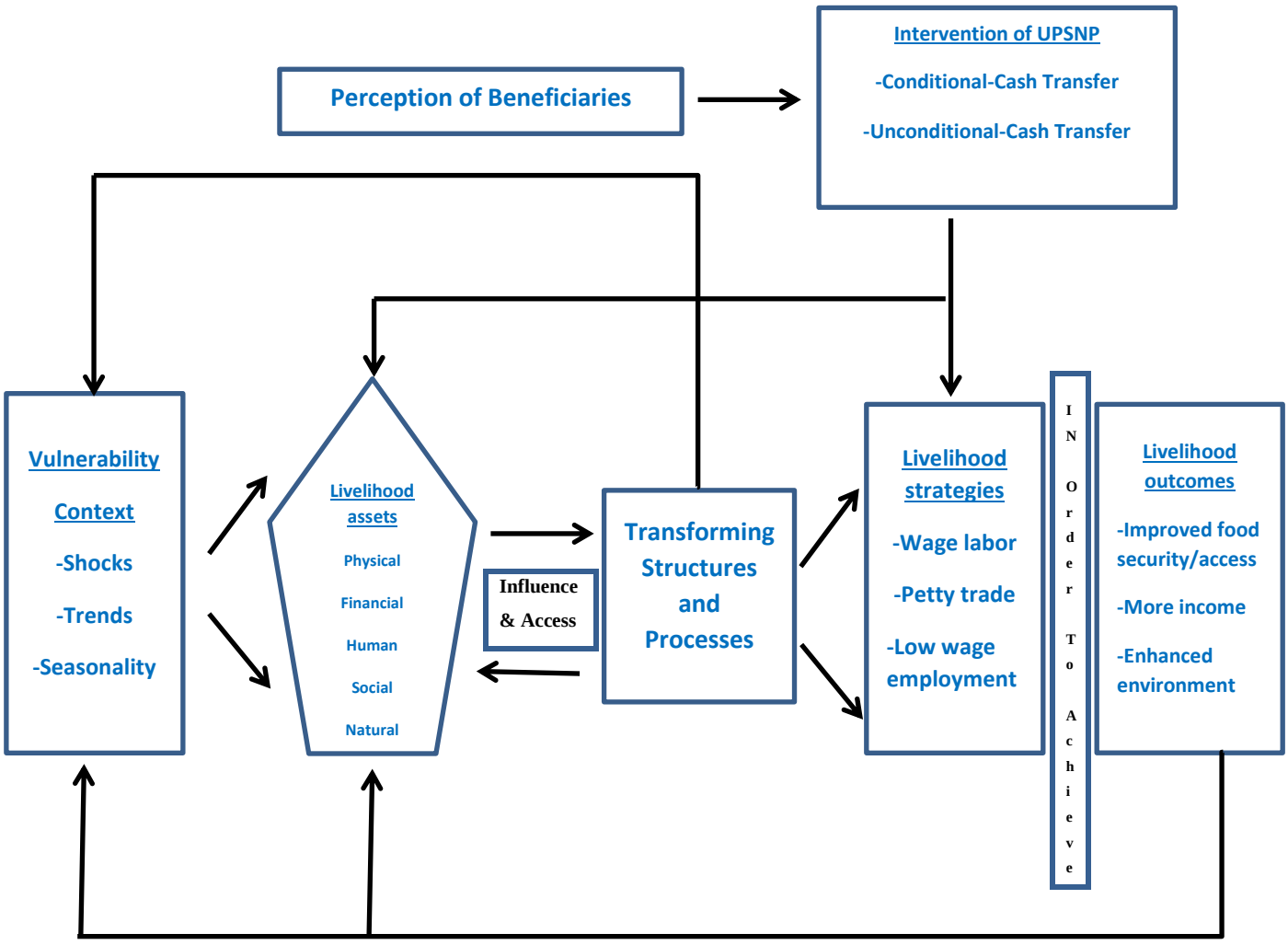

Figure 2.1: Analytical Framework of the Study (Source: Modified from DFID Sustainable Livelihood Framework (2000)).

As shown in Figure 2.1, the framework includes the vulnerability context, assets, transforming structures and processes, livelihood strategies, livelihood outcomes, UPSNP intervention and perception of beneficiaries towards the program's support and implementation. The arrows in the figure show the influence of one on the other. According to the framework, the vulnerability context (shocks, trends and seasonality) affects the assets that people have. The asset pentagon shows the different kind of assets that the poor people have and combine to achieve positive livelihood outcomes. The transforming structures and processes (institutions, organizations and policies) determine the access that people have to different kinds of assets as well as the type of livelihood strategy being used to build livelihoods. Access to different kinds of assets and structures and processes affect the strategies being employed.

The Urban Productive Safety Net Program supports the development of assets of the beneficiaries in a number of ways. The program improves the social assets (social networks), financial assets (income and saving), human assets (food security, skill and work habit), natural assets (environmental protection), and physical assets (household assets) of the beneficiaries. By improving their assets, the program will enable them to engage in better livelihood strategies with better outcomes.

In addition, it makes intervention in order to enhance the urban poor's livelihood strategies through safety net support (conditional and unconditional cash transfers). In other words, it provides a stable and additional means of livelihood for the households besides the other means of living (wage labor, petty trade and low wage employment).

The perception of the urban poor towards the program determines the intervention of the program on the urban poor. In other words, beneficiaries' perception towards the UPSNP's support and implementation determines the willingness of the beneficiaries to be included in the program and to continue receiving support from the program till graduation. The livelihood outcomes feed back into the assets to allow asset building which reduce vulnerability, to buffer shocks and stresses.

CHAPTER THREE: RESEARCH METHODOLOGY

3.1.Description of the Study Area

The study is conducted in Addis Ababa, the capital city of Ethiopia since 1886, located at 9°1′48″N 38°44′24″E coordinates. It has an area of 527 km^2 and an estimated population of 3,040,740 as stated by CSA (2014). The city is simultaneously experiencing high rates of economic growth and urbanization having 25% of the urban population of Ethiopia (UN-HABITAT, 2017; World Bank Group, 2015). According to the State of Ethiopian Cities 2015 Report 2, Addis Ababa's share in GDP accounts for 29% of the total urban centers (UN-HABITAT, 2017). Addis Ababa is the also political center being the head quarter for the African Union and United Nations Economic Commission for Africa.

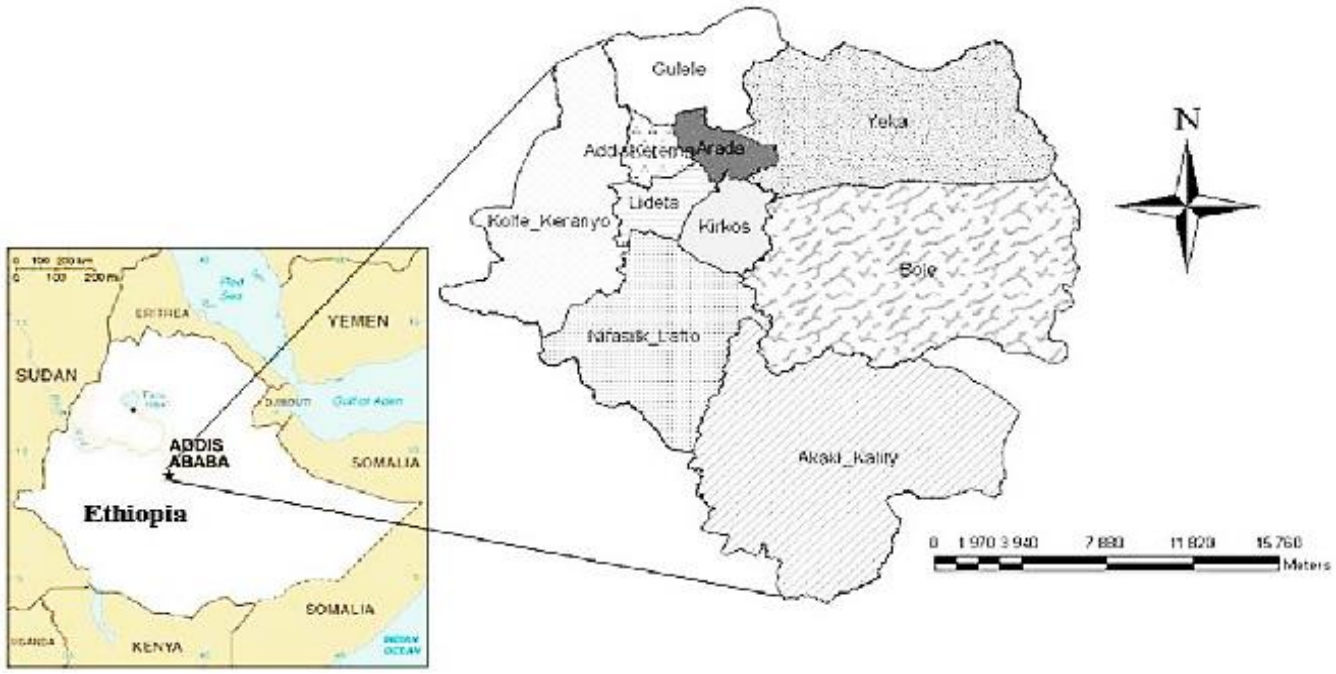

Figure 3.1: Map of Addis Ababa and Its Ten Sub Cities (Source: https://www.researchgate.net/figure/Map-of-Addis-Ababa-City_fig1_281460707 retrieved at 6:15pm Jan 15, 2018)

As depicted in Figure 3.1, Addis Ababa has 10 sub cities named as Arada, Addis Ketema, Yeka, Kirkos, Lideta, Kolfe, Akaki Kaliti, Nifas Silk Lafto, Gulele and Bole. Under each sub city, there are *woredas* and *ketenas* which are the lowest units of administrations. The city has a population of over 3 million, which is 25% of the country's urban population (World Bank Group, 2015). It is facing extensive urban poverty, joblessness, inadequate housing, severe overcrowding and congestion and underdeveloped infrastructure. As per MoUDH PAD (2015), the overall unemployment rate in urban areas is 17.1 percent, but this is higher in Addis Ababa (23.6 %). It is also stated that almost a third (31 %) of those working in Addis Ababa are underemployed. As stated in UN- HABITAT (2017), the rapid and uncontrolled demographic growth and spatial expansion in Addis Ababa has resulted in considerable damage to the environment which today is suffering from high levels of water and air pollution, soil degradation and contamination. Slum and informal settlements brought a great deal of challenge to the city, which is considered to be the core problem that affects the livelihood and the state of the urban environment (Dubbale, *et al*., 2010). Addis Ababa is expanding in height and width which has consequently brought modification of landscapes and land covers in and around the city.

For the first round intervention, 35 *woredas* from the ten sub cities were beneficiaries of Urban Productive Safety Net Program (UPSNP). The study has chosen two *woredas* from two sub cities namely: Arada and Addis Ketema sub cities as the study site of the study which is discussed below.

Figure 3.2: Map of Arada Sub City (Source: http://www.addisababa.gov.et/fi/web/guest/arada-sub-city Retrieved at 6:20pm Jan 15, 2018)

As it is shown in Figure 3.2, Arada sub city is located in the northern area of the city, nearby the center. It borders with the districts of Gullele, Yeka, Kirkos, Lideta and Addis Ketema sub cities. It has area of 9.9 sq.km and population size of 225,999 (in 2011)[6]. It is the second most densely populated sub city with 22,805 per sq.m[7]. It has ten *woredas* administered under its jurisdiction. Out of the ten *woredas*, four *woredas* (1, 3, 5, and 8) are the beneficiary *woredas* of UPSNP. Only *woreda* 1 was drawn to be the study site of the study from Arada sub city.

Figure 3.3: Map of Addis Ketema Sub City (Source: http://www.addisababa.gov.et/sk/web/guest/addis-ketema-sub-city Retrieved at 6:25pm Jan 15, 2018)

As it is depicted in Figure 3.3, Addis Ketema sub city is located in the northern area of the city, bordered with the districts of Gullele, Kolfe keraniyo, Lideta and Arada sub cities. It has area of 7.41 sq.km and population size of 271,644 (in 2011)[8]. It is the most densely populated sub city with 36,659 per sq.m[9]. It consists of ten *woredas* under its jurisdiction. Out of the ten *woredas*, four *woredas* (3, 5, 8 and 9) are the beneficiary *woredas* of UPSNP. Only *woreda* 5 was drawn to be the study site of the study from Addis Ketema sub city.

6 http://www.addisababa.gov.et/fi/web/guest/arada-sub-city

7 http://www.addisababa.gov.et/fi/web/guest/arada-sub-city.

8 http://www.addisababa.gov.et/sk/web/guest/addis-ketema-sub-city

9 Ibid.

Thus, *woreda* 1 from Arada sub city and *woreda* 5 from Addis Ketema sub city were taken as the study sites of the study. The beneficiary households within these *woredas* were the respondents of the survey.

3.2.Study Design

Cross-sectional research design was conducted in the study between April 23 and 30, 2018. Both qualitative and quantitative approaches were used in the study design in order to produce a comprehensive analysis of the study.

A) Qualitative Approach

Qualitative approach was used in order to gain a deep understanding about the safety net program: its main activities, its contribution to improve households' livelihood and the city's environment, and limitations. Semi-structured interviews, focus group discussions and observation were carried out to gather qualitative type of data.

B) Quantitative Approach

Quantitative approach was used to quantify and see the relationship among variables. Household survey was carried out to conduct a cross-sectional study to collect data on the socio-economic and demographic information of households, livelihood condition (housing and hygiene conditions, food security and income status) of beneficiary households, the public work activities undertaken and perception of respondents towards the program's implementation (targeting, expression of opinion, creation of awareness about the program among beneficiaries, impartiality and adequacy of support).

3.3.Study Population

The program's initial implementation started in 35 *woredas* out of the 116 *woredas* in Addis Ababa city. The first round beneficiary *woredas* of the selected sub cities were *woreda* 1, 3, 5, and 8 (Arada sub city) and *woreda* 3, 5, 8 and 9 (Addis Ketema sub city). Out of the beneficiary *woredas*, one *woreda* was drawn from each sub city. *Woreda* 1 was drawn from Arada sub city and *woreda* 5 from Addis Ketema sub city to be the study sites of the study. Therefore, the first batch beneficiary households within *woreda* 5 of Addis Ketema sub city and *woreda* 1 of Arada sub city were the study populations.

3.4.Data Sources

To carry out this research, different techniques were used to gather primary as well as secondary data. The researcher had collected primary data to get firsthand information from different respondents including beneficiary households and stakeholders (public work high experts, agency head, public work coordinators and targeting committee members) through structured questionnaires, semi-structured interviews, direct observations and focus group discussions. Both qualitative and quantitative types of data were gathered through the different data collecting instruments. The secondary data sources used for the study were unpublished documents, researches, articles, and reports related to the study.

3.5. Sample Size Determination and Sampling Techniques

3.5.1. Sample Size Determination

Regarding to sample size determination, Cochran (1963: 75) formula was used to determine the sample size of the study.

$$n = \frac{Z^2}{e^2} pq$$

Where,

$n =$ Sample size required

$p =$The estimated proportion of an attribute that is present in the population (expected prevalence)

$q = 1 - p$ (P is the estimated proportion of an attribute that is present in the population)

$Z =$ Z- Score (critical value associated with appropriately chosen level of confidence)

$e =$ The desired level of precision

To estimate the sample size, the expected prevalence for the Addis Ababa is not known for there were limited similar studies carried out. Therefore, assume p=.5 (maximum expected prevalence). Accordingly, the desired level of precision 5% with 95% level of confidence the Z value equals 1.96. The estimated sample size is:

$n = \frac{(1.96)^2}{(0.05)^2}[0.5(0.5)] \approx 384$

Finite Population Correction for Proportions:

If the population is small, sample size can be reduced slightly. This is because a given sample size provides proportionately more information for a small population than for a large population (Israel, 1992). Since the study areas (*woreda* 1 of Arada and *woreda* 5 of Addis Ketema sub cities) have definite number of UPSNP beneficiaries (1,347). Therefore, the finite population correction formula is used to draw the sample size from the two *woredas*.

$$n = \frac{no}{1 + (no - 1)/N}$$

Where n is the sample size and N is the population size

$$n = \frac{384}{1 + (384 - 1)/1347}$$

$$n = 299$$

Adding 10% contingency for expected non-response rate, the final sample size of beneficiary households for the household survey is:

$$n = 299 + 10\%(299) = 299 + 30 = 329$$

3.5.2. Sampling techniques

The UPSNP has targeted 35 *woredas* from the 10 sub cities of Addis Ababa for its initial implementation. The study had chosen two sub cities and one beneficiary *woredas* from each sub cities to conduct its study. A sample size of 329 beneficiary households was drawn for the study.

Using a multi stage sampling technique, both probability and non-probability sampling were employed to make selections.

Table 3.1 Sampling Conducted on Sub Cities and *Woredas*

Selected sub cities	**Beneficiary *woredas***	**Selected *woreda***	**Selected *ketenas***
Addis Ketema	3, 5, 8 and 9	5	4, 6, 7 and 8
Arada	1, 3, 5 and 8	1	12, 14, 15 and 16

As shown in Table 3.1, a non-probability purposive sampling technique was deployed to select sub cities. At the first stage, the two sub cities which were densely populated (Arada and Addis Ketema sub cities) were purposively drawn. The rapid growth of urban population both natural and through migration, has put heavy pressure on public utilities like housing, sanitation, transport, water, electricity, health, education and so on (Rai,2017). As stated in UN- HABITAT (2017), the rapid and uncontrolled demographic growth and spatial expansion in Addis Ababa has resulted in considerable damage to the environment which today is suffering from high levels of water and air pollution, soil degradation and contamination. Similarly, densely populated sites can impose pressure on the environment and infrastructure. Taking this into consideration, the two most densely populated sub cities were selected purposely to assess the Urban Productive Safety Net Program's role in relation to the environment and infrastructures.

At the second stage, probability sampling was implemented to choose from the beneficiary *woredas* under the selected two sub cities. Simple random selection was made from the beneficiary *woredas* under each sub city. The first round beneficiary *woredas* were 3, 5, 8 and 9 from Addis Ketema and 1, 3, 5, and 8 from Arada sub city. Accordingly, *woreda* 5 from Addis Ketema and *woreda* 1 from Arada sub city were drawn as the study sites.

Thirdly, convenience sampling was utilized to select *ketenas* from each *woredas* in order to undertake the household survey. Those *ketenas* which were close to the woredas were chosen. Thus, *ketenas* 12, 14, 15 and 16 from woreda 1 of Arada sub city and 4, 6, 7 and 8 from woreda 5 of Addis Ketema sub city were drawn.

Finally, beneficiary households were chosen randomly to conduct the survey. So a total sample size of 329 beneficiary households from the two *woredas* had been the study population for the research.

A total of 53 direct support beneficiary and 276 conditional beneficiary households had participated in the survey. A proportionate sampling was conducted to define the number of households from each *woreda* for the survey. The total households in each *woreda* is multiplied by calculated sample size (329) and divided by the number of total households in both selected *woredas* (*woreda* 1 of Arada and *woreda* 5 of Addis Ketema sub cities).

$$sample\ size\ in\ each\ woreda = \frac{\text{total HHs in each } woreda * \text{calculated sample size (329)}}{\text{number of total HHs in both selected } woredas}$$

Thus, 28 and 25 direct support beneficiary households, and 128 and 148 conditional beneficiary households were drawn from *woreda* 5 (Addis Ketema) and *woreda* 1 (Arada) respectively.

3.6.Data Collection Methods

Both quantitative and qualitative data collection methods were employed in order to obtain detailed and reliable data for analysis.

a) Quantitative Data Collection Method

Household Survey: Quantitative data was gathered from respondents by administering open and close ended questions. Information concerning the socio economic and demographic information of households, livelihood condition (housing and hygiene conditions, food access and income status) of beneficiary households, public work activities of the program and perception of respondents towards the program's implementation (targeting, expressing one's own opinion, awareness of beneficiaries about the program, impartiality and adequacy of support) were obtained through interview based household survey.

Before carrying out the survey, pretest was done on five beneficiary households to evaluate the questionnaire questions. Relevant questions were screened out after the pretest. In additions, the

questions were understood in the context of respondents which had enabled the researcher and the data collectors to understand and collect responses based on the study population's context.

The survey was done on 329 households in the study areas. Three data collectors were recruited to fill out questionnaires through interview. The collectors had completed their bachelor degrees. Before starting the survey, they were informed about the research's objectives and contents. Each question was discussed before the data collection to avoid confusion while asking and filling out the questionnaire.

b) Qualitative Data Collection Methods

i) Semi-structured interview: Semi-structured questions were forwarded to interviewees from each *woreda*. Interviews were conducted with Urban Job Creation and Food Security Agency Head of *woreda* 5 of Addis Ketema (Interview 01) and public work high expert of *woreda* 1 of Arada sub city (Interview 02). The interviews had helped to get data on the UPSNP's interventions on households' livelihood (in improving food access, income status) and environmental development activities (physical environment sanitation and greenery and social infrastructure development), targeting, achievement and drawbacks of the program.

ii) Focus Group Discussions: FGD was carried out in order to complement the information collected through survey and semi-structured interview methods. The program's role in enhancing households' livelihood and environmental protection, participants' perception towards the program, effects and drawbacks of the program were discussed. Three FGDs comprising six participants were conducted. The three separate focus groups were the male group (FGD 01), the female group (FGD 02) and the mixed group (FGD 03). FDG 01 consists of male *iddir* organizer, targeting committee member, watershed management expert, direct support beneficiary and two *kabboes*. FGD 02 includes female community member, targeting committee member, urban greenery expert, direct support beneficiary and two *kabboes*. FGD 03 is constituted of female community member, female targeting committee member, male urban agriculture expert, male direct support beneficiary and two female *kabboes*.

iii) Direct Observation: Observations were carried out during household survey and field visit to enhance the data collected from the other methods. Observations during interview while filling questionnaire were carried out to assess the intra households' livelihood conditions. Using checklists, the field visit was accompanied by photographing and informal conversation with

people. Therefore, the study sites' housing conditions, hygiene facilities, service facilities/ infrastructures (health, education, water, and electric facilities), the districts' waste management, green areas, watershed management, agriculture activities as well as latrines, school, health center, roads infrastructures developed by UPSNP were included during the observation.

3.7. Study Variables

Dependent variables of the study are food security/ access, income-poverty status, environment (solid waste management, greenery, watershed management, urban agriculture, and social infrastructure) and perception of respondents towards the UPSNP.

The independent variables used in the study are demographic and socio-economic factors that could affect the dependent variables of the study population.

Table 3.2 List of Independent Variables for Dependent Variables (Food Security/ Access and Income-Poverty Status of Beneficiary Households)

Explanatory Variable	Type	Measurement	Exp. sign
Demographic factors			
Sex of household head	Dummy	0 Female, 1 Male	– or +
Educational level of the household head	Dummy	0 Illiterate, 1 Literate	+
Marital status of household head	Dummy	0 Single, 1 Married	+
Household size	Continuous	Number	-
Socio-economic factors			
Number of economically inactive members	Continuous	Number in the household	–
Cash transfer from UPSNP	Continuous	Amount in birr	+

Monthly income from wage labor, petty trade, low-wage employment, pension, financial assistances from relatives	Continuous	Amount in birr	+
Income variability	Dummy	0 yes 1 no	-

3.8.Methods of Data Analysis

3.8.1. Qualitative Data Analysis

Qualitative data generated through observations, focus group discussions, and interviews were described and summarized. Thematic analysis was deployed to analyze the qualitative data. While conducting thematic analysis, data collected from interviews, focus group discussions and direct observation was transcribed. In order to get familiarized, the data was read, and relevant points were highlighted to be coded. Then, the lists of codes were sorted into themes. The themes were reviewed again whether they support the collected data. Finally, the themes and sub themes were defined and the data that fit under each theme was written up in direct quote or being paraphrased.

3.8.2. Quantitative Data Analysis

The survey data collected was edited, coded and entered into a computer for analysis using Statistical Packages for Social Science (SPSS 20) and STATA 13 soft wares.

The study had used both descriptive statistics and econometric technique for analyzing the quantitative data. The descriptive statistics had used frequency, percentage, mean, range, standard deviations to describe the characteristics of the respondents. The econometric technique used in the study was binary logistic regression model to determine the likelihood/ probability of being food secure/insecure and income secure/insecure.

Household Food Insecurity Access Scale (HFIAS) generic questions were forwarded to respondents to measure the food security (access) status of household in the study *woredas*. The standardized questions had 9 items with 4 frequency options with a recall period of four weeks (30 days). The respondent was first asked an occurrence question in the past four weeks (yes or

no). For “yes” response, a frequency-of-occurrence question was asked to determine whether the condition happened rarely (once or twice), sometimes (three to ten times) or often (more than ten times) in the past four weeks. The Household Food Insecurity Access Prevalence (HFIAP) was used to categorize the households’ food insecurity into four categories (food secure, mildly food insecure, moderately food insecure and severely food insecure) and into categories (food secure and food insecure).

Using the USAID-FANTA (2008), food secure households were the households which did not have the food insecurity/ access condition, or rarely worry about food. Mildly food insecure (access) households worried about not having enough food sometimes or often, and/or were unable to eat preferred foods, and/or ate a more monotonous diet than desired and/or some foods considered undesirable, but only rarely. Moderately food insecure households were those eating a monotonous diet or undesirable foods sometimes or often, and/or reduce the size of meals or number of meals, rarely or sometimes. Severely food insecure/access households reduced meal size or number of meals often, and/or experienced any of the three most severe conditions (running out of food, going to bed hungry, or going a whole day and night without eating).

The four categories were grouped into two general groups as food secure and food insecure. The first two categories (food secure and mildly food insecure) were taken as food secure; while, the other two categories (moderately food insecure and severely food insecure) were considered as food insecure.

The poverty line was used to define the income-poverty status of the households; where, those below the poverty line ($ 1.9) were considered as poor and those above the poverty line as non-poor. As per 2016, the Purchasing Power Parity (PPP) conversion factor of Ethiopia is 8.60 which was used to convert $1.90 (poverty line per person per day) into Ethiopian Birr (ETB). Therefore, 8.60 is multiplied by $1.90 giving national extreme poverty line of 16.34 ETB per person per day.

Household size is converted into adult equivalent to compute income per adult equivalent of households. The AE value is determined using the following formula (Shinns and Lyne, 2002).

$$\text{No of AE} = (\text{No. adults} + 0.5\ \text{children})^{0.9}$$

Where:

No. of AE = number of adult equivalents in the household,

No. of adults = number of household members aged 15 years or older,

No. of children = number of household members younger than 15 years old.

Then amount of income each AE received was measured against the National Poverty Line (NPL). Those households having less than 16.34 ETB per AE per day were categorized as poor; while those above 16.34 ETB per AE per day as non-poor.

3.8.3. Econometrics Model

Quantitative variables (household size, number of economic dependents and income) as well as qualitative variables (sex, marital status, literacy level, income variability, income-poverty status and food security) were included in the model as variables. Ui is disturbance term and assumed to have zero mean and constant variance.

3.8.4. Model Specification

Based on the theoretical review and empirical considerations, the following model is specified by using binary logistic regression model.

The binary logistic regression is used to assess the relationship between independent variables and the dependent variable; where, the dependent variable is dichotomous. According to Gujarati (2004, p 581), binary logit is employed when a study has qualitative response variable, or regressand taking two values. In other words, the regressand is a binary, or dichotomous, variable. In regression, for E(Yi | X1i , X2i , . . . , Xki), where the X's are regressors, both quantitative and qualitative and Y is qualitative, the objective is to find the probability of something happening. Hence, qualitative response regression models are often known as probability models. This study has outcomes (income-poverty status and food security) having probability of happening being either secure (non-poor, food secure) or insecure (poor, food insecure). The dependent variables have dichotomous values taking a value 1 if the households are non-poor for income-poverty status and food secure for food security status and 0 otherwise. Thus, the binary regression is used in order to measure the association between the outcome variable and the independent variables.

The mathematical (functional) expression of the model is given as follows:

$$logit(\mathrm{Y}) = 0 + 1X1i + 2X2i + \cdots + Xni$$

The functional form of the regression model estimates the factors that affect the income-poverty status and food security of UPSNP beneficiary households in Addis Ababa.

$$Y1 = f(X1, X2, X3, X4, X5, X6, X7, X8, E)$$

$$Y2 = f(X1, X2, X3, X4, X5, X6, X7, X8, E)$$

Where:

Y1 = income-poverty status; 1 if the respondent is non-poor, 0 otherwise

Y2 = Food security; 1 if the respondent is food secured; 0 otherwise

X1 = Sex of household head; 1 if male, 0 female.

X2 = Marital Status of household head; 1 if the households are married, 0 otherwise

X3 = Educational level of household head; 1 if the households are literate, 0 otherwise

X4 = Variation of household head income after joining UPSNP; 1 if the households' income vary, 0 otherwise

X5 = Household Size

X6 = Monthly income from UPSNP

X7= Monthly income from other livelihood sources

X8= Number of economically inactive members

E=error term

The explicit estimable binominal logistic econometric model is formulated as follows for both income-poverty status and food security.

$$Y1 = \beta 0 + \beta 1x1 + \beta 2x2 + \beta 3x3 + \beta 4x4 + \beta 5x5 + \beta 6x6 + \beta 7x7 + \beta 8x8 + E$$

$$Y2 = \beta 0 + \beta 1x1 + \beta 2x2 + \beta 3x3 + \beta 4x4 + \beta 5x5 + \beta 6x6 + \beta 7x7 + \beta 8x8 + E$$

3.8.5. Multicollinearity Test

A test of multicollinearity had been conducted to determine the correlation of the independent variables. As stated in Mendenhall and Sincich (2003, Section 7.5), multicollinearity refers to the extent to which an independent variable could be explained by other independent variables in the analysis. If it is too high, this can have harmful effect on regression. Multicollinearity occurs when two or more predictors in the model are correlated and provide redundant information about the response. It is a situation where the variables are too highly correlated. The correlations between constructs were checked for multicollinearity, and the results showed that the correlations between explanatory variables were measured by variance inflation factor (VIF). Since the VIF is less than 10 (mean vif=6.25) which shows the absence of multicollinearity problem in the analysis.

3.8.6. Autocorrelation

As per Gujarati (2004, p 441), in cross-section studies, data are often collected on the basis of a random sample of cross-sectional units, such as households (in a consumption function analysis) or firms (in an investment study analysis), so that there is no prior reason to believe that the error term pertaining to one household or a firm is correlated with the error term of another household or firm. Therefore, testing autocorrelation in this analysis is not important.

CHAPTER FOUR: RESULTS AND DISCUSSIONS

4.1. Socio-Demographic Characteristics of Households

A total number of 329 households had participated in the study: 156 from Addis Ketema sub city (*woreda* 5) and 173 from Arada sub city (*woreda* 1). Age, sex, marital status, educational level, household size, and age of household members were the socio-demographic variables included in the study. The finding in this study showed that, in both sub cities, majority of the households were female headed (51.1%). *Woreda* 1 of Arada sub city had 42.8% male headed and 57.2% female headed households; whereas, *woreda* 5 of Addis Ketema sub city had 55.8% male headed and 44.2% female headed households.

The head of the households age ranges from 23 to 68 with mean age of 45 (SD+1.32). Very small proportion (11.6%) of the household heads were in their twenties (20-29) and those who were above the age of 55 were 29%. Most (70.5%) of the head of the households were under 55 years which is considered as productive age group. The 276 (84%) of the sampled households are from conditional beneficiaries that had members who could engage in physical work of the program. Thus, the result of the study (70.5% household heads under 55years) asserts that they are grouped as conditional beneficiaries that engage in the public activities of the Urban Productive Safety Net Program (UPSNP). Though 70.5 % of the households' heads are in productive age groups, they are beneficiaries of the program. This could be due to having large household size, large number of economically dependent members, or having jobs with low income earnings.

Table 4.1 Size of Households

Household Size	Frequency	Percentage (%)
1-2	33	10
3-4	179	54.4
5-6	76	23.1

7-8	27	8.2
>9 (9-11)	14	4.3

Source: Author's Research survey, 2018

As shown in Table 4.1, the households size ranged from 1 to 11 persons and had mean of 4.43 (SD+1.96) person. The majority (54.4%) had 3-4 household members and 23.1% had 5-6 members. This is similar with the study conducted in Dessie by Tesfaye (2016) where 57.14% respondents had 3-4 family members. As studies showed, household size and poverty have inverse relation which means that as the size of household increases the households will tend to be poor (Yibrah Hagos, 2014).

Table 4.2 Ages of Households' Members

Household members	Number of members	Percentage (%)
<15 years	271	82.4
15-64 years	323	98.2
>65 years	15	4.6

Source: Author's Research survey, 2018

According to Table 4.2, households having children (<15 years) were 82.4%. The number of children per household below 15 years ranged from 0 to 6 with mean of 1.68(SD+1.28); while the majority (62.3%) having 1 to 2 children. The finding shows that significant number of the study population have children (<15 years) that are dependent on the income earned by other members of the household.

Among the total number of the households, 75.4% had one to three age-dependent members. The number of the dependent ranged from 0 to 10, with mean 2.32(SD+1.49). The age-dependency ratio of the study population, calculated by the statistical formula (# (Age<15+>65) / # (Age 15-

64)) was 0.89. The age independents' size is relatively more than the dependents' among the respondent households. This implies the most members of the households are in the productive age group that could involve in income generating activities.

Table 4.3 Educational Profile of Respondent Household Heads

Educational Level	Male Headed HH (%)	Female Headed HH (%)	Total HH (%)
No formal education	36.6	57.1	47.1
Read and write	33.5	20.2	26.7
Completed primary education	26.1	18.5	22.2
Completed secondary education	3.1	3.6	3.3
Completed higher education/ certified	0.6	0.6	0.6

Source: Author's Research survey, 2018

With regard to the finding of the survey, as shown in Table 4.3, nearly half (47%) of the respondents did not attend formal education. Among those that had attended formal education, 22.2% completed primary education and only 3.3% completed secondary school. About 26.7% of the respondents were able to read and write. There are a total of 53% of the households' heads that were literate (including those who can read and write), out of which 63.4% were male headed and 42.9% were female headed. The study population has nearly equal number of literates and illiterates. However, low literacy levels (read and write and completed primary educations) account most of the literates in the study population. This implies that the study population has low literacy level.

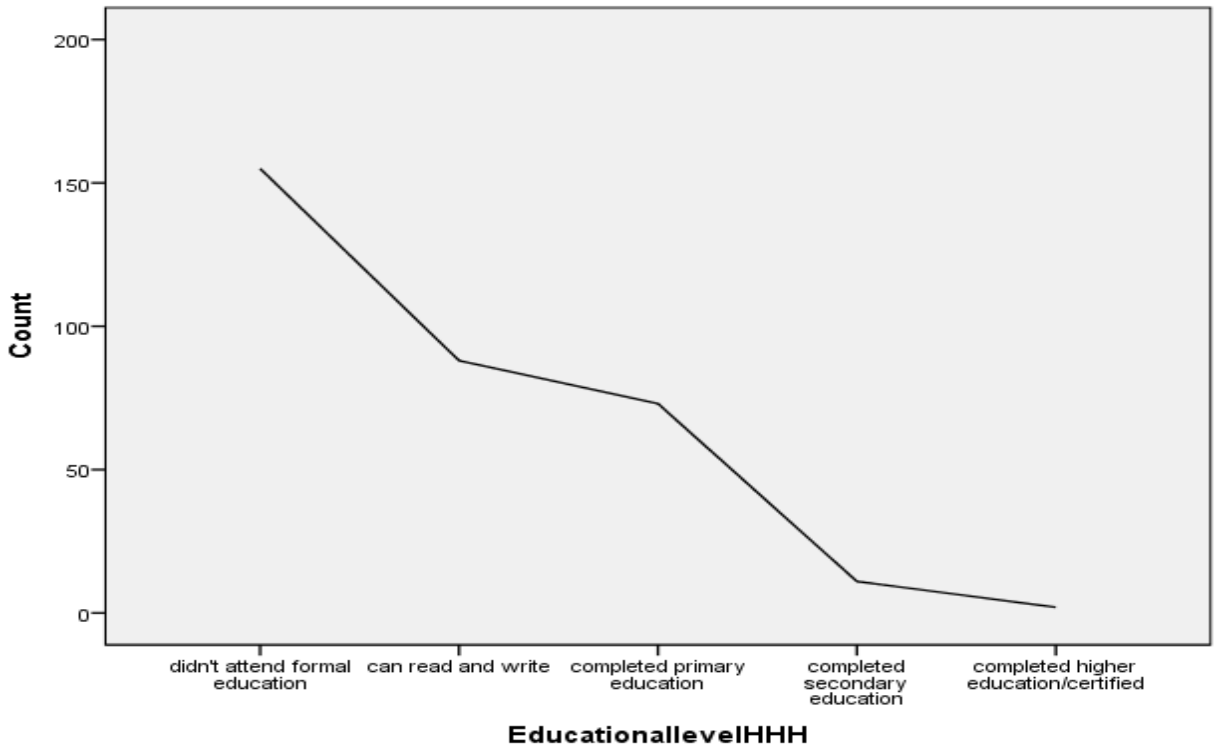

Figure 4.1: Level of Education of Household Heads (Source: SPSS result)

As Figure 4.1 shows, there is a decrease in the number of household heads as the level of literacy increases. In 2010/11, households headed by individuals who reported themselves to be illiterate were 34 percent more likely to be poor at the national level and 41 percent more likely to be poor if they lived in urban areas (MoFED, 2013). Other surveys had been showing the relation between low level of literacy and poverty among urban households. This study's result also reflects similar thing where the majority of the poor in the study areas have low level of literacy. Low educational level could not allow them to involve in well-paid jobs. They will be forced to engage in activities that only require their labor as it was explained in Degefa's (2008) study in Addis Ababa. He stated that the urban poor are usually engaged in low income earning means of livelihood as a result of low education level they have. It can be concluded that due to their low literacy level, the study population will engage in low payment jobs which is also assured in the findings of livelihood activities they are engaged. Therefore, the low income generation could have contributed to the existence of the households below poverty line.

Table 4.4 Marital Distribution of Respondents by Gender of Household Head

Marital status	Male Headed HH (%)	Female Headed HH (%)	Total HH (%)
Unmarried	5.6	22.6	14.34
Married	86.3	0.6	42.6
Divorced	1.2	18.5	10
Widowed	5	52.4	29.13
Separated	1.9	6	3.9

Source: Author's Research survey, 2018

The survey result showed that, as shown in Table 4.4, the majority of the respondent households were married (42.6%) and widowed (29.13%). Out of the male headed households, the majority (86.3%) were married; whereas, out of the female headed households, 52.4% were widowed in the study areas. The survey shows large proportion of widows among the female headed households in the study areas. Moreover, 99.4% of the female headed households were single (unmarried, divorced, separated or widowed). Almost all the female headed households are single mothers which could have contributed for their vulnerability to poverty. As Girma's (2012) finding showed, food insecurity was worse in female headed household implying that males are to some extent more engaged in income generating activities than females. Similarly, this study's single female heads could not engage in intense income generating activities which could expose their households have insecure livelihood.

In general, majority of the study areas have household heads within the productive age group (<55years), higher household size, having children (<15 years), having more age-independent members, household heads having low literacy level, married male headed and single female headed households.

4.2. Livelihood Capitals/ Assets

As per Chambers and Conway (1992:7) definition, a livelihood comprises the capabilities, assets (stores, resources, claims and access) and activities required for a means of living. The livelihood capitals determine the livelihood opportunity and livelihood security of households. The assets allow households to generate income, meet their basic needs, manage risk, and cope with stresses and shocks. The five assets the respondents possess are discussed below.

4.2.1. Physical Assets

People may own, rent or have access to physical assets. As stated in USAID (1992), physical asset refers to goods and infrastructures such as housing, tools, household equipment and public infrastructures. The study included housing condition, household possessions and public amenities (water, latrine, drainage, solid and liquid waste disposal, health, educational and road facilities, energy source) as physical assets of the respondents.

i) Housing Condition

House Tenure: According to the study, there were five house tenure forms. These include renters from government (*Kebele*), renters from private owners, renters who live by sharing (*Debal*), private owners and temporary settlers (termed as shelter houses). From the survey result, most (56.2%) of the respondents lived in the *kebele* houses (payment ranging from 3.50 - 11.00 Ethiopian birr (ETB))[10], about 19.1% lived in houses rented from private owners (rental payment ranging from 500-1,500 ETB), 17.3% lived in shelter houses (plastic made houses) which were built as a result of displacement for redevelopment purpose, 5.5% lived in shared house with others, and only 1.8% lived in their own houses. As per UN-HABITAT (2017), housing in Addis Ababa is unaffordable pushing most low-income households to prefer *kebele* houses. Almost all respondents of this study do not have their own houses which had been one of the targeting criteria for the beneficiaries to be included in Urban Productive Safety Net Program (UPSNP).

Number of Rooms: Regarding compartmentalization of the houses, the EDHS (2016) report showed that 70.3% of the national and 65.2% of the urban households had single room for sleeping. In addition, similar study by Abnet, *et al*. (2017) revealed, more than 30% of the Addis

10 One US Dollar is equivalent to 27.7891 Ethiopian Birr (ETB) as per Commercial Bank of Ethiopia on April 23, 2018
https://www.combanketh.et/More/CurrencyRate/tabid/110/ctl/Summariz%20Exchange%20Rate/mid/535/Default.aspx

Ababa population had a single roomed houses. Most of the houses in this study area lack compartments with no separate space for kitchen, bed room or living room. The majorities (62.9%) have only one room and 37.1% have two rooms with varying sizes. The type of houses observed during the direct observation were single small sized room, one room partitioned by some materials to make two rooms, lengthy but small width room, and extended rooms towards open spaces (such as corridors or porches) as an additional room.

It was seen during the observation that the households' members shared the few rooms for all purposes such as for sleeping, staying, cooking, and bath taking purposes. Their household items were not placed appropriately i.e. all the cooking utensils, living room and bedroom materials were placed in the same place, their sleeping spaces were confined, and their houses were filled with cooking smell due to lack of separate room. From the conversation during the direct observation, a resident living with HIV/AIDS described her housing condition as she had suffered from insufficient space for her child and herself. Her house had a very small space remained for cooking, making her one roomed house warmer. This had caused danger for placing her medicines that should have been kept away from heat sources.

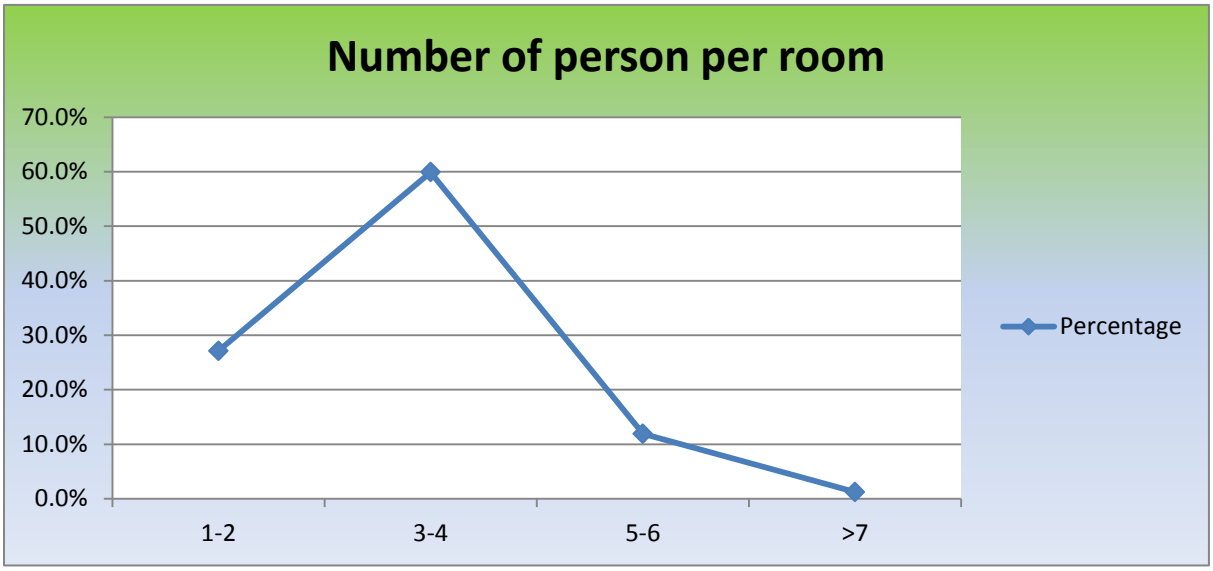

Figure 4.2: Number of Person per Room of Respondent Households (Source: Author's Research survey, 2018)

Spacing: By dividing the household size by the number of rooms, the households' spacing was calculated. Based on the calculation, as shown in Figure 4.2, the number of persons per room ranged between 1 and 8 having a mean of 3.41 persons per room. According to figure 4.2, more

than half (59.9%) had 3-4 persons living in a room, 27.1% having 1-2 persons per room, 11.9% having 5-6 persons per room and 1.2% having more than 7 persons per room.

As WB (Ethiopia Urbanization Review, 2015) stated, the informal and *kebele* housing in Addis Ababa was often overcrowded which make the residents vulnerable to shocks. Based on the UN-HABITAT (2006/7) standard parameters for housing, the study area is categorized as overcrowded or 'slum' (72.9% having more than three people sharing one room).

According to Adler & Newnam (2002) and Krieger & Higgins (2002) as cited in Chapman, *et al.* (2017), crowding is often a marker of poverty and social deprivation, a defining characteristic of slum housing. It is associated with exposure to infectious disease. Therefore, the majority of the study population have high probability of being exposed to infectious diseases as a result of their crowdedness and less compartmentalization of rooms in their houses.

The housing condition of the respondents in relation to ownership, ventilation, the condition of roof and wall were assessed. It is summarized in Table 4.5.

Table 4.5 Housing Condition of Respondent Households

	Frequency	Percentage (%)
House tenure		
Owned	6	1.8
Rented (Private)	63	19.1
Shared	18	5.5
Rented (*Kebele*)	185	56.2
Temporary settlement (Plastic thatch shelters)	57	17.3
Ventilation		

Ventilated	90	22.4
Poorly ventilated	239	72.6
Roofing material		
Iron sheet	283	86
Plastic thatch	46	14
Condition of roof		
Good	130	39.5
Leaks	179	54.4
Dilapidated	20	6.1
Wall Material		
Mud	232	70.5
Corrugated Sheet	46	14
Plastic thatch	45	13.7
Bricks	5	1.5
Blocks	1	0.3

Source: Author's Research survey, 2018

As presented in Table 4.5, based on the survey finding and the direct observation, about 72.6% of the houses were found to be poorly ventilated, with very small sized and a few or no window which are insufficient for the free movement of air and access to sun light. Most of the houses,

86% had roof made up of iron sheet and the remaining 14% were made of plastic thatch. According to the observation and assessment conducted regarding the status of the roofs, 54.4% were found to leak and 6.1% were dilapidated, with only 39.5% found to be in good condition. Concerning the wall of the houses, 70.5% were made up of mud, 13.7% plastic thatch, and 14% corrugated iron sheet. According to the observation, the condition of the wall was found to be good in 57.8%, partially ruined in 35% and dilapidated in 7.3% of the households.

Figure 4.3: Houses in the Study Area a) *kebele* house with iron corrugated wall in Arada sub city (top left) b) *kebele* house with low and leaking roof in Addis Ketema sub city (top right) c) congested *kebele* houses in Arada sub city (bottom left) d) temporary shelter with plastic thatch in Arada sub city (bottom right) (Source: direct observation, 2018)

Figure 4.3 shows the *kebele* houses and the shelter houses made up of plastic thatches in the study areas. The plastic houses are made when they were displaced for redevelopment purpose. The *kebele* houses are built congested to each other. They have the appearance of old and poor quality. From the direct observation, some houses with mud walls were ruined and made fixed

with materials such as corrugated iron sheets. Most houses have low roofs and stones, woods, and some other materials were put on the roof to hold the materials placed on the roof to protect leakages.

The majority of the *kebele* houses in Addis Ababa was described in UN-HABITAT (2017) as sub-standard and is often characterized as slum houses which constitute about 9% of the total housing stock in Addis Ababa. While stating the UN-HABITAT's (1996) definition of adequate shelter, it comprises of adequate space, structural stability and durability, adequate lighting, heating and ventilation, adequate basic infrastructures such as water supply, sanitation and waste management facilities, etc…. Bonnefoy (2007) had reflected in his article about the relationship between living and housing condition and human health. Accordingly, the study population has inadequate living conditions which could expose them to health related problems. So, from the above discussions it can be concluded that the majority of this study's respondents are living in poor housing conditions having poor ventilation, leaking roofs, ruined wall (more than one-third partially ruined) and congestion among houses.

To summarize the housing condition of the study areas, the majority has *kebele* houses paying between 3.50- 11 ETB per month, one roomed houses, and more than 3 persons occupying a single room together. Besides, the majority houses are poorly ventilated houses with roofs having leakages. These findings imply the necessity of intervention in the aspect of housing for the poor households. UPSNP, besides the cash transfer, should include the alleviation of housing problem of the urban poor in its future interventions.

ii) Household Possessions

The respondents were asked the availability and the adequacy of basic household assets they possessed. The adequacy is described in terms of having more than one to use it for change. Their responses are summarized in Table 4.6.

Table 4.6 Availability of Household Possessions among Respondent Households

Basic Needs	Adequate		Inadequate		Not Available	
	Freq.	%	Freq.	%	Freq.	%
Blanket	123	37.4	199	60.5	7	2.1
Bed-sheet	108	32.8	200	60.8	21	6.4
Clothing	152	46.2	170	51.7	7	2.1
Assets						
	Available (%)		Not available (%)			
Furniture	55		45			
Radio	40.4		59.6			
Television	58.4		41.6			
Refrigerator	15.5		84.5			

Source: Author's Research survey, 2018

As seen from Table 4.6, most of the households lacked or had inadequate number of basic items such as blanket, bed-sheet and clothing. Households that had adequate blanket, bed-sheet and clothing were 37.4%, 32.8% and 46.2%; on the other hand, 60.5%, 60.8% and 51.7% had inadequate and 2.1%, 6.4% and 2.1% had no for the respective items. Among the total households in the study, about 55% of the households had furniture (chair, table and bed), 40.4% owned radio, 58.4% owned television and 15.5% owned refrigerator. From the three focus group

discussions (FGDs), the cash transfer was not adequate enough to buy the basic household assets. It was mentioned that the cash transfer had allowed some of them to buy simple and low cost household assets (such as cooking utensils, bed sheets, and bedcovers). However, for most beneficiaries, it was impossible since the cash amount was not adequate enough to purchase items other than food items.

The finding of Akter (2013) in Comilla, Bangladesh, showed that the aid amount in the Employment Generation Program for the extreme poor which was under the social safety net (SSN) program had enabled 82.1% of respondents to meet their clothing needs after getting the SSN program's money. By citing the finding of Khuda (2011), Akter mentioned the positive effect of the program by improving household assets and clothing. On the contrary, the result of this study showed that the cash support of the UPSNP could not enable the majority beneficiaries to fulfill their basic household assets. This could be because it has been only a year since the households have received support from UPSNP. The program could have potential of yielding positive impact on household possessions as the support year increases and the cash adjustment is made.

iii) Public Amenities

The study had included the public facilities such as sanitation facilities (waste disposal and hygiene facilities) and basic services (water supply, energy source, health, education and road facilities) which are discussed below.

a) Solid and Liquid Waste Disposal

The study populations' solid and liquid waste disposal was assessed both through household survey and direct observations. Accordingly, for the 289 (87.8%) households, there were drainages either in their living compounds, villages or both for disposing waste water. Whereas, 40 (12.2%) did not have drainages both in their living compound and in their villages. The functionality of the available drainages was reported by 265 (91.7%) respondents while 24 (8.3%) reported the presence of drainages but are not allowing the passage of liquid waste which had forced them to dispose either on open spaces or in to river around their residence. Besides, from the survey result, the health problems resulting from properly unmanaged drainages were listed as diarrheal disease 2 (6%), common cold 43 (13.1%) and exacerbating asthma 1 (0.3%). Almost 20% (64) of the beneficiaries in the study areas were challenged by non-functionality and

unavailability of drainages of the available drainages. Thus, open spaces and water body were their available means for waste water disposal (the river refers to those residing in Arada sub city, near *Gordeme* River). As per WB, there had been estimation that only 25-30% of households in Addis Ababa had waste water collection, either through piped sewer line or vacuum trucks. The remaining significant proportion of the population disposes liquid wastes in the open spaces and water bodies which contribute to negative impact on health and environment (WB, 2015). The WB assessment also revealed the problem associated with liquid waste management remains very critical, especially among the urban poor. Therefore, UPSNP which is also concerned with the development of social infrastructures should consider the building up and maintenance of drainages where necessary.

Concerning solid waste disposal, all the respondents disposed solid wastes by collecting wastes from their households inside sacks which were taken by the city municipality (door-to-door solid waste collectors). From the survey, 3.6% of the households reported the presence of solid waste piles near their residences and 16.7% along roads in their residence areas. 11.2 % of the respondents claimed that they had suffered from health related conditions such as common cold and exacerbation of asthma as a result of the poorly managed solid waste in the neighborhood. With regard to the effect of the poorly managed solid waste on the environment, 17.9% of the respondents mentioned the presence of bad odor, causing disease and affecting the esthetic value of the environment. The direct observation revealed that the sanitation of the resident areas were good; however, there had been areas having solid wastes disposed inside drainages and along roads and fences creating bad odor and reducing esthetic value of the areas.

Figure 4.4: Solid Wastes Disposal a) along road in Addis Ketem sub city (left) b) in drainage in Arada sub city (right) (Source: direct observation, 2018)

As seen in Figure 4.4, there are wasted disposed along roads and drainage within the residence area of the study area. During conversation with residents in the area, the wastes were thrown out by the community expecting the safety net workers to collect the wastes. It was described that some residents were more concerned in keeping their compounds clean, but they are negligent in handling waste outside their compounds. This indicates that awareness should be made among the community about the potential impact of inappropriate waste management.

In general, the majority of the respondents in the study areas have proper solid and liquid waste disposals, except for a few (12.2%) having no drainage facility. Thus, building and maintenance of drainage is required for areas having non-functional and unavailable drainages facilities. As part of social infrastructure development, UPSNP should try to address the drainage need of in order to reduce pollution resulting from waste management. Community awareness creation related with waste management should be undertaken in order to make the community enhance the environmental protection together with the public workers.

b) Hygiene Facilities

The hygiene facilities assessed in the study were the availability of rubbish bin or pit, cloth and dish washing facilities, drying racks for clothes, bath taking facilities and water container/storages. All the respondents had sacks for collecting solid wastes that were taken by the waste collectors. All respondents did not have both cloth and dishes washing facility in their house as well as in their living compound. They used plastic washing bowl for washing clothes within their houses or living compounds. All had reported the presence of drying racks that were commonly shared with nearby residents either within or outside their living compound. Besides, they had plastic jars to store water both for drinking and washing purposes. Majority of the respondents 296 (90%) had no bath washing facilities which had forced them to take bath inside their houses using plastic barrel; whereas, some of the members took bath somewhere else with payment.

The direct observation had clearly shown the problem that exists in the study areas regarding hygiene facilities. The residents did not have enough space to carry out cloth washing due to the congestion of the houses. They use piles of tires or stones to wash clothes at their door-steps. The drying racks were fixed along passage ways due to scarcity of space to be shared by nearby

households. In general, the households had rubbish bin or pit, drying racks for the clothes, water container/storages; whereas, they did not have bath and cloth and dish washing facilities.

The latrine types available in the study area were private and public latrines which were either made up of wooden slab or cement. Out of the 329 respondents, the majority 273 (83%) had cemented public pit latrines, whereas 29 (8.8%) had cemented private pit latrines, 15 (4.6%) had public pit latrine with wooden slab, 4 (1.2%) had private pit latrine with wooden slab and 8 (2.4%) had no latrine. Based on sharing of latrines with other households, 87.6% share while 10% did not share. Hence, according to the definition of improved toilet facilities (unshared among households which was stated in EDHS, 2016), most of the households (87.6%) had unimproved, and a few (10%) had improved latrine facility.

Figure 4.5: Toilets in the Study Area a) public toilets shared by households in Addis Ketema sub city (left) b) shared toilet in Arada sub city (middle) c) toilet having no wall in Arada sub city (right) (Source: direct observation, 2018)

Figure 4.5 shows latrines available in the study sites. These toilets are public toilets shared by households residing in the same area. Some have well-built walls while others don't have any. EDHS (2016) had reported 16% of urban households Ethiopia had improved/unshared and 84% shared toilet facilities. Similarly, this study's areas have less access to improved latrine facility reflecting the common feature of most urban areas of Ethiopia.

Regarding the problems related with latrines, 31.9% of the respondents stated the presence of problems. The mentioned problems were inadequate number of latrines 43 (13%), absence of latrines in the near future 26 (7.9%) because they were using temporary latrines that were going

to be removed soon for redevelopment purpose, leaking of public latrines 18 (5.5%), hygiene related problem 17(5.2%), and toilet without wall cover 1 (0.3%). As per the direct observation, most of the public toilets had a few number of latrines (three) that were shared by a number of households. Besides, they had bad odor that could reach the nearby residences. In other area of the study, there were toilets which were very close to living houses, with small latrine holes, with plastic and cloth covering as a wall and with no roofing.

According to the CSA Welfare Monitoring Survey (2012), an estimated 72.27% of Addis Ababa residents were without access to adequate toilet facilities because the personal hygiene infrastructure of the city was highly inadequate. The city has been challenged by provision of adequate toilet facility which influence the quality of life by threatening the public health.

It can be concluded that the study population does not have access to adequate latrine, bath taking and washing facilities. Therefore, the community is living in a poor hygienic living environment which makes them prone to diseases and medical expenses. Along with the cash transfer, UPSNP should broaden its intervention towards the basic hygiene facilities which the urban poor households lack.

c) Basic Services

The thesis has studied the basic services available in the study area including electric access, water supply, health, education and road facilities.

Access to Electricity - Nearly all urban households (93%) have electricity and have largely reached a universal electricity access rate (EDHS, 2016 and WB, 2015). This study's survey reflected similar results, where 96% households had access to electric power supply whereas the remaining 4% lacked electric power so that they used candles and kerosene as power source for lighting. As per the focus group discussions, most beneficiaries were using electric power by sharing line from their neighbors. For the purpose of cooking, almost all 320 (97.3%) used firewood and charcoal and a few 9 (2.7%) used dung. Other studies signify that source of energy reflects the income status of residents in urban areas. Traditional stoves and woody biomass represent the major source of energy for cooking, heating and lighting among low income households in Addis Ababa (UN-HABITAT, 2017). Thus, due to their low income status the study population is completely dependent on traditional energy source for cooking in order to minimize their electric expenses.

Access to Water Supply - The respondents had different access of water which was from taps found in their living compounds, from public taps and buying from nearby water sources. 138 (41.9%) had access to water taps found in their living compounds mostly sharing with residents in the compound. More than half (52%) accessed water from public taps available in their community. The remaining 12 (3.6%) neither had access to private nor public taps in their settlements which had forced them to go to nearby or walk some distances to buy and fetch water. Concerning the availability of water supply problem, 303 (92.1%) did not mention water supply problem, while 26 (7.9%) had listed out the problems as: inadequacy of public water taps (1.8%), currently not functioning water taps (2.4%) as a result of redevelopment activity and distant access to water (3.6%) to buy. Thus, all households have access to improved/safe (clean) water sources, though there is inadequate water supply for a few households in the study area.

Health infrastructure- According to the 2017 report of UN-HABITAT, there was an increase in national health infrastructure (health centers and hospitals) in Ethiopia raising its service coverage to 92% in 2012. For the same year, however, Addis Ababa has only expanded its health infrastructure with 62 health centers, bringing services coverage to 62%. As per this study's survey result, all of households had access to health facilities. 70.5% had a close access to health centers, 2.7% to government hospitals, 26.6% to both health center and government hospital. Near to 3% of the households got free health coverage using the support card from UPSNP.

Educational Infrastructure -Regarding access to educational facility, all of the households had access to preschool, primary and secondary schools in proximity. Similar report was given by UN-HABITAT (2017) that Addis Ababa has shown significant improvement in educational infrastructure that, in turn, improved accessibility as well as reducing overcrowding in each class.

Road Facility - Roads in the study areas were 59.6% made up of cobble stone, 19.1% made up of flat stones, whereas the remaining 21.3% were unpaved roads. The unpaved type of road was mainly among the residents in Arada sub city residing in the redevelopment area.

In general, almost all the study population has access to electricity for lighting and water supply either from private or public taps except those having temporary settlement. All the respondents use traditional source of energy (coal) for cooking purpose. Both private and public educational

and health facilities are nearly available to the study areas. Almost all the study areas are having paved roads either made up of cobble or flat stones.

4.2.2. Human Assets

Human asset refers to the livelihood knowledge and capabilities possessed by individuals, in addition to the intangible character traits (ambition, drive, persistence, etc.) and health status that determine how effectively individuals apply their knowledge and capabilities to livelihood activities (USAID, 1992). Human asset is essential in order to use the other kinds of assets that exist. According to the survey of the study, the human assets of the respondents refer to household head's education level, and household members' health and ability to work.

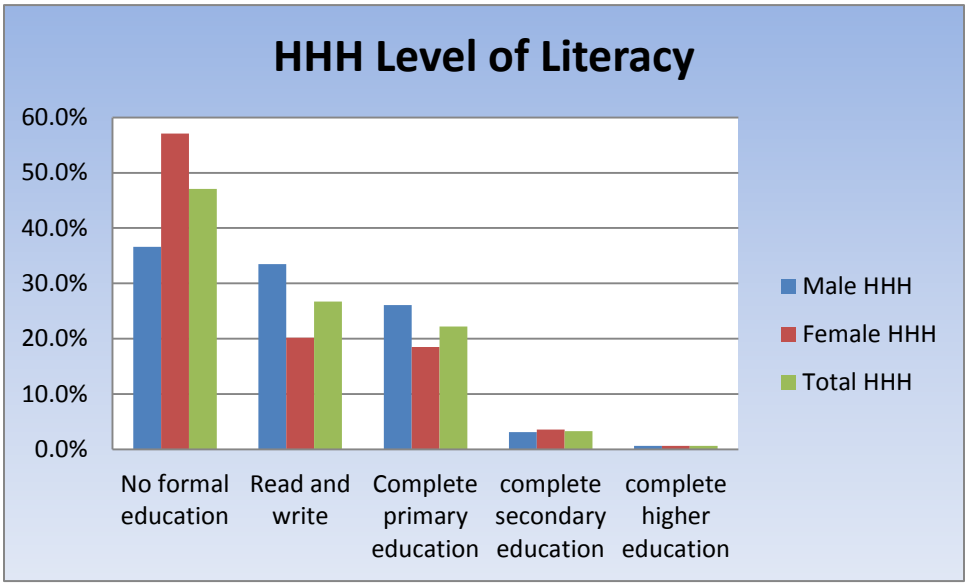

Figure 4.6: The Educational Level of Household Heads in the Study Area (Source: Author's Research survey, 2018)

As Figure 4.6 shows, nearly half 47% of the respondents did not attend formal education. From those that had attended formal education, 22.2% completed primary education and only 3.3% completed secondary school. About 26.7% of the respondents were able to read and write. Including those who can read and write, there were a total of 53% literate household heads. Out of this, 63.4% were male headed and 42.9% were female headed. Those who could read and write and those who had completed primary educations account most of the literates in the study population. Other surveys had showed the relation between low level of literacy and poverty among urban households. Yitagesu's findings in Somali showed large proportions (79.6%) of

PSNP beneficiary household heads being illiterates. He concluded that it is not difficult to infer that for significant majority of household heads, their poor educational level might contribute for their food insecurity status. If it was not the case, they would have been engaged in other diversified activities such as government employment and other business activities in their large number (Yitagesu, 2014). This study's result could also reflect similar thing where the low level of literacy could not allow them to engage in better income earing jobs.

Table 4.7 Number of Household Members Based on Economic Activity

Household members	Range of number	Number of HH	Percentage
Dependents(economically inactive)	0-10	307	93.3
Independents (economically active)	0-10	308	93.6

Source: Author's Research survey, 2018

From Table 4.7, regarding the ability to work for making a living, the households members were categorized as dependent (economically inactive) and independent (economically active). The households had 0 to 10 members who could earn and could not earn income for their households. The households had one (32.2%) and two (40.4%) economically active members which is similar with the finding of Akter (2013): 66% and 30.1% having only one and two respectively. Regarding economically inactive members, 24.6%, 29.2 %, 21.6% and 10.3% had one, two, three and four economically inactive members. The findings imply that the majority households have one and two economically active members which are lesser than the number of members who do not earn income for the households. Therefore, regarding economic-dependency ratio, for the majority households, the economically dependents outnumber the independents which reduces the income per adult equivalent of the households. In other words, the income earned by the few members will be shared with the larger dependent members of the households. Thus, the households will remain below subsistence level.

There had been different reasons for the members of the households to be economically inactive. The mentioned ones were being student, difficulty to find jobs, disability, chronic illness, being too young or too old, and looking after household activities.

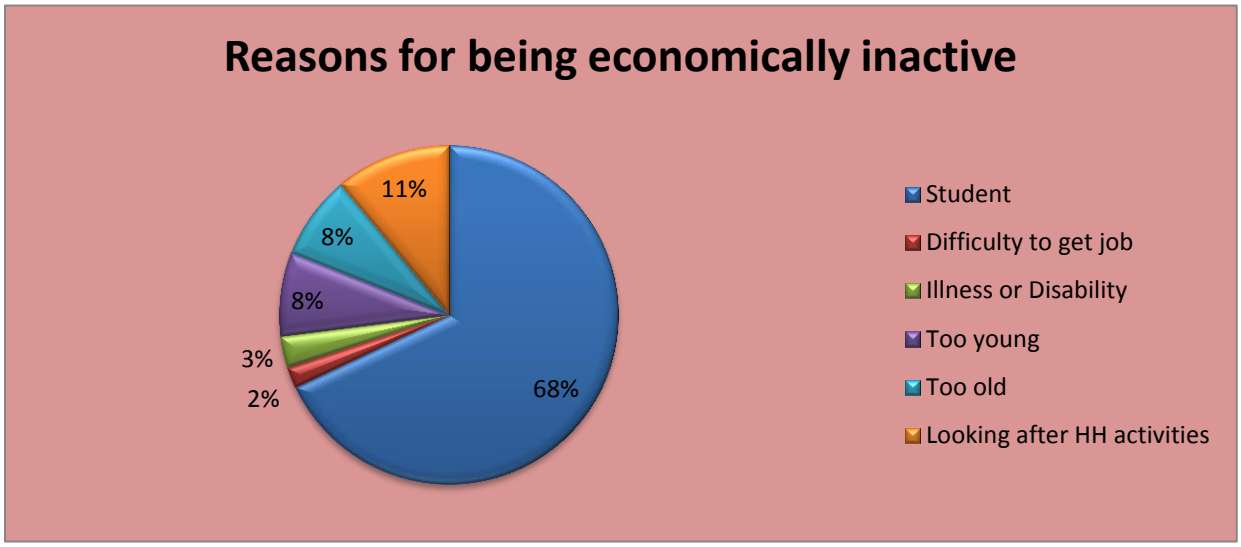

Figure 4.7: Causes of Dependency of Members of Households (Source: Author's Research survey, 2018)

As the Figure 4.7 shows, the major reason for dependency was being student accounting 68%, followed by looking after household activities (11%). 8 %, 8%, 3% and 2 % were for being too old, being too young, chronically ill or disabled, and difficulty to get jobs respectively. The majority dependents are children who are enrolled in school and a few staying at home looking after household chores. This confirms the finding that significant number of households (82.4%) having children (<15 years). Hence, it can be concluded that most households have children (reaching learning age) who are enrolled in school.

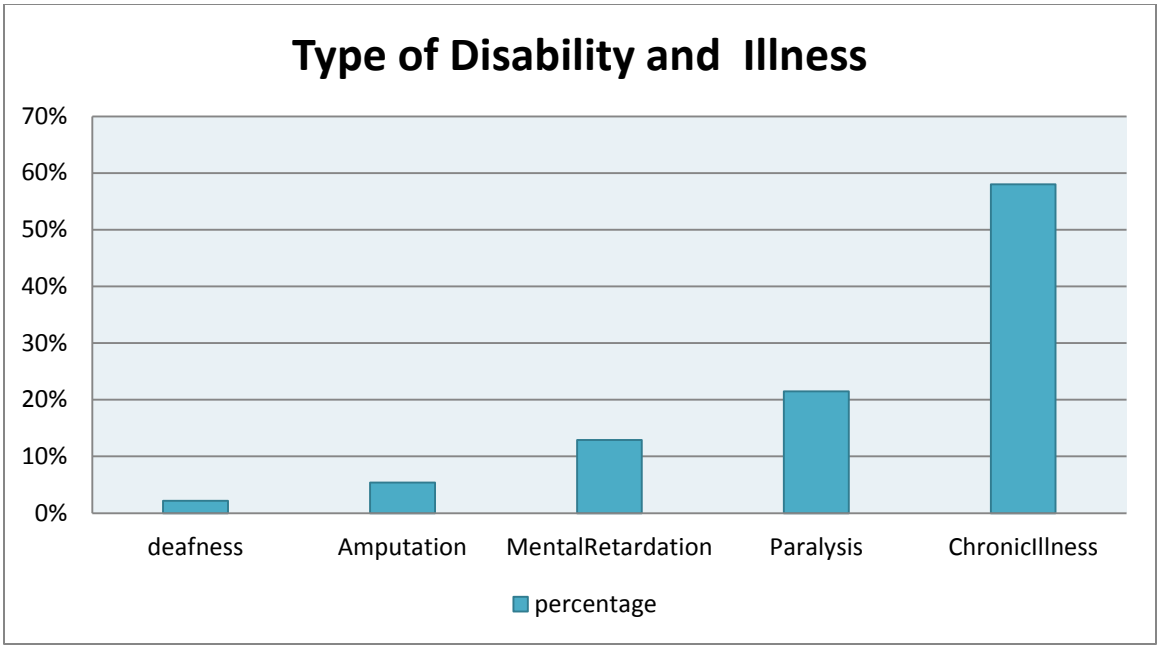

Figure 4.8: Types of Disability and Illness (Source: Author's Research Survey, 2018)

From Figure 4.8 above, about 28.3% of the households had a member who had some form of chronic illness or disability. The chronic illness included chronic lower back pain, HIV, epilepsy, muscle and nerve related illness, or undiagnosed chronic illness; whereas, disability comprised paralysis (21.5%), mental retardation(12.9%), amputation(5.4%) and deafness (2.2%).

4.2.3. Natural Assets

As stated in USAID (1992), natural asset refers to environmental assets such as land, water, forests, biodiversity, etc., which are common property or open access resources. As per Farrington (2002), natural resources are generally less used in the livelihood strategies of the urban poor, as they tend to be less available, especially in large urban centers. In the study, the natural capital for the beneficiary households were their land in their backyard and the common land that were used for planting vegetables to be used for consumption or income.

Only 3% of the interviewed households had backyard garden where they cultivate vegetables such as cabbage, lettuce and spinach. The production covered the food demand of the household for less than one week.

35.6% of the respondents said UPSNP had role in preparing area for urban agriculture and in 64.4% in preparing the area as well as in providing seeds and seedlings of vegetables which

would be used for consumption turn by turn. Though the number of households having vegetables in their backyard is insignificant (only 3%), the production of vegetable done privately by the households themselves has allowed them to access food. Besides, the vegetable plantation from UPSNP's public work has also potential of providing one means of accessing food for the beneficiaries.

4.2.4. Financial Assets

Financial assets are financial resources, savings, credit, insurance, remittances, pensions, cash transfers from social welfare programs, and assets held as a store of value (livestock or jewelry) (USAID, 1992). Income from the sale of labor is often one of the most important assets for the urban poor and one which they tend to prioritize (Farrington, 2002).The study's respondent households were receiving cash transfer from UPSNP; 16% (53) got direct financial support from UPSNP with gross amount of 170 ETB, and the remaining 84% (276) were conditional beneficiaries that did public work (5 days per month) provided by the program to get a monthly payment of 300 ETB (60ETB per one working day). From the cash transfer, all the beneficiaries had 20% mandatory saving that would not be withdrawn until their graduation. The respondents also got income from different livelihood activities to sustain their households' livelihood. The lists of livelihood activities were wage labor 32%, petty trade 8.2 % and low wage employment 5.8%. Only 5.2% and 4.9% got financial resources from pension and relatives respectively.

Therefore, the financial assets for the study population are the cash transfer (conditional and unconditional transfers) from UPSNP, savings, income from other means of livelihood (wage labor, petty trade, and low wage employment), pension, and financial assistances from relatives. This shows that the cash transfer is one important financial source for the beneficiaries to sustain their livelihood together with other livelihood sources. Mainly, it is crucial for households which do not have other means of gaining income.

4.2.5. Social Assets

Social asset is generated by the household's connections in a social network, and the trust, reciprocity, and resource-sharing qualities of those connections (USAID, 1992). It refers to the social networks that people can get in order to achieve livelihood. The social assets that were assessed in the study were the assistances the households got from pensions, relatives, and neighbors. As per the assistances the households received, 5.2% got from pension, 4.9% from

relatives and 6.4% from neighbors in the form of finance or social supports (such as sharing meals, assistance in cooking and washing clothes, and cloth provision).

Besides, the beneficiaries had informal organization like *iddir* and *iquib* with the non-beneficiary community to strengthen their acquaintances, bondage and receive support during different events. As explained in the FGDs, the beneficiaries were able to involve largely in these organizations after joining UPSNP. The cash had enhanced their confidence to be part of the social life within their communities.

Generally, the lists of social assets that the respondents have are social assistance from relatives and neighbors and social networks such as *iddir* and *iquib*. Social capital is a valuable and critical resource for poor urban households, especially during times of crisis and socio-economic change (Farrington, 2002). Thus, the program has contributed to enhance the beneficiaries' social networks within their communities. These networks have benefit of enabling the households cope up during times of challenge.

4.3. Livelihood Activities/ Strategies of Households

Livelihoods strategies are activities that people undertake to build their livelihoods. Livelihood strategies include coping strategies designed to respond to shocks in the short term, and adaptive strategies designed to improve circumstances in the long term (Farrington, 2002). These strategies lead to livelihood outcomes. The survey result showed that the beneficiaries were involved in different means of activities in order to sustain their households' livelihood. A few (7.9%) of the households made their living only from the cash transfer of UPSNP; while the remaining most (92.1%) had additional source of making living besides the cash transfer from UPSNP.

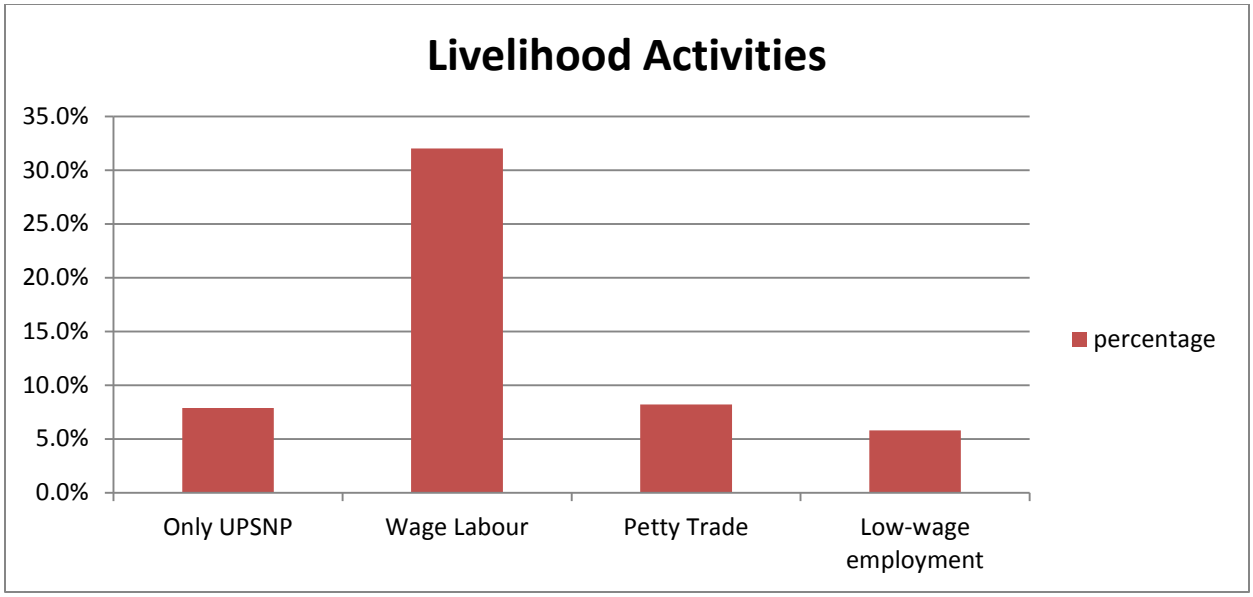

Figure 4.9: Respondents' Means of Livelihood (Source: Author's Research Survey, 2018)

The households had mixed livelihood sources having combination from the three means of livelihoods (wage labor, petty trade and low wage employment). From Figure 4.9, those households having members in wage labor, petty trade and low wage employment were 32%, 8.2% and 5.8% respectively. Those that are dependent only on the cash transfer were 7.9%. The majority (82.5%) of the respondents had a means of income for the survival of their household in addition to the PSNP's transfer, but the rest (17.5%) of the respondents haven't other means of income (Yitagesu, 2014). This indicates that most households are engaged in other means of living other than the safety net support. As stated in MoUDH (2016), the public work activities are temporary employments, but they can also be seen as paths to a more permanent income generating activity. Therefore, engaging in other livelihood activities is necessary for households to generate income for living.

Some of the lists of wage labor included working as porter, washing clothes, making 'injera' for weddings and funerals. The respondents had engaged in petty trades such as selling candies, chewing gums, biscuits, coffee/ tea, and shoe shining. Those households having members with low wage employment were involved in jobs such as janitors, café waiters, shop waiters and guards.

Study of Degefa (2008) undertaken in Addis Ababa showed that the urban poor were usually engaged in low income earning means of livelihood as a result of low education level they had.

Because of low level of human capitals, in particular low level of education and unskilled labor, the type of permanent employment in which the inhabitants work are low wage occupation (Degefa, 2008). Similarly, this study's households are involved in livelihoods that have low income earning and varying income amount. This could make them insecure due to the income inadequacy and instability of the jobs. The 100 Days Employment Generation Program for the poor under social safety net program in Comilla, Bangladesh, had provided a guaranteed employment with a fixed wage which helps to stabilize income and consumption (Akter, 2013). Akter added that it had provided income in the time when the income is very low. The same is for this study where the cash transfer from UPSNP is a stable source of living for the beneficiaries even in times of shocks (such as job loss). Specially, it has a paramount importance for households that do not have members involved in other means of living to earn income. Therefore, the program has contribution in being additional and stable source of living for the beneficiaries.

4.4. Livelihood Outcomes

Livelihood outcomes refer to the results of the livelihood strategies undertaken by people. The UPSNP has intervened to enhance the livelihood strategies of the beneficiaries in order to bring improvement to their livelihoods. The study had investigated the outcomes that resulted after UPSNP's intervention. It has included the changes on beneficiaries' income-poverty status, food security/access and environmental protection in the study areas.

4.4.1. Income-Poverty Conditions of Households

i) Monthly Average Income of Households

The beneficiaries had income source from UPSNP, other means of living and financial assistances from pension and relatives. Therefore, the total estimated monthly income of the household was drawn from the mentioned sources. The amount represents estimated amount that the household usually earn monthly after they received support from UPSNP. Hence, the amount might exceed or lessen from the mentioned one.

The program allows a maximum of four individuals per household to be beneficiary of the program. In the survey, the number of beneficiaries per household that are receiving cash transfer ranges from one to four receiving monthly an amount of 300, 600, 900 and 1200 ETB

(conditional beneficiaries) and 170, 340, 510 and 680 ETB (direct support beneficiaries) for households having one, two, three and four members respectively. Out of the 329 household respondents, 276 (84%) were receiving conditional cash transfer (engaged in public works) of 300 ETB per month, while the remaining 53 (16%) were receiving unconditional cash transfer (direct support) from UPSNP with an amount of 170ETB per month. The survey result showed that 55.9% households had four beneficiary members per household, 27.1% three members, 10.9% two members and 5.5% one member only.

The total estimated monthly income of the respondent households was a minimum of 170 ETB and a maximum of 2400 ETB. It had a mean of 1322 ETB and SD of 430.6. Regarding *woreda* 1 of Arada sub city, the respondents had average monthly income of 1300ETB, minimum of 170ETB, maximum of 2400ETB, range of 2230 and SD of 437.6. Whereas, respondents from *woreda* 5 of Addis Ketema sub city had average monthly income of 1345ETB, minimum of 600ETB, maximum of 2200ETB, range of 1600 and SD of 422.9. The survey shows that *woreda* 1 of Arada sub city has minimum monthly income and higher income range among its respondents than the Addis Ketema sub city respondents. The minimum monthly income of 170ETB implies that there are households that do not have other means of living other than the cash transfer (direct support). On the other extreme, the high income range indicates that there are also households that are highly engaged in income earning activities.

The estimated monthly income were 150-450 ETB for 2.4%, 451-750ETB for 10%, 751-1050ETB for 11.8%, 1051-1350ETB for 20.7%, 1351-1650ETB for 37.1%, 1651-1950ETB for 10.4%, and 1951-2400ETB for 7.6%. The number of male headed households and female headed households within the income categories is summarized in Table 4.8.

Table 4.8 Monthly Income Ranges of Household Heads

Total monthly income (ETB)	Male headed HH (%)	Female headed HH (%)	Total HH heads (%)
150-450	0	4.8	2.4
451-750	6.2	13.7	10

751-1050	4.3	19	11.8
1051-1350	18	23.2	20.7
1351-1650	47.2	27.4	37.1
1651-1950	12.4	8.3	10.4
1951-2400	11.8	3.6	7.6

Source: Author's Research survey, 2018

As seen in Table 4.8, nearly half (47.2%) of the male headed households were having average monthly income of 1351-1650 ETB; while 27.4% and 23.2% of the female headed households had 1351-1650ETB and 1051-1350 ETB respectively.

On one side, results from the FGDs showed that the cash transfer had become additional source of income besides the temporary works they had been engaged in. Thus, it had changed their amount of monthly income. As the participants in the FGDs stated that most were happy in having stable income source which had reduced their feeling of anxiety. Before joining the program, they were not able to ask credit from neighbors because they were not sure of paying back. The program has contributed in shifting their lives from begging to making a living by themselves.

On the other side, they had stated that the amount of the cash transfer was inadequate as compared to the current standard of living. It had become difficult to expend it for their basic needs (food, cloth, medication). Unless they were engaged in additional livelihood activities, it was impossible to lead their lives with the small cash support from UPSNP. The situation was worsened among the direct support beneficiaries who were receiving 170 ETB per month. They were kept supported by neighbors rather than by the program alone.

Even the earnings from wage labor and petty trade had varying amount each day. Besides, the inflation (high food price) had challenged them to meet the basic necessities of their households. The amount of money they earned from these livelihoods and the price of items could not match

as time went by. There is similar finding in the research of Akter. Even though the SSN program had resulted stable income earning among the vulnerable, for 85.4% respondents, the amount they got was not enough to maintain their family (Akter, 2013).

In general, the study population receive 170 ETB (direct support) and 300ETB (conditional transfer) per month from UPSNP. More than half are having an estimated monthly income range 1051-1650 ETB from different livelihood activities. The program has become additional as well as stable income source for the households who are mostly engaged in jobs with low and varying earning. However, the inadequacy of the cash transfer which is worsened by the existing inflation is revealed in the survey and FGDs. The UPSNP, as a recently implemented program (one year) and as a provider of temporary job employments (public work), it could not address the income condition of households. Though, the amount of the transfer should be adjusted in line with the current urban condition in order to help the beneficiaries to move out of poverty.

ii) Expenses and Saving of Households

The expenses of the households mentioned in the survey were food 256 (77.8%), water and electric fee 43 (13.1%), house rental 19 (5.8%), milk, diaper and clothes 5 (1.5%), medication 4 (1.2%), and education 2 (0.6%).

Concerning the medication expense of the beneficiaries, as per the survey result, nearly 3% of the households got free health coverage using the support card from UPSNP. Likewise, according to the focus groups, most did not have free medical card. Even the free medication card did not cover the purchasing of medicines. The public workers are frequently exposed to common cold due to their frequent contact with different types of wastes during environmental cleaning. This implies that the program should provide the beneficiaries with Identification (ID) cards for free health coverage in order to minimize their expenses.

According to the MoUDH (2016), each beneficiary has a compulsory saving of 20% which cannot be withdrawn until graduation. All the respondents had saving in their bank accounts. The amount saved ranges between 20 ETB to 240 ETB per month. Accordingly, 186 (56.5%) of the respondent households had saving of 220-240 ETB, 61 (18.5%) had saving of 140-180 ETB, 41 (12.5%) had saving of 20-60 ETB, 26 (7.9%) had saving of 100-140 ETB, and 15 (4.6%) had saving of 20 ETB per month in their bank accounts. Most of the saving amount falls in the 220-240 ETB range. This is because most of the respondents are public workers having four

beneficiary members per household. They receive 1200ETB which has 20% compulsory saving of 240ETB.

The focus groups had loudly appreciated the saving aspect of the program because it had brightened the beneficiaries' future hope. They stated that the saving had enhanced the beneficiaries' motivation to engage in different livelihood activities to earn more and save more. As per the interviewees (Interview 01 Urban Job Creation and Food Security Agency Head, April 27 and Interview 02 public work high expert, April 28, 2018, Addis Ababa), after three year, the beneficiaries will graduate from the program after receiving livelihood training to be self-employed or employed in to better jobs. Grant from the program, together with the savings they had, will then be offered for them to be self-dependent. Having saving is very challenging for poor households who could not even attain their food security. Despite involvement in one or combination of some (permanent employment, casual jobs, wage labor and informal activities), the income people draw can neither meet the basic needs nor to save some amount out of those jobs (Degefa, 2008). Therefore, the saving undertaken by the program is a good beginning to change the urban poor's lives. The saving could enhance the beneficiaries' saving habit as well as encourage them to involve in various livelihood activities to earn and save more.

iii) Income-Poverty Status of Households

The amount of income an adult in the households got per month was calculated by dividing the total monthly income of the household by the adult equivalent value of the household. The adult equivalent value of the households was obtained by the following formula:

No of AE = (No. adults + 0.5 children) $^{0.9}$ Where: No. of AE = number of adult equivalents in the household, No. of adults = number of household members aged 15 years or older, No. of children = number of household members younger than 15 years old. Accordingly, the range for the number of adult equivalent value of the survey was between 1 and 8 adults, where 39.5%, 28.6%, 13.7% of the households consisted of 3, 2 and 4 adult equivalents respectively.

The monthly income per adult equivalent had minimum amount of 115 ETB, maximum of 1200ETB, mean of 460.14 ETB and s.d of 176.5ETB. Most of the respondent households' (93.6%) monthly income per adult equivalent fell within 151-750 ETB out of the 26.7% were within 351-450 ETB, 20.4% within 451-550 ETB, 17% within 551-650 ETB, 15.8% within 251-350 ETB, and 7.6% within 151-250 ETB.

The current international poverty line for low income countries has changed from $1.25 to $1.90 per day since September 2015 due to the occasional update of Purchasing Power Parity (PPP). PPP is the quantity of that currency needed to buy a specified unit of a good or a basket of common goods and services[11]. PPP conversion factor is used to know the amount of country's currency required to buy the same amount of goods and services in its domestic market as United Stated Dollar (USD) would buy in the United States. As per 2016, the PPP conversion factor of Ethiopia is 8.60 which is used to convert $1.90 into ETB. Therefore, 8.60 is multiplied by $1.90 giving a national extreme poverty line of 16.34ETB per person per day. The poverty status was used to define the income-poverty status of the households; where, those below the poverty line were considered as poor and those above the poverty line as non-poor.

In order to attain the income per AE per day of the households, the monthly income per adult equivalent of the household was divided by 30days. Accordingly, the income per adult equivalent per day of the households had minimum amount of 3.83 ETB and maximum of 40 ETB, mean of 15.34, and s.d of 5.9. There is large difference between the minimum (3.83 ETB) and maximum (40 ETB) income per adult equivalent per day among the households. This can indicate that there are households that are not able to engage adequately in other livelihood activities; while, others are highly involved to earn more income. This implies that the program is more important for those households that could not adequately involve in income generating activities.

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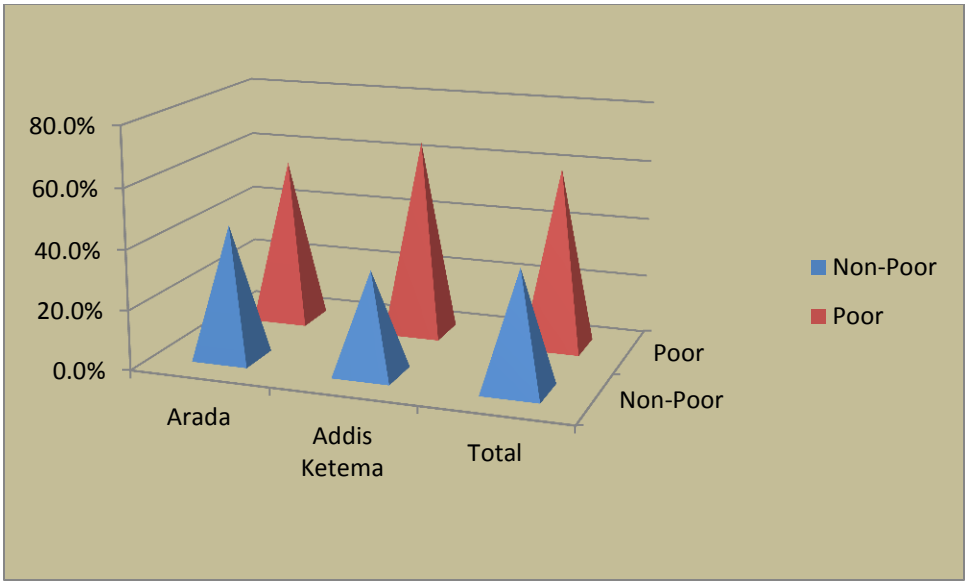

Figure 4.10: Income-Poverty Status of Household Heads in Arada and Addis Ketema Sub Cities (Source: Author's Research Survey, 2018)

Based on the national poverty line (16.34 ETB per person per day), as shown in Figure 4.10, 44.5% of Arada sub city's household were above poverty line; while, 55.5% are below. 34% of Addis Ketema sub city's households were above poverty line and the remaining 66% were below. Addis Ketema has lesser non-poor and poorer beneficiaries than Arada sub city. Thus, Addis Ketema's beneficiaries are more impoverished households than Arada's.

Table 4.9 Income-Poverty Status of the Total Households in the Study Areas (16.34 ETB per person per day)

Income-poverty status of HH	Male headed HH (%)	Female headed HH (%)	Total HH (%)
Non-Poor (> 16.34 ETB per Adult Equivalent per day)	38.5	40.5	39.5
Poor (< 16.34 ETB per Adult Equivalent per day)	61.5	59.5	60.5

Source: Author's Research Survey, 2018

As it is seen in Table 4.9, out of the 329 households, more than half (60.5%) were below the poverty line ($1.90 per day); while, 39.5% were above the poverty line. Regarding the gender of HH heads, 61.5% of male headed and 59.5% of the female headed households were below poverty line; whereas, 40.5% of the female headed and 38.5% of the male headed households were above the poverty line. It can be noticed that both male and female headed households account nearly the same in the two poverty categories. This implies that the sex of household heads does not determine the income-poverty status of households. This is also confirmed in the regression result that sex of household head did not have significant relationship with income-poverty status of households.

In the survey findings, besides the cash transfer from UPSNP, most beneficiaries were engaged in different livelihoods. However, more than half of the households remain below the extreme poverty line. This can indicate that the income earned through the cash transfer and means of livings (wage labor, petty trade and low wage employment) is low; as well as, it is insufficient in relation to household size and number of economically dependent members. In addition, it has been a year since the beneficiaries have been receiving the cash support, so that it is difficult to expect the program to deliver the households from poverty within this period of time.

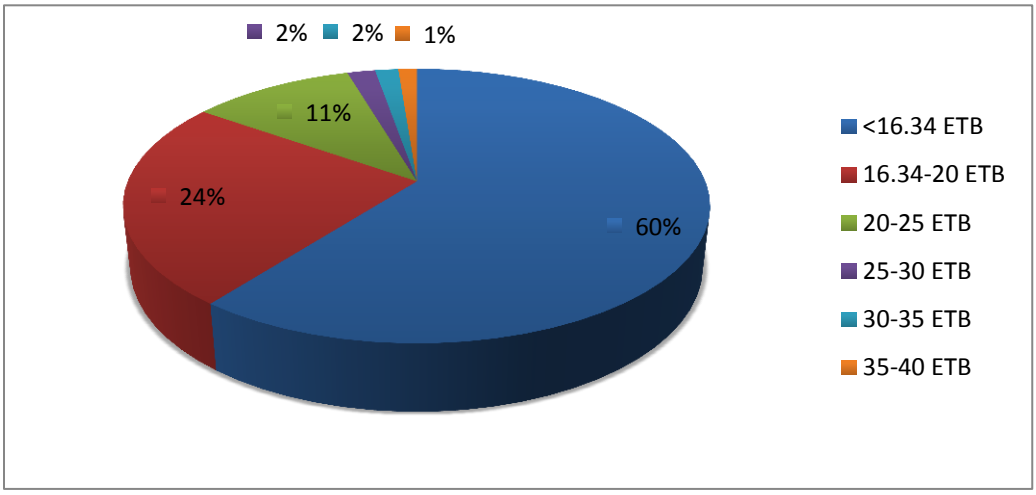

Figure 4.11: Income per Adult Equivalent per Day Categories (Source Author's research survey, 2018)

By evaluating the range of income per adult equivalent per day of the households against the poverty line, as Figure 4.11 shows, the majority (60.5%) of the households' income fell below

16.34ETB, 24.3% within 16.34-20 ETB and 10.6% within 20-25 ETB. A few households were within 25-30 ETB (1.8%), 30-35 ETB (1.5%) and 35-40 ETB (1.2 %).

When comparing the finding with Ephrem (2015) who did his study in small urban towns of Ethiopia (Durame, *Wolenchiti and* Debresina), the percentage of households that were below income-poverty (60%) is lesser than his finding (66.8%). This could be due to the cash transfer received from UPSNP which has improved the households' income status. It should not be ignored that there is improvement for the remaining 39.5% who are above poverty line within a one year period. Since the households were recruited based on their low income status, the program together with the other sources of income has contributed to the households' income condition.

In general, the majority of the respondents have monthly income per adult equivalent within 151-750 ETB range. After one year support from UPSNP, more than half of the study population are still below poverty line having <16.34 income per adult equivalent per day. The 40% are above poverty which indicates the contribution of the program in supporting the income condition of the beneficiaries within one-year support. There is high range between the minimum (3.83 ETB) and maximum (40 ETB) income per adult equivalent per day among the households showing that there are households that are engaged adequately in other livelihood activities and others that are not. This implies that the program is important source of income especially for those households that have a few or no member involving in income generating activities.

iv) Income Stability

Respondents were asked if they had faced variation of income after being beneficiary of UPSNP. Accordingly, 203 (61.7%) of the respondent households had faced income variation due to different reasons; whereas, the remaining 126 (38.3%) had constant earing until the survey time.

Table 4.10 Factors Varying (Affecting) Income of Respondents

Factors varying HH income	% of HH
Inflation	50.3
Illness of household member	8.9
Variation of income earned from casual works	31.4
House rental increment	8.9
Household size increase	0.5

Source: Author's Research Survey, 2018

As seen in Table 4.10, the factors that had challenged and varied the households' income situation were mainly inflation for 50.3% and variation of income earned from other sources (wage labor and petty trade) for 31.4%; while, for 8.9% were due to illness of household member, for 8.9% due to house rental increment and for 0.5% due to household size increase.

Inflation and varying income from earnings are the major factors causing variation for the beneficiaries' income. Thus, the program should take into consideration those potential factors that could result income variation while adjusting the amount of cash transfer.

v) Regression Analysis and Interpretations for Income-Poverty Status

The binary logistic regression was employed to check whether the explanatory variables determine the income and food security (outcome variables) status of households. The association between the explanatory and the outcome variables are measured.

The dependent variable, income-poverty status, has dichotomous values taking a value 1 if the households are non-poor (above poverty line) and 0 otherwise. The binary regression is used in order to measure the association between income-poverty status and the explanatory variables which are listed in Table 4.11. The relationship between the variables was tested under the

following two hypotheses: the null hypothesis denoted as H_0 and alternative hypothesis denoted as H_1.

H_0: There is no significant relationship between income-poverty status and independent variable

H_1: There is significant relationship between income-poverty status and independent variable

The null hypothesis is rejected when the p-value is less than the level of significance (α), so that the alternative hypothesis will be accepted.

In addition, there are two pointers to demonstrate the significant relationship between dependent and independent variables which are the pseudo R-squared and X^2-statistics. As depicted on appendix 1, pseudo R-squared accounted is less than 1; which means the low income status (being poor) is explained by the variations of the independent variables in the model. Besides, the X^2 value is not large showing that the model is good to explain the relationship between the variables. In general, the model fits the data.

The selected explanatory variables for the income-poverty variable were sex of HHH, marital status of HHH, educational level of HHH, HH size, number of economically inactive member, monthly cash transfer from UPSNP, monthly income from other means of livings (wage labor, petty trade, low wage employment, pension and financial assistances from relatives) and variation of household's income.

Using $1.9 per adult equivalent per day, beneficiary households' income per adult equivalent per day is calculated to define their income-poverty status. Thus, 16.34 ETB per adult equivalent per day is used to group the households as poor or non-poor.

Table 4.11 Binary Logit Result for Income-Poverty Status

Income-Poverty Status	Coef.	Std. Err.	z	P>z	[95% Conf.	Interval
Sex of HHH	-.5331872	.5596851	-0.95	0.341	-1.63015	.5637754
Marital Status of HHH	.4454521	.5793015	0.77	0.442	-.6899581	1.580862
Literacy of HHH	.0247806	.2736835	0.09	0.928	-.5116291	.5611904
HH Size	-.6793537	.1350697	-5.03	0.000***	-.9440855	-.4146218
No of Economically Inactive members	-.3477487	.1572581	-2.21	0.027**	-.6559688	-.0395285
Monthly Cash transfer from UPSNP	.0034677	.0006698	5.18	0.000***	.0021548	.0047805
Monthly Income from Livelihoods	.0032948	.0005996	5.49	0.000***	.0021196	.00447
Variation of HH Income	-.2524523	.2840101	-0.89	0.374	-.8091019	.3041972

Source: Author's regression result using STATA 13

Note: the sign ***, ** and* denote the coefficients are statistically significant at 1 %, 5% and 10% respectively.

As shown in Table 4.11, the effect of sex of the respondent was found to be negative and statistically insignificant. Sex difference does not determine the income-poverty status between male and female household heads. The negative sign implies that being a male headed household

has a tendency of being poorer than female headed households. However, sex difference has no significant impact on the income-poverty status of the beneficiaries in the study areas.

Being literate or illiterate household head did not significantly affect the income-poverty status of households. But the positive sign carried by the coefficient of education shows that illiterates are poorer than literates. Because as the level of education increases, there will be difference in income earning between households. The positive coefficient is consistent with the finding of PSNP in Tigrai region by Yibrah Hagos (2014); where, highest level of poverty of 35.55 percent (head count index) was observed in illiterate households; accompanied by high level of poverty gap index 9 percent and severity index of 1.65 percent. On the contrary, his analysis showed the significant impact of literacy on income-poverty.

Marital status of the household is found to be statistically positive and insignificant. It carries positive sign suggesting that, married household heads are non-poor than single households. However, being married or single among household's heads does not have significant impact on income-poverty status of households.

Household size had significant impact on income-poverty status. Its β-coefficient is negative indicating that the variable negatively affects income-poverty status of the households. In other words, being consistent with Yibrah Hagos's (2014) finding, as the size of household increases the households will tend to be poor. Based on the regression model, the household size has a coefficient of -0.68. This signifies that for a unit rise in household size, the probability of being non-poor reduces by 68%. This would be due to the increase in the number of individuals sharing earnings as the size of household increases. Thus, the income generated by the productive individuals will be divided for more individuals in the household.

The number of economically inactive members of the household was found to be statistically negative and significant. As the number of economically inactive members in a household increases, its income-poverty status is affected negatively. Thus, the income generated by the few productive individuals will be shared by the dependent members. This signifies that the program's cash transfer could be more advantageous for those households having more or all members who are economically inactive (children, disabled, chronically ill, etc…). The coefficient of the variable is -0.35 showing that for a unit rise in economically inactive member,

the probability of being non-poor reduces by 35%. This is due to the less engagement of these members in income generation.

The cash transfer from UPSNP significantly affected income-poverty of the beneficiaries. This means, it had led the households to become less poor. This study has similar finding with Yibrah's study on PSNP in Tigrai region. His result revealed that the poverty level of the program participants was lower than that of the non-participants. 30.33 percent of the program participants and 31.11 percent of the non-participants were found to be living below the total poverty line (Yibrah Hagos, 2014). In this study, the cash transfer has a coefficient of 0.0035. Thus, as the cash transfer increases by one Ethiopian birr (ETB, the probability of being non-poor will increase by a factor of 0.35%. Therefore, the cash transfer from the UPSNP has contribution in improving the income status of the beneficiary households.

Income earned from other means of livelihood (wage labor, petty trade, low-wage employment, pension, financial assistances from relatives) significantly affected income of households. This means, it led the beneficiary households to become less poor. Holding other variables constant, a 0.0033 coefficient shows that the probability of being non-poor increases by a factor of 0.35% as the households' income from other sources increases by one ETB. Therefore income-poverty status depends on both income earned from UPSNP and other livelihood sources. Especially cash transfer from the program could benefit more the households that do not have economically active member because they could not involve in other livelihood activities to earn income.

Variation of households' income after joining the UPSNP is negative and statistically insignificant. The negative sign carried can imply that the variation of income affects income-poverty status negatively; however, its effect is not statistically significant to determine income-poverty status of the households. Having permanent cash transfer from UPSNP has helped the beneficiary households not to have change in their income-poverty status even encountering income variation.

In general, out of the eight variables, only four variable namely: household size, number of economically inactive member, cash transfer from UPSNP and income from the other sources had affected income-poverty status significantly at 1%, 5%, 1% and 1% level of significance respectively. Household size and number of economically inactive members had affected income negatively; while; earnings from UPSNP and other means of livelihood positively affect income.

So, from the above discussions, it can be concluded that the UPSNP has contributed in improving the income-poverty status of the beneficiary households within the one-year support period. Thus, the null hypothesis can be rejected and concluded that there is significant relationship between UPSNP and income-poverty status of the beneficiary households.

4.4.2. Food Security/Food Access

Food security of the beneficiary households was studied in the aspect of the households' ability to access food items either through production or purchasing to sustain their households' members. Urban areas are mostly dependent on the food market to purchase their food. As explained by Farrington (2002), finance is a critical factor that ensures food security in urban areas. Thus, more than production, urban people's income status determines their level of food access. The study has taken into account the food access and food access stability of households to assess the improvement of households' food security. The cash transfer, income earned from other livelihood sources and financial assistances are the beneficiaries' means to access food through purchasing.

i) Food Access Condition of Households

The food security condition of the households was assessed after the coming of UPSNP. Concerning the number of meals taken per day, 75% (247) of the households usually had three meals per day, and 25% (82) had two meals per day. The program's targeting had recruited households that had less number of meals per day and unsustainable food security. Thus, the finding could imply that UPSNP has contributed in improving beneficiaries' number of meals per day within one year. Responses from the FGDs had also explained the positive effect of the program on households' food intake.

> *The cash transfer from the program has become additional income source, so that it has brought improvement to their food security status. Previously, they had been staying starved and sometimes begging for meal which is currently changed to buying food with their own cashes. They are now relieved from worrying about what to eat and feed their households. There is progress in the number of meals per day especially for those who could not have one meal per day formerly. In addition, they have got the chance of eating variety of foods such as 'injera', stew and vegetables. (FGD 03, April 25, 2018, Addis Ababa)*

Regarding the improvement on accessing food after joining UPSNP, there was improvement for the 315 (95.7%) respondents; whereas, for the 14 (4.3%) households there had been no significant improvement from their previous state (before joining UPSNP).

Different studies have reflected the contribution of safety net program in enhancing the food-intake and food access of beneficiaries. For instance, the Employment Generation Program under SSN program in Comilla, Bangladesh, has its contribution in food consumption and about 68% says that their food intake has been increased and has ensured access to food (Akter, 2013). Similarly, the program (PSNP) in Bale Zone, Southeast Ethiopia, had increased the number of dining times and the amount of meal and food at each dining time, and the program had also increased the food expenditure and level of consumption (Diriba, *et al.*, 2017). It was also stated that, besides the direct provision of food items, the PSNP provided the beneficiaries the chance to buy food items through the provision of cash, even if they were unable to produce. Yitagesu's (2014) study on PSNP in Somali had showed that there were some improvements observed after joining to the program. Though the program is challenged by different reasons, the existing food gap among chronically food insecure households has been reduced dramatically (Yitagesu, 2014). Likewise, according to this study, for the majority respondents, there is improvement in the number of meals taken and the food access status of the households.

On the contrary, the FGDs had also mentioned the insignificant impact of the program in attaining food security/access. It was stated that the beneficiaries were acquiring no change on their food security status since the cash transfer is insufficient. It covered a maximum of 15 days' food demand of households. Along with this, the food-market price increment had worsened the condition. Mostly, it is stated that the income earned from other means of living had rather helped them to feed their households. Though the inadequacy of the cash transfer is convincing, it will not be reasonable to expect a one year-old cash transfer, which is also challenged by rising food-price, to address households' food insecurity/access.

It can be concluded from the discussions that the cash transfer from the program has contributed in improving the number of meals eaten per day and the variety of food item eaten by the households. Besides, it has minimized their worries about what to feed their households. Even though there is complain concerning the inadequacy of the cash transfer, it will not be logical to expect a recently implemented program to address beneficiaries' food insecurity. Besides, the conditional cash transfer is not a permanent employment for the beneficiaries as it is stated in the

manual. The public work activities are temporary employments but they can also be seen as paths to a more permanent income generating activity (MoUDH, 2016). Thus, it is necessary for the households to involve also in other income generating activities in order to address their food insecurity.

Quantitatively, the food access change of the households was assessed using the Household Food Insecurity Access Scale (HFIAS). Using HFIAS, respondents were asked whether they had faced the occurrence of conditions in the past one month (four weeks). The result of those who had faced the conditions is summarized in Table 4.12.

Table 4.12 Households' Responses on the Occurrence and Frequency of Occurrence of the Household Food Insecurity Access Scale (HFIAS) Questions

	Yes respondents (%)	How often		
HFIAS Questions	%	Rarely (%)	Sometimes (%)	Often (%)
Q1 Worry about having enough food	54.7	19.1	23.7	11.9
Q2 Unable to eat kinds of preferred foods	93	21.6	41	30.4
Q3 Eat a few variety of foods	90.6	32.2	26.4	31.9
Q4 Eat foods they did not want to eat	8.8	0.6	7.6	0.6
Q5 Reduce amount of meal	82.4	42.6	30.4	9.4
Q6 Reduce number of meal	47.4	25.5	20.7	1.2
Q7 No food to eat of any kind	0	0	0	0

Q8 Go to sleep hungry	8.5	5.5	3	0
Q9 Go a whole day and night without eating	0	0	0	0
Q9 Go a whole day and night without eating	0	0	0	0

Source: Author's Research Survey, 2018

From Table 4.12, 93% households had member/s who was/were unable to eat the kinds of food he/she/they had preferred due to lack of finance, 90.6% had eaten a limited or a few variety of foods as a result of inadequate finance, 82.4% had reduced the amount of meal they had been eating because there was no enough food, 54.7% had worried about having enough food for the members, 47.4% had reduced their number of meal because there was no enough food, 8.8% had eaten some foods that they did not want to eat due to lack of finance to buy preferred foods, and 8.5% had gone to sleep hungry because there was no enough food.

Therefore the finding shows that, more than half of the respondents had experienced the five conditions out of the nine rarely (once or twice) and sometimes (3-10 times). These were: worry about having enough food in the household, unable to eat the kinds of preferred food items, eat a few varieties of foods, reduce the amount of meal and reduce the number of meal.

Based on the Household Food Insecurity Access Prevalence (HFIAP), the households' food security status had been categorized into four as: food secure, mildly food insecure, moderately food insecure, severely food insecure.

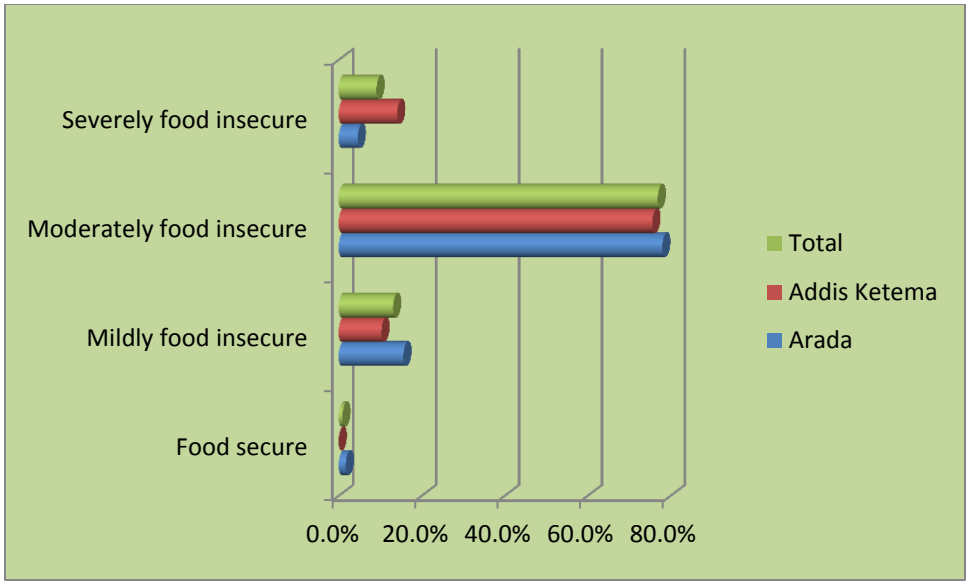

Figure 4.12: Food Insecurity Categories of Arada and Addis Ketema Sub Cities' Households (Source Author's research survey, 2018)

As depicted in Figure 4.12, households in Arada sub city are food secure (1.7%), mildly food insecure (15.6%), moderately food insecure (78%) and severely food insecure (4.6%). In Addis Ketema sub city, none are food secure, 10.3% are mildly food insecure, 75.6% are moderately food insecure and 14.1% are severely food insecure. Addis Ketema has more severely food insecure households, and has no food secure household. When bringing the four categories into two categories, 17.3% and 10.3% are food secure (food secure and mildly food insecure); whereas, 82.6% and 89.7% are food insecure (moderately and severely food insecure) in Arada and Addis Ketema respectively. This implies that the beneficiary households in Addis Ketema are more food insecure than those in Arada sub city.

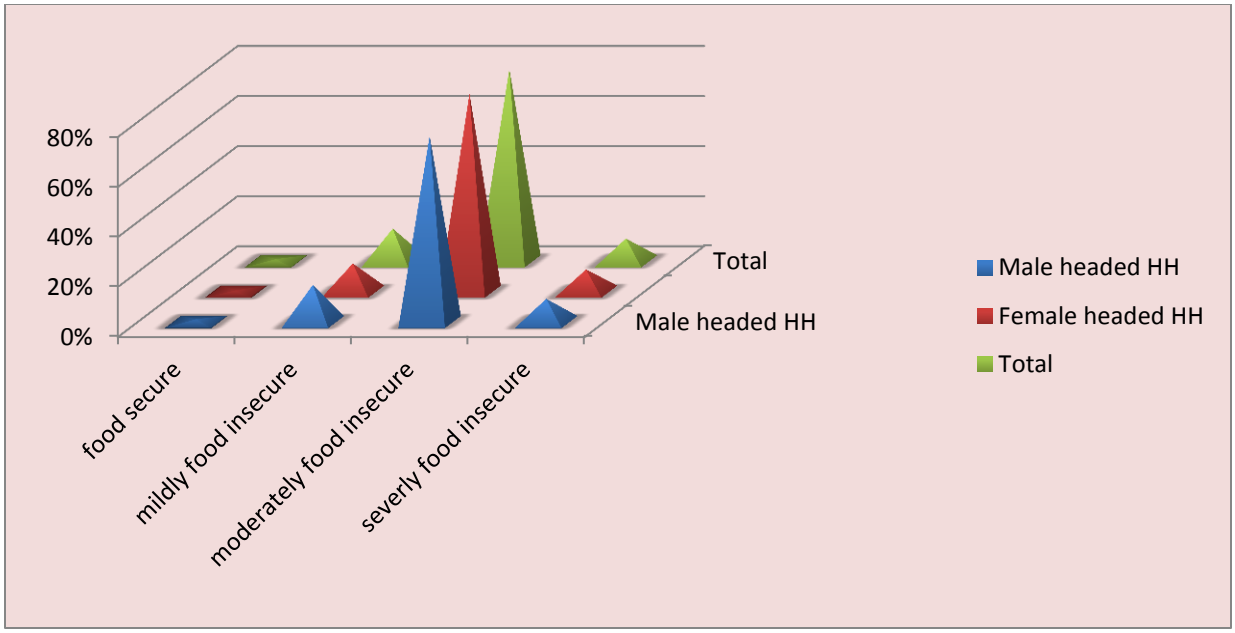

Figure 4.13: Food Insecurity Categories of the Total Households in the Study Areas (Source Author's Research Survey, 2018)

As Figure 4.13 shows, most of the households (76.9%) were moderately food insecure, and a few (0.9%) were food secure. The remaining 13.1% and 9.1% were mildly food insecure and severely food insecure respectively. In the finding of Ephrem's study (2015), conducted in small urban towns of Ethiopia (Debre Sina, Wolenchiti and Durame), 22.7% of all the respondents were food secure, 28.4% mildly food insecure, 35.3% moderately food insecure, and 13.3% were found in the severe food insecurity condition. When compared to Ephrem's finding, this study has higher number of moderately food insecure households; while, it has lesser number of food secure, mildly food insecure and severely food insecure households. Ephrem has stated that as compared to small towns, large towns have lower employment rates and higher unemployment for all age groups. Which means, the poor households living in larger urban areas like Addis Ababa will be more food insecure than those living in small urban areas of Ethiopia. Therefore it is rational to expect poor households living in Addis Ababa (large town) to be more food insecure than other towns of Ethiopia. On the other side, the households in the severely food insecure category are lesser in this study which could show the contribution of the cash transfer in improving their food insecurity. This means, the program has reduced the severe food insecurity status of the beneficiaries within one-year period support. Thus, the program could have a possibility of reducing the food insecurity condition of households as the year of support increases.

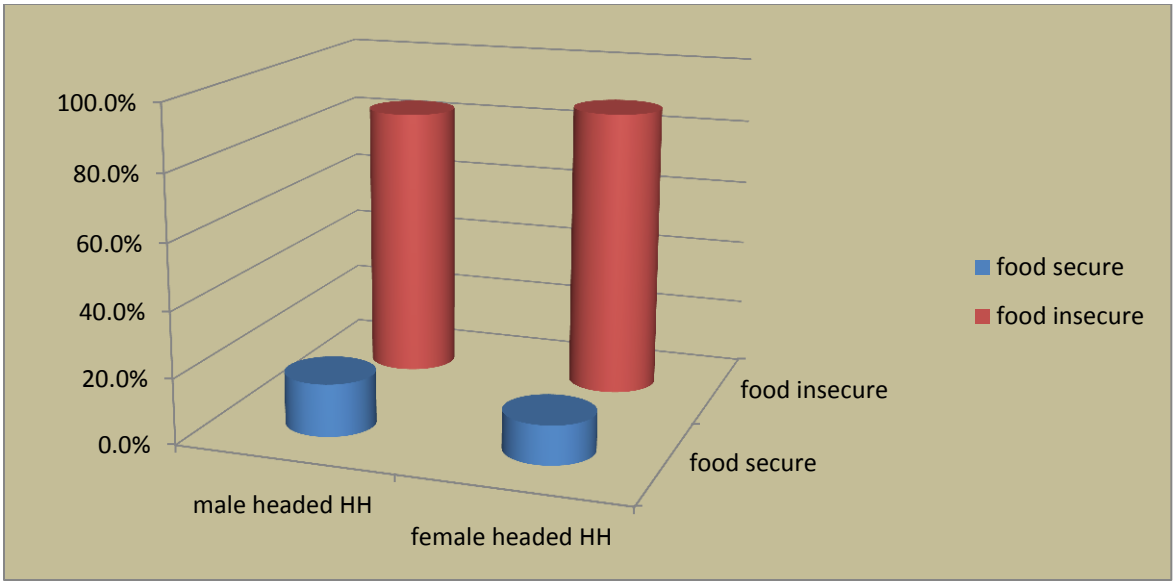

Figure 4.14: Food Insecurity Categories Based on Sex of Household Heads (Source Author's Research Survey, 2018)

Figure 4.14 shows that most (86%) of the households in the study area were food insecure out of which 88.1% were female headed households and 83.9% male headed. The male headed households account for 16.1% and the female headed households for 11.9% of the food secure households. There is a clear indication that the female headed households were more food insecure and less food secure than the male headed households in the study population. This is also confirmed in the regression result that sex of household head had significant relationship with food security status of households. In other words, having a female headed household has a probability of making a household more food insecure than male headed households. This can be as a result of less engagement of females in income generating activities as stated in Girma's (2012) finding.

iii) Food Access Stability

The food access stability is checked whether the households have stable or unvarying food accessing opportunity. Those having varying access to food due to seasonal or permanent conditions are considered as having unstable food security/access.

Table 4.13 Factors Varying (Affecting) Food Access of Respondents

Factors varying food access of HH	% of HH
Inadequacy of monthly income	50
Increase in food price	21
Variation of income earned from casual works	29

Source: Author's Research Survey, 2018

Regarding the seasonality of food security/food access, there was variation for the 80% (263) of the respondent households after they had joined the UPSNP. As seen in Table 4.13, the major factors contributing for the variation of their food security were inadequacy of income earned for the 50% households, increment on food-market prices for the 21% households, and variation of income earned from other sources (such as wage labor and petty trade) for the 29% households.

According to Ephrem (2015), inflation or high food price has been reported as the most common shock being faced by the households. Thus, limited income and rise in price of goods had made most respondents to buy inadequate food for their households. The group that is most likely to report high food prices as the primary shock is the group of daily laborers (91.1%), followed by those depending on government salary/wages (90%) while the least likely are those that depend on money transfer or pension funds (67.7%). Thus, since most of this study's households are engaged in casual livelihood activities, they could be exposed to food access instability due to their low and varying income earnings.

Generally, the amount of income and inflation has significant impact on beneficiaries' food access stability, because most of them access their food by purchasing from market. Therefore,

most of the respondents are exposed to instability in different times and situations which should be taken into account by the UPSNP to address their food insecurity.

iv) Regression Analysis and Interpretations for Food Security

The dependent variable, food security/access status, has dichotomous values taking a value 1 if the households are food secure and 0 otherwise. The binary regression is used in order to measure the association between food security status and the explanatory variables which are listed in Table 4.14. The relationship between the variables was tested under the following two hypotheses: the null hypothesis denoted as H_0 and alternative hypothesis denoted as H_1.

H_0: There is no significant relationship between food security/access and independent variable

H_1: There is significant relationship between food security/access and independent variable

The null hypothesis is rejected when the p-value is less than the level of significance (α), so that the alternative hypothesis will be accepted.

There are two pointers to demonstrate the significant relationship between dependent and independent variables which are the pseudo R-squared and X^2-statistics. As depicted on appendix 1, pseudo R-squared accounted is less than 1; which means being poor is explained by the variations of the independent variables in the model. Besides, the X^2 value is not large showing that the model is good to explain the relationship between the variables. In general, the model fits the data.

The selected independent variables for the food security variable were sex of HHH, marital status of HHH, educational level of HHH, HH size, number of economically inactive member, monthly cash transfer from UPSNP, monthly income from other means of living (wage labor, petty trade, low wage employment, pension and financial assistances from relatives) and variation of household's income.

Using HFIAP categorization, beneficiary household that fell into the categories of food secure and mildly food insecure are defined as "food secure" households; whereas, households that fell into the categories of moderately food insecure and severely food insecure are defined as "food insecure" households.

Table 4.14 Binary Logit Result for Food Security

Food Security	Coef.	Std. Err.	z	P>z	[95% Conf.	Interval
Sex of HHH	1.063199	.5662951	1.88	0.060*	-.0467193	2.173117
Marital Status of HHH	-1.177296	.5831827	-2.02	0.044**	-2.320314	-.0342793
Educational Level of HHH	-.0215821	.3475587	-0.06	0.950	-.7027846	.6596204
HH Size	-.3833785	.1774085	-2.16	0.031**	-.7310927	-.0356642
No of Economically Inactive members	.191418	.175763	1.09	0.276	-.1530712	.5359071
Monthly Cash transfer from UPSNP	.0017069	.00074	2.31	0.021**	.0002566	.0031573
Monthly Income from Livelihoods	.001748	.0006051	2.89	0.004***	.000562	.0029341
Variation of HH Income	-.6468058	.3487889	-1.85	0.064*	-1.33042	.036808

Source: Author's regression result using STATA 13

Note: the sign ***, ** and* denote the coefficients are statistically significant at 1 %, 5% and 10% respectively.

As shown in Table 4.14, the effect of sex of the household head was found to be positive and statistically significant. This indicates that the sex difference significantly affects the food security status between the households' heads. The male headed households are more food

secured than the female headed ones. This is associated with the income generation difference between male headed and female headed households where males participate in highly labor intensive jobs (income generating activities) than females. Females are more engaged in household responsibilities. Girma's (2012) finding is consistent with this finding that food insecurity was worse in female headed household implying that males are to some extent more engaged in income generating activities than females in the study area. The findings are also in line with Jemal and Kim (2014) where sex had influence on household food security, but the result is in contrast with the sign it carries. In the findings of Jemal and Kim, sex of respondent had significant and negative impact implying that the male headed households were less food secure than female headed households.

The marital status of household heads significantly affected food security. It can be deduced that the married household heads are less food secure than the single household heads. The finding is contrary to the survey result of Ejigayehu and Abdi-Khalil (2012) where the marital status showed no significant difference ($p > 0.10$) among households on food security status. This study's result can be reason out that those married headed household could have additional individuals (such as spouse, children) who share feeding by the existing low wage earning of the poor households.

As the result of the regression shows, educational level (being literate or illiterate) did not significantly affect the food security status of households. It is statistically insignificant showing that the literacy does not bring significant difference on food security status. This has become contrary to findings of Conceicao, *et al*. (2016) which showed food insecurity resulting from lack of education; and Girma's (2012) analysis implying that illiterate households are more food insecure than literate ones since literate households are diversifying as well as increasing their means of income in order to drag out of food insecurity situation and lead quality life. This study's regression result is due to the non-participation of almost all the household heads in professional jobs due to low literacy. Additionally, the source of income among the households is similar irrespective of household heads' educational background. Thus, literacy level could not have significant impact on food security status of the beneficiaries.

The variable denoted as house hold size carries a negative sign with significant coefficient. The negative sign of the coefficient indicates that an increase in household's size reduce food security. In other word, the larger the household size, the higher probability of households to

become food insecure. The low wage earnings coupled with increasing family size worsen the food insecurity status of the beneficiary households. The finding is consistent with Jemal and Kim (2014) and Ejigayehu and Abdi-Khalil (2012) where household with more family members were more food insecure than the household with less family members. Having a coefficient of -0.38, holding other variables constant, the probability of being food secured decreases by a factor of 38% as household size increases by one unit.

The variable denoted as economically inactive carries positive sign with statistically insignificant coefficient. This implies that having economically inactive members does not have impact on food security status of households. Since the economically inactive members do not generate income for the households, they cannot contribute to bring their households to be food secure.

The cash transfer from UPSNP had positive and statistically significant impact on food security. The cash allows the beneficiaries to purchase food. Therefore the program is important for increasing the tendency of the beneficiary household to be food secured. Tamene's study conducted in Tach Gayint *woreda*, South Gonder, had finding of positive relationship between food security and income of the household after PSNP. The provision of food commodities and cash has sustained the life of the most vulnerable social groups (i.e. elders, lactating and pregnant mothers, and children) (Tamene, 2017). He also stated that the aid was the only sources of food for vulnerable people since they had no labor to sell in order to make a living. Likewise, in this study, the cash transfer is more important for households that have a few or no income earning members. One Ethiopian birr (ETB) increase in the cash transfer, will improve the tendency of the households to become food secured by a factor of 0.17%.

Income obtained from other source also affected food security positively and significantly. Income which is generated from pension and assistances; and jobs like petty trade, wage labor and low wage employment has significant and positive impact on food security. These livelihood activities raise the beneficiary households' income which determines the purchasing power of the households. Thus, as the daily wage or employment earnings get higher, the households tend to be food secured. Studies with similar findings are Adugna and Wagayehu (2011) and Ejigayehu and Abdi-Khalil (2012) where monthly income had negative relation with food insecurity. For this study, as the monthly income from other sources increases by one unit (ETB), the probability of being food secured increases by a factor of 0.17%. Therefore, it can be concluded

that income obtained from the UPSNP, pensions, assistances and low-wage jobs supports food security of the beneficiary households.

The variable denoted by variation of household's income after joining UPSNP has carried negative sign with statistically significant coefficient. This has implication of income variability creates food insecurity on the households. Since income determines the food purchasing capability of residents in urban areas, variation in households' income will directly affect the food access status of urban households. The reasons for the food variation in the study were inadequacy of monthly income, increase in food price and variation of income from casual jobs.

In general, out of the eight variables, six variables namely: sex, marital status, variation of income, household size, UPSNP cash transfer and income generated from other sources affect food security significantly at 10%, 5%, 10%, 5%, 5%, and 1% respectively. Sex, and income obtained both from the UPSNP and other sources positively affect food security; whereas, marital status, variation of income and household size negatively affect food security of the beneficiary households.

So, from the above discussions, it can be concluded that the UPSNP has contributed in improving the food security/access status of the beneficiary households within the one-year support period. Thus, the null hypothesis can be rejected and concluded that there is significant relationship between UPSNP and food security status of the beneficiary households.

4.4.3. Environmental Protection

Beneficiaries with conditional transfer participate in public work activities which include urban greenery development, watershed management activities, urban agriculture, environmental cleaning activities and social infrastructure development.

According to the FGDs, UPSNP's role on the environment was much appreciated one. The program's public work activities had changed the city's environmental image.

> *The cleanings undertaken by other cleaning bodies is unsatisfactory and inadequate to make the city clean and safe because their works are only focusing on main streets and roads of the city. Hence, the residence areas of the communities are not included zones for the workers. The public work activities undertaken by UPSNP has filled up the gaps by creating clean, safe and beautiful*

environment starting from the living areas to the main streets of the city. Besides, the activities are carried out continuously and responsibly every day as well as during monthly cleaning campaigns. Roads, streets, drainages, and green areas had been piled up with wastes which are currently cleaned up and had brought amazing esthetics to the environment. (FGD 02, April 25, 2018, Addis Ababa)

The public work is also being support by other related governmental bodies for its effective accomplishment. The Urban Job Creation and Food Security Agency Head had explained this as follows:

Integrated work is carried out between the public work and other governmental bodies to strengthen the effectiveness of the program. The Solid Waste Disposal Municipality, Urban Greenery and Beautification Bureau, Agriculture and Trade Industry have been providing trainings, experts, and supplies for the related environmental activities of the public work. (Interview 01 Urban Job Creation and Food Security Agency Head, April 27, 2018, Addis Ababa)

The presence of functional urban ecosystems represents significant economic and health benefits, while their absence implies costs for both citizens and government (UN-HABITAT, 2017). The program's involvement in the environment aspect has importance in changing and upgrading the city into an environment which is healthy and suitable for the livelihood of dwellers.

i) Environmental Cleaning

MoUDH (2016) describes the list of activities under the urban solid waste management and environmental cleaning as street sweeping, door-to-door waste collection, waste segregation, cleaning illegal dumping and water bodies, management of market and public spaces waste, waste segregation and waste recycling activities. The survey result has shown that UPSNP is involved in solid waste management such as sweeping and collecting solid wastes. Besides, there was cleaning up drainages and water bodies/ river periodically.

The same idea was forwarded by the FGDs that the public workers involved in sweeping roads, inside the living community. Solid wastes found inside green area were also cleaned. The solid wastes collected from the streets were segregated based on their types by some public workers. The degradable, plastics and infectious wastes were packed separately. Those degradable types

of household wastes such as peels of potatoes, onions and vegetables were taken to be used as fertilizers for plants. On the contrary, most of the public workers simply pack the wastes together to be deposited into the collecting containers.

Drainage within the *woredas* was cleaned up. Overfilled and malfunctioning drainages were cleaned up and opened by taking out the wastes filling them in order to allow the passage of waste water. This also had relieved the environment from having bad odor. Cleaning was also undertaken along water body sites such as rivers (*Arba Arat* River in Addis Ketema and *Gordeme* River in Arada sub city).

According to one interviewee (Urban Job Creation and Food Security Agency Head):

> *The Solid Waste Disposal Municipality has been working in integration with the program's public workers. The wastes collected by the public workers of the UPSNP are transported to disposal sites by the socially organized cleaning bodies. Besides, trainings are given by experts on solid waste management to enhance the knowledge and skill of the public workers of the program. During the program's initial phase, working tools such as brooms, gloves, mouth masks and carrying carts were offered by the woredas' cleaning authority/agency. (Interview 01 Urban Job Creation and Food Security Agency Head, April 27, 2018, Addis Ababa)*

Figure 4.15: Solid Waste Cleaning by Public Workers in Arada Sub City (Source: direct observation, 2018)

Figure 4.15 shows the public workers cleaning up solid wastes in residence area. The public work has undertaken all the list of activities specified in the Program Implementation Manual (PIM) except door-to-door waste collection, waste segregation and waste recycling activities. It has engaged in sweeping and collecting solid wastes from streets inside residence areas, cleaning drainages and water bodies. Improper waste disposal is the most common environmental related problem including water, soil, and air pollution of urban and peri-urban areas, thereby communities become highly vulnerable to various health problems (Leulsegged, 2011). Therefore, the cleaning activity of UPSNP, which includes solid and liquid waste management, has paramount importance in reducing pollution and providing good-for-sight living environment. It shows that the program has contribution in protecting and enhancing the quality of the environment of the study areas.

ii) Urban Greenery

UPSNP's public work is also engaged in creating green spaces in the city starting from the residence areas. The activities focus on urban landscaping and basic green infrastructure development activities including planting and management of trees, shrubs, flowers and grasses along streets, in and around public parks (MoUDH-PIM, 2016). In the survey, almost all of the households mentioned the presence of developed green areas and described the significant roles of UPSNP in the development of urban greenery by planting grasses, flowers and trees, conserving already existing vegetation, constructing protective fences and beautification of streets. The FGDs had shown the public work's tasks in developing green areas as:

> *Green areas are developed both inside the residence areas and main streets. Planting areas are layered with soil, holes are prepared, and seedlings and flowers are planted along cobble roads, streets and residence fences, on areas where there had been waste piles, on open spaces, and on road partitions. Flowers, shrubs and grasses are planted to beautify streets and residence areas of the community. The plants are watered, weeded and given the necessary care for their proper growth. In addition, seedling nursing activities are undertaken that*

would be used later for greenery purposes. (FGD 02, April 25, 2018, Addis Ababa)

According to one interviewee (Urban Job Creation and Food Security Agency Head), the Urban Greenery and Beautification Bureau had been supporting the program by giving sites, technical support, experts, seedlings and working tools to upgrade the urban greenery tasks of the public workers and the *woredas*.

Figure 4.16: Urban Greenery a) ground holes prepared for planting seedlings in Arada sub city (left) b) ornamental plants planted in Addis Ketema sub city (right) (Source: direct observation, 2018)

Figure 4.16 show the holes prepared for planting seedling plants and flowers planted along fences for greenery purpose. The scarcity of green spaces in cities of Ethiopia has generated environmental problem which are described by MoUDH ESMF (2015) as increase of temperature, air and water pollution and greenhouse gas emissions. Hence, the public work greenery task undertaken by UPSNP has significance in creating green spaces which can improve the air quality, reduce flooding in the city as well as mitigate global climate change which consequently contribute for health of communities.

iii) Watershed Management

According to the manual (MoUDH, 2016), urban integrated watershed development activities focus on biological and physical soil and water conservation activities as well as cleaning of waterways. The survey finding, the FGDs and the direct observation showed that, UPSNP had played role by carrying out watershed related activities in their *woredas*. Assembled water is

deflected by making waterways/ channels towards drainages to allow its flow into drainages. Grooved roads that collect rain water are filled up with gravels and soil.

Figure 4.17: Watershed Management Area a) stone bunds and table terraces in Arada sub city (left) b) trench made for reserving water in Arada sub city (right) (Source: direct observation, 2018)

Figure 4.17 show the stone bunds and trench made in the watershed management area found in Arada sub city. Stone bunds, table terraces and trenches were constructed specifically in *woreda* 1 of Arada sub city for soil conservation. The stone bunds and table terraces were made along slopes to protect soil from being eroded. Trenches are also made to collect water that would be used for the seedling nursery activity undertaken along the watershed zone. The Addis Ketema's Focus Group reported that they had not yet started activities related to watershed management. But they have started cleaning up around *Arba Arat* River. According to the interviewee 01 (Urban Job Creation and Food Security Agency Head, April 27, 2018, Addis Ababa), the sub city is on preparation to begin its watershed activities along the *Arba Arat* River, so that the public workers have started cleaning the area. Stones are brought for making bunds within the coming times.

Figure 4.18: Seedling Nursery in the Watershed Management Area in Arada Sub City (Source: direct observation, 2018)

Along the watershed, as shown in Figure 4.18, there are seedling nursing sites which would be used for greenery purposes. These activities (watershed management) have environmental functions such as improving land productivity, soil fertility restoration, access to drinking and irrigation water and minimization of runoff (MoUDH-PIM, 2016). Therefore, this component of the public work is crucial in sloppy areas found near water bodies in order to direct runoffs towards the river, control erosion and restore soil fertility of the area.

iv) Urban Agriculture

The UPSNP has started its urban agriculture activity by planting vegetables which are used for consumption purpose by the beneficiaries. According to the findings, the UPSNP had planted vegetables and was preparing more planting sites. The vegetables were consumed by the public workers turn-by-turn.

In the semi-structured interviews, a number of plots were covered with vegetables and more plots were being prepared to increase the urban agriculture sites. It was stated that the Trade and Industry Bureau and the Agriculture Bureau had been providing support to the program by giving trainings, technical supports and vegetable seedlings to improve the urban agriculture activity in the *woredas*.

Figure 4.19: Urban Agriculture (Vegetables) a) vegetables planted in Arada sub city (left) b) vegetables planted in Addis Ketema sub city (right) (Source: direct observation, 2018)

Figure 4.19 show the vegetables planted by the public workers that are going to be used later for daily consumption by them. The vegetables planted were tomato, carrot, lettuce, cabbage, potato, spinach, *enset*, corn, avocado and collar green (*ye'habesha gomen*). As stated in MoUDHC-ESMF (2015), urban agriculture is an important contributor to sustainable urban growth and development, as well as to people's livelihoods by providing alternative food source for the producing urban poor and may supply to the town markets to some extent. Thus, the agriculture activity has benefited the public workers by providing know-hows and skills on doing agriculture. In the future, it has potential of being a source of food to supplement beneficiaries' food consumptions and dietary diversity.

v) Development of Social Infrastructures

According to the manual, as its fifth component of the public work, UPSNP has intention of engaging in development of social infrastructures.

> *The program supports projects that include construction and/or rehabilitation of social infrastructure such as class rooms, child care centers, heath posts, pubic latrines, construction of cobblestone roads, building drainages and community infrastructure, and development of shelters and workshops for income generation (Small and Micro Enterprises activities) and others. (MoUDH-PIM, 2016)*

As per the findings of the survey, the FGDs and the interviews, the UPSNP had not yet engaged in social infrastructure activities. According to one interviewee's reply:

> *List of social infrastructures (such as latrines, bath facilities and cobble roads) that are necessary for the community were reported to the concerning bodies. There is scarcity of budget, experts, and resources to undertake this component. Thus, the woreda and the public workers are waiting for coming response to engage in the activity. (Interview 01 Urban Job Creation and Food Security Agency Head, April 27, 2018, Addis Ababa)*

According to Interview 02 (public work high expert, April 28, 2018, Addis Ababa), the public workers of *woreda* 1 of Arada sub city had involved in preparation of stones that were used by microenterprise agency to construct cobble roads. However, there had not been any undertaking related to social infrastructure in the *woreda*.

Fekadu and Mberengwa (2009), conducting their study in Kuya *woreda* of North Shewa, stated that while current efforts being made under PSNP, such as bund and check dam construction, were commended, findings of the study further showed that community participation was not demand driven as community priorities were not often considered in the program. The researchers forwarded the need to consider and implement communities' prior problem areas first. Hence, since social infrastructures have direct or indirect impact on the quality of life of people, UPSNP should give equal attention to this component of the public work. Besides, when starting its implementation, it should give priority for the demand of the communities.

4.5. Perceptions of Beneficiaries

The respondents' perceptions towards UPSNP assessed in the study were the recruitment of beneficiaries, awareness among beneficiaries about the program, expressing one's own opinion, adequacy of support, timeliness of support, impartiality of support provision and the general effect of the program on beneficiaries' livelihood. In the survey, assessment was made on the satisfaction level of the respondents which ranged between very unsatisfied to I don't know (Very unsatisfied, somehow unsatisfied, neutral, somehow satisfied, very satisfied, I don't know). The FGDs had served as supplementary source of data by gathering the participants' opinion through discussions.

4.5.1. Targeting/ Recruitment

Targeting is conducted at household level in order to recruit poor households that are eligible to receive support from UPSNP. As per the UPSNP manual (MoUDH-PIM, 2016), beneficiaries are selected through community-based targeting, and there is an effective appeal mechanism to address inclusion or exclusion errors. Besides, it is required that the following defined criteria are fulfilled for recruiting households by the targeting committee.

i) The household is poor and vulnerable and not able to meet its food needs
ii) Residing in the program area (city/sub-city/*woreda*/*kebele*) for at least six months
iii) Up to four members of each eligible urban household
iv) For unconditional transfer- Does not have able bodied persons (healthy and of working age as per the national definition)
v) For the conditional transfer- Have able bodied persons (healthy and of working age as per the national definition)
vi) For temporary unconditional transfer- Has evidence of the reasons for exemption from public works. (MoUDH, 2016)

The recruitment was explained by the FGDs as:

> *The recruitment in their woredas was conducted by publicly selected and trained community members to identify the poorest households and rank those in four levels (the poorest of poor, very poor, medium poor and non-poor) based on the criteria. The poor were registered according to their low economic status (who do not have any means of living, do not have permanent income source and get insufficient income as compared to the household size), dependence on others (unable to work to earn income due to aging or health problem, members below the working age- < 18years), food insecure (having a few meal per day, unstable food access), and having poor housing conditions (living in kebele, rent house, or plastic shelters for more than 6 months and inadequate household assets). Later on, the enlisted poor were screened in front of the community for confirmation. Besides, those who were missed in the first round selection had been included during the screening. (FGD 03, April 25, 2018, Addis Ababa)*

According to the Urban Job Creation and Food Security Agency Head, the program had prioritized the poorest of poor and the very poor households for the first round implementation of the program. From the above discussions, it can be deduced that, as a pilot project, the targeting is proper in prioritizing the poorest households having insecure livelihood: low economic status, unable to work to earn income, food insecure and poor housing conditions.

From the survey result, the majority 267 (81.2%) were very satisfied by the recruitment of beneficiaries, 42 (12.8%) were neutral, 16 (4.9%) were somehow satisfied, and 4(1.2%) were somehow unsatisfied.

According to Ethiopian Development Research Institute (EDRI) UPSNP Baseline Survey Report (2017), the registrations and some aspects of targeting were done before the training was offered to *ketena* targeting committee members since there was no uniform system of information dissemination. Some targeting committees did not take training but had carried out the targeting task.

The focus groups had mentioned the limitation of the targeting process of the program. The participants had described the limitation as:

> *One was regarding the defined criteria that had led to the exclusion of some poor households to join the program. For instance, there had been some excluded food insecure households who had household assets provided previously by neighbors or other supports, who had children that had work but did not supported them at all, and who had been living in plastic shelters for less than 6 months (4 or 5 months). The other was regarding the size of quota set for districts. The number of quota given to some districts was smaller relative to the size of poor households they had. (FGD 01, April 24, 2018, Addis Ababa)*

According to EDRI (2017) baseline study, categorizations of the households were done based on the subjective judgment of the *ketena* targeting committee members which was done by comparing the economic status of households within the *ketena*. These had caused the most destitute *ketenas* to have a smaller chance of inclusion compared to a household with the same or even a better economic status in a better off *ketena*. Moreover, to do the targeting, the criteria mainly used by the *ketena* targeting committee varied among different *ketenas*. Some had mainly

focused on the availability and ownership of assets while others focused on food consumption status of households.

Other studies had mentioned the limitation of the PSNP's targeting in the rural parts of Ethiopia. For instance, Fekadu and Mberengwa's (2009) survey revealed that the PSNP targeting had drawbacks , such as, non-inclusion of poor people, less consideration of eligible aged, disabled, and female headed households, high inclusion ratio of non-poor households participating at the expense of chronic food insecure households and filling up of the process with corruption and nepotism. From the targeting in Bale zone, the Saweyna *Woreda*'s PSNP coordinator has pointed out that there was a false inclusion and exclusion of beneficiaries where better off individuals were found to be wrongly included, particularly in pastoral areas and individuals affected worst by food insecurity may wrongly be excluded (Diriba, et al., 2017). Unlike these studies, this study's findings do not show issues of nepotism, corruption and inclusion of non-poor households. Rather, the main limitation of the targeting is related to the criteria used to recruit the poor households. Due to some criteria poor households were excluded. Thus, the criteria that bring exclusion should be considered and checked, and its uniform application by the targeting committee should be checked.

Besides, other reasons emerging from the side of the community had made some poor households to miss the opportunity to be included into the program. The FGDs had reflected some of the reasons as:

> *Some poor households did not want to be considered as poor and were suspicious about the program's genuineness. Others were not interested with the type of tasks in the public work as well as they got fear of the work load and the amount of payment for the public works. Besides, there had been situation where household's members and house renters did not allow the poor households to be registered for clearly unknown reason. Due to their unavailability during the screening, some households missed the opportunity and were substituted by new households. (FGD 02, April 25, 2018, Addis Ababa)*

So, it can be concluded that UPSNP's targeting had good sides in prioritizing and including the poorest segment of the community. As an initial intervention, the program cannot be free from limitations. The limitation of some targeting criteria is the observed drawback of the program in

the study area. Thus, the reconsideration of the criteria that brought exclusion of poor households is necessary.

4.5.2. Awareness of Beneficiaries

Respondents were forwarded with question whether they have the necessary information they should have gained about the program while being beneficiary. Concerning the adequacy of information the households were getting about the program, 250 (76%) were very satisfied, 45 (13.7%) were neutral, 29 (8.8%) were somehow satisfied, and 5 (1.5%) were somehow unsatisfied as collected from the survey.

According to the FGDs, starting from the recruitment they were having the necessary information about the program. Besides, information were shared among the public workers through meetings held within one to five and one to thirty discussions, as well as meeting with districts' (*ketenas*) coordinators and the *woreda's* agency head.

> *Every day there are 1 to 5 discussions after the public works; whereas, every 15 days there are meetings once or twice among the representatives of the team of 5 and the district's 'kabbo' (1 to 30 team leader). The minutes taken during the discussions are exchanged between 'ternafi' (who supervises and communicates the 1 to 30 team leaders ('kabboes')) and districts' coordinators, then to the woreda's Urban Job Creation and Food Security Agency Head. Concerning the direct support beneficiaries, they are not frequently called for meeting due to their conditions. However, information is delivered to them to where they are. (FGD 03, April 25, 2018, Addis Ababa)*

The information flow to beneficiaries has yielded satisfaction among the beneficiaries as seen in the findings. The limitation that the Focus Groups mentioned was they had not been informed about the reduction of working days each year for the public work beneficiaries. They stated that they got the message recently when they were nearly to join their second year in the program. It had become a shock for the beneficiaries who had never had such an expectation to hear such message late. On the contrary, one of the interviewees explained "The beneficiaries were informed from the beginning about the reduction of working days in the second and third year of the program. There had been awareness creation about the number of working days and payment

of each year since the beneficiaries has joined the program" (Interview 02 public work high expert, April 28, 2018, Addis Ababa).

The program has tried to create awareness about the program and deliver the necessary information to the beneficiaries using the hierarchy of communication. As findings show, most beneficiaries are satisfied with the program's information delivery process. This could create among the beneficiaries the feeling of being part of the program, not as an outsider. Therefore, UPSNP has tried to deliver its beneficiaries with the necessary information about the program.

4.5.3. Expressing one's own Opinion

Being as a beneficiary of a program, the respondents have replied whether they get the chance to freely express their opinions and forward comments and questions directly or indirectly to the concerned bodies in the program. Beneficiaries' opinion sharing on meetings was recorded as very satisfactory for the 248 (75.4%), don't know for 59 (17.9%), somehow satisfactory for 20 (6.1%), and somehow unsatisfactory for 2 (0.6%) respondents.

FGDs results showed that, the public workers had good chance of meeting, communicating and speaking out their opinions daily and weekly in one to five discussions, and within 15 days with the *kaboo* in one to thirty discussions. Later on, their discussions' minutes were reported to the districts' coordinators and the *woreda's* UPSNP's agency head (Urban Job Creation and Food Security Agency Head). The beneficiaries had been freely reflecting their opinions, ideas and comments concerning the program's implementations to their immediate delegates which would be reported to the higher bodies.

Allowing free expression of opinions, comments and questions has paramount importance for the effective implementation of the program. It enables to understand the real conditions of the beneficiaries, so that the program could know how to correct and modify its actions while intervening towards the poor beneficiaries. Hence, it can be generalized that UPSNP has provided space for its beneficiaries to reflect their opinions in the provided meetings and discussions.

4.5.4. Adequacy of Support

As stated in the MoUDH (2016), the daily payment for the conditional support beneficiaries is 60 ETB per day (equivalent to $2.91) for the first year of the program. The program chose a higher

wage of 60ETB (10 ETB more than the wage rate of 2015 according to CSA report) to take into account expected inflation between 2015 and the program start date of 2016. The direct support beneficiaries receive Birr 170 per person per month and a maximum of four family members receive Birr 680 (170*4 = 680 Birr) per month. Direct support (DS) clients receive transfer which is significantly higher than for the other categories of urban poor (Birr 600 per person per month for 12 months) (MoUDH, 2016).

According to the survey finding, the majority 275 (83.6%) had reported the adequacy of the cash transfer as very unsatisfactory, whereas, 40 (12.2%) as somehow unsatisfactory, 10 (3%) as somehow satisfactory, 2 (0.6%) as very satisfied and 2 (0.6%) were neutral. The inadequacy of the cash support was also reflected by the focus groups. They had forwarded their complaints as the amount of cash they were receiving could not even cover their meals properly. It did not consider the inflation on food and good items. Especially those households receiving the direct support (170 ETB per month), living in rental houses and having chronic patients had the worst case. It is similar with the finding of Fekadu and Mberengwa (2009) studying PSNP in Kuyu *Woreda* (North Shewa Zone), the mode of transfer participants prefer, 89% of the households indicated that they prefer the transfer to be in kind/food, while the rest were satisfied with cash payment. In the same study, during participant group discussions, it was raised that the amount of cash transfer (six birr/day/person) is too little and cannot support the consumption level of the households. From the study of PSNP in Somali by Yitagesu (2014), the majority (66%) respondents preferred food only than cash transfer; food transfer reduces the cost to get food since in the market it is difficult to get the same amount of food if it was cash transfer.

It is stated in MoUDH (2016) that the cash transfer is subjected to adjustment on annual basis when necessary depending on food price situation of each city/town. It was stated by Interview 01 (public work high expert) that there had been decision made before that the amount of cash transfer would be increased by 15% to the beneficiaries. However, there was no announcement concerning the increment yet.

As it is reflected in the discussions, the cash transfer requires to be adjusted to enable the beneficiaries meet their basic necessities. The amount should be adjusted based on the current standard of living as well as taking into account the potential factors that could affect the beneficiaries' living conditions.

Moreover, the numbers of working days for the public workers is going to be reduced by 1 day per month per person in the coming second year. For comparison purpose, the first year and the second year conditional cash transfer of the beneficiaries are tabulated in Table 4.15.

Table 4.15 First and Second Year Monthly Cash Transfer

	1st year		2nd year	
No of HH members	No of working days per month	Monthly cash transfer (ETB)	No of working days per month	Monthly cash transfer (ETB)
1 beneficiary	4	240	3	180
2 beneficiaries	8	480	6	360
3 beneficiaries	12	720	9	540
4 beneficiaries	16	960	12	720

Source: Semi-structured interviews and FGDs, 2018

As Table 4.15 shows, a household having 1, 2, 3 and 4 public work beneficiaries are going to have 60, 120, 180 and 240 ETB lesser payment in the second year than the first year.

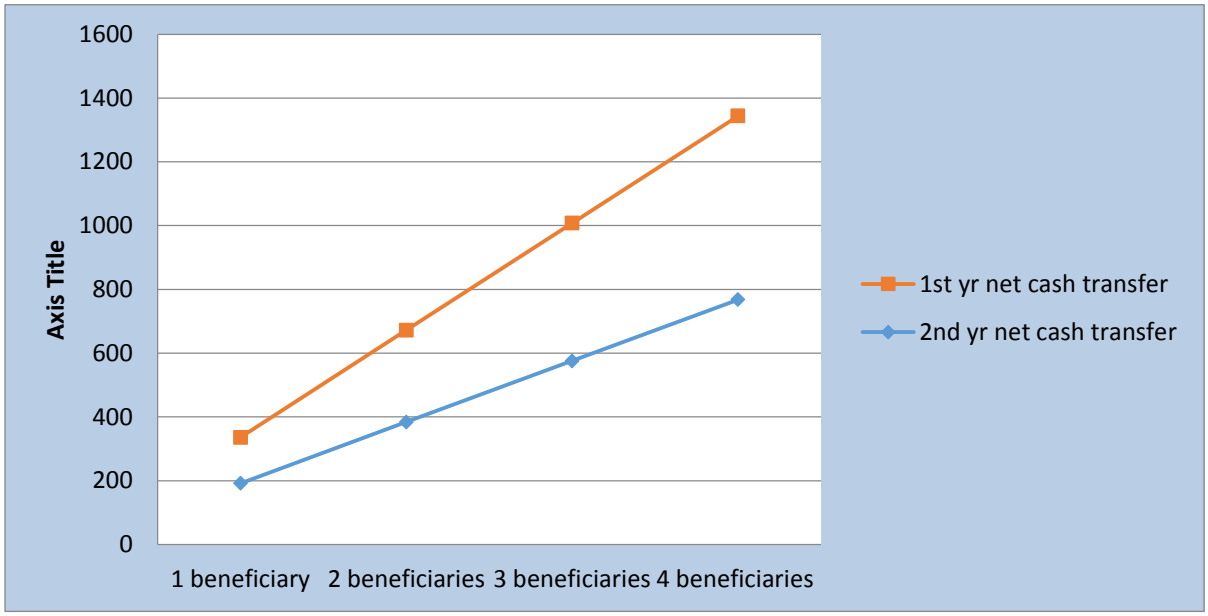

Figure 4.20: Comparison of the Cash Transfer of the Public Work Beneficiaries for the First and Second Year (Source: Semi-structured interviews and FGDs, 2018)

As it can be seen in Figure 4.20, the difference will be more as the number of clients in a household increases.

The reason for the reduction in the number of working days was explained by one of the interview as:

> *The reason for the cash transfer reduction is due to the beneficiaries' entrance into the second phase of the program ('livelihood support' component). One of the households' beneficiaries will take livelihood trainings on livelihood and financial skills in the second year. In other words, the reduced working days will be for training. (Interview 01 Urban Job Creation and Food Security Agency Head, April 27, 2018, Addis Ababa)*

Following the decline in the amount of the cash transfer in the second and third year, the adjustment could somehow alleviate the income situation of the beneficiaries.

When concluding from the above findings and discussions, the amount of the cash transfer of UPSNP is inadequate at least to meet the basic needs of the beneficiaries. Revising the amount is one means to address the situation of the poor households.

4.5.5. Timeliness of Support

UPSNP's timely cash transfer to its beneficiaries was assessed. A transfer is timely if it is provided to clients before or at the time during the year when they need the support, takes place according to a planned transfer schedule and meets the needs of households: cash is provided in settings where markets function well (MoUDH, 2016). The respondents had described the timeliness of the cash transfer as very satisfied by 141 (42.9%), very unsatisfied by 103(31.3%), somehow satisfied by 51 (15.5%), somehow unsatisfied by 32 (9.7%), and neutral by 2 (0.6%).

The interviewees and the focus groups had forwarded the limitation of the program in releasing payments on time. The public workers had been receiving 7-10 days after the beginning of the month. Though, they have stated that the time of payment had improved in the past month (one month before the data collection period).

The report done in October 2017 by the Addis Ababa City Administration Urban Job Creation and Food Security Agency (UJCFS)) state that there had been a number of public workers who had not yet (till October 23, 2017) received their payments. It was explained that the payment system was suspended at sub city level as a result of inadequate financial experts at sub city level and delayed delivery of pass attendance list to the *woredas*. This shows that the timeliness of UPSNP's cash transfer has been improved as compared to the previous months. According to one of the principles of UPSNP (MoUHD, 2016), which is delivering timely, predictable and appropriate transfer, beneficiaries have the right to know the time of transfer. Therefore, in order to accomplish this, the obstacles should be assessed and the necessary measures should be taken in which the beneficiaries will be able to receive on fixed date basis.

4.5.6. Impartiality of Support Provision

One of the principles stated on the MoUDH (2016) is non-discriminatory treatment among persons and among groups of people. Respondents had stated the impartial provision of support by the program as very satisfactory 274 (83.3%), and don't know 55 (16.7%). The response "don't know" has come from the direct beneficiaries who were not sure of the issue. In addition,

the FGDs had confirmed the impartiality of the cash transfer. All beneficiaries got their cash through their own bank accounts.

The use of formal financial institution (bank) to deposit cash into the accounts of the beneficiaries is a good means to attain transparency and impartiality while providing support. Hence, partiality is not an issue mentioned in the delivery of transfer by the program.

Table 4.16 Perceptions of Beneficiary Respondents towards Urban Productive Safety Net Program

	Very unsatisfied (%)	Somehow unsatisfied (%)	Neutral (%)	Somehow satisfied (%)	Very satisfied (%)	I Don't know (%)
Targeting/recruitment of poor	0	1.2	0	4.9	81.2	12.8
Awareness about UPSNP	0	1.5	13.7	8.8	76	0
Expression of one's opinion	0	0.6	0	6.1	75.4	17.9
Adequacy of support	83.6	12.2	0.6	3	0.6	0
Timeliness of support	31.3	9.7	0.6	15.5	42.9	0
Impartiality of support provision	0	0	0	0	83.3	16.7

Source: Author's Research Survey, 2018

In general, as seen in Table 4.16, the households are relatively satisfied towards the program intervention, but the majority of the respondents are unsatisfied towards the adequacy of the cash transfer provided by the program.

4.5.7. General Effect of UPSNP

Concerning the general effect of the program on the livelihood of the beneficiaries and the community, three options were provided to them: positive, negative and no significant effect. The survey result showed that, the majority 96% (316) reported the positive effect of the UPSNP; while 4% (13) of the respondents stated the non-significant effect of the program on beneficiaries' livelihood. Referring to other studies' findings, Akter (2013) had stated his findings as the livelihood pattern of the beneficiaries had also been improved by the social safety net program. It has created additional employment for the poorest segment of the society; therefore, the standard of living of the beneficiary households was becoming upgraded. Likewise, the PSNP in Bale Zone had resulted positive impact on its beneficiaries.

> *Taking into account the overall livelihood effect of PSNP, the majority of the respondents (64.7%) claim that their living standard was improved: for the 44.4% the livelihood situations of the household are a little bit better and for the 20.3% a better change after they became a beneficiary of the program. (Diriba, et al., 2017)*

On the other side, Diriba, et al. had found that for the 26.4% of respondents, their living standard had been deteriorated further while they were the beneficiaries of the program. Similarly, the survey result of this study reflects the positive effect of UPSNP for the majority beneficiaries in improving their livelihood as compared to their previous state.

From data collected through FGDs, the program has positive, non-significant and negative effects in different aspects of their livelihood. When explaining the positive effect, they stated that the program had given them light of hope for their future lives by letting them save money which they had not experienced before. The saving had encouraged them to live with better expectation for their future lives. The cash transfer had contributed to attain better food security as compared to the past. Besides, it was stated in the FGDs that they are now able to involve in social lives such as *iddir*, *iquib*, visit sick neighbors, visit those who have lost their family member, visit those who have given birth, get acquainted with others through the public work, get credits, and buy household assets (such as cooking utensils, bed sheets, bedcovers). It had enhanced their confidence while living among the community. They have also appreciated the contribution of the public work activities in providing skills, enhancing the beneficiaries work

habits, and upgrading the safety and esthetic value of the environment (clean and green physical environment). Likewise, it was mentioned in Yitagesu's findings that 84.5% asserted that the transfer being creating initiation towards work and avoid feeling of charity. From the discussions, it can be generalized that UPSNP has contributed in improving the social assets (social networks), financial assets (income and saving), human assets (food security, skill and work habit), natural assets (environmental protection), and physical assets (household assets) of the beneficiaries.

The focus groups explained the non-significant effect of the program in the aspect of the support's inadequacy in bringing change on the livelihoods of the households. The amount of the cash transfer, both the direct support and conditional transfer, was inadequate to attain their food security or income status. Qualitative results of Diriba, *et al.* (2017) showed that PSNP was playing a key role in meeting the immediate food requirements of beneficiaries through cash and food transfer; however, the long-term livelihood improvement effect of the program was less. It is obvious that the amount of the cash transfer is not adequate enough to attain a sustainable livelihood among the beneficiaries. However, within a one-year period support, it is difficult to expect the program to address the livelihood insecurity of the beneficiaries.

One of the negative effects of the program mentioned was the deprivation of job opportunity in *woredas* and sub cities. As per the FGDs, the beneficiaries had returned their unemployment identification card when joining the UPSNP which made them to be considered as employed. Therefore, they were not permitted to involve in jobs provided by their *woredas*.

The other negative effect of the program explained both from the FGDs and semi-structured interviews was health related risks from the public works. The Addis Ketema public workers had suffered from unavailability of safety materials and tools that had exposed them to health and body injuries. They were not provided with safety clothing such as gloves, eye wears, mouth masks, work pants, boots and caps. On the hand, the Arada public workers had suffered from inadequacy of safety material where very few workers had got the clothing. The *woreda* had sent the boots size of the workers previously, but has not received yet. The materials such as mouth masks and gloves had short term function which should be supplied continuously to the workers. Concerning the working tools, the public work high expert interviewee replied that there were adequate supplies of brooms, but other tools (rakes, spades, watering jar, hoes, reaping-hook/ *machid*) were not adequate enough which had forced the workers to take inconvenient measures

to carry out the tasks. There was delay in provision of working materials and tools for the public works. This implies the necessity of fulfilling the working tools and clothing for the workers who are continuously exposed to injuries.

Moreover, as per the reply of the Agency Head interviewee, there were no first aid kits available in their districts to treat the workers after accidents or injuries. Though it had been reported to the concerning bodies (Urban Food Security and Job Opportunity Creation Agency of the sub city's as well as the city's), the beneficiaries could not get the solution yet. The program had opened the access to free medication service for the beneficiaries by giving them identification cards. The beneficiaries' list had been sent to the sub city; the cards are not made ready for the beneficiaries yet. All these indicate that the program should create healthy working environments for the public workers which have direct impact on their livelihoods. They should be supplied with the necessary working tools, safety clothing and medication facilities.

When concluding from the above discussions, UPSNP has positive effects on beneficiaries' assets, livelihood strategies and livelihood outcomes. By improving their assets, the program will enable them to engage in better livelihood strategies with better outcomes. For most, it has supported their livelihood strategies by being additional and stable means of livelihood. By yielding positive outcomes (food access, income and safe environment), it has allowed the beneficiaries to build their assets which could enable them to lead their livelihood. The positive effect of the program are the saving facility, improving food security, enhancing social networks, providing skills, upgrading work habits, and protecting the physical environment of the city. The amount of the cash transfer is not adequate enough to attain a sustainable livelihood among the beneficiaries. Though, on one hand, it is difficult to expect the program to address the livelihood problem of the beneficiaries within a one-year period support; while, on the other hand, the beneficiaries should not depend completely on the cash transfer since the program is not serving as a permanent job. Therefore, it is necessary for the beneficiaries to engage in other livelihood strategies to attain their livelihoods. While adjusting the cash amount, the program should create a healthy working environment for the public work which has also impact on the livelihood of the public workers.

CHAPTER FIVE: CONCLUSIONS AND RECOMMENDATIONS

5.1. Conclusions

The Urban Productive Safety Net Program (UPSNP) has been implemented since 2016 in Addis Ababa city. It has been a year since the study areas namely: Addis Ketema (*woreda* 5) and Arada (*woreda* 1) sub cities have been receiving support from the program. Though it is too early to assess the impact of the program, the study has tried to examine the improvements of the households after joining the program within the one-year support period. Therefore, this research has investigated the role of UPSNP in improving the income-poverty and food security/access status of households. In addition, it has also studied the environmental protection role of the program in the study *woredas*.

UPSNP is contributing to the development path by transferring cash to beneficiaries to address poverty and by engaging in public works to enhance the living environment of communities. Though it is difficult to address the poor households from poverty and food insecurity within a short period, UPSNP has contributed to the income and food condition of the households. Through the provision of cash, the program has provided a stable and additional income for the households that are involved in jobs with low and varying income. Moreover, the cash transfer has become more important for those households that have a few or no income earning members. Likewise, the regression result also indicates that the cash transfer from UPSNP significantly and positively affects income-poverty status of the beneficiaries. The cash transfer and earnings from other livelihood sources (wage labor, petty trade and low wage employment) positively affect the income of households; while, household size and number of economically inactive members have negative effect.

The cash transfer has also improved the food security of households. It has contributed in increasing the number of meals taken per day and the food access through purchasing. The reason for remaining in food insecurity for most beneficiaries could be due to their short (one year) duration in the program. Besides, the beneficiaries' low and varying wage earnings as well as inflation have negatively affected the households' food access and stability. As per the regression result, UPSNP's cash transfer has positive and statistically significant relationship with food security. The cash allows the beneficiaries to purchase food which has improved their food access status. Other explanatory variables affecting food security in the study are sex; where, being a female headed household tends to make the households more food insecure than

male headed households. This can be as a result of less engagement of females in income generating activities than the males. Being a married household head, household size and variation of income have negative impact on food security status of beneficiaries. Income from other means of living has also improved the food security status of households.

Generally, the amount of income and inflation has significant impact on beneficiaries' food access stability, because most of them access their food by purchasing from market. Therefore, most of the respondents are exposed to instability in different times and situations.

The UPSNP has involved in environmental cleaning activities, urban greenery development, watershed management and urban agriculture activities. The program's involvement in the environment aspect has importance in bringing a healthy environment for dwellers by reducing pollution, minimizing runoff, mitigating heating, improving land productivity, enhancing soil fertility restoration and contributing for the health of communities.

Most respondents are satisfied towards the program interventions (targeting, awareness about the program, expressing one's own opinion, timely and impartial provision of support), but the majority are unsatisfied towards the adequacy of the cash transfer provided by the program which requires adjustment by the program. UPSNP has brought positive effect on the livelihood of beneficiaries. It has contributed to improve beneficiaries' assets, livelihood strategies and livelihood outcomes. For the majority, it has enhanced their livelihood strategies by being additional and stable means of livelihood. By yielding positive outcomes (food security, more income and enhancing the environment), it has allowed the beneficiaries to build their assets which could enable them to lead their livelihoods. The program has improved the social assets (social networks), financial assets (income and saving), human assets (food security, skill and work habit), natural assets (environmental protection), and physical assets (household assets) of the beneficiaries.

The program has potential of reducing poverty; however, it has to work out to fill up its gaps using the feedbacks from its initial implementation. Like other studies' finding conducted on PSNP, this study's findings reflect the inadequacy of the amount the transfer to meet the basic need of households. Besides, it should work out on the time of cash delivery, targeting criteria which exclude the poor and the safety of the working conditions of the public workers.

Improving its limitations will allow the program to bring an effective and sustainable livelihood change on the beneficiaries.

5.2. Recommendations

The following recommendations were forwarded based on the household survey findings, interviews and focus group discussions conducted in the study area.

- The program has become additional as well as stable income source for the households who are mostly engaged in jobs with low and varying earning. Similar with other studies conducted on PSNP, the finding of this study has also reflected the inadequacy of the cash transfer to meet the basic needs of the beneficiaries. Thus, the amount of the transfer should be adjusted in line with the current urban condition in order to help the beneficiaries to move out of poverty. Following the decline in the amount of the cash transfer in the second and third year, the adjustment could somehow alleviate the income situation of the beneficiaries.
- Though there is improvement as compared to the previous months, the transfer should be delivered to the beneficiaries timely. Since they have the right to know the time and expect the delivery of their support, the obstacles should be assessed and the necessary measures should be taken.
- The study population has inadequate living conditions which could expose them to health related problems. The majority are living in poor housing conditions having poor ventilation, leaking roofs, ruined wall and congestion among houses. Therefore, UPSNP, besides the cash transfer, should include the alleviation of housing problem of the urban poor in its future interventions.
- The beneficiaries have poor hygiene facilities such as latrines, bath facilities, cloth washing facilities and separate cooking places. In addition, households in Arada sub city residing near river areas dispose waste water into the river due to lack of drainage. Therefore, the social infrastructure development component of the program should start its implementation by prioritizing the demand of the study areas.
- The inadequacy and unavailability of working tools, safety clothing and first aid kits are observed in the findings. Therefore, adequate number of working tools and safety clothing should be made available in order to undertake the works properly and minimize the public workers exposure to health related risks. First aid kits should be made available in each district for the public workers to deliver treatments during injuries. Besides, immediate action should be taken to provide free medication cards for those who do not have in order to reduce their medical expenses.

- The limitation of some targeting criteria is the observed drawback of the program in the study area. Due to some criteria, poor households were excluded. Thus, the reconsideration of the criteria that had brought exclusion of poor households is necessary. Along with, uniform application of the criteria by the targeting committee should be assured.
- The non-beneficiary community should receive adequate lessons and advices related with waste management. They should be cooperative and should take part in the environmental protection together with the public workers.

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Appendixes

Appendix 1. STATA Result of Binary Regression Model

```
. vif,uncentered
```

Variable	VIF	1/VIF
HHSize	12.30	0.081315
UPSNPMONTH~H	10.34	0.096713
_sex	8.04	0.124408
_MaritalSt~H	7.18	0.139244
econ~yactive	4.59	0.217970
othersourc~e	3.03	0.329704
_Variation~P	2.42	0.413061
_Education~H	2.12	0.471961
Mean VIF	6.25	

```
.

. logit _incomesecurity _sex _MaritalStatusHHH _EducationallevelHHH _VariationofHHincomeafterUPSNP
>  HHSize economicallyactive UPSNPMONTHLYincomeofHH othersourcesMONTHLYIncome

Iteration 0:   log likelihood = -216.05402
Iteration 1:   log likelihood = -172.76973
Iteration 2:   log likelihood = -169.71837
Iteration 3:   log likelihood = -169.64165
Iteration 4:   log likelihood =  -169.6415
Iteration 5:   log likelihood =  -169.6415

Logistic regression                             Number of obs   =        324
                                                LR chi2(8)      =      92.83
                                                Prob > chi2     =     0.0000
Log likelihood =  -169.6415                     Pseudo R2       =     0.2148
```

_incomesecurity	Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
_sex	-.5331872	.5596851	-0.95	0.341	-1.63015	.5637754
_MaritalStatusHHH	.4454521	.5793015	0.77	0.442	-.6899581	1.580862
_EducationallevelHHH	.0247806	.2736835	0.09	0.928	-.5116291	.5611904
_VariationofHHincomeafterUPSNP	-.2524523	.2840101	-0.89	0.374	-.8091019	.3041972
HHSize	-.6793537	.1350697	-5.03	0.000	-.9440855	-.4146218
economicallyactive	-.3477487	.1572581	-2.21	0.027	-.6559688	-.0395285
UPSNPMONTHLYincomeofHH	.0034677	.0006698	5.18	0.000	.0021548	.0047805
othersourcesMONTHLYIncome	.0032948	.0005996	5.49	0.000	.0021196	.00447
_cons	-1.319298	.5558708	-2.37	0.018	-2.408785	-.2298114

```
. logit _FOODSECURITYSTATUS _sex _MaritalStatusHHH _EducationallevelHHH _VariationofHHincomeafterU
> PSNP HHSize  UPSNPMONTHLYincomeofHH othersourcesMONTHLYIncome economicallyInactive

Iteration 0:   log likelihood = -132.36473
Iteration 1:   log likelihood = -120.79709
Iteration 2:   log likelihood = -119.04717
Iteration 3:   log likelihood = -119.02303
Iteration 4:   log likelihood = -119.02298
Iteration 5:   log likelihood = -119.02298

Logistic regression                             Number of obs   =        324
                                                LR chi2(8)      =      26.68
                                                Prob > chi2     =     0.0008
Log likelihood = -119.02298                     Pseudo R2       =     0.1008
```

_FOODSECURITYSTATUS	Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
_sex	1.063199	.5662951	1.88	0.060	-.0467193	2.173117
_MaritalStatusHHH	-1.177296	.5831827	-2.02	0.044	-2.320314	-.0342793
_EducationallevelHHH	-.0215821	.3475587	-0.06	0.950	-.7027846	.6596204
_VariationofHHincomeafterUPSNP	-.6468058	.3487889	-1.85	0.064	-1.33042	.036808
HHSize	-.3833785	.1774085	-2.16	0.031	-.7310927	-.0356642
UPSNPMONTHLYincomeofHH	.0017069	.00074	2.31	0.021	.0002566	.0031573
othersourcesMONTHLYIncome	.001748	.0006051	2.89	0.004	.000562	.0029341
economicallyInactive	.191418	.175763	1.09	0.276	-.1530712	.5359071
_cons	-2.661356	.7098378	-3.75	0.000	-4.052613	-1.2701

```
. logit _incomesecurity _sex _MaritalStatusHHH _EducationallevelHHH _VariationofHHincomeafterUPSNP
>  HHSize economicallyInactive UPSNPMONTHLYincomeofHH othersourcesMONTHLYIncome, or

Iteration 0:   log likelihood = -216.05402
Iteration 1:   log likelihood = -172.71544
Iteration 2:   log likelihood = -169.58333
Iteration 3:   log likelihood = -169.50179
Iteration 4:   log likelihood = -169.50162
Iteration 5:   log likelihood = -169.50162

Logistic regression                             Number of obs   =        324
                                                LR chi2(8)      =      93.10
                                                Prob > chi2     =     0.0000
Log likelihood = -169.50162                     Pseudo R2       =     0.2155
```

_incomesecurity	Odds Ratio	Std. Err.	z	P>|z|	[95% Conf.	Interval]
_sex	.5680031	.3165451	-1.01	0.310	.1905376	1.693249
_MaritalStatusHHH	1.618461	.9352163	0.83	0.405	.5214843	5.022999
_EducationallevelHHH	1.033994	.2825739	0.12	0.903	.6051996	1.766598
_VariationofHHincomeafterUPSNP	.7755907	.2201069	-0.90	0.371	.4447008	1.352687
HHSize	.3573012	.0657383	-5.59	0.000	.2491298	.5124402
economicallyInactive	1.427984	.2241759	2.27	0.023	1.049773	1.942458
UPSNPMONTHLYincomeofHH	1.003468	.0006756	5.14	0.000	1.002145	1.004793
othersourcesMONTHLYIncome	1.003304	.0006012	5.51	0.000	1.002127	1.004483
_cons	.2645572	.1473799	-2.39	0.017	.0887832	.7883304

```
.
```

```
. logit _FOODSECURITYSTATUS _sex _MaritalStatusHHH _EducationallevelHHH _VariationofHHincomeafterU
> PSNP HHSize economicallyInactive UPSNPMONTHLYincomeofHH othersourcesMONTHLYIncome, or

Iteration 0:   log likelihood = -132.36473
Iteration 1:   log likelihood = -120.79709
Iteration 2:   log likelihood = -119.04717
Iteration 3:   log likelihood = -119.02303
Iteration 4:   log likelihood = -119.02298
Iteration 5:   log likelihood = -119.02298

Logistic regression                             Number of obs   =        324
                                                LR chi2(8)      =      26.68
                                                Prob > chi2     =     0.0008
Log likelihood = -119.02298                     Pseudo R2       =     0.1008
```

_FOODSECURITYSTATUS	Odds Ratio	Std. Err.	z	P>|z|	[95% Conf.	Interval]
_sex	2.895618	1.639774	1.88	0.060	.9543552	8.785622
_MaritalStatusHHH	.3081106	.1796848	-2.02	0.044	.0982428	.9663016
_EducationallevelHHH	.9786491	.340138	-0.06	0.950	.4952044	1.934058
_VariationofHHincomeafterUPSNP	.523716	.1826663	-1.85	0.064	.2643663	1.037494
HHSize	.6815549	.1209136	-2.16	0.031	.4813827	.9649642
economicallyInactive	1.210965	.2128429	1.09	0.276	.8580687	1.708998
UPSNPMONTHLYincomeofHH	1.001708	.0007413	2.31	0.021	1.000257	1.003162
othersourcesMONTHLYIncome	1.00175	.0006062	2.89	0.004	1.000562	1.002938
_cons	.0698534	.0495846	-3.75	0.000	.0173769	.2808037

Appendix 2. Household Survey Questionnaire

Dear participant!

My name is ----------. I'm working my Master's thesis in Addis Ababa University. I am conducting survey to study the livelihood, food security (food access) and income status of UPSNP beneficiary households after joining the program. Besides, it tries to study the environmental improvement undertaken through the program's public work activities. I would like to ask you questions about your household. All your response and the results obtained will be kept confidentially.

Are you willing to participate in the interview? Yes_____ (continue the interview). No _____ (Thank and stop)

Name of the enumerator _____

Date of interview _____

Sub-city _____ Woreda _____ Kebele _____

Survey HH No _____

Respondent Head of the Household (tick) Other (specify relation to HHH)

Age of the respondent in year _____

Part I Socio-Demographic Characteristics of the Head of the household

No	Question	Response	Code
1	Sex of the HHH	1. Male 2. Female	
2	Age of the HHH	In years_____	
5	Religion	1. Orthodox 2. Protestant 3. Catholic 4. Muslim 5. Other (specify)	
5	Marital status	1. Single 2. Married 3. Divorced 4. Widowed 5. Separated	
6	Level of education	1. Did not attend formal education 2. Read and write 3. Completed Primary school 4. Completed High school 5. Completed higher institution education 6. Other (specify)_____	

Part II Socio-demographic Characteristics of the Household

No	Question	Response	Code
7	How many people are living in the house?	Specify the No _____	
8	How many are in the age group of	Specify the No 1. <15 _____ 2. 15-64 _____ 3. >65 _____	

9	Number of economically active members of the HH	Specify the no _____	
10	Number of economically inactive members of the HH	Specify the no _____	
11	What are the causes for those who are economically dependent?	_____ _____ _____	
12	Do any of household members have a permanent/chronic disease/health problem/disability?	1.Yes 2.No	
13	If yes, What is the kind of disability/disease?	1. Blindness 2. Deafness 3.Dumbness 4.Amputation 5.Mental retardation 6.Paralysis 7.chronic illness 8.Other (specify)_____	
14	How many children are currently attending School?	Specify the No _____	
15	How many children are not currently attending School?	Specify the No _____	
16	What is the reason for not attending school?	1. Economic constraints 2. Illnesses 3. Looking after siblings 4. Taking care of their guardians 5. Taking care of sick ones 6. Needs to work 7. Others specify_____	

Part III Condition of housing and living environment

No	Questions	Responses	Code
17	Housing	1. Owned 2. Rented_____(Specify in Birr) 3. Sharing _____(Birr)	

		4. Care taking 5. Kebele_____(Specify in Birr) 6. Other (specify)_____			
18	Number of rooms	1.one 2.two 3.three 4.>three			
19	How many people are living in the house?	Specify the No _____			
20	Is the spacing adequate in relation to the HH size ?	1. Adequate 2. Small 3. Very small			
21	Ventilation	1. Well ventilated 2. Poorly ventilated			
22	Roofing	1. Iron Sheet 2. Plastic thatch 3. others specify_____			
23	How is the condition of the roof?	1. Good 2. Leaks 3. Dilapidated/decaying			
24	Wall	1. Brick 2. Blocks 3. Mud and wood 4. Plastics 5. Others specify_____			
25	How is the condition of the wall?	1. Good 2. Partially ruined 3. Dilapidated/decaying 4. Others specify_____			
26	Basic household items	Enough	Inadequate	None	
	Blanket				
	Bed sheets				
	Clothing				
	Kitchen equipment				
		Adequate	Inadequate		

	Furniture			
	Radio			
	TV			
	Refrigerator			
27	Does the dwelling have electric power?	1. Yes 2. No (specify source of power for lighting)_____		
28	What Is the power source for cooking?	Specify_____		
29	What is the water source of the household?	1. Piped Water into dwelling/compound 2. Public tap 3. Buying 4. Other Specify_____		
30	Which hygiene facilities are available in the household?	1. Rubbish pit 2. Cloth washing facility 3. Drying rack 4. Bath washing facility 5. Dish washing facility 6. Water storage container		
31	Is there any problem with water supply in your community?	1. Yes 2. No		
32	If yes, what are the problems?	1. Inadequacy of water taps 2. Nonfunctional water taps 3. No water supply line 4. Distance of access 5. Others(specify)_____		
33	What role has UPSNP played related to water facility in your community?	1. Build water taps 2. Build washing facility 3. Maintenance of water taps 4. Maintenance of washing facilities 5. Others(Specify)_____		
34	What is the type of latrine?	1. Private Pit latrine with wooden slabs 2. Private ventilated cemented pit latrine		

		3. Public pit latrine with wooden slabs 4. Public ventilated cemented pit latrine 5. Other(specify)_____	
35	Do you have any problem related to latrine facility in your household/community?	1. Yes 2. No	
36	What are the problems related with latrine facility in your community?	1. Inadequate number of latrines 2. Nonfunctional latrines 3. Absence of latrine 4. Other(specify)_____	
37	What role has UPSNP played related to latrine facility in your community?	1. Building public latrines 2. Maintenance of toilets 3. Other(specify)_____	
38	Is there drainage system/ waste water disposal?	1. Available 2. Not available	
39	Are the drainage systems functional currently?	1. Functional 2.Non functional	
40	What consequence has it brought on your health?	_____(diarrheal diseases, common cold, Asthma-exacerbate,.etc.…)	
41	What role has UPSNP played related with drainage system in your community?	specify_____	
	Solid waste management		
42	Means of dry waste disposal of the HH	1. Burning 2. Disposing in to drainages, ditches and roads 3. Collected and taken by waste collectors 4. Other(specify)_____	
43	Do you have solid waste pile near your house?	1. Yes 2. No	
44	Are wastes disposed along road sides,	1.Yes (Explain)_____	

	open pits, drainages, and vacant areas in your community?	2. No	
45	Did any of the household members suffer from illness within the past 4 weeks related with solid waste?	1. Yes 2. No	
46	Mention if there is other problem related to solid waste disposal in your community?	1.odor problem 2.causing disease 3.affect esthetics value of the environment 5.others(specify)_____	
47	What role has UPSNP played related with solid waste management in your community?	1. Sweeping 2.collecting wastes 3.separating wastes 4. Others (Specify) _____	
	Urban agriculture (if available)		
48	Does the household have backyard agriculture?	1 .Yes 2. No	
49	What type of agriculture does the HH has?	1. vegetable 2. livestock 3. others	
50	For how long does it sustain the household food demand?	1. <1wk 2. 1-2 wks 3. 2-3wks 4. 3-4wks 5. >4wks	
51	Describe your income you get from agriculture	in terms of birr_____	
52	What role has the UPSNP played related to urban agriculture in your community?	Specify_____	
Urban green areas (public parks and playgrounds, recreational facilities, urban forestry, etc.)			
53	Is there any green area near your house?	1.Yes 2. No	
54	What role has the UPSNP played related to urban greenery in your community?	1. Planting grasses and trees 2.conserve already existing plants 3. Protective fences 4.city park development 5.other (specify)_____	
Watershed management			

55	What role has the UPSNP played related to watershed management in your community?	Specify _____	
Public facilities			
56	Is health facility available near to the household?	1. Yes 2. No	
57	Distance to the nearest health center	1.<5km 2.5-10km 3.10-15km 4.15-20km >20km	
58	What is the type of health facility?	1. Health centre 2. Hospital 3. Private clinic 4. Other(specify)_____	
59	What role has UPSNP played related to health?	1. Building health centers 2.maintenance of health centers 3.free health assistance 4. Health advice 5.others_____	
60	Which of the following are available in your community?	1. Kindergarten 2. Primary school 3. Secondary school	
61	What role has UPSNP played related to school facility?	1.build educational centers 2.maintenance of educational centers 3.free education 4.building libraries 5.others	
62	What type of road in your community?	1.paved-made of asphalt 2. paved-made of cobble stone 3 unpaved 4 others	
63	What role has UPSNP played related to road facility?	1. Build roads 2.maintenace of roads 3. Others	

Part IV Income Information

No	Question	Response	Code
64	What are the major income sources of the household?	1. Direct support from UPSNP 2.payment through public work from UPSNP 3.wage labor 4.petty trade 5.low wage employment 6. Shop, trade, market vending	

		7. Others_____	
65	How many UPSNP beneficiaries are there in the HH?	1.one 2.two 3.three 4.four	
66	The amount of monthly cash transfer from UPSNP	In birr_____	
67	For how long does the monthly cash transfer fulfill the food demand of the HH?	1.1wk 2.2wks 3.3wks 4.4wks 5.>4wks	
68	If the HH receives any financial support from sources other than UPSNP	1.pension 2.NGOs 3.relatives 4.others 5.none	
69	What is the household estimated monthly income?	Monthly income in Birr_____	
70	Is the monthly income adequate to support the household?	1 Yes 2 Fair but not fully adequate 3 Not at all	
71	What are the HH's main expenses?	1. Food 2.education 3.transport 4. Medical 5.house rent 6.water and electric fee 7.loan 8.others	
72	Is there variation of income after joining the UPSNP?	1.Yes 2.No	
73	If yes, what are the major factors that cause income variability?	1.inflation 2.illness of HH member 3.variation of income earned from casual works 4.increment of rental price 5.increment of HH size 6.others	
74	Has any adult household member had any savings?	1.Yes 2.No	
75	If yes, how much is the estimated amount saved per month?	In birr_____	
76	How is the HH's income condition after joining the UPSNP?	1.no improvement 2. Improvement 3.other	

Part V Assistance

No	Questions	Responses	Code
77	What kind of support is the household getting from UPSNP?	1.Finacial assistance through direct support 2.Finacial assistance through conditional support 3.Counseling 4.Financial assistance for medical care 5. Financial assistance for education 6.Other(specify)_____	
78	Does the household get support from any other source?	1 Yes 2 No	
79	What kind of support is the household getting?	1 Direct food assistance 2 Counseling 3 Financial assistance for medical care 4 Financial assistance for education 5 Clothing assistance 6 Others (specify)_____	

Part VI Food security condition of Households

No	Questions	Responses	Code
80	How many meals per day the household members feed on?	1.One meal 2.Two meals 3.Three meals and above	
81	Is there food access change after joining UPSNP?	1. Not improved 2. Improved 3.other	
82	Is there variation of food access for the HH after being beneficiary of UPSNP?	1.yes 2.no	
83	If yes, what are the factors affecting food access variation?	Specify_____	

Food access information (Household Food Insecurity Access Scale)

No	Questions	Responses	Code

1	In the past four weeks, did you worry that your household would not have enough food?	0=No (skip to Q2) 1=Yes	
1.a	How often did this happen?	1=Rarely (once or twice in the past four weeks) 2=Sometimes (three to ten times in the past four weeks) 3=Often (more than ten times in the past four weeks)	
2.	In the past four weeks, were you or any household member not able to eat the kinds of foods you preferred because of a lack of resources?	0=No (skip to Q3) 1=Yes	
3.	How often did this happen?	1=Rarely (once or twice in the past four weeks) 2=Sometimes (three to ten times in the past four weeks) 3=Often (more than ten times in the past four weeks)	
3.	In the past four weeks, did you or any household member have to eat a limited variety of foods due to a lack of resources?	0=No (skip to Q4) 1=Yes	
3.a	How often did this happen?	1=Rarely (once or twice in the past four weeks) 2=Sometimes (three to ten times in the past four weeks) 3=Often (more than ten times in the past four weeks)	
4.	In the past four weeks, did you or any member have to eat some foods that you really did not want to eat because of lack of resources to obtain other types of food?	0=No (skip to Q5) 1=Yes	
4.a	How often did this happen?	1=Rarely (once or twice in the past four weeks)	

		2=Sometimes (three to ten times in the past four weeks) 3=Often (more than ten times in the past four weeks)	
5.	In the past four weeks, did you or any household member have to eat a smaller meal than you felt you needed because there was not enough food?	0=No (skip to Q6) 1=Yes	
5.a	How often did this happen?	1=Rarely (once or twice in the past four weeks) 2=Sometimes (three to ten times in the past four weeks) 3=Often (more than ten times in the past four weeks)	
6.	In the past four weeks, did you or any other household member have to eat fewer meals in a day because there was not enough food?	0=No (skip to Q7) 1=Yes	
6.a	How often did this happen?	1=Rarely (once or twice in the past four weeks) 2=Sometimes (three to ten times in the past four weeks) 3=Often (more than ten times in the past four weeks)	
7.	In the past four weeks, was there ever no food to eat of any kind in your household because of lack of resources to get food?	0=No (skip to Q8) 1=Yes	
7.a	How often did this happen?	1=Rarely (once or twice in the past four weeks) 2=Sometimes (three to ten times in the past four weeks) 3=Often (more than ten times in the past four weeks)	
8.	In the past four weeks, did you or any household member	0=No (skip to Q9)	

	go to sleep at night hungry because there was not enough food?	1=Yes	
8.a	How often did this happen?	1=Rarely (once or twice in the past four weeks) 2=Sometimes (three to ten times in the past four weeks) 3=Often (more than ten times in the past four weeks)	
9.	In the past four weeks, did you or any household member go a whole day and night without eating anything because there was not enough food?	0=No (questionnaire is finished) 1=Yes	
9.a	How often did this happen?	1=Rarely (once or twice in the past four weeks) 2=Sometimes (three to ten times in the past four weeks) 3=Often (more than ten times in the past four weeks)	

Part VII Opinions of beneficiaries

No	Questions	Responses	Code
93	Targeting/ recruitment of beneficiaries	1. Very unsatisfied 2.somehow unsatisfied 3.neutral 4.somehow satisfied 5.very satisfied 6.not applicable	
94	Awareness of beneficiaries about the program	1. Very unsatisfied 2. Somehow unsatisfied 3.neutral 4.somehow satisfied 5.very satisfied 6.not applicable	
95	Expressing one's own opinion	1. Very unsatisfied 2. Somehow unsatisfied 3.neutral 4.somehow satisfied 5.very satisfied 6.not applicable	
96	Adequacy of support	1. Very unsatisfied 2. Somehow unsatisfied 3.neutral 4.somehow satisfied 5.very satisfied 6.not applicable	
97	Timeliness of support	1. Very unsatisfied 2. Somehow unsatisfied 3.neutral 4.somehow satisfied 5.very satisfied 6.not applicable	
98	General effect of UPSNP on livelihood	1.no effect 2.positive effect 3.negative effect	

THANK YOU!

Appendix 3. Guiding Questions for Focus Group Discussion

Date _____Sub-city _____

Woreda _____Kebele/ketena_____

Focus Group No _____ Total No of people in the group: _____

Description of the group: _____

Conductor and assistance: _____

Participants

No	Name	Gender	Age	Marital status	Highest education qualification	Employment status
1						
2						
3						
4						
5						
6						

	Household size	Ketena/kebele	Other notes (qualification/role)
1			
2			
3			
4			
5			
6			

1. Can you describe the livelihood and living condition of the beneficiaries in this woreda before joining the program?
2. How do you describe the program's targeting?
3. How do you describe the cash transfer of the program?

4. How is the awareness about the program among the PW and DS beneficiaries?
5. Can you tell how the participation and involvement of beneficiaries looks like?
6. In what way does the UPSNP contribute to address households' problems?
7. In what way does the UPSNP contribute to address the community/ village's problems?
8. What is the role of the UPSNP towards the improvement of food security/access?
9. What is the role of the UPSNP towards the improvement of income-poverty status?
10. What is the role of the UPSNP towards the improvement of the physical environment of the community?
11. Adverse effects towards the beneficiary households and community?
12. What are the strength and limitations of UPSNP?

THANK YOU!

Appendix 4. Guiding Questions for Semi-Structured Interview

Date of interview: _____

Interview No : _____

Name of interviewee: _____

Description of the interviewee: _____

_____

_____

1. Can you explain the livelihood insecurity condition in this woreda? (Food insecurity, income poverty, living physical environment condition and facilities)
2. Explain about the number of beneficiary individuals and households, females and males in the woreda.
3. How do you assess the effect of UPSNP on food access/security status of beneficiary households in this woreda and sub city? (changes/progress, effectiveness, limitations, challenges)
4. How do you assess the effect of UPSNP on income status of beneficiary households in this woreda and sub city? (changes, effectiveness, limitations, challenges)
5. Can you describe the contribution of the public work activities in this woreda?
   SWM, Greenery, Watershed, Urban agriculture, Social Infrastructures

6. Are there other bodies undertaking or supporting the public work activities? Who, when, strength and weakness
7. What adverse effect does UPSNP has on households, and community?
8. How do you assess the Perception of the beneficiaries in this community, woreda and sub city?

Recruitment

Adequacy of information/awareness about UPSNP---beginning, currently

Adequacy of support- amount of cash transfer, additional support

Timeliness of cash transfer, impartiality of support

Safety of workers---clothing, first aids, working tools

Participation of beneficiaries

9. In general, what are the strength and weakness of the program?

THANK YOU!

Appendix 5. Check List for Direct Observation

Urban environment

- Housing condition- type of houses, congestion of houses, number of rooms
- The living physical environment

Solid waste management

- sorting according to types before disposal
- disposal out of the HH
- sanitation condition of the residence areas- solid waste pile near houses, road sides, vacant areas, drainages, open pits

Drainage and sewerage

- Availability of drainage and sewerage system
- Functionality of the system

Urban green areas (public parks and playgrounds, recreational facilities, urban forestry, etc.)

- The presence of green areas
- The quality of the green areas

Urban agriculture

- The availability of urban agriculture
- The type of agriculture (if there is urban agriculture)- crop, livestock production or both

Social infrastructures

- Public water taps to the community
- Washing facilities
- Bath taking
- Drying rack
- Latrine facility – type toilet, where it flushes (if flushed)
- Health center
- Road facility
- Source of lighting
- Cooking energy source

Public work activities

- Solid waste management
- Urban greenery
- Drainage and sewerage
- Urban agriculture
- Social infrastructure development