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URBAN FOOD INSECURITY: DETERMINANTS, EXTENT AND HOUSEHOLD COPING STRATEGIES IN KEBELE 13/14 OF KIRKOS SUB CITY, ADDIS ABABA

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May the Lord Bless Ethiopia.

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Acronyms

FAO	–	Food and Agriculture Organization of the United Nations
FEDRE	–	Federal Democratic Republic of Ethiopia
FEWS/NET	–	Famine Early Warning System Network
FSCB	–	Food Security Coalition Bureau of Ethiopia
IFPRI	–	International Food Policy Research Institute
HH	–	Household
M&E	–	Monitoring and Evaluation
MoARD	–	Ministry of Agriculture and Rural Development
MoFED	–	Ministry of Finance and Economic Development
NGO	–	Non Government Organization
PASDEP	–	Plan for Accelerated Sustainable Development to End Poverty
PSNP	–	Productive Safety Net Program
SLF	–	Sustainable Livelihood Framework
SME	–	Small and Medium Scale Enterprise
SSA	–	Sub Saharan Africa
USAID	–	United States Agency for International Development
UN	–	United Nations
WFP	–	World Food Program
WHO	–	World Health Organization

Glossary of Local Terms

- Addis-Ketema – A Sub City/District found in Addis Ababa
- Ambasha –Bread made of wheat flour
- Arada – A Sub City/District found in Addis Ababa
- Cherkos – A local name given to a village found at the center of Addis Ababa
- Chornake - toast like bread
- Gebeya – a local Amharic name that means Market
- Injera – A bread type of food made from water, yeast, and flour of Teff
- Injera be'shiro Wet – A local type of food made from a combination of onion, chickpea flour, cooking oil and water, eaten using Injera
- Injera Firfir – a local type of food made from the combination of onion, hot spice, cooking oil, Injera and water
- Kebele – The third administrative tyre of the Ethiopian government, consisting of approximately 10,000 households
- Kinche – a food made of oats and water
- Kirkos – A Sub City/District found in Addis Ababa
- Legehar – A local name given to one locality found at the center of Addis Ababa, where the only train station in the city is situated
- Lideta – A Sub City/District found in Addis Ababa
- Nifassilk-Lafto – A Sub City/District found in Addis Ababa
- Shiro Wet – A sauce made of the combination of onion, pea flour, cooking oil and water
- Teff – A grain type grown in Ethiopia usually used to bake Injera
- Woreda – the second administrative tyre of the Ethiopian government, which consists of .....
- Ye'Mashila Injera – Injera made of Sorghum/Millet
- Ye'Tef Injera – Injera made of the grain type called Teff
- Ye'Siga Wet – A sauce made of combination of onion, meat, hot spice, cooking oil and water

Abstract

This study was conducted at one of the most deprived regions of Addis Ababa, Kebele 13/14 of Kirkos sub city, commonly known us "Cherkos Sefer". Amongst the city dwellers, the area is known for its deprived citizens and very low living standards. The study had objectives of finding out the determinants, extents and household coping strategies of food insecure residents in the Kebele. Two stage sampling technique was employed to extract the sample from the whole population. First, a purposive sampling technique was used to divide the residents of the Kebele into Male headed and Female headed households. Then, simple random sampling technique was used to come up with a total of 275 households, which is 5% of the total households in the locality, as a sampling size.

By a means of 24 hour recall period, the daily calorie intake per capita was calculated for the households under study. The analysis of the data showed that 70.1% of the sampled populations are food insecure. The most common determinants of household food insecurity were found to be gender of the household head, family size or dependency ratio, very low average monthly income, high expenditure on food and hence very high urban food prices. The seriousness of the problem is vividly presented. Personal interviews with residents revealed that there exists a very serious problem that needs urgent response from city/country planners. Coping strategies were another concern analyzed in the study. It was found that most food insecure households have reduced their meal only to twice or once a day starting two years ago. Limiting the size of food per meal and consuming less preferred food types were other commonly adopted strategy to cope with food insecurity. Some households have also reported that they sold household assets to buy food. Impacts of food insecurity were also studied and it was found that the major impact was extreme hunger sensation. Other impacts were emotional distress, physical weight loss, anxiety, continuous health complications, and educational and work performance fluctuations.

Key Words: *Food Security, Food Insecurity, Determinants of Food Security, Coping Mechanisms*

Chapter One

Introduction

1.1 Background

The world's population is becoming increasingly urbanized as a result of both natural increase and rural-urban migration. In 1950, 30% of the world's population lived in urban areas, by 2002, that figure had increased to 47% of the global population and by 2050; it is estimated to reach 65%. (UN Population Division, 2008). This rapid increase in urbanization poses new and different challenges for food security in Africa. In sub-Saharan Africa approximately 34% of the population currently lives in urban areas, by 2020 it is predicted that nearly half (46.2%) of the population will be urban (UN-Habitat, 2007). This ever increasing urbanization rate, in urban cities of the developing world brings about severe challenge for assuring food security and accesses to basic services such as housing, water, sanitation, and education and health facilities. Having these in mind, there will be a critical need to address urban food security issues in order to come up with healthy and favorable urban environment.

The biggest proportion of the poor living in a state of acute poverty is found in Africa South of Sahara (Todaro, 1997).The regular annual World Food Summits staged in different countries around the world set a multitude of standards for achieving the minimum targets for self sufficient and food secured community. Every year, more than 800 million people in the world do not have enough food to meet their basic nutritional needs. (World Summit on Food Security, 2009) Greater political will and commitment is needed to minimize this number. In the 1996 summit, leaders around the world pledged to reduce the number of undernourished people by half until 2015. (FAO, 1998) However, recent reports on world food security point out that this target cannot be achieved within the desired time. The annual decrease rates have only been 2.5 million which is far below the required level. Concerns are mounting over food security around the world and needs urgent action to mitigate its impact. (World Summit on Food

Security, 2009) FAO has recently estimated the number of people suffering from chronic hunger (undernourishment) worldwide at 923 million in 2007, up by 75 million from 2003-05. (FAO Statistics Division, 2009)

The share of sub-Saharan Africa in world hunger is very disproportionate compared to the rest of the world. Out of the total world's population, only 11 per cent resides in the sub-continent and 25 per cent of the total number of hungry people in 2003-05. (UN Economic and Social Council, 2009) At 18 per cent in 2003-05, the proportion of undernourished people on the continent is well above the world average (13 per cent) and 2 points higher than the average of the developing world. (ibid)

According to the United Nation Economic and Social Council report of 2009, the term food security does not only refer to the availability of food, but also the ability to purchase food. According to the United Nations Food and Agriculture Organization's (FAO's) widely accepted definition,

> *"Food security" means that food is available at all times; that all persons have means of access to it; that it is nutritionally adequate in terms of quantity, quality and variety; and that it is acceptable within the given culture. Only when all these conditions are in place can a population be considered "food secure." (FAO, 2001)*

Ethiopia is one of the countries severely exposed to food security problems. Tassew and Eberlei, 2004 as sited by Bahiru 2005, state that on the average, the income of the urban poor is 10.1% far below from the poverty line. In addition to the deprivation of the urban poor, migration to the urban areas is increasing. Urbanization rate is estimated to be 4.37% in 2015. (UN Population division, 2008) This trend calls for a serious look into the availability of food to the urban poor. A non income situational analysis made by UN-HABITAT on Addis Ababa's informal settlement has indicated that Kirkos sub city is the most densely populated sub city sharing 11.48% of total population of Addis Ababa

within an area of 1,518.03 hectares. The same report says that the sub city is the poorest sub city of Addis Ababa, occupied by low income or poor households living in Kebele administered rental houses. (UN Habitat, 2007) In addition, Mere observation tells that this sub city of the Addis Ababa city administration is one of the deprived and poorest sub cities in the city. There is a very high concentration of slums located at the center of the city. Kebele 13/14 of the sub city is a typical case of this fact.

1.2 Statement of the Problem

Ethiopia has been trying to address food security to its population since modern times. Almost all national economic development policies of Ethiopia have included "food security" as an integral part of their strategy for development. USAID (2007) report indicates that, although Ethiopia has been trying to address food security and its related elements, today, significant number of its population are chronically food insecure. Maxwell and Frankenberger (1992:69) mentioned that "Food insecurity exists when members of a household have an inadequate diet for part or all of the year or face the possibility of an inadequate diet in the future". This reveals that access to adequate diet is an important component of the concept of food security. The food security strategy of Ethiopia as indicated on MoARD (2004) is based on three aspects. These are:

A) Increasing food and agricultural production
B) Improving food entitlement
C) Strengthening capacity to manage food crisis.

Combinations of factors have resulted in serious and growing food insecurity problem in Ethiopia. These include high population pressure, growing climatic variations, rugged terrain, and large family size. (Tilaye 2004, Asfaw 2006, Bahiru 2005) The Federal Democratic Republic of Ethiopia Food security Coordination bureau has shown that 45% of the total population was food insecure in the year 2004. (FSCB M&E Task Force, 2004) The same report states that over the past decade, more than five million people on average have required food aid each year.

Rural-Urban migration, if not managed, contributes substantially to deterioration of living standards in metropolitan cities. In Addis Ababa, the volume of migrants which was 974,839 in 1994 is 2.5 times that of 1967 and 1.3 times that of 1984. (UN Habitat, 2000) This indicates an increasing migration rate, which could lead to chaotic urban setting with the given prevailing price levels and inflation. Urban food insecurity has been given a little attention throughout the world. Mougeot (2006) says that urban population does not seem to get serious food insecurity, but significant portion of the urban poor suffer from food insecurity. The capacity of the urban poor and middle class to purchase the good-quality food they need is undermined by a number of factors: currency devaluations; reduced purchasing power; salary reductions; formal-job retrenchment and the informalization of employment; elimination of subsidies for needs such as food, housing, transportation, and health care; and the very uneven access of different income groups to retail food within cities.

USAID Ethiopian food security update 2007 states that nominal prices for cereals and other commodities remain high in Addis Ababa, making life miserable for the poor. The same report indicates that despite some increases in income, these high prices are affecting the food security of the rural and urban poor, who heavily rely on the market to purchase food.

Being food secure for a nation or a family is to have a reliable source of food and sufficient resources to purchase it. This is why it is of great importance to investigate for the underlying causes and the proximate factors that lead to food insecurity and food crisis. Literature and researches made in Ethiopia by Asfaw (2006), Bahiru (2005), FSCB M&E Task Force (2004), Tilaye (2004) show that most of the concern is on rural food security. Urban food security cases are sidelined from the picture and needs to be researched.

Although it is known that a substantial proportion of the urban population of Ethiopia is suffering from food insecurity, poverty monitoring unit of the MoFED estimates that

every year about 2.8 million people receive food assistance, and hence are food insecure. But not much is known about the urban food insecure cases.

The gap that the researcher wants to fill by undertaking this research is to show what determines food insecurity, its extents and survival strategies of urban population with particular emphasis on the Kebele 13/14 locality of Kirkos sub city in Addis Ababa city administration.

1.3 Objective of the Study

The general objective of the study is to assess the overall urban food insecurity situation in Kebele 13/14 of Kirkos sub city in Addis Ababa city administration. In addition to the general objective, specific objectives are set to be assessed.

Specific objectives:

1. To quantify the problem of urban food insecurity in Kebele 13/14 of Kirkos sub city
2. To identify factors contributing to food security/insecurity at household level
3. To assess coping strategies of the residents of the sub city to food insecurity problems
4. To show the impact of food insecurity on day to day lives of the urban poor

1.4 Research Hypothesis

1. Female headed households are more vulnerable to food shortage and food insecurity than male headed households.
2. Households who have older heads are more food secure than households headed by younger individuals.
3. Households with large family size are more food insecure than those with small family size.
4. Households with large dependency ratio are more food insecure than those with small ratio.
5. Households led by literate individuals tend to be more food secure than those headed by illiterate individuals.

6. Households who have individuals to support outside the homes are vulnerable to food insecurity than those who do not have.
7. Households who receive remittance are less vulnerable to food insecurity than the once who try to manage on their own without any external support.

1.5 Significance of the study

The significance of this research endeavor is to indicate urban food insecurity by generating relevant and appropriate data on the extent, determinants and resident's way of mitigating the problem in the study area. The results of the study are expected to be useful to city planners in mobilizing resources and attain allocative efficiency for the urban poor. In addition to the above benefit, the following are some pinpoints on the significance of the research:

- Determinants of food insecurity identified in the research could be used as indicators to tackle urban food insecurity and hence poverty
- The extent of food insecurity in the locality can be used as a tool for determining the real required amount of monetary resources in order to curb the problem
- The extent of food insecurity can be used to show the urgency needed to deal with the problem
- Policy makers could use the results of this research as indicative mechanism to foresee future developments in attaining food secure community
- Policy implications derived at the end of the research can be used as tools for the government in how to mitigate existing problems of urban food insecurity

1.6 Limitations of the Study

The data for this research was collected in April and May 2010. This period was the end of the two month long fasting season for Christians. As the area of the study is dominated by Christian residents, some deviation from normal dietary practices was observed. Together with the households under study, effort was exerted to adjust the meal content of the households into the normal pattern. In due process, some discrepancies were observed in the types of food consumed.

Chapter Two

Literature Review

2.1 The Concept of Food Security/Insecurity

Millions of people worldwide suffer from hunger and under-nutrition. A major factor contributing to this international problem is food insecurity. Food Security/Insecurity is a concept that has evolved through generations for decades. This chronic problem of our world is somehow different in its nature from other calamities that the human being has been experiencing. First, the basic difference arises from its nature of cyclical occurrence, across the world at different places and time. Governments all over the world have designed mitigation strategies in their national development agenda to tackle the problem of food insecurity. But the problem, although attempted by diverse strategies, has continued to materialize in countries where their economy is primarily dependent on rain fed agriculture. (Kedir and McKay, 2003) Second, this problem has a potential of occurring in developed countries too. In order to verify this claim, it is enough to see the food security strategy of industrialized countries. (Bickel et al, 2000) On the other hand, Buhi (2009) tried to show the extent and widespread nature of food insecurity across continents as:

> *"The United Nations estimates that there are 840 million undernourished people in the world. The majority of undernourished people (799 million) reside in developing countries, most of which are on the continents of Africa and Asia. This figure also includes 11 million people located in developed countries and 30 million people located in countries in transition (e.g., the former Soviet Union). The U.S. Department of Agriculture estimates that nearly 11 percent of U.S. households are food insecure, with approximately one-third of these households experiencing moderate to severe hunger.*
>
> *(Buhi, 2009: 1)*

Food insecurity is determined by different factors. Most common determinants observed in developing countries are varying household income and fluctuating price of food. Removals of subsidy and tax increments are other possible reasons that lead to food insecurity. (Devereux et al, 2004; Buhi 2009) Coping mechanisms are other important dimensions of food insecurity. When faced with realities of food insecurity, communities devise their own coping mechanisms, in order to save their lives. Usually, minimizing food intake and jumping meals are the most common coping mechanisms practiced by food insecure communities. (Feleke et al, 2004)

Impacts of food insecurity are severe. Certain communities end up loosing everything what they posses, in trying to cope up with food insecurity. When seasonal food insecurity hits a rural area, the population usually migrates to urban areas. Urban food insecure population tries to survive by adopting multitude of mechanisms starting from reducing daily food intake to begging for food and eating wild food. Sometimes, the effects are so ruthless that, considerable amount of human beings die.

2.2 Basic Definitions

There are different approaches and definitions adopted by researchers to show the whole concept of food security. Some definitions and concepts are country dependent, while others vary according to geographical setting. There are cases where specific nutritional status is taken to define food security cases, while others take expenditure spent on food items as a measure of food insecurity. (Maxwell and Wiebe, 1998) In order to eliminate these ambiguities, we will try to lay down the most common definitions and concepts, adopted by FAO/WHO and the World Bank so that general understanding is established.

Food Security: is defined as physical and economic access to sufficient, safe and nutritious foods which meet the individual's dietary needs and food preferences for an active and healthy life.

Food Insecurity: Lack of access by all people at all times to sufficient food for an active and healthy life; the deprivation of food.

Household Food Security: is a condition in which all households at all times have access to enough food for an active and healthy life.

Food Availability: is basically the household's capacity to produce the food it needs. It involves the visibility of the various human foods and the mechanisms, which produces them, in textual and visual elements, and in activities.

Food Access: is the ability of the households or individuals to purchase food. It involves the inter-play between the supply and demand side of food, i.e., the physical availability of food commodities on the local market (supply), and the ability of individuals or households to purchase food (demand).

Food Utilization: refers to the consumption of food in a way that supplies all the essential nutrient requirements for bodily maintenance and growth.

Coping Strategies: refers to strategies, which households are said to resort to, when Food Availability, Access to Food and Food Utilization are threatened.

Chronic Food Insecurity: is a long term and persistent food shortage. It occurs when people are unable to meet their minimum food requirements over a sustained period of time. It results from extended periods of poverty, lack of assets and lack of inadequate access to productive and financial resources.

Transitory Food Insecurity: is a short term and temporary shortage of food. It occurs when there is a sudden drop in ability to produce or access enough food to maintain a good nutritional status. It results from short-term shocks and fluctuations in food availability and food access, including year-to-year variations in domestic food production, food prices and household incomes.

Extreme Poverty: is the most severe state of poverty. Many can not meet basic needs for food, shelter, water, sanitation, and clothing. The people live on USD $1.25 per day adjusted for PPP.

Moderate Poverty: is the situation in which people are deprived of basic needs and earn less than USD $ 2 per day.

Relative Poverty: Poverty referred to some relative threshold of money or status of living

2.3 Food Security in the Urban Setting

Urban Food security has been given little attention in policy making around the world. Almost all governments and NGOs working in humanitarian assistance are only concerned with rural food insecurity cases than urban once. (Garrett and Ruel, 1999) The fact that due concentration has been given to rural cases is because of its acute nature. Rural population is usually vulnerable to natural shocks, as its livelihood is primarily dependent on it. Therefore, as food security is closely tied with rainfall variation in rural areas, the probability of its occurrence is high. (ibid) For the urban poor, financial assets are very important, whereas for the rural poor, natural assets are very decisive. Degefa (2008) argues that like the difference in asset ownership and financial assets, risks and vulnerability also differ in urban and rural settings. Sources of risk for the urban poor are, price variations, lay off and unemployment, whereas for the rural poor are; natural calamities, such as drought, soil erosion and flooding.

Kennedy (2003) argued that there are three key dimensions of food security. These are Food Availability, Access to food, and utilization of food by the body. The meaning of these dimensions has been given in the previous subtopic. Each of the three dimensions of food security can be analyzed in the urban setting. Food Availability in urban areas is largely determined by food supply to the city. In most of the urban cities of the world, food is imported. Researches indicated that more than 90% of total urban food is imported, and the rest obtained from urban agriculture. (Tollens 1997, Maxwell et al, 2000) This shows that the main source of food in cities is from purchase of food items

that have been imported to the market. Kennedy (2003) also has pointed out that there are several intermediaries in the process of importing certain food item into the city. These include wholesalers, intermediate purchasers, distributors and vendors. The number of middle men usually determines the price of food in urban centers. The urban dwellers are forced to buy food form small neighborhoods, because wholesalers prefer to sell food items to retailers than individual purchasers. This has swollen the price of food in urban centers.

Access to food is another very important factor for food security in urban areas. By access to food, it is to mean the household's ability to buy food. In most of the urban cities of Africa, the poor spend more on food than the rich. A study made in Accra indicated that average urban dwellers spend 54% of their income on food, while the lowest income group spends up to 60% of their income on food items. (Maxwell et al, 2000) In addition to the ability of households to buy food, there are other reasons that inhibit people from getting proper dietary patterns. Kennedy (2003) has mentioned that shortage of time to prepare meals because of physical exhaustion, walking for long distance till reaching the nearest shop, long distance from work to home and inhospitable living places with outdoor cooking places are some of the reasons for poor access to food. Street foods are other commonly used food types, because of inaccessibility of food items. A study made in Kenya discovered that people living in urban slums consumed more street foods than those with low or middle income people. (H van 't et al, 2001).

Utilization of Food by the body is an indication of the health status of individuals. There is a general agreement that, if there is good utilization of food eaten in the body, then the individual is free of diseases. Illness and disease can lead to loss of appetite and poor absorption of important nutrients from food. Therefore, food utilization is largely determined by the health status of dwellers. Kennedy (2003) said that poor access to services, including primary health care and education, as well as potable water, sanitation systems and general environmental conditions influence the health status of individuals and leads to poor utilization of food by the body. To signify the problem, Kennedy said that:

> *While access to services and amenities may indeed be greater in urban areas, the urban poor are exposed to uniquely urban problems such as, insecure living tenure, air and noise pollution, exposure to open sewage and crime. Most of these features disproportionately affect the poor and can have a significant impact on food security and nutritional well-being.*
>
> *(Kennedy, 2003: 5)*

The case of food utilization extends its scope to underweight individuals and malnutrition. Children are more vulnerable to malnutrition and being underweight because of their body's requirement of growing fast. Therefore, measuring children's malnutrition could be taken as a good indicator of overall community health. (H van 't et al, 2001) Malnutrition, sometimes called Stunting, shows the extent of chronic food deprivation. Kennedy (2003) presented the extent of urban underweight prevalence and urban stunting prevalence in the following manner. The table shows the seriousness of urban food insecurity when measured against food utilization.

Table 2.1: Countries with high or very high rates of underweight and/or stunting in urban areas

Country	Urban Underweight Prevalence (Above 20%) (Weight-for-age)	Urban Stunting prevalence (Above 30%) (Height-for-age)
Benin (1996)	24.4	-
Burkina Faso (1998/99)	26.2	-
Chad (1996/97)	33.1	-
Comoros (1996)	25.0	-
Ethiopia (2000)	28.4	-
Guinea (1999)	21.9	-
Madagascar (1997)	35.6	44.6
Mali (1995/96)	31.7	-
Mozambique (1997)	20.0	-
Niger (1998)	35.3	31.2
Nigeria (1999)	26.7	41.6
Tanzania (1996)	-	31.3

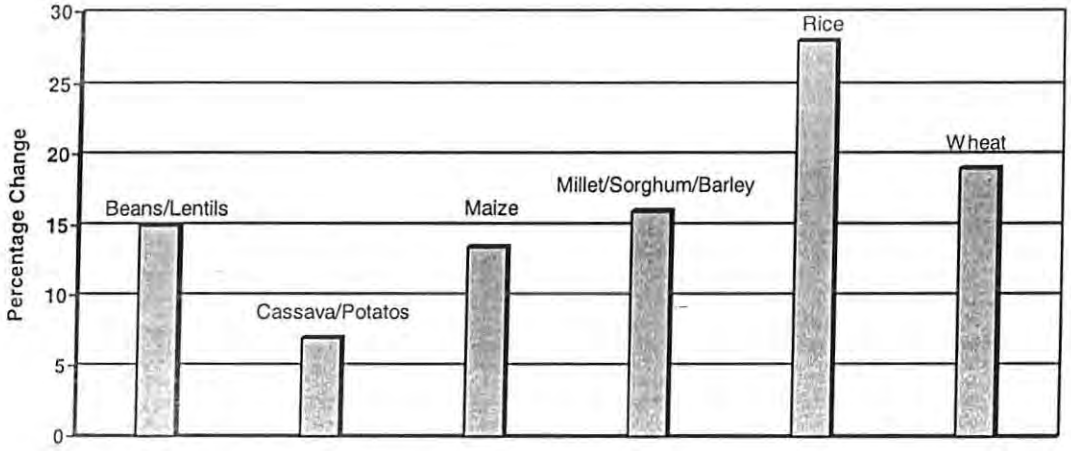
Source: Kennedy, 2003: 6

MoFED on its 2008 report on the dynamics of growth and poverty in Ethiopia shows that the country has managed to reduce food poverty in rural areas, whereas there was no reduction in urban areas in the incidence, depth and severity of food poverty. The report claims that despite the substantial increment in food prices, it was not surprising to see stagnation in the incidence depth and severity of food poverty. However, in rural areas, the indicators showed increase in food poverty from 1999/2000 to 2004/20005.

Surge in the price of food items is a serious problem of developing countries. When people do not have enough money to buy food, they devise indigenous coping mechanisms that could insure survival. The increase in prices is somehow a continental phenomenon, which was even aggravated, following the global financial crisis of

2007/2008. A report by FAO and WFP shows that the rise of price of food items was started before the global financial crisis, but rapidly spread across the world. (FAO and WFP, 2009) The general percentage change in food price increase is presented on the following graph:

Figure 2.1: World Domestic food price Increases Over Two Years, to end - 2008



Source: FAO, 2009:15

2.4 Food Security in the Ethiopian Context

Over the past three decades, Ethiopia has been challenged by lack of food security. Markos (1997), as cited in (Feleke et al, 2004), argues that, in Ethiopia the trend in growth of domestic food production matched population growth only in the 1960s. Per capita domestic food production has steadily declined over the last three decades. Between 1971 and 2000, a simple average of year-to-year growth of per capita production was −1.15%, with average growth rates during the 1970s, 1980s, and 1990s estimated at −0.84, −1.98, and −0.64%, respectively. (FAO, 2001) This means that the country has been consuming more than what it produces. Non-arguably, the ever declining per capita production is an indication of the complex problems that country faces with respect to food security. FEWS/NET (2010) indicates that an estimated 5.23 million people will continue to require emergency food assistance up to December 2010 with the net food requirement of 290,271 million tones. Moreover, the same report

indicated that 48% of the children, less than five years of age were stunted and 27% of women malnourished.

The three pillars of food security strategy of Ethiopia, as indicated on Ministry of information's 2002 report, rests on:

1) Increase supply or availability of food
2) Improve access/entitlement to food;
3) Strengthening emergency response capabilities.

Based on these pillars the objectives and interventions are also elicited explicitly. The overall objective of the food security strategy of the FDRE government is to raise the level of food production nationally with commercial and export orientation and ensure household food security in the long term not only by production but also by the ability to buy consumables including food.

In relation to the above, government ministers and experts have been taking different measures to minimize the number of vulnerable and undernourished population in the country. National development strategies of Ethiopia incorporated food security as a primary issue in the development agenda. (MoFED, 2008; PASDEP, 2001; PASDEP, 2006) The following quote indicates the commitment of government officials to the broad goal, achievement of food security for all.

> *"Perhaps the greatest challenge that the country faces is that of ensuring food security. This is so because of the low technological base of agriculture, limited rural infrastructure and off-farm employment compounded by neglect and inappropriate policies over many years. The food security strategy, whose implementation has begun, is meant to break the complex problems to close the food gap and ensure food security."*
>
> *(Mekonnen Manyazewal, 2000:14)*

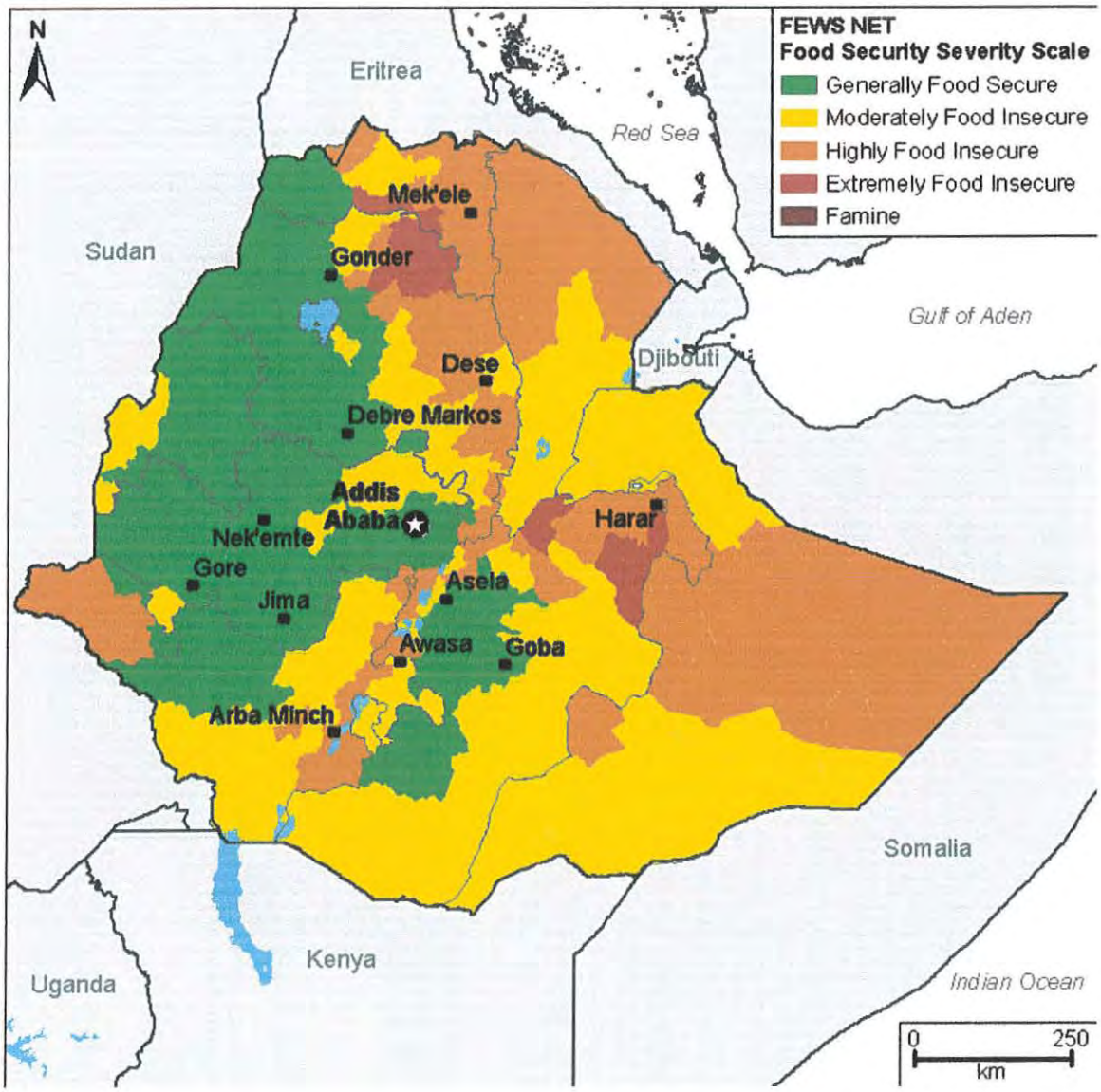
Food insecurity in Ethiopia derives from dependence on undiversified livelihoods based on low-input and low-output rain fed agriculture. (Devereux, 2000) Ethiopia has been structurally food deficit since at least 1980. The food gap rose from 0.75 million tons in 1979/80 to 5 million tons in 1993/94. Despite a record harvest in 1995/96, the gap still persisted and was 2.6 million tons. (Befekadu and Berhanu, 2000). Even in that year, 240,000 tons of food aid was delivered, suggesting that chronic food insecurity afflicts millions of Ethiopians in the absence of transitory production shocks.

The major causes for transitory and chronic food insecurity in Ethiopia, as explained by MoARD (2004) are:

- Recurring drought
- Limited source of alternative incomes
- Population pressure
- Limitations in technology
- Lack of product diversification & market integration
- Limited capacity in planning & implementation
- Environmental degradation
- Limited access to credit.

WFP and FEWS 2007 Food Security update has categorized Ethiopia into different food security severity levels. The following figure shows this dissection.

Figure 2.2 Ethiopian Food Security Scale



Source: FEWS Ethiopia Food Security Outlook, April to September 2010:1

A number of studies by different research groups have been made in Ethiopia regarding food security. Most of the researches have concluded by showing the magnitude and severity of food insecurity, coupled with determinants and coping strategies. The main determinants for food security shared by these groups were Degradation, Recurrent Draught, Population Pressure, and subsistence agriculture practice characterized by low input and output. In addition, stunting was observed more in highlands than lowlands and more in rural areas than urban areas. The most vulnerable households in drought prone

areas are associated with very small landholdings, most are female headed, and are without oxen. (Devereux, 2000; Eden et al, 2009 ; Feleke et al, 2004; Teller et al, 2009; WFP, 2007)

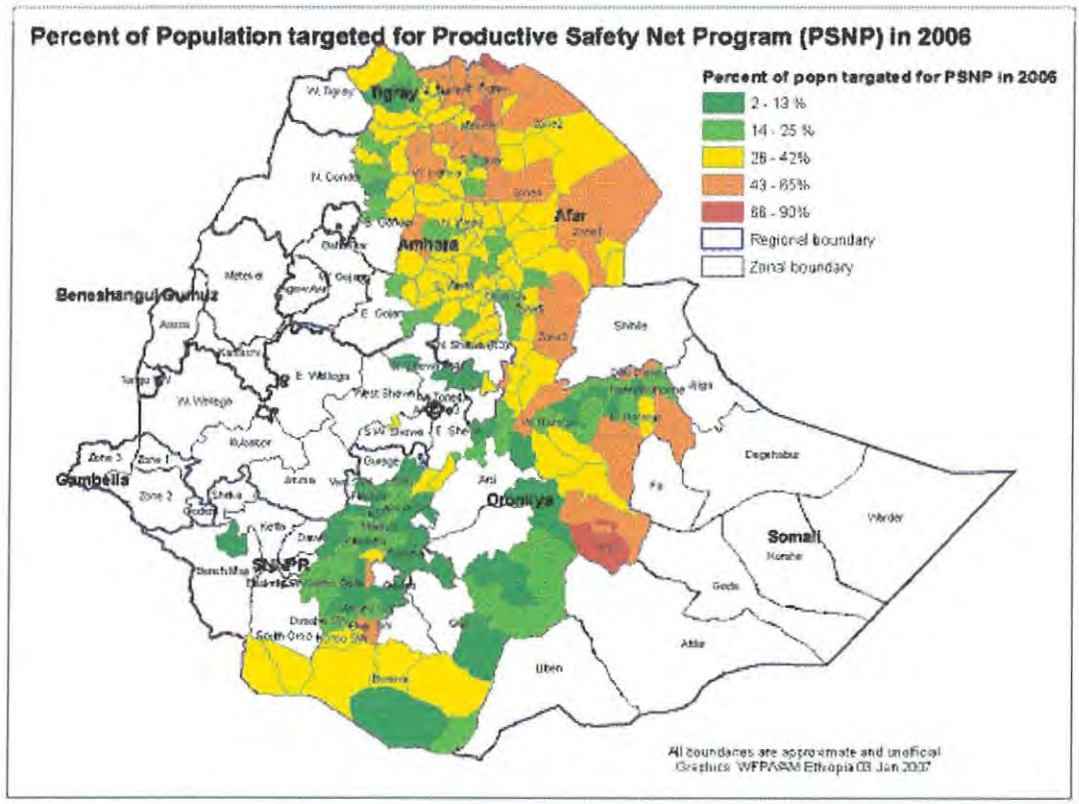
Table 2.2: Food Deprivation and Consumption Indicators of Ethiopia (in Ethiopian Calendar)

		1990 – 1992	1995 – 1997	2000 – 2002	2004 – 2006	1990-92 to 1995-97 (%)	1995-97 to 2000-02 (%)	2000-02 to 2004-06 (%)
Food Deprivation								
Proportion of Undernourishment	Percent	71	64	50	44	-2.2	-5.0	-3.0
Number of undernourished	Millions	37.5	39.5	35.3	34.6	1.0	-2.2	-0.5
Food deficit of undernourished population	kcal/person/day	410	380	330	310	-4.1	-2.8	-1.3
Food Needs								
Minimum dietary energy requirement (MDER)	kcal/person/day	1660	1660	1670	1680	0.0	0.1	0.2
Average dietary energy requirement (ADER)	kcal/person/day	2060	2060	2080	2090	0.0	0.1	0.2
Food Supply for Human Consumption								
Dietary energy supply (DES)	kcal/person/day	1470	1560	1750	1840	3.0	2.2	1.2
Total protein consumption	g/person/day	42.2	45.3	50.6	52.5	3.5	2.2	0.9
Animal protein consumption	g/person/day	5.5	5.6	6.2	6.3	0.5	2.0	0.7
Fat consumption	g/person/day				20.0	0.8	2.0	2.7
Diet Composition (Share in DES								
Carbohydrate	percent				78.8	0.2	0.0	-0.1
Total protein	percent				11.4	0.5	0.0	-0.3
Animal protein	percent				1.4	-2.6	-0.2	-0.6
Fat	percent				9.8	-2.2	-0.3	1.5
Major food commodities consumed (share in DES)*								
1 - Flour of maize	percent	22.1	21.9	21.0	18.2	-0.5	-0.8	-3.5
2 - Flour of wheat	percent	13.4	12.9	15.9	15.9	-1.9	4.1	0.1
3 - Flour of cereals NES	percent	13.2	13.4	12.6	12.2	0.6	-1.1	-0.9
4 - Roots and tubers NES	percent	12.9	12.5	11.8	12.0	-1.3	-1.3	0.5
5 - Flour of sorghum	percent	10.0	10.6	10.4	10.2	2.9	-0.5	-0.5
Share of cereals and roots & tubers in DES	percent	81.1	81.0	80.8	79.2	0.0	-0.1	-0.5
Share of oils and fats in DES	percent	2.7	2.3	2.2	2.9	-7.7	-0.6	6.8

Source: FAO Country Food Security Indicator: Ethiopia, 2009: 1

Consumption and expenditure can be taken as good indicators of poverty and food insecurity. (IFPRI, 2007) If an individual spends more than 75% of his expenditure on food items, then the person is assumed to be food insecure. MoFED (2008) report points out that in Ethiopia, rural total expenditure on food is higher than urban expenditure. The report showed a comparison of the indicators at two different fiscal years. In 1999/2000, there was a 61.77 percent national expenditure on food items, which then declined to 56.2% in 2004/2005. The urban indices particularly showed a decline from 55.29% to 49.87% in the years mentioned. The Ethiopian government understood the extent of the problem and started taking action in 2004, when 14 million people were desperately needing food assistance. The first measure was to address the needs of chronically food insecure people by providing Productive Safety Net Program (PSNP). (MoARD, 2004) The Safety net program is used to accommodate food insecure citizens until they are eligible to continue their life on their own. The following figure shows the percentage of population targeted for PSNP in 2006.

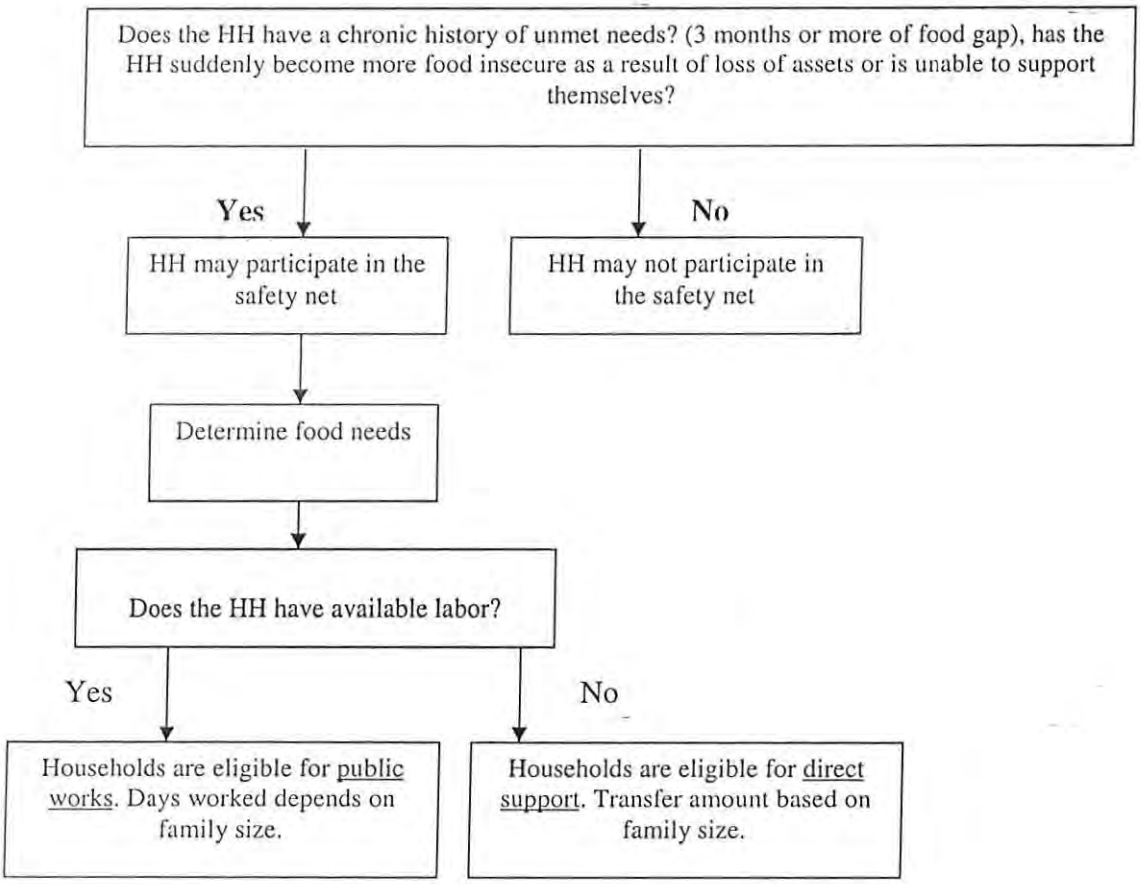
Figure 2.3 Percent of population targeted for PSNP



Source: FAO, 2007:41

Eligibility of a person to participate in PSNP is another area of discussion among different stakeholders. The people who are found in drought/famine prone areas desperately want to participate in the program, while government and other organizations who work on food security issues have put some baselines to choose beneficiaries. MoARD (2004) guideline of targeting beneficiaries has put clear procedures that have to be taken before a person is chosen to benefit from the PSNP program. The Following figure shows the general guideline, whether a person is eligible to be participating in safety net programs, across the country.

Figure 2.4 Flow Chart for Determining Household Eligibility



Source: **Productive Safety Net Targeting Guideline. MoARD. (2004:21)**

The Ethiopian government recognizes the availability of food insecure people different areas of the country. The rural Development Policies, Strategies and Instruments

handbook of the government indicates that, to protect people who live in drought prone areas is to re-settle them to places based on the consent of the settlers. (MoI, 2002) Until these settlers become self sufficient, they will be allowed to maintain their land, both at the new and old villages. When dealing with food insecurity cases and how to accommodate them, the rural development policy of the country says the following:

> *"The agricultural development work we perform in these areas is mainly centered on ensuring food security. Of course, the wok of ensuring food security should be conducted in other areas as well. As food insecurity is the main problem in these areas, the main activity of ensuring food security should be done in these areas. Food security can be ensured not by agricultural activity only. Ensuring food security means enabling, at the end of the day, citizens avoid hunger and get sufficient income to provide themselves with food; it does not mean that each person should necessarily produce his own food. Therefore, it is possible to ensure food security by earning sufficient income from non-agricultural activity. Using this alternative efficiently should be part of our food security program. However, such non-agricultural job opportunity cannot be a solution for all people who suffer from food insecurity. Currently, the major job opportunity we have is agriculture. Therefore, major food insecurity activity should revolve around agriculture."*
>
> (MoI, 2002)

Graduation, a term used to refer to those households who are clear of food insecurity threat, is a process that is carried out every year. If a household, who has graduated this year, is food insecure in the subsequent years, it will be again included in the Safety Net Program. The main beneficiaries of the program are households living in chronically food insecure Woredas. (MoARD, 2004)

2.5 Urban Poverty and Food Insecurity in Addis Ababa

There exists a very important need to discuss about urban poverty when dealing with urban food security. Feleke et al (2004) provided evidence that urban poverty can be taken as one indicator for the existence of food insecurity in metropolitan cities. The evidence is that, when there is poverty in the city, there appears the problem of meeting daily food consumption requirements, because people are unable to buy food.

The population growth rate of Addis Ababa is very low compared to other urban centers of Sub-Saharan Africa. UN Habitat (2007) report shows that the population of Addis Ababa has been increasing at a rate less than 3% per annum (more in-migration of 1.69%, than a 1.21% natural increase). The average rate of growth of SSA urban centers is 5%. Another study conducted by UN Habitat (2000) revealed that 61% of the population of Addis Ababa earns less than 550.00 birr per month per household. The same report indicates that the average number of members in a household is five. If we make simple arithmetic calculations, one household member contributes only 110.00 birr to the household per month. That means, the daily amount that these individuals earn is 3.66 birr, way below the $1.00 set as poverty line by the World Bank. For a better measurement of poverty line, different researchers have drawn their own poverty line applicable to the subjective geographical, physical and economic condition of an area. Mekonnen (1997) as cited by UN Habitat (2000) has calculated poverty line for food poverty (defined as the inability to obtain a healthy and affordable food) and total poverty in Addis Ababa. The following table shows per adult per month poverty line for the urban poor of Addis Ababa.

Table 2.3: Total and Food Poverty line for Addis Ababa (birr per adult per month)

Year	Food Poverty	Total Poverty
1994	67.30	90.95
1995	70.61	112.08
1997	58.61	96.08

Source: Mekonen, 1997:14 as cited on UN Habitat 2000:20

Studies on urban food insecurity of Addis Ababa are very small (almost unavailable) compared to the rural once. One qualitative study conducted by Degefa (2008) showed a description about the realities of urban poor and their food security situations by using two areas as case study. The villages taken in this study are Berta Gibi (located in Kebele 06/07/08 of the Nifassilk-Lafto sub city) and Gemachu Safar (located in Kebele 02/03 of the Lideta Sub city) of Addis Ababa City Administration. The author has used Sustainable Livelihood Framework (SLF) to explore how different aspects of food insecurity and urban poverty interplay in determining the situational status of urban poor. The main findings of the research indicate that poverty in the selected areas is very high with all measures. The area is characterized by small and congested dwelling units, poor sewerage systems, lack of access to toilets and insufficient and intermittent water supply. In addition to these characteristics, inhabitants of the area are characterized by limited access to financial resources and low human capital, lack of access to livelihood assets and vulnerability to urban price shocks.

Another quantitative study done by Netsanet (2009) on dynamics of poverty in Addis Ababa's selected sub cities signified the existence of urban food insecurity. The sub cities included in the study were Addis-Ketema, Arada and Lideta. The findings indicated that female headed households were more vulnerable to food insecurity. The main determinant cited as cause of food insecurity in the study is a continuous surge in price of food items. Significant number of the sampled population indicated that they have cut their meals to twice or only once per day, and usually eat less preferred foods. The respondents indicated that they acutely rely on sell of their possessions to buy food and food aid from NGOs or Government Organizations.

2.5 A Snapshot at the Methods of Measuring Food Security

As we have been discussing the depth and complex nature of food security, it is possible to guess how its measurement could be difficult. Due to the sever outcomes of food insecurity, there is an enormous need to search for proper mitigation strategy before it causes catastrophic impacts. For this purpose, different researchers around the world have been looking for the best measurement scale, and others have devised their own. But the

most frequently used measures include consumption and expenditure, nutritional status, coping strategies and resource related correlates. (Maxwell and Wiebe, 1998)

The first standard measure of food security is to take households that are able to meet more than 80 percent of daily caloric requirements as food secure. (Haddad et al, 1994; Reardon and Malton 1989) The standard cut-off caloric content often used is 2,200 kilocalories/adult equivalent/day. In order to measure consumption of food, usually, researchers add up all the household production and purchases of food items to compare it against increase or decline in stocks held over the same period of time. The other method is to recall a 24 hour food consumption of individual household members and analyze each type of food item mentioned with respect to calorie content. (Swindale and Bilinsky, 2006) The third measurement method is based on expenditure of households on food items. Anthropometric measures of nutritional status are sometimes used as food security measures. But since food security is not the only reason to determine nutritional status, this method is used with caution. (Maxwell and Wiebe, 1998) Other researches have successfully used coping strategies as effective proxy for the measurement of food insecurity. When human beings are faced with food insecurity, they devise their own mitigation strategies. Therefore, it would be appropriate to account for the coping strategies and measure food security. (Cambell 1991; Corbett 1998; Maxwell and Frnakenberger 1992; Maxwell 1996) Maxwell and Wiebe (1998) also argue that other indicators of food security; such as household income, household size, asset ownership, access to land and resources and dependence ratios can be used as measures of food security. The following table summarizes the indicators of measuring food security, and their household level measures.

Table 2.4: Indicators of Food Security and their Household level measures

Population Level Indicator	Household Level Indicator
Diet Quantity	
Daily food energy consumption per capita	Household daily food energy availability per capita. The energy in the food acquired by a household over the survey reference period divided by the number of household members and the number of days in the period
Percentage of households or people that are food energy–deficient	Whether a household is food energy–deficient. Whether a household acquires insufficient food over the reference period to meet the energy requirements of all of its members for basal metabolic function and light activity. (An individual's energy-deficiency situation is defined as that of her or his household.)
Diet quality	
Diet diversity	Household diet diversity. The number of foods or nutritionally significant food groups acquired by a household over the reference period.
Percentage of food energy from staples	Percentage of food energy available from staples. The percentage of the energy acquired by a household over the reference period that is derived from staple foods (cereals, roots, and tubers).
Quantities of foods consumed daily per capita	Quantities of foods acquired daily per capita. Quantity of specific foods acquired over the reference period divided by the number of household members and the number of days in the period.
Current economic vulnerability	
Percentage of expenditures on food	Percentage of expenditures on food. The percentage of total household expenditures devoted to food over the reference period.

Source: IFPR, 2007:6

Chapter Three

Methodology and Conceptual Framework

The study area is confined within 24,854 m^2. In order to come up with expected results and completeness, both Quantitative and Qualitative research designs are implemented.

The general methodology used to collect data in this research is the *Survey Research Design*. The rational behind choosing this methodology is to explore the exact nature of the determinants for food insecurity, the depth of food insecurity and coping strategies of the poor against food insecurity in the sub city. This makes the research an *exploratory* one.

The primary medium through which data was collected for this research is *Questionnaire.* Considering the nature of the research under study, the researcher also held *Key informant Interview* with community members, which helped to supplement the data collected by showing clearer and personalized pictures of the extent of food insecurity.

3.1 Study Design

3.1.1 Area of study

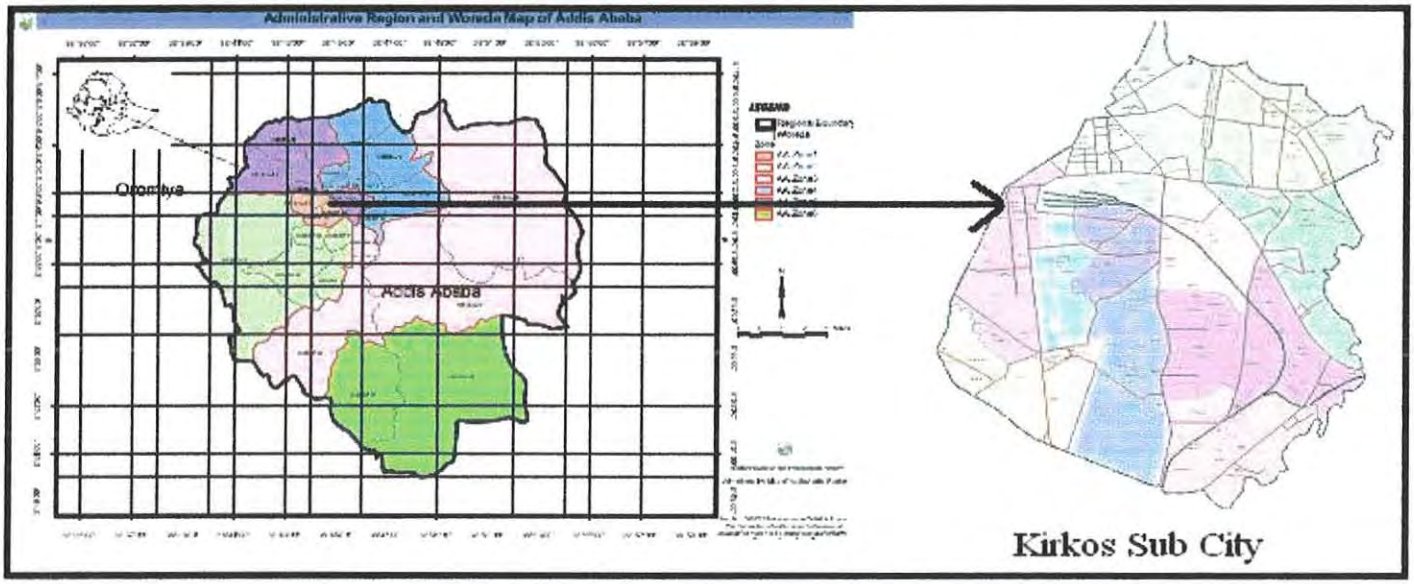
Rational behind choosing Kebele 13/14 of Kirkos sub city

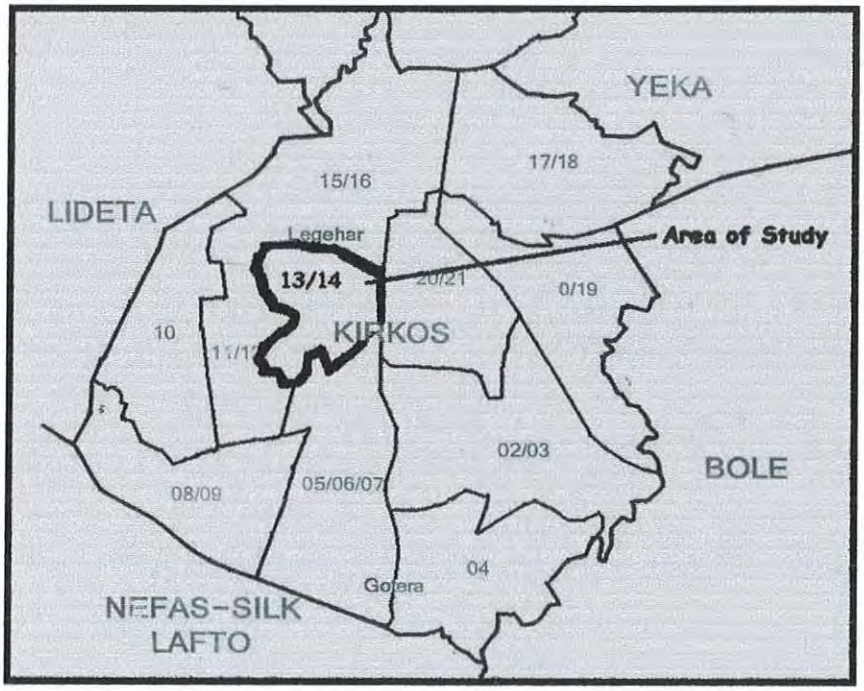
The selected area of study is Kebele 13/14 of Kirkos sub city. This Kebele is selected based on information obtained from Kirkos sub city administrators and Kebele 13/14 officials about the economic status of its inhabitants. The researcher believes that real urban food insecurity cases can be captured within this Kebele, as 80% (Zena Kirkos, 2009), of the total population lives under severe poverty. In addition, site survey and mere observation tells that the selected Kebele is severely hit by poverty.

The local government (Kebele 13/14) area is customarily known as *"Cherkos"* by the inhabitants of the area and the general population of Addis Ababa. The area is bounded to the north by Kebele 15/16, to the East by Kebele 20/21, to the South by Kebele 06/07, and to the West by Kebele 11/12 of the same Kirkos sub city. It has a total land area of 24,854 square meters. The 2007 national population census puts the population of the

local government at 22,086 people. Gender wise, the same report puts the number of men to be 10,294, while women are 11,792. In addition, there are 5,485 households, 3,042 are male headed and the rest 2,443 are female headed households. The Kebele administration estimates that there are about 5,700 government and privately owned houses. Cherkos is one of the densely populated Kebeles in Addis Ababa. In 2007, it had a crude density of approximately one person per square meter. (1 m^2 = 1 person).

Figure 3.1: Physical Location of the study area in Kirkos Sub city





3.1.2 Sample Design and Data Collection.

Both primary and secondary data collection techniques were used in this study. For primary data, questionnaires were used with the *household* being the unit of analysis. Two stage sampling technique was used in this research. The first is *Purposive sampling technique*, while the second is *Simple random sampling technique*. First, "Population Registration Booklet" of the Kebele was used to select the sample. To avoid gender bias, out of the 5,485 households, the researcher decided to *purposively* divide the households into male headed (3,042) and female headed (2,443) households. Then, using *simple random sampling*, 138 households (i.e. 5% of the total households headed by Male) and 137 (i.e. 5% of the total households headed by Female) were selected from the total number of households in the Kebele. Totally, 275 households were sampled which accounts for 5% of the total 5,485 households in the Kebele. Out of the 275 distributed questionnaires, it was able to collect 261 of them (95% return rate). The researcher believes that 261 sample population; is a generous amount to explore the urban food insecurity that exists in the Kebele. Due to the fact that the researcher, together with enumerators was closely following the distribution and collection of the questionnaires, the return rate was fairly good. In addition, the researcher tried to undertake *Focus Group Discussion*, but was unable to conduct it since respondents were unwilling to respond to questions related to food intake and family food consumption in groups. The major reason for this difficulty was due to the very fact that it is very hard and uncomfortable to talk about food deficit in a household in front of neighbors. Respondents indicated that this seriously affects their family pride and acceptance in the community.

3.1.3 In depth Key Informant Interview

In addition to the questionnaire, structured interview was held with 5 *purposively* selected residents of the Kebele. These respondents were selected based on closer observation of their living standards. This interview was recorded using tape and was finally transcribed. The main purpose of holding interview was to make the analysis more personalized, and add experiences of individuals who are severely affected by food insecurity. Table 3.1 indicates some demographic characteristics of the interviewee.

Table 3.1: Brief description of the key informants

Name	Occupation	
Mr. Mulugeta Seifu	President of Kebele 13/14 administration	
Resident of the Kebele	**Age**	**Occupation**
Mr. Debebe Argaw	35	Contract Daily Laborer
Mrs. Lelise Gebeyehu	48	Charcoal retailer
Mrs. Sehin Alemayehu	31	Waitress/Prostitute
Mr. Taye Leoul	26	Daily Laborer
Mr. Dawit Ejigu	40	Shoe Shine

3.1.4 Description of the Questionnaire

The questionnaire was first prepared in English, but then translated to Amharic to be administered. The questionnaire is divided into four parts. Each part was designed in a way to address objectives of the research questions. The first part deals with demographic characteristics of the informants and the second deals with determinants of food insecurity. The third part deals with extent/depth of food insecurity, while the last part deals with coping strategies of the sampled population. Specifically, data was collected about *age, occupation, and sex of household heads* as well as other household characteristics including *monthly income, income sources, monthly expenditure, monthly expenditure on food, difficulties to meet daily needs of food intake, types of food usually eaten in the household and dietary rescheduling techniques.*

3.2 Analytical Techniques

3.2.1 Descriptive (Qualitative) Statistics

Households were classified based on their socioeconomic characteristics using tables and percentages. After going through the necessary data cleaning procedures, the researcher analyzed determinants, extent and coping strategies of food insecurity by taking account of the most ranked indicator as the major reference of analysis. To avoid possible errors in calculation and determination of aggregate indicators, SPSS software was used for both the qualitative and quantitative analysis.

3.2.2 Quantitative Analysis

Data on food consumption was obtained by using both seven-day recall on food consumed and a 24 hour individual intake data. For the calculation of calorie content of the foods eaten, the researcher used the 24 hour recall questions, which helped in getting the amount of food eaten in the household. This measure determines whether a household has consumed sufficient dietary energy over a specified period. (IFPRI, 2007) These food items were then converted to their equivalent energy content measured in kilo calories by using conversion table designed for Ethiopian use by Gunnar Agren and Rosalind Gibson in 1968. MoFED (2008) data shows that the average calorie intake level for Addis Ababa is 2,239 kcal/capita/day. But for standardization and consistency purpose, we take the nationally recommended calorie intake for Ethiopia, which is 2100 kcal/capita/day. The following table shows the distinction between food secure/insecure households in the sample survey.

Table 3.2: Distinction between food secure and insecure households in the survey

HH Calorie Intake/Day > 2100 kilo Calories	Food Secure HH
HH Calorie Intake/Day < 2100 kilo Calories	Food Insecure HH

The data and questionnaire was designed in a way to incorporate all the recommendations of IFPRI (2006) and the researcher's particular emphasis on sample specific measurements of dietary diversity, consumption, caloric availability and intake.

In addition to the kcal/capita/day calculation, the hypotheses made earlier were tested for statistical significance at 5% level. For this purpose t-test and chi-square testes were carried out on the appropriate data. SPSS was used for this analysis too.

3.3 Conceptual Framework

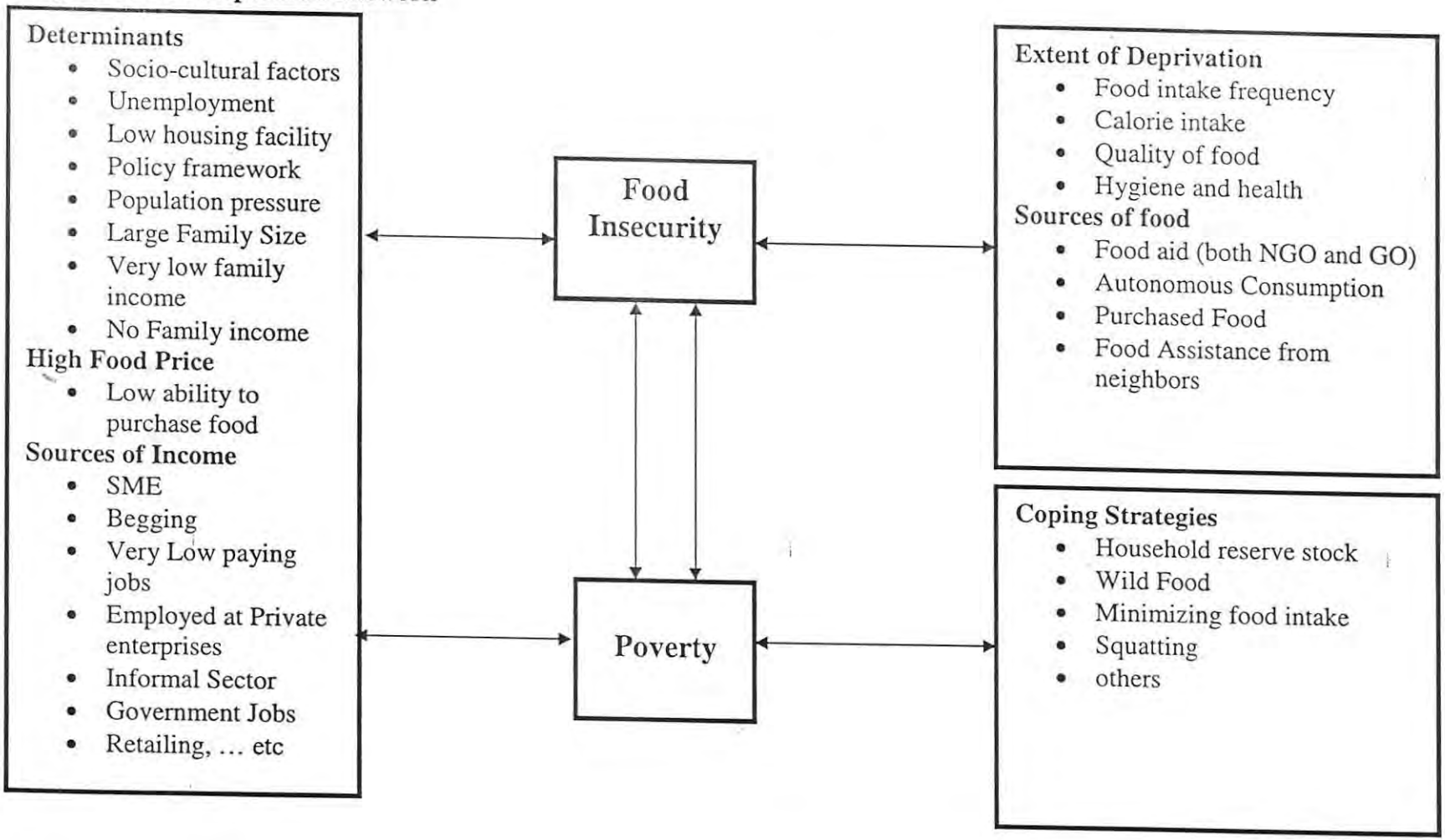
The dimensions of food security are of different level and nature. One level is concerned with countries being able to meet national food security, the ability of countries to produce or import sufficient food in all years to meet their requirement for both private and public distribution, while the other level is concerned with the problem of

malnutrition. (Omonona et al, 2007) Under the national food security, countries have developed different mitigation strategies to overcome the problem. Countries which were able to oversee the problem coming, designed national prevention strategies synchronized with economic development policies.

The levels of nutrient requirement have been determined by the World Food Program (WFP) and the Food and Agricultural Organization (FAO). The basic minimum requirement figure has been found to be 65 grams of protein and 2100 kcal of energy per capita intake of which if consumed less, leads to a state of malnutrition. (FAO and WFP, 2009)

The following graphical presentation shows the conceptual linkage between determinants, extents and coping strategies of food insecure population. It also shows the multiple factors which influence urban food insecurity.

Figure 3.2: **Conceptual Framework**



Source: Researcher's Construction

Chapter Four

Data Presentation, Analysis and Interpretation

4.1 Introduction

Addis Ababa is a multi-colored city made up of diverse ethnic, cultural, and religious societies that are believed to have migrated from different parts of the country. Although Ethiopia has one of the lowest urbanization rates in Sub Saharan Africa (Solomon et al, 2004), Addis Ababa has been growing at a relatively faster rate than the other urban centers of the country. Latest report of the central statistics authority of the country show that the population size of urban centers is growing at a rate of about 2.6%. The Central Statistics Authority population report of 2007 indicates that the population of the city is 2.7 million. The city has two socioeconomic faces at the outset. One face of the city is the luxurious houses, elegant automobiles and modern high-rise buildings. The other face is the sever poverty characterized by deprived slum dwellers, high rate of unemployment and inhospitable living environment. The evidence obtained from food poverty head count index shows that 32.4% of the population of the capital consumes below 2,200 kilo calorie per day. (MoFED, 2008)

4.2 Socio Economic Description of the Site under Study

Kebele 13/14, also informally known as *"Cherkos"*, is an area found at the center of Addis Ababa, right behind "Legehar" train station. There are four asphalt roads that dissect the area. The name *"Cherkos"* was given to it following the name of the local Orthodox Christian church named "Kirkos", together with the previously established open market, encircling the church. There is a very high concentration of slums and impoverished housing facilities in the area. Mere site observation tells a lot about the status of inhabitants of the area. Cherkos is packed with little children running here and there. There is also considerable population of unemployed young dwellers, which mostly spend the day sitting on road sides chewing "chat". Women usually are seen either washing cloths on roadsides or looking after their kids. The researcher, after spending ample time in the Kebele, has learned that significant numbers of the residents

in Cherkos are disadvantaged citizens, who lack human capital. Illiteracy rate, as estimated by the Kebele administration reaches about 46%.

Figure 4.1: A Narrow Gateway Leading to Living Area of Approximately 700 Households

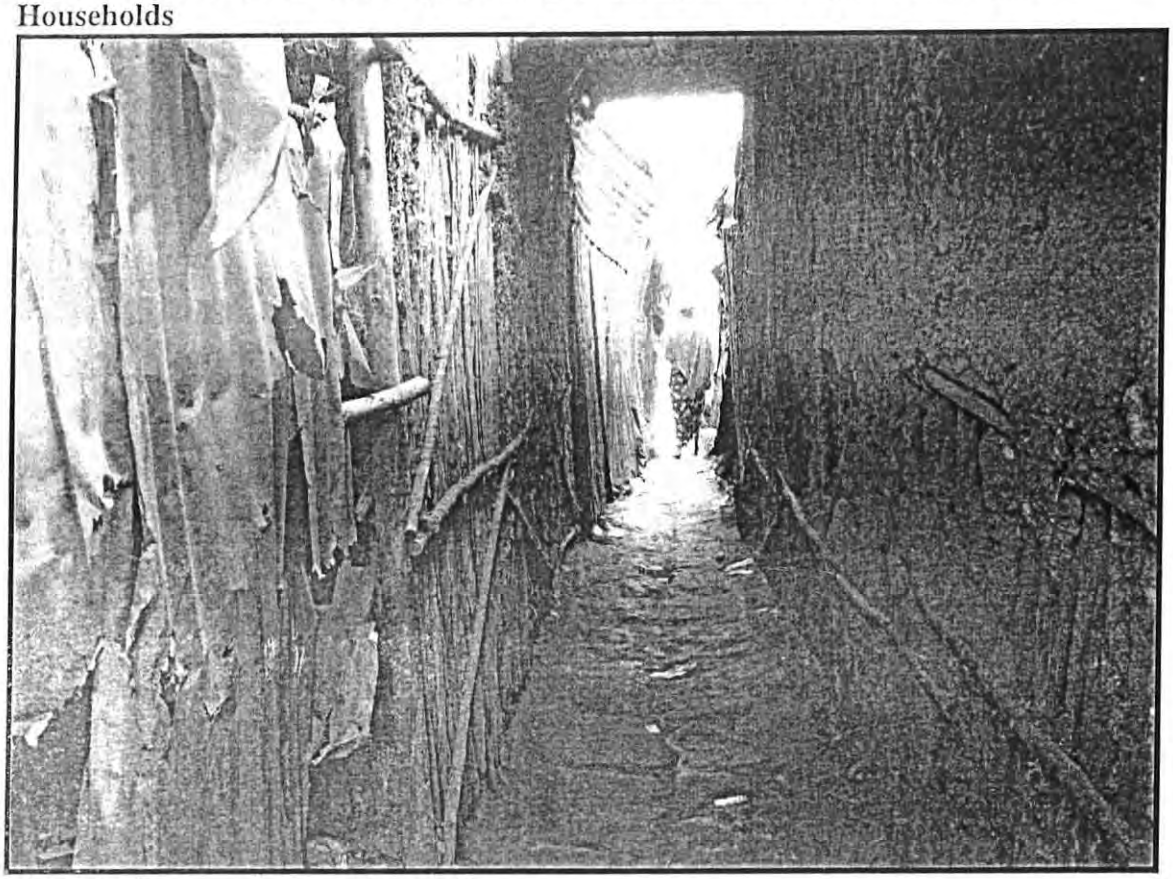


Photo by the researcher, May 2010

There is a large shopping mall at the center of the area under study. The market is called "Cherkos Gebeya", where different types of goods and commodities are being sold. The large mall is surrounded by other small shops. Economic inequality is observed in the Kebele. We can observe some rich households, with large and extended houses living side by side with poor households living in shanty Kebele houses. Personal observation also can tell that there are a good number of middle class dwellers, who have managed to live an average life.

Gender wise, in conformation with the percentage of Female/Male in Addis Ababa, 52% of the inhabitants are female, while 48% are male. As mentioned above, in terms of employment, the majority of residents are unemployed, with high dependency ratio. The

total number of houses, as estimated by the Kebele administration is 5700, with majority of the dwellers living in small stuffed and suffocated Kebele houses. The Kebele has many open ditches that sever as sewers. Solomon (et al, 2004) indicated that 23.9 percent of Addis Ababa's housing units had no to toilet of any kind. The area is a perfect evidence for their claim. Sanitation is another big problem observed in the Kebele. Children are playing on dirty roadsides, filled with filthy and household refuses. There are some minor indications of NGO involvement in the Kebele regarding sanitation, but compared to the area coverage and population size, it is definitely not enough.

Figure 4.2 Different sites in the Kebele

Partial View of the main leaving area



Narrow getaway to one of the villages



The Former "Cherkos Gebeya", now a market used for petty trade



Photo by the researcher, May 2010

Box 1: Sanitation problem

Mr. Debebe Argaw is a contract daily laborer in the Kebele. He lives with his unemployed mother and brother. His brother is the only permanent bread winner for the family, earning 500 birr per month. Mr. Debebe's income varies with luck. They live in a two room house that they rent from the Kebele.

Mr. Debebe continuously suffers from poor health. He usually goes to the nearby health center found in the Kebele vicinity. Although the health center provides him free health follow-up, he can't afford to buy medicines prescribed by Nurses, as the price is very expensive in pharmacies. The Nurses at the health center have repeatedly told him that his health problem is primarily caused by contagious diseases. He says the narrow corridor leading to his family's home is dirty filled with household refuses. In addition to the household wastes, there is a partially open sewerage that passes just in front of his house. He says that he sometimes faints due to the stinky smell coming out of the sewerage.

4.3 Results and Discussion

4.3.1 Demographic Characteristics of the sample households

According to the sample survey, the number of successfully filled questionnaires revealed that 50.4% of the households are headed by female while the rest 49.6% are headed by male. In addition to this, average household size was found to be 4, with a standard deviation of 1.8. When we come to the age of household heads, it was found that the mean age was 45 with a standard deviation of 15.4. The minimum age of household head in the sample is 15, while the maximum age is 90. Majority of the households, i.e. about 29.1% are headed by individuals within the age group of 41 – 59. Table 4.1 shows the demographic characteristics of the population under study.

Table 4.1: Demographic composition of the households under study

Demographic Composition			
Item	**Frequency**	**Percent**	**Cumulative Percent**
Female Headed Households	132	50.6	50.6
Male Headed Households	129	49.4	100
Total	**261**	**100.0**	
Age Distribution			
Younger Than 21 household head	9	3.4	3.4
21 – 30	43	16.5	19.9
31 – 40	56	21.5	41.4
41 – 50	76	29.1	70.5
51 – 60	41	15.7	86.2
Above 61	36	13.8	100.0
Total	261	100.0	
Literacy Status of household members			
Household Members Who Never Attended School	154	15.25	15.25
Household Members Who Attended Primary and Secondary Education Only	695	68.82	84.07
Household Members Who Attended Tertiary Education (Diploma and Degree)	161	15.93	100.00
Total Number of Members of the Households Under Study	**1010**		
Marital Status of Household Heads			
Single	47	18.0	18.0
Married	126	48.3	66.3
Divorced	39	14.9	81.2
Widowed	45	17.2	98.5
Abandoned	4	1.5	100.0
Total	261	100.0	

Source: Researcher's Sample Survey Data, May 2010

As can be seen from Table 4.1, about 15.25% of the members of the households have never attended school of any sort. About 68.82% of the members of the households have attended primary and secondary schools only, while the rest 15.93% attended tertiary education. In addition, household heads marital status indicates that 48.3% of the heads of households are married. The remaining households, 18%, 14.9%, 17.2% and 1.5% are headed by Single, Divorced, Widowed and Abandoned household heads respectively.

4.3.2 Extent of Food Insecurity

Per Capita Calorie Available for the Household per Adult Equivalent per Day

In an attempt to convert the food intake of the households to calorie content, *Food Consumption Table for Ethiopia* of the Ethiopian Ministry of Public Health (1968) was used. From this table, it was possible to extract the most traditional foods consumed in the area under study and find out their calorie content per 100 grams. This calorie content is then converted to food specific grams, then to kcal consumption per day of the households in the sample survey. Table 4.2 is an extract of the most common combination of foods in the area and their calorie content.

Table 4.2: Table used for conversion of food to calorie equivalent

Major Types of Food	Average Dietary Energy (kcal/100 gram)
Injera be'shiro Wet = (Ye'Mashila Injera + Shiro Wet)	115 + 51 = 166
Injera be'shiro Wet = (Ye'Mashila Injera + Misir Wet)	115 + 104 = 219
Injer be'Wet = (Ye'Tef Injera + Average Different types of Wet)	162 + 120 = 282
Injer be'Wet = (Ye'Tef Injera + Ye'Siga Wet)	162 + 206 = 368
Injera Firfir	109
Bread (Ambasha) of Wheat	227
Porridge	146
Egg	352
Meat	187
Milk	76

Pasta/Macaroni	104
Coffee	96
Fruits (Papaya, Orange, Guava, Banana, Lemon)	47
Tomato	28

Source: Adapted from Ministry of Public Health's Food Composition Table for Ethiopia (1968)

The data for this study was collected in May 2010, by a 24 hour recall period technique. Inline with the recommended rigorous calculation and conversion technique, it was found that 70.1% of the households in the survey are food insecure. This means, about 183 households are not able to consume 2100 kcal/capita/day. The rest 29.9% are food secure households who are able to meet their daily energy needs. Table 4.3 and Figure 4.3 show the proportion of food secure/insecure households, sub divided into male and female headed households.

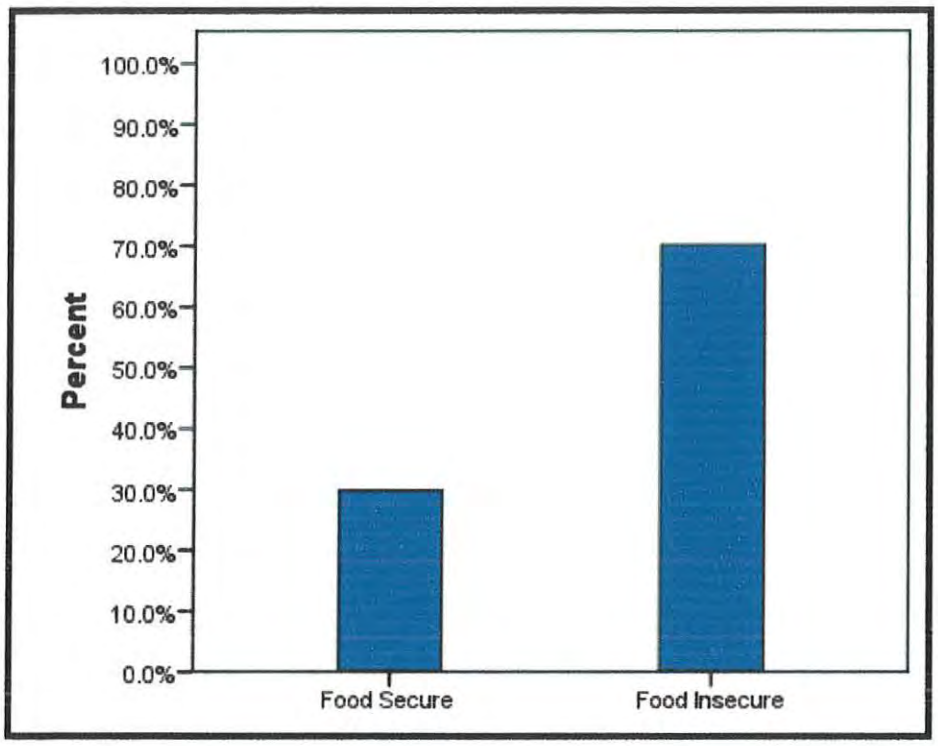
Table 4.3: Food Security Status

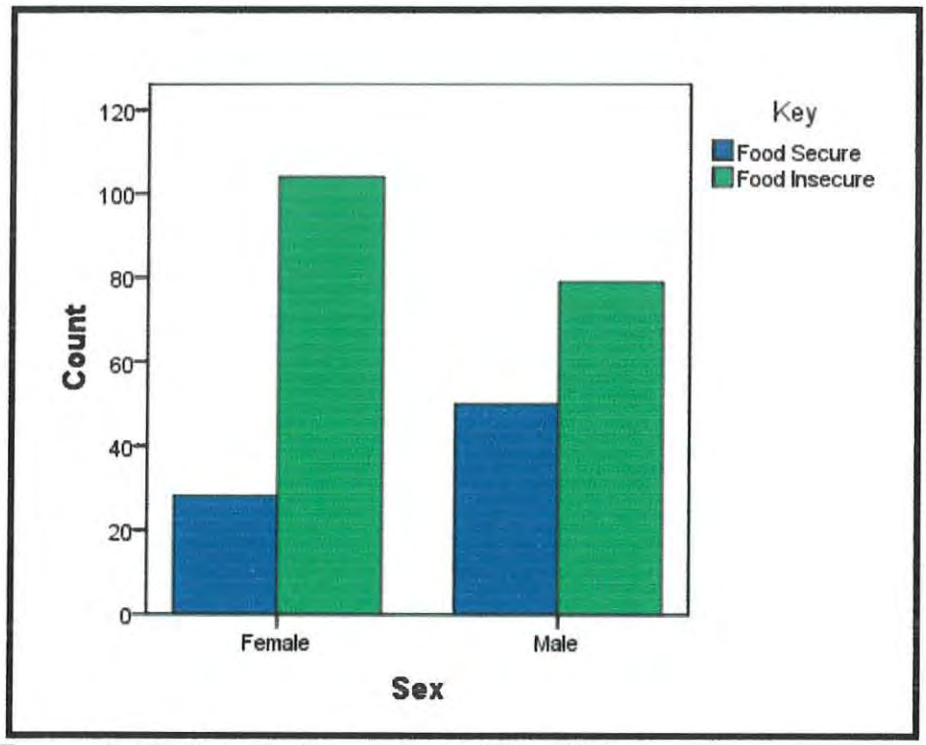
Item	**Frequency**	**Percent**	**Cumulative Percent**
Food Secure	78	29.9	29.9
Food Insecure	183	70.1	100.0
Total	**261**	**100.0**	
Female headed Food Secure HH	28	10.72	10.72
Female headed Food Insecure HH	104	39.85	50.57
Male headed Food Secure HH	50	19.16	69.73
Male headed Food Insecure HH	79	30.27	100

Source: Researcher's Sample Survey Data, May 2010

The data shows that female headed households are more food insecure than the male headed households. One possible reason for this is the very fact that women are more disadvantaged than male in Ethiopia. () Being disadvantaged means that they did not get equal opportunity and access for education with male while being raised. This has a negative effect on their monthly income and hence food consumption levels.

Figure 4.3 Food Security Status of households





Source: Researcher's Sample Survey Data, May 2010

4.3.3 Current Economic Vulnerability

Economic vulnerability is a situation where citizens or localities of a defined boundary face problems related to economic and financial instability. However, the degree of vulnerability varies across different strata of the same society. For instance, group of individuals who are vulnerable to international price instability and export performance are less susceptible to variability in local food price.

International Food Policy Research Institute indicates that people, who spend more than 75 percent of their total expenditure on food items, are generally vulnerable to food shortage. This means that these individuals, regardless of their current consumption status, if they experience any decline in their monthly income, would likely be accompanied by a reduction in food consumption or quality of food eaten. (IFPRI, 2007)

Accordingly, it was found that 68.58% of the households under study had their monthly expenditure more than 70% of their total expenditure, and hence are food insecure. The rest 31.42% were having expenditure on food less than the threshold amount. This result confirms the above calculated per capita calorie available for households per adult equivalent, which showed that 70.1% of the households were food insecure, with minor discrepancies. Table 4.4 summarizes this information.

Table 4.4: Monthly expenditure on food

Item	Frequency	Percent	Cumulative Percent
Monthly expenditure on food > 70% of household total expenditure	179	68.58	68.58
Monthly expenditure on food < 70% of household total expenditure	82	31.42	100.00
Total	**261**	**100**	

Source: Researcher's Sample Survey data, May 2010

With this respect, the determinants, extent and coping mechanisms of the households here after will be based only on those insecure households (183 in number), by excluding the

secure households from the analysis. In other words, the proportion of households whose kcal/person/day is less than the recommended 2100 kilocalories is used for further analysis.

Table 4.5: Food Security by Calorie Group

Kcal/person/day	Frequency	Percent	Cumulative Percent
Less than 1001	74	28.4	28.4
1001 - 1500	39	14.9	43.3
1001 - 2100	109	41.7	70.1
Above 2101	78	29.9	100.0
Total	**261**	**100.0**	

Source: Researcher's Sample Survey data, May 2010

In order to study more about the characteristics of food security/insecurity in the study area, respondents, were grouped into different categories of kcal/person/day intake. Table 4.5 shows this grouping, with their respective percentages. The above cross tabulation shows that 28.4% of the total households have per capita kilocalorie which is below 50% of the minimum recommended allowance and 14.9% of them have per capita kilocalorie which is only between 51% and 80% of the minimum recommended allowance. And only 29.9% of the total households in the sample have per capita kilocalorie, which is above minimum recommended allowance

It is also interesting to note that majority, which is 41.7%, of the respondent's kcal intake lies between 1001 – 2100 kcal/person/day. This shows the homogeneity of foods consumed in the area. Although it is assumed that urban population has more access to variety of foods, the data shows that most of the urban dwellers consume same types of food combination. Details about the dietary habits of the residents will be discussed in detail in the subsequent sections.

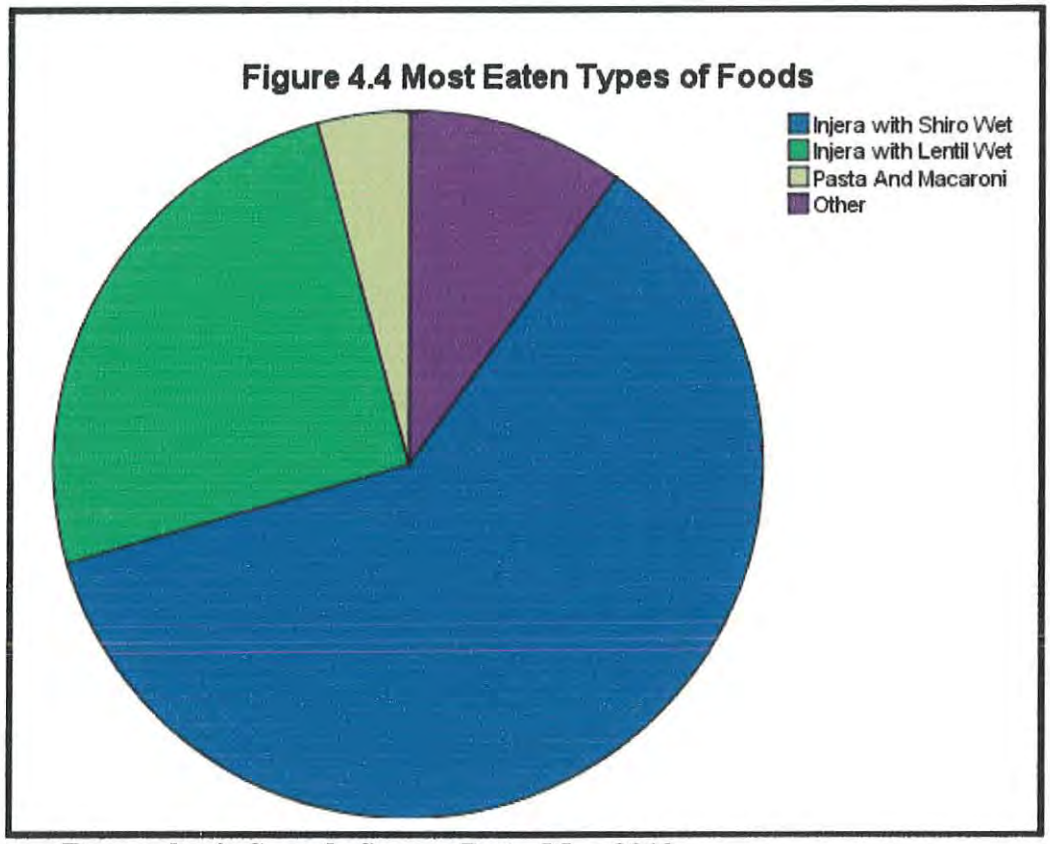
4.3.4 Dietary Habits

Any nation, nationality or ethnic group has its own habitual practice of food consumption. Food is generally specific to geographical, cultural and demographic settings of nations. Researchers have shown that diversified dietary experience makes a community less vulnerable to food insecurity (Tilaye 2004, IFPRI 2007). In contrary to this, although Ethiopia has multitude of culture specific foods, the most common once are limited in type and quality.

The most common type of food eaten in the study area is "Injera be'Shiro Wet". This food combination is a less preferred type of food in urban centers of Ethiopia. Elementary economic theories indicate that when income increases, there are certain types of commodities, for whom marginal utility declines, indicating diminishing marginal utility. These types of commodities are commonly referred to as *inferior goods*. In the Ethiopian case, there is perception that "Injera be'Shiro Wet" is an inferior good, considering the fact that this food combination is generally consumed highly by the poor, than by the rich. The Types of "Injera" mostly consumed in the study area by the food insecure population is made Millet/Sorghum. This type of "Injera" is usually less preferred than the normally consumed "Ye'Tef Injera", and is mostly consumed by rural poor.

In the study area, the above stated fact is baldly seen. Based on a 7 day recall period, the dwellers were asked of the most common type of food consumed, and out of the food insecure households, 89.3% said that they consume "Injera with Shiro Wet" more than 10 times a week, and on average, this particular type of food combination being consumed more than 6 times a week in all the households under study. Although it is very difficult to present a normative data on "ideal" or "target" level of food diversity, Swindale and Bilinsky (2006) recommended that households should consume "Vitamin A" rich foods like papaya, avocado, banana or orange, more often than any other food. In this particular sample survey case, considering the "Vitamin A" content of "Injera be'Shiro Wet", it is easy to conclude that the food type is poor in diversifying the consumption needs of urban dwellers. In relation to this, respondents were asked about their 7 day intake of

fruits (Vitamin A rich foods), and it was found that only 21% have eaten fruits only once in the stated period



Source: Researcher's Sample Survey Data, May 2010

4.3.5 Perception of People

Data on people's perception of weather they consider themselves as "food secure" or not was also collected. Aggregate results show that 53% of the households, who are scientifically food insecure, ***consider*** themselves as food secure. The scientific calculation based on daily calorie consumption of households (kcal/person/day) showed entirely different result, indicating all of these households to be food insecure. This analysis can tell us that although people are consuming less preferred and minimum amount of food, they do not see themselves as energy deficit.

Table 4.6: People's Perception about food security in their household

	Frequency	Percent	Cumulative Percent
There is food shortage in my household	97	53	47.9
There is No Food Shortage in my household	86	47	99.5
Total	183	100	

Source: Researcher's Sample Survey Data, May 2010

4.3.6 Determinants of Food Insecurity

Demographic Characteristics and food security/insecurity

The demographic characteristics of households have potential relationship with food security/insecurity. Thus in this section, the study tries to find out weather there exists any relationship between household demographic characteristics and food security. The demographic characteristics under consideration here are sex of household head, age of household members, dependency ratio, family size and literacy status. These variables will be weighted against per capita food kilocalorie consumption.

4.3.7 Sex and food security

Sex of household head is an important demographic variable that influences the food security of the household. This is due to the fact that usually, female headed households are vulnerable to food shortage than male headed households. Women are largely deprived of resource endowment like land, labor and capital. (Devereux 2000; Eden et al 2009; FAO 2009) Therefore, it is hypothesized that female headed households are more vulnerable to food shortage and food insecurity than male headed households. A t-test was run on the sample and it was found that the mean per capita kilocalorie intake of male headed households is 1382.2 (n=79) and female headed households is 1265 (n=104). The t-test showed that there is significant statistical difference in mean per capita kilocalorie available between male and female headed households ($t = -2.045$ and $P < 0.042$) at 5% significance level. This confirms that the relationship between food

security and head of the household is not due to chance only, but because of other related factors.

Data analysis from the sample also indicated that women headed households earn a mean average monthly income of birr 1230.80 only, while the men headed households get a monthly average income of birr 1542.00. The t-test also showed that this income difference is not by chance only with a 5% significance level. ($t = -2.033$ and $P < 0.044$) The reason why women headed households face difficulty in attaining minimum daily per capita intake could be explained by the income factor above.

The data confirms that women headed households; on average earn less amount of monthly income than male headed households.

Table 4.7: Statistical significance tests

Mean Kcal/Capita/Day			
	N	**Mean Kcal/Capita/Day**	
Female Headed Households	104	1265.00	t = -2.045
Male Headed Households	79	1382.20	df = 181 Sig (2-tailed) = 0.042
Monthly Average Income			
	N	**Monthly Average Income**	
Female Headed Households	104	1230.80	t = -2.033
Male Headed Households	79	1542.00	df = 181 Sig (2-tailed) = 0.044

Source: Researcher's Sample Survey Data, May 2010

4.3.8 Age and food security

Another important variable that needs to be studied is age of the household head. Although the age data from the sample is vulnerable to underreporting and respondent ignorance about their age, maximum effort was exerted to correctly get their ages.

Generally, it is hypothesized that households who have older heads are assumed to be more food secure than households headed by younger individuals. This is because of the fact that households headed by older individuals have accumulated more capital than those headed by young individuals. Mean age for all households was found to be 45. In order to test for the above hypothesis, a t-test was run and it was found that mean age of food secure households was 47, while those of food insecure households was 44. This discrepancy seems to tell that households headed by young individuals are more vulnerable to food insecurity. But the result of the t-test shows that these two variables are related only by chance, and there is no significant relationship among them. ($t = 1.31$, $P < 0.191$) Moreover, chi-square test confirms that the variables are related only by chance, with chi-square value of 7.989 and $P < 0.157$.

Table 4.8: Age of Household Head and Food Security

Age of Household Head			
Age	N	Mean	
Food Secure Households	78	46.81	
Food Insecure Households	183	44.08	
t-test Result (5% significance Level)			
t	1.310	Chi-square	7.989
df	259	df	5
Significance (2-tailed)	0.191	Significance	0.157

Source: Researcher's Sample Survey Data, May 2010

4.3.9 Family size/Dependency Ratio and food security

Family size is another variable to take into account when considering household food insecurity. It is hypothesized that households with large family size tend to be more food insecure than those with small family size. The average household total size in the sample was found to be 4. Again, a t-test was run on the two variables and it was found that food secure households had a mean average family size of 3.22, while the insecure households

had a mean average household size of 4.15. This shows that food secure households have smaller family size than the insecure households. The t-test also confirms this fact with t = -3.921 and P < 0.000. Moreover, chi-square test was also run to test the existence of systematic relation between food security status and family size, and the analyses shows that there is significant systematic contingency relation between the two variables with chi value of 8.252 and P value of 0.0.004. Table 4.9 presents the family size and food security status of the households with statistical significance tests.

Table 4.9 Family size and Food Security

Family Size	**N**	**Mean**
Family Size of Food Secure Households	78	3.2
Family Size of Food Insecure Households	183	4.15

t-test Result (5% significance Level)			
t	-3.921	Chi-square	8.252
df	259	df	1
Significance (2-tailed)	0.191	Significance	0.004

Source: Researcher's Sample Survey Data, May 2010

Another effort was made to find out the dependency ratio that exists in the area. Accordingly, it was found that on average, one working person supports at least two individuals in every household. In other words, half of the members of the household depend on the other half of the members for food and non food needs.

It is hypothesized that households with large dependency ratio tend to be more food insecure than those with small ratio. The data shows that food insecure Households who have less than two persons who bring income to the household had mean kcal/capita/day of 1226.4, while those who have more than two persons who bring income into the household had kcal/capita/day of 1323.4. Therefore, the hypothesis does not have statistical support at 5% significance level. (t = 1.343, P<0.181)

4.3.10 Educational Status and Food Security

When we come to the educational status of the sample households, it was found that 15.2% of the members of the households are illiterate. About 11% of them can only read and write. The rest 73.6% indicated that they have attained different levels of education above first grade. Table 4.10 shows the educational status of households under study.

Table 4.10 Educational Status of household head and Food Security

Educational Status	Number of household Members	% from total number of household Members
Illiterate	154	15.25
Only read and write	112	11.09
Primary level (1 – 8 grade)	266	26.34
Secondary level (9 – 12)	317	31.39
Diploma	122	12.08
Degree	39	3.86
Total	**100**	**100**

Source: Researcher's Sample Survey Data, May 2010

An effort was made to establish a relationship between literacy status of the household head and food insecurity in the study area. It was hypothesized that households led by literate individuals tend to be more food secure than those headed by illiterate individuals. The results showed that households headed by illiterate individuals had mean kcal/person/day calorie intake of 1329.3 while those headed by literate heads had mean intake of 1254.2 kcal/capita/day. This difference tells that the two are not related at all in the sample, as households headed by illiterate individuals tend to consume more kcal than those headed by literate individuals.

4.3.11 Income and food security

Income could be taken as another determining factor in food security analysis. Households who have more income tend to be less vulnerable to food shortage than those with small income. The survey data shows that the average monthly income of all households is birr 1519.20 and standard deviation of 1180. In addition, it was found that food secure households had a mean income of birr 2144, while the insecure households had mean average income of birr 1252.8. A t-test was run on the sample and it showed that the difference in mean is statistically significant at 5%. (t = 5.942, P = 0.000)

Table 4.11 Monthly Average income and food security

Item	N	Mean	Std. Deviation
Monthly Average income of Food Secure	78	2144.00	1410.67391
Monthly Average income of Food Insecure	183	1252.80	953.27637
t-test Result (5% Significance Level)			
t - test	5.942		
df	259		
Significance (2-tailed)	0.000		

Source: Researcher's Sample Survey Data, May 2010

4.3.12 Monthly Expenditure and Food Security

On average, 54% of the households in the sample spend more than 75% of their expenditure on food. If a household spends more than 75% of its income on the purchase of food, then this household is regarded as food insecure household. (IFPRI, 2007) Moreover, MoFED (2008) indicates that the average real per capita food expenditure for Ethiopia is 1,256 birr. National food expenditure accounted just for 62% of household's budget, while urban average consumption is 52%. The results of the survey are similar to the national averages. Table 4.12 shows the summary of the findings.

Table 4.12 Monthly expenditure and Food Security

Item	Mean (Birr)
Mean Total Expenditure per capita household	1,041.60
Mean Expenditure on Food per capita household	741.92
Mean Expenditure on Education per capita household	107.57
Mean Expenditure on Transport per capita household	82.01
Mean Expenditure on Rent and household bills per capita household	116.40
Mean Total Expenditure per capita food insecure household	853.66
Mean Expenditure on Food per capita food insecure household	642.02
Mean Expenditure on Education per capita food insecure household	85.4
Mean Expenditure on Transport per capita food insecure household	53.20
Mean Expenditure on Rent and household bills per capita food insecure household	86.83

Source: Researcher's Sample Survey Data, May 2010

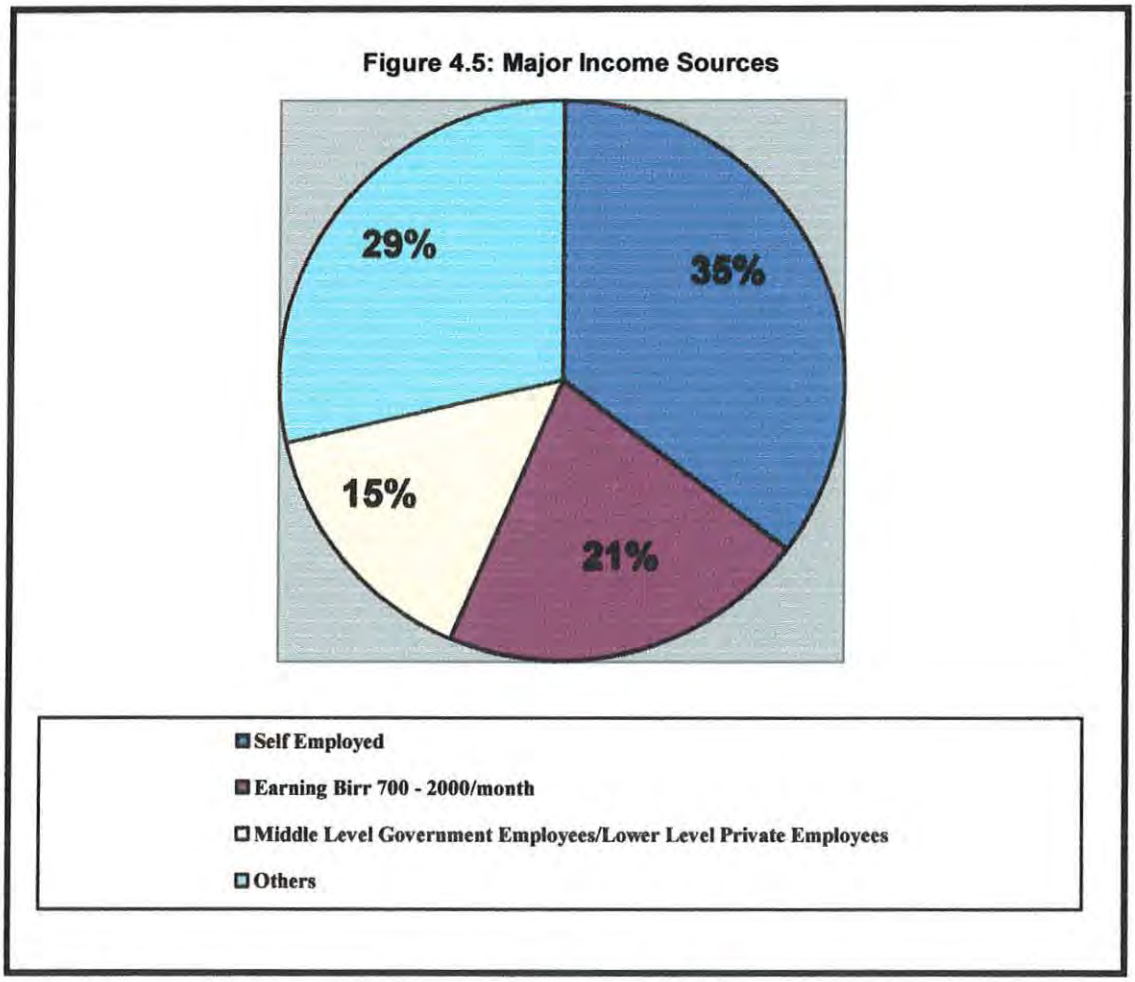
Table 4.12 tells a lot about the difference between the food insecure and total expenditure means in the sample. Food insecure households have lower total expenditure, expenditure on food, expenditure on education, expenditure on food and expenditure on other household bills than the total households in the sample.

4.3.13 Income Source

Information on income sources of households and household members engaged in activities that bring income to the household regularly was collected by the survey. Households were asked to rank their major income source for the whole household, and majority of the households i.e. 74 (35.4%) of them ranked "Self Employed" category as their first income source. Self Employed individuals in the study area include those Taxi Drivers, Carpenters, Prostitutes, retailers of sweets (like candy, chewing gum, cigarette, and biscuits), Small and Medium Scale Enterprise operators (SMEs), ... etc. These

individuals dominate money income to households more than people engaged in other fields of work. To support this claim, a study on urban anatomy of income distribution conducted by Bigsten and Negatu (1999) indicated that wage employment is by far the most common type of job in urban areas. The next source of income and employment, ranked by the households as second by 55 households (21.1%), was jobs paying birr 700.00 – 2000.00 per month. Types of jobs included in this category are government jobs for diploma and degree holders, and employees for small scale private firms (like those employed in photocopy services, those employed in small scale enterprises, etc …). The third ranked source of income by households in the study area is Middle Level government employees or lower level private employees (15%). These employees include drivers of government cars, office Messengers, individuals who work in boutiques … etc. Figure 4.5 summarizes these income sources.

Figure 4.5: Major Income Sources



Source: Researcher's Sample Survey Data, May 2010

Box 2: Diversifying Income Source to "Prostitution", as a Coping Strategy

Mrs. Sehin Alemayehu who is 31 and married, is a waitress by profession, and part time sex worker. She has three children of age 7, 4 and 2. Her first child lives in countryside with her mother, while the other two are with her. She works her full time job at a bar found in Lideta sub city.

Mrs. Sehin said that she sometimes works as a sex worker to fill food gap that is occasionally created in her home. She has told her husband about the part time job and he is fine with it. He even encourages her to bring more income to the household by doing the "business". The biggest challenge that Mrs. Sehin and her family face is to meet the monthly house rental schedules. She usually does the "sex work", at the end of the month, when the rent due date arrives. It can be seen from her eyes the amount of emotional disaster that she is going through, but the fact keeps on materializing every month.

4.3.14 Shocks to food and non food needs

Another determinant of food insecurity in the area is the repeated occurrence of different types of shocks on access to food. Informants were asked of the most difficult shocks they experienced, and it was found that "High Food price" was reported by 181 households as the first shock they experienced in recent times. The second reported shock was, high transportation cost, which ranked second by 130 households. The third shock reported was increasing house rental price, ranked third by 150 households.

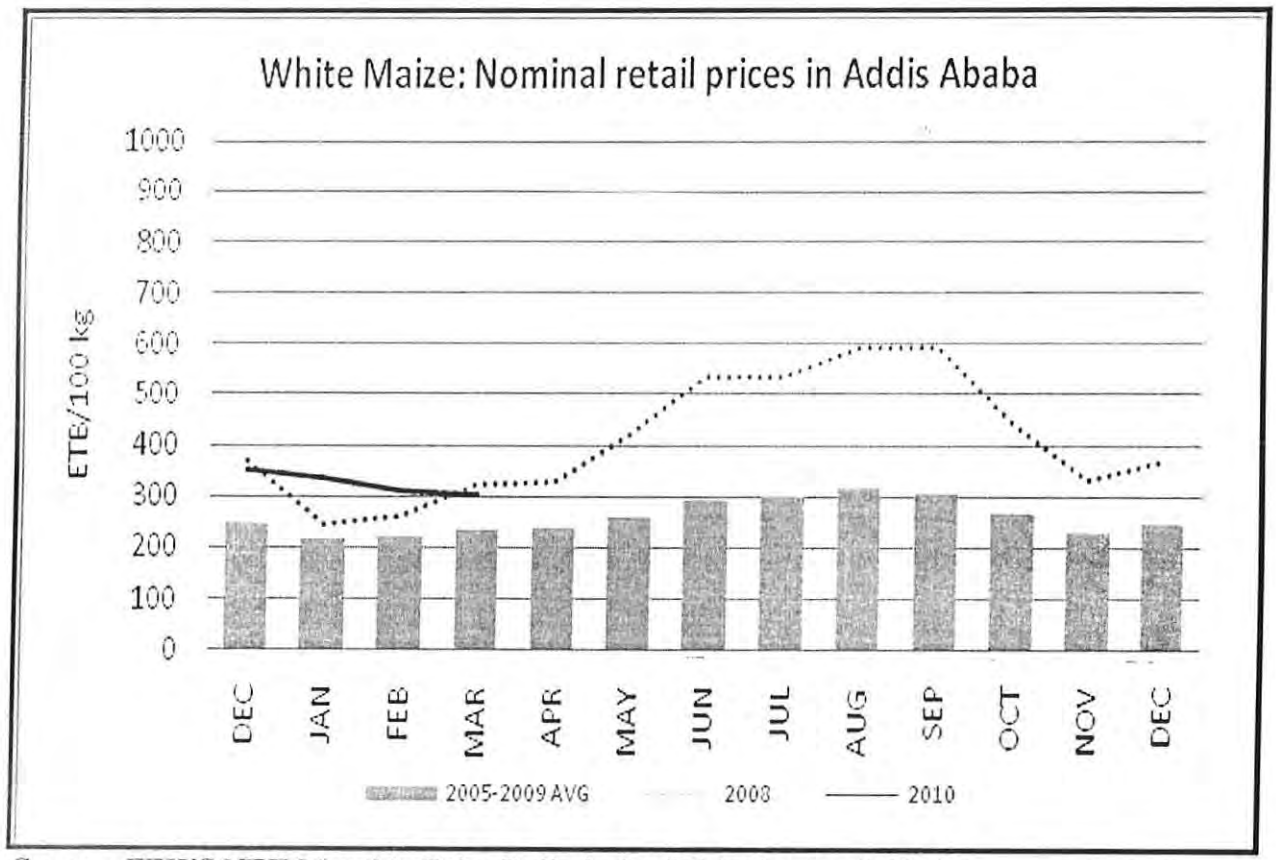
Table 4.13: Major Shocks to food and non food needs

Rank	Shock	Frequency
1st	High food prices	181
2nd	High fuel/transport costs	130
3rd	Increasing house rental price	150

Source: Researcher's Sample Survey Data, May 2010

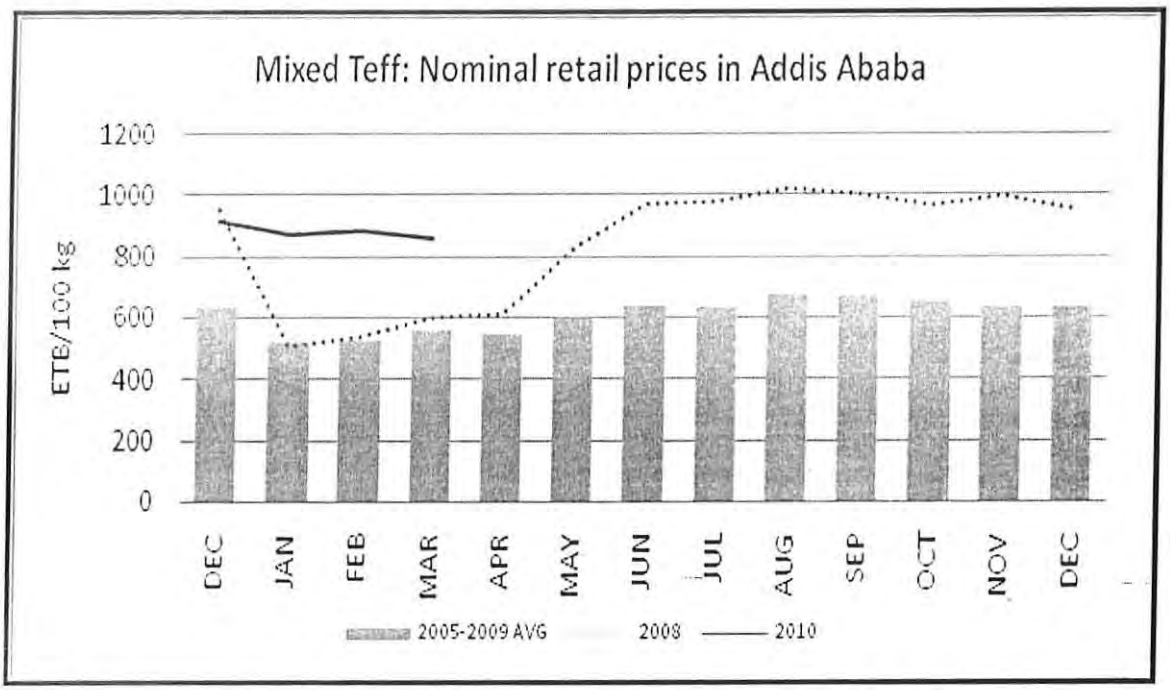
This claim of the respondents can be supported by the Ethiopian Famine Early Warning System's monthly price bulletin of April 2010. The price bulletin indicates that price of food items is still very high compared to recent times. For instance, price of Wheat in Addis Ababa has been increasing at a very high rate in 2008, reaching birr 600/100kg. It is known that this grain is used to prepare home made bread called "Ambasha". From the sample survey, more than 75% of the respondents said that "Ambasha" is their second most consumed type of prepared food, next to "Injera with Shiro Wet". At the end of March 2010, the price of Wheat was oscillating around birr 400/100kg. This surge in price of Wheat was also manifested in the price of "Tef", which is used to prepare Injera. The price of Teff jumped straight from birr 300/100kg in 2006 to more than 1000/100kg in 2008. Let us see the average price movement of the two most consumed grains, by the following chart.

Figure 4.6: Average Price of Wheat in Addis Ababa



Source: FEWS NET Monthly Price Bulletin for Ethiopia: April 2010:1

Figure 4.7: Average Price of Teff in Addis Ababa



Source: FEWS NET Monthly Price Bulletin for Ethiopia: April 2010:2

4.3.15 Household Support

Households were asked to indicate if they support other members of the household located elsewhere, or they are being supported by other interest groups. The response of the households is presented as follows.

Table 4.14: Household Support to others

Item	Frequency	Percent	Cumulative Percent
Households who support individuals outside the house	55	21.1	21.1
Households who do not support individuals outside the house	206	78.9	100.0
Total	**261**	**100.0**	

Source: Researcher's Sample Survey Data, May 2010

It is hypothesized that households who have individuals to support outside the home are highly vulnerable to food insecurity than those who do not have. In order to test this hypothesis, a t-test was run and the results are as follows, the mean average kcal/capita/person for households who have someone to support was found to be 1577.9, while for those who do not have someone to support was 1667.4 Although there is a difference in the mean between the two, t-test revealed that there is no statistically significant relationship ($t = -0.886$, $P<0.377$).

4.3.16 Household Remittance

Remittance is one of the major sources of income to developing countries as a whole. People who live abroad remit to their mother country mostly for the sake of helping their family. Ethiopia is a very good example of countries who receive considerable amount of remittance from nationals living abroad. National Bank of Ethiopia (2009) data shows that remittance transferred through the bank in one year (2009) on average accounted to US $60.7 million.

The data shows that 33% of the households in the sample receive remittance from a family member who now lives abroad. It is hypothesized that households who receive remittance are less vulnerable to food insecurity than the once who try to manage on their own without any external support. The mean of the two groups (the once who receive remittance and the once who do not receive remittance) was compared and it was found that households who receive remittance had mean calorie intake of 1577.9, while those who do not receive remittance had a mean kcal/captia/day intake of 1667.4. The difference in mean disproves the hypothesis, and there is no statistical significant relationship between those who receive remittance and those who do not receive remittance on calorie intake per day.

4.3.17 Source of Food

An attempt was made to find out sources of food for the survey population. Studies show that generally, 80% of source of food for rural population is from own production.

(Devereux 2000; Eden et al 2009; Ramakrishna and Assefa 2002) In contrary to this, Results of this study show that 100% of source for the urban population is from purchases of food items from local markets. Coupled with the location of the study area, these households do not have any other alternative (like urban agriculture) than purchase of raw, semi-processed or processed food items. Street foods are another important consumption sources for the urban poor. Respondents have indicated that it is easier for them to buy foods from the street, like toast like breads ("Chornake") than preparing one.

Box 3: Street Food as a Common Consumption Practice

Ato Taye Leoul, 26 and a daily laborer is a resident in the Kebele. It has been 6 years since he came to the Kebele for permanent residency. There is a station at one of the corners of the Kebele where daily laborers wait for contract employers. He spends most of his time there waiting to be employed.

Ato Taye always eats street food for living. He cant remember the last time he prepared food for himself. The most common breakfast food is a toast like bread ("Chornake") with tea. After consuming this around 10:00 AM in the morning, he continues work, if he has one. The reason why he always consumes this type of breakfast is that the food is somehow oily and it has the potential to make people feel like they have eaten enough. Ato Taye said that he does not feel hungry up until 3:00PM in the afternoon. During lunch, he sleeps anywhere he gets, as long as the place is shady.

In the afternoon, he finishes work at 5:00PM and goes back home. On his way, he buys ½ a kilo of banana and locally produced bread called "Ambasha". He then eats them back at home. He has been strictly following this practice for the past 2 years.

4.3.18 Time since food shortage is felt

Households were also asked about the time since they first started experiencing severe food shortage. More than 27 percent of the households said that they experienced serious food shortage starting 2 years ago. As discussed above, the first reason that the food insecure households put forward for this shortage is the ever increasing price of food items. Some respondents also said that they started feeling the food shortage since they lost household members who were responsible to bring cash for food in the household.

4.4 Coping Strategies

4.4.1 Number and type of Meals

Information on the number of meals consumed a day before the survey was collected. The data was analyzed for the food insecure population and it was found that 59 households, i.e. 32.7% of the food insecure households have reduced the number of meals to cope with food shortage from three to two times per day. It appears that around 33% of the households of the insecure population can't consume three times a day. The respondents have said that they do not eat breakfast in the morning. Rather, they prefer to stay late and have breakfast around 11:00 in the morning. The most common food consumed by the food insecure population at this time of the day is a toast like bread called "Chornake". The food insecure households usually have this toast with tea or coffee.

The data extracted form the sample indicates that food secure households usually eat more diversified types of food daily than the food insecure households. The most common type of food eaten for breakfast by the food secure households is "Genfo", coupled with tea or milk. Next to that, households usually consume "Injera Firfir" and "Kinche".

Lunch time is not usually respected by the food insecure households. Mr. Taye Leoul, who is 26 and a daily laborer, said that it has been years since he ate lunch at the mid day. He usually goes and sleeps during lunch time, because he gets very tired of the work

done in the morning. When lunch time is over, he gets back to work, and tries to leave early from work. He then rushes home to eat his lunch/dinner. He mentioned that he feels so exhausted and tired when reaching home. The meal eaten at this time is ½ a kilo of banana and locally produced bread called "Ambasha". Then the meal budget for the day is closed. Surprisingly enough, more than 97% of the food insecure households have confirmed the use of *"bread"* for breakfast. Bread is highly consumed by these insecure households. Bread is consumed at least once in a day. Some households consume bread more than three times per day. Out of curiosity, interview respondents were asked why they consume this much amount of bread daily, and they indicated that bread does not need accompanying sauce. Mr. Taye said that "Injera" needs some sauce or topping to eat, but bread can be eaten as it is.

Another interesting coping strategy is to save some food for breakfast from dinner. Most of the food insecure respondents have indicated that they eat left over from dinner for breakfast household members are encouraged to save some portion of their dinner for breakfast, because usually, they do not have resources for breakfast. In order to find the most common types of adaptation strategies with food insecurity, the food insecure households were asked to show and rank their most common types of coping strategies, and the Table 4.15 summarizes this fact.

Table 4.15: Coping Strategies

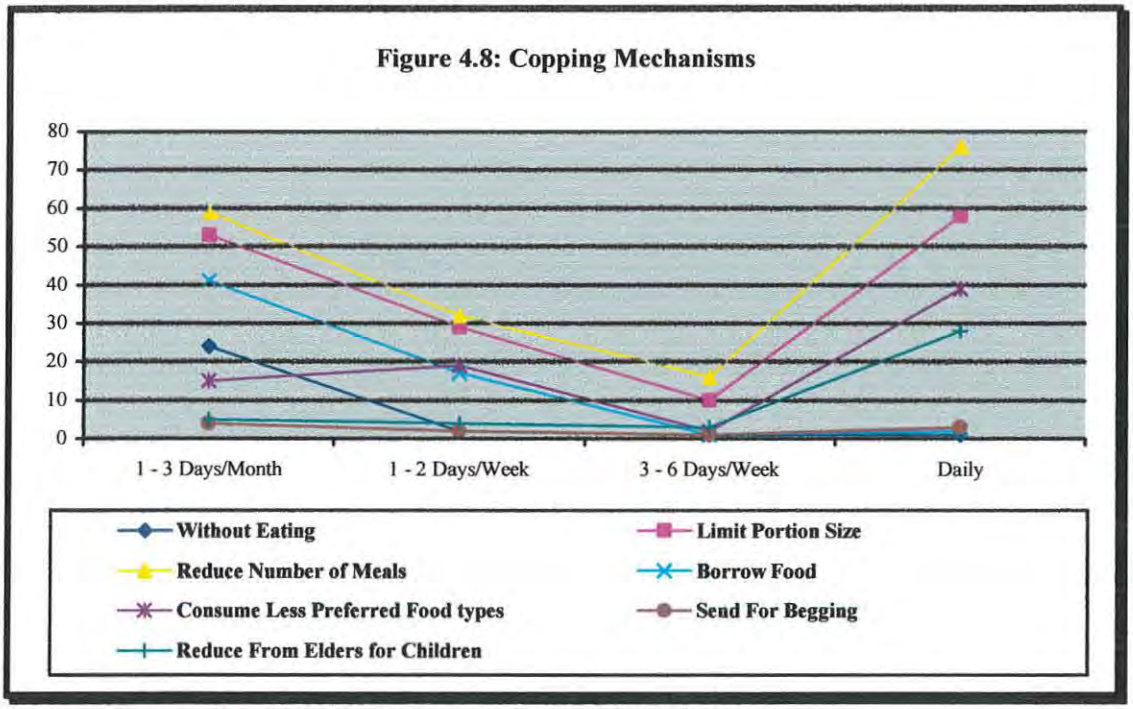
	Without Eating		Limit Portion Size		Reduce Number of Meals		Borrow Food		Consume Less Preferred Food types		Send For Begging		Reduce From Elders for Children	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Never	155	84.7	33	16.4	0	0	122	66.7	108	59.0	173	94.5	143	78.1
1 - 3 Days/Month	24	13.1	53	29.0	59	32.2	41	22.4	15	8.2	4	2.2	5	2.7
1 - 2 Days/Week	2	1.1	29	17.5	32	17.5	17	9.3	19	10.4	2	1.1	4	2.2
3 - 6 Days/Week	1	0.5	10	5.5	16	8.7	1	0.5	2	1.1	1	.5	3	1.6
Daily	1	0.5	58	31.7	76	41.5	2	1.1	39	21.3	3	1.6	28	15.3
Total	183	100	183	100	183	100	183	100	183	100	183	100	183	100

Source: Researcher's Sample Survey Data, May 2010

As can be seen from Table 4.15, the most adopted type of coping mechanism with food insecurity is reducing the number of meals per day. More than 41% of the food insecure households reduce their number of meals daily. The second most adopted strategy of coping with food insecurity is limiting the portion size of food served and consumed in every meal. The sample indicates that 31% of the insecure households limit their portion size of food intake on every meal. Next to these strategies, there are dozens of other mechanisms used by the insecure population to cope with food shortage. As it has been discussed in detail earlier, these individuals consume more of "Injera with Shiro Wet". This is a good evidence for their massive consumption of less preferred types of food. Ingredients that are used to prepare "Shiro Wet" are also reduced by the households. Sometimes, the flour of "Shiro" is mixed up with different types of flours to make it enough for the whole family.

The following graphical representation shows the distinction between the major coping mechanisms of the households in the study area. The yellow line shows the number of households who reduce meal per day. This line lies well above the others, because it is the most practiced coping strategy. The pink line shows the number of households who reduced the amount of food they eat per meal.

Figure 4.8: Copping Mechanisms



Source: Researcher's Sample Survey Data, May 2010

4.4.2 Sale of household assets as a way of income

Another interesting point to note in the sample is the sale of household assets as a way of managing food shortage. Out of the 183 food insecure households, 17 percent said that they have sold one household asset at least once in the past two years. Households usually sell tape recorders and cupboards more than other asset.

Box 4: Selling of Household Assets as a coping strategy

Mrs. Lelise Gebeyehu who is 48 is a charcoal retailer in the Kebele. She is leaving alone, as she never got married and had children. She rents one room Kebele house from her cousin and pays 10 birr per month for it. She says that she has difficulty in meeting her daily food requirements.

What makes Mrs. Lelise different from other dwellers of her status in the Kebele is the fact that she has sold her own household furniture more than three times in the past two years. One day, Mrs Lelise says, she was very hungry because it was raining the whole day and she didn't sell charcoal to buy food for that day. She says, "After crying for more than one hour in my house, I decided to sell my tape recorder, because it was really unbearable to withstand the hunger. It was very painful, to decide and sell your asset, but I had to do it. I sold the tape to my youngster neighbor for 40 birr, and went to buy something for dinner". But afterwards she has also sold one medium sized cupboard and one stove to cover her food expenses. She characterizes the practice of selling household asset for food as a very disappointing and hurting activity, but due to lack of alternatives, she has to do it.

4.4.3 Efforts exerted by potential stakeholders

The seriousness of the issue under study has been covered to some extent. Now let us divert our attention to the efforts exerted to eradicate this chronic problem from the area. Just by perception and observation, the local administration (Kebele 13/14) has recognized the existence of food shortage in the locality and has started supporting poor

The second group of beneficiaries is children who have lost their parents due to HIV/AIDS. These kids receive different types of nutrient rich foods like "Cerelac" and "Fafa" which are useful for early years of child growth and development. The third group of individuals receiving aid through government structures is HIV/AIDS victims. These people, after detailed background check, which includes their economic status, are illegible for grain aid.

The organizations that work on grain/food aid in the Kebele are two. The first organization that distributes food aid to HIV/AIDS victims is called "Hiwot HIV/AIDS Prevention and Support Organization" (HPSO), a local NGO funded by donor agencies worldwide. The second organization is called "Medhin Act Development Association", targeting elderly people of the Kebele.

When we come to the analysis of the sample data, out of the total food insecure population, only 8.2% have reported that they receive grain/food assistance from authorized NGOs that operate in the Kebele. Together with this, households were asked to rate the assistance that they get from aid organizations, and they have indicated that it is satisfactory, and has helped them minimize their food deficit. On average, 10kg wheat flour and one litter cooking oil is distributed per household per month. For households who have children, it was reported that they receive 10kg of "Fafa" per month. Table 4.17 summarizes the total number of sample population who participate in the food aid scheme.

Table 4.17 Food/Grain Assistance to the sample population

	Frequency	**Percent**	**Cumulative Percent**
Have Received food/grain assistance from NGOs that operate in the Kebele	15	8.2	8.2
Have never received food/grain assistance from any NGO	168	91.8	100.0
Total	**183**	**100.0**	

Source: Researcher's Sample Survey Data, May 2010

The Kebele administration, together with the NGOs has prepared eligibility criteria for households to participate in the food assistance scheme. As mentioned above, 948 individuals have fulfilled the criteria and are currently participating in the scheme. But there are some complaints from food insecure households in the sample survey, who have mentioned that there are irregularities in the selection process of beneficiaries. The Kebele administration defends itself by stating that it has laid down the criteria with maximum care and is undertaking the process with sufficient background information on the beneficiaries.

The researcher tried to get documented selection criteria manual, but couldn't find one. It was learned that decision is made on whether to participate an individual in the food aid program, based on background narrative history of the concerned individual and some basic indicators of poverty like:

- Prove that he/she is an HIV/AIDS Victim, has started taking medicine, and is unemployed
- People with HIV/AIDS, but have been diagnosed to have reached serious stages of the virus
- Elderly individual with no support from anyone around, or with no pension
- Children who lost their parents by HIV/AIDS

An effort was also made to get access to the amount of grain/food aid distributed by the NGOs, but due to poor information storage and retrieval mechanisms in the organizations, this information is not presentable for further study. The above analysis calls for properly designed Urban Safety Net Programs that directly target the urban food insecure population and save lives of million endangered individuals.

4.5 Impacts of food Insecurity

Food insecurity is one of the deadliest chronic problems of third world countries. Its impacts are so severe that they may lead people to different undesirable consequences, especially in urban centers. The impacts can be divided into two. The first and major

impacts are health problems. When people are food insecure, malnutrition takes the podium and degrades the "ability to work" of individuals. (IFPRI, 1993) this will result in continuous visit to health centers and weakness to execute physical and mental work. The second impacts are, as discussed on IFPRI (1993), where people are ignored or sidelined from social events as a result of their physical appearance. Another social impact is vandalism and theft in third world urban centers (like Nairobi, Johannesburg, Lagos... etc). Although we cant claim that all the vandalism is caused by food insure urban dwellers, it takes some significant share. Desperation for food can lead people to unexpected measures. (ibid)

Respondents in the sample have indicated that they experienced different types of effects of food insecurity. The major impact reported by respondents was chronic hunger sensation. The food insecure households feel this deep irritating feeling especially at mid day and mid night. Mrs. Lelise Gebeyehu, who is a charcoal retailer, said that she usually feels physical weakness when carrying out her day to day activities. She feels sleepy and tired all the day. When talking about her hunger feelings, she said "I mostly cry when I get home from work. I feel emotionally down and wasted. The feeling is so hard".

In addition to the sensation of hunger, respondents pointed out that they consistently have lost weight for the past couple of years. Mrs. Sehin Alemayehu, who is a waitress, said that she and her husband have lost approximately four kilo grams in the past two years. She was suspicious of this rapid weight loss and went to HIV/AIDS clinic to find out her status. Luckily, her HIV status was negative, but the weight loss still worries her so much.

Poor health is another impact of food insecurity. Respondents said that one household member visits the nearby government owned clinic at least once in a month. The most common diagnostic problem they experience is malnutrition. Health workers at clinics constantly tell them to consume more diversified foods and prescribe "Vitamin" pills to improve their nutrition status. But the residents do not buy the pills due to shortage of

funds. Children easily catch "Cold" and "Cough". This indicates lack of resistance to most common and easily curable diseases.

Another impact of food insecurity in the study area is impact on human performance. Adults usually experience anxiety and weakness when carrying out day to day activities. Mr. Debebe Argaw, who is a daily laborer, said that whenever he gets contract, he usually does his job for half a day. In the afternoon he hides from his bosses to protect himself from being ordered to do a task. He said:

> *"Sometimes, I go to the back side of the place where I work and sleep in the hiding. I do not have any choice other than that, because I feel like falling within minutes".*

This impact of food insecurity is vividly seen on children who attend school. Mr. Dawit Ejigu, who is 40 and a shoe polisher in one corner of the Kebele, said that his two children have been sent back home from school a couple of times by teachers because they failed to attend classes properly. He said that his children feel so sleepy and tired, that they can't follow what is being said by the teacher. This impact shows the reduced work performance and ability to work by both children and adults.

Chapter Five

Conclusion and Policy Implications

5.1 Conclusion

Poverty is a conclusive term used in various fields of research to show the extent of deprivation of basic human necessities. Countries around the world are broadly subdivided into two categories. The first group includes those countries commonly known us "Western", which have a very well functioning and developed economy. These countries have attained a level of development where they can afford to feed their entire population at different levels. This does not mean that everyone in these countries can feed himself. But generally speaking, the countries have laid down the necessary ground and opportunity to significantly reduce the incidence of poverty. On the other hand, countries like Ethiopia are included in the other face of the world, where a considerably large proportion of the people are not able to meet their minimum food requirements. These countries, commonly known as "Less Developed Countries", are highly vulnerable to natural and man made disasters which have made their population's lives miserable.

International agencies like the Food and Agricultural Organization and World Health Organization of the UN have created multitude development agencies throughout the world who work on the eradication of food poverty from our world. These humanitarian organizations have been working together with governments of third world economies to at least minimize the seasonal and cyclical occurrences of food deficit for decades. Although massive efforts have been exerted into the field, the prevalence of the problem is still there. Ethiopia is one good example of this scenario, where both development agencies and government are working relentlessly, but with no much success.

Urban poverty and food insecurity is relatively a neglected issue in Ethiopia. Researches indicate that a little has been done to withstand the evil effects of urban food insecurity. The main reason for this little attention and effort is the lack of properly documented data on the extent of urban food insecurity. Although rural food security is the concern of

many stakeholders, urban cases are ignored. This research has tried to come up with fresh data and cases, which can be substantiated for future use.

Results of the study have to some extent shown the degree of prevalence of this chronic urban problem. Hence, the objective of the study was to show the determinants, extent and coping strategies of food insecurity in Kebele 13/14 if Kirkos sub city in Addis Ababa, and indicate possible ways forward for these deprived urban dwellers. The following are major findings of the research.

Food insecurity is a very serious issue in the study area. The analysis shows that 70.1% of the sampled population is food insecure. This figure is a weighty number, which explains the extent of food insecurity in the Kebele. The seriousness of the issue can only be felt by those who are experiencing the food crisis day and night. MoFED, in its 2008 report shows that food inflation reached 34.9% in 2007/2008 fiscal year. This can explain a lot about the severity of food insecurity in the Kebele.

A number of determinants have been found that contribute to food insecurity in the area. The first determinant of household food insecurity is gender of the household head. It was found that there is statistically systematic relationship between gender of the household head and food security status in the Kebele. Households Headed by Female are significantly vulnerable to food insecurity than those headed by Male.

Family size/dependency ratio and food security of households were found to have systematic statistical relationship. Households with large family size are more food insecure than those with small family size. In relation to this, households with high dependency ratio are more food insecure than those with low dependency ratio.

The sample survey shows that food insecure households have lower monthly average income than the secure once. This is supported by statistical significance tests too. It was also found that 68.58% of the households under study had their monthly expenditure more than 70% of their total expenditure, and hence are food insecure. Out of the food

insecure households, 89.3% said that they consume "Injera be'Shiro Wet" more than 10 times a week, and on average, this particular type of food combination being consumed more than 6 times a week in all the households under study.

Source of food for the urban dwellers was found to be purchases of food items. The most common activity (work) is the "Self Employed" Category. Price of food items was also found to be another important determinant of food insecurity. Urban surge in prices, which started three years ago, has caused households to spend much of their money on few types of foods. Therefore, their food consumption was limited to a small variety of food stuffs.

Households who support individuals outside the home were hypothesized to be more vulnerable to food insecurity. In reality, the data showed that there is no statistically significant relationship on their food security status among those households who support others outside the home and those who do not support people outside the home. Remittance was considered as another determining factor for food insecurity, but it was found that there is no statistical significant relationship between households who receive remittance and those who do not.

When we come to the coping strategies of the residents, it was found that the most important mechanism to adapt to food insecurity was reducing the number of meals per day. Limiting the size of food per meal and consuming less preferred food types was another commonly adopted strategy to cope with food insecurity. The last coping strategy with food insecurity was selling of household assets. Some of the respondents have indicated that they have sold household assets to buy food.

Impacts of food insecurity were also studied in the research. The major impact of food insecurity was chronic hunger sensation. Other impacts include emotional distress, physical weight loss, anxiety, continuous health complications, and educational and work performance fluctuations.

In conclusion, the research has indicated the area at which a considerable effort has to be exerted by city planners. In addition, the research contributes a significant share to the body of knowledge in urban food security. Further studies have to be carried out in this area of research as there are gaps that need to be filled by more scientific and intuitive analysis. The determinants of food insecurity have to be rated accordingly, and evaluate the most determining factors, which can be used as a baseline for future developments of series of actions that need to be taken by city planners.

5.2 Policy and Program Implications

1) Urban Safety Net Programs have to be started
    - Results of the study have explicitly shown that food insecurity is a very serious issue in the sample neighborhood. The extent figures found from the study demonstrate the seriousness of the case, even more than national figures. Therefore, it is mandatory to include food security into the national poverty strategy papers of the country and give due attention for the implementation.
    - Urban population who face food gap should be included in the PSN program. By undergoing through the recommended requirements for participating in safety net programs, the urban households should have access to public work and care for their lives
2) Family Planning programs have to be Scaled up
    - One of the causes of food insecurity is large size families. Family planning and guidance procedures have to be effectively given to the general urban public, in the form of door to door counseling and education, so that the residents see the advantages of having smaller family size.
3) Improvement in the grain subsidy program
    - Grain subsidy program has to be strengthened by improving its targeting schemes. It has to include more vulnerable urban population into the picture and insure the continuity.

4) Introduce food price subsidies and food transfers

- One of the major reasons sited as a threat to the lives of urban poor regarding food security is ever increasing price of food items. Food price subsidy and food transfer is a widely adopted method in many of the developing countries around the world, which is keeping the urban poor alive. The technique is carried out by setting a lower market price, which benefits all consumers, and a limited access subsidy, in which a commodity is rationed to some or all members of a community by setting a price for it lower than the prevailing market price. (IFPRI, 1993) It would be superficial to think of price subsidies in a food deficit country like Ethiopia. But, the suffrage and destitution of the urban poor has to also be considered as a serious threat to human lives in the planning process. Therefore, it will be appropriate to reallocate government budget and provide food price subsidies for the urban poor.

5) Expanding Employment

- Employment base in the area should be broadened. The data shows that most of the insecure population is unemployed. Therefore, it is advisable to encourage and strengthen SMEs and other micro level enterprises that can accommodate medium or low level trained manpower for their operations. In addition, collateral for borrowing should be set to minimum or zero, so that the populations have the initiative to participate in the SMEs sector.

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APPENDICES

ANNEX 1: Format for Safety Net beneficiaries master list

Region: Woreda: Kebele:

Sr. No	Name of Head of HH	Sex	Age	Safety net ID no.	Village name	Food Gap (H, M, L)	Family size (No. of dependants)	Safety Net Category (✓)		Remark
								Public works	Direct support	

Note: H = High; M=Medium, L=Low

Summary:

Total Households:
Male _____
Female: _____

Total number of dependants:
Male _____
Female: _____

Source: MoARD, 2004:30

Prepared by: _____
Position: _____
Signature: _____
Date: _____

Approved by: _____
Position: _____
Signature: _____
Date: _____

ANNEX 2: PSN Leaving Sheet

Mater list no.	Name of HH Head	Sex	Reason for leaving (please ✓)					
			Targeting error	Migration	Voluntary withdrawal		Death	Other
					Improved livelihoods	Found support		

Summary

Total: _____

Male _____

Female _____

Prepared by:

Position:

Signature:

Date:

Approved by:

Position:

Signature:

Date:

Source: MoARD, 2004:31

ANNEX 3: Questionnaire

Addis Ababa University

Collage of Development Studies

Regional and Local Development Studies (RLDS)

Questionnaire for Capturing Food Insecurity Cases

Dear respondent, first of all, thank you very much for the time that you gave me to respond to these questions. My name is Bisrat Teshome. I am a MA student of Addis Ababa University in the department of Regional and Local Development Studies (RLDS). I am currently working on my thesis titled, "Urban Food Insecurity: Determinants, Extent and Household Coping Strategies in Kebele 13/14 of Kirkos Sub city, Addis Ababa".

This questionnaire is designed to capture food insecurity cases in this Kebele. From the name list of the inhabitants of the kebele, I have tried to pick respondents based on simple random sampling technique. By chance, you happened to be one of my respondents. Please try to answer the questions as faithfully as possible. Thank you again for your time.

Name of Enumerator: _____

Household Code: _____

Date: ___/____/2010

Sub city:	**Kirkos**
Kebele:	**13/14**

Part 1: **Questions Related to Demographic Aspects**			
1.1. Name of respondent:			
1.2 House Number			
1.3 Sex of the head of the household {1 = Male 2 = Female}			
1.4 Age of the head of the household			
1.5 Educational Status of the Household Head (1 = Illiterate, 2 = Read and Write Only, 3 = Primary Education Complete, 4 = Secondary Education Complete, 5 = Diploma holder, 6 = Degree Holder)			
1.6 Marital Status:	1 = Single	4 = Widower/d	
	2 = Married	5 = Abandoned	
	3 = Divorced	6 = Other	
1.7 Family size by age group	0 – 17		
	18 – 60		
	above 61		
1.8 Total Family size			
1.9 Household Educational Status	Number of Illiterate Individuals		
	Number of individuals who can only Write and Read		
	Number of family members who completed Primary school (1-8 grades)		
	Number of family members who completed Secondary school (9 – 12 grades)		
	Number of individuals who have Diploma		
	Number of individuals who have Degree		

Part II. Determinants of food Insecurity

2.2 What are income sources of household members?

Name of the household member	Sex 1 = Male 2 = Female	Income Source (Write down the appropriate Code)	Temporary	Seasonal	Permanent	Rank according to importance (1 = Most important)

Code

1 = No Income
2 = Begging for money
3 = Retailing of food items (e.g. "Gulit negade", retail charcoal selling, ... etc)
4 = Daily wage laborer
5 = Working on Contract basis for Domestic Works (backing injera, washing cloth, cooking, ... etc)
6 = Employed at very low paying jobs (e.g security guards, waiter and waitress, cleaners, gardeners, "Woyala", ... etc)
7 = Middle level public servant or lower level private employees (e.g. Drivers at government offices, Messengers, employed in boutiques, secretaries who work in photocopy shops, ... etc)
8 = Self employed (e.g taxi, carpenter, crafts)
9 = Pensioner
10 = Renting of infrastructure, asset or any other material for income
11 = Monthly Income of 700 - 2000
12 = Monthly income of > 2000

2.3 How much is your monthly **average income?**	

2.4 In the last month, what difficulties **have negatively** impacted your household's ability to **meet your food and non-food needs?**

Shocks	Tick all difficulties **identified by the HH**	Rank top 3 difficulties
loss of employment/ reduced salary		
sickness/health expenditures		
death of household member		
high food prices		
high fuel/transport costs		
Increasing house rental price		
debt to reimburse		
irregular/unsafe drinking water		
insecurity/thefts		
Others (Specify) _____		

2.5 What are your major expenses? What is the total household expense in a month time?

Expenses	Rank them according to significance

2.6 Can you tell me your monthly expenditure on food items? (in birr) _____

2.7 Does the household support anyone living outside the home with money or food? (Circle One) 1=Yes 2=No

If yes, who?

a. Children in school elsewhere
b. Other family living in rural areas
c. Other family living in urban areas

Other Specify: _____

2.8 Does the household receive remittance from anyone outside the household? (Circle One) 1=Yes 2=No

If yes, from who, how often and how much?

		Amount
a. Previous household member, who now lives by his/her own		
b. Previous household member, who is now living abroad (outside Ethiopia)	Regularly	_____
c. Close relative	Occasionally	_____
d. Friends		

Other specify: _____

2.9 How many individuals from the household earn money?

2.10 How do you characterize the recent escalation of food prices?

a. Significant that it affected our dietary program
b. Significant, but we were able to withstand it through increased expenditure on food items
c. Not significant
d. Other:

Specify:_____

_____

Part III. Extents of food insecurity

3.1 Which of these statements best describes the food eaten in your household in the last 12 months?

A. We always have enough to eat and the kinds of food we want;
B. There is enough food, but not the kinds we want
C. Sometimes we do not have enough to eat;
D. Often we do not have enough to eat;

(IF SOMETIMES OR OFTEN NOT ENOUGH TO EAT) Here are some reasons why people do not always have enough to eat. For each one, please tell me if that is a reason why you do not always have enough to eat:

A. Not enough money for food
B. There is money, but it isn't enough to buy us one meal
C. No convenient place to cook
D. Not able to cook or eat because of health problems
E. There is food, but there is no one to cook for my household
F. Other

_____

(IF ENOUGH FOOD, BUT NOT THE KINDS WE WANT) Here are some reasons why people do not always have the kinds of food they want or need. For each one, please tell me if that is a reason why you do not always have the kinds of food you want or need.

A. Not enough money for food that we want
B. Too hard to get to the store
C. Kinds of food we want are not available

Other please specify: _____

3.2 What quantity of the following items did you consume over the last 7 days, and what was the primary source of these commodities? (Write the quantity of the consumed food in the "Quantity" Column

Food Item	Local Name	Quantity	Main Sources
Meat Products			
Meat in different forms	Siga tibs, siga wet...etc		
Grain			
----------	Shiro wet		
Cooked lentil	Misir wet		
Enjera accompanied with different food items			
Enjera with salt	Enjera be'chew		
Enjera with chili spice	Enjera be'berbere		
Enjera with eye chili spice	Enjera be'mitmita		
Dried Enjera	Dirkosh		
Bread			
Bread	Dabo		
Bread of corn	Kita		
Bread of wheat	Ambasha		
Pasta/Macoroni/Rice			
Pasta	Pasta		
Macaroni	Macaroni		
Rice	Ruz		
Milk/milk products and egg			
Milk	Wetet		
Egg	Enkulal		
Yoghurt	Ergo		
Vegetables/Fruits			
Pumpkin	Duba		
Tomato	Timatim		
Cabbage	Gomen		
Boiled potato	Dinich kikil		
Orange/banana/ Guava/Papaya	Birtukan/Muz/ Zeytun/Papaya		
Sugar	Sikuar		

Quantity

1 = kilograms
2 = Loaves
3 = Liters
4 = 500 grams
5 = Number

Sources

A. = Purchase
B. = Remittance from relatives
C. = Borrowed from neighbors
D. = NGO, Charity Group food assistance
E. = Government charity
F. = Own Production
G. = Barter
H. = Wild Food

If quantity and sources are different from the above mentioned, describe them here:

3.3 How many meals did the adults in this household eat in the past 24 hrs?	Number of meals =
3.4 How many meals did the children 6 – 18 years of age in this household eat in the past 24 hrs?	Number of meals =
3.5 What is the combination of the most common food? How often do you eat this food in your household?	The most common food is _____ _____ We consume it _____ times a week
3.6 Do you think there is food shortage in your household? (1 = Yes 2 = No) If your answer is "Yes", then how long do you think this shortage of food items sustained in your household?	

Part IV. Coping Strategies, in cases of food Insecurity

4.1 In the past 30 days, how frequently did your household resort to using one or more of the following strategies in order to have access to food? SELECT ONE ANSWER PER STRATEGY.

	Never	Seldom (1 – 3 Days/Month)	Sometimes (1 - 2 Days/Week)	Often (3 - 6 Days/Week)	Daily
Skip entire days without eating?					
Limit portion size at mealtimes?					
Reduce number of meals eaten per day?					
Borrow food or rely on help from friends or relatives?					
Rely on less expensive or less preferred foods?					
Purchase/borrow food on credit?					
Gather unusual types or amounts of wild food?					
Send household members to beg?					
Reduce adult consumption so children can eat?					

4.2 Have you ever sold a household asset to buy food, in the past one year?
Circle one 1 = Yes 2 = No (If yes, then indicate the type of the sold items in the past one year)

4.3 Can you tell me the most common combination of food intake for each of the following meals in your household?

Breakfast (choose a combination)
a. One full bread (20 grams)
b. A cup of Tea
c. ¼ of one Injera accompanied with _____
d. ½ of an Injera accompanied with _____
e. One full injera accompanied with _____
f. Bread like toasts (Chornake) with tea
g. Qolo
h. Left over from dinner
i. Escape breakfast without eating
j. Other (specify): _____

Lunch (choose a combination)
a. One full bread (20 grams)
b. ¼ of one injera accompanied with _____
c. ½ of an injera accompanied with _____
d. One full injera accompanied with _____
e. Bread like toasts (Chornake) with tea
f. Qolo
g. Left overs from breakfast
h. Escape Lunch without eating
i. Other (specify): _____

Dinner (choose a combination)
a. One full bread (20 grams)
b. ¼ of one injera accompanied with _____
c. ½ of an injera accompanied with _____
d. One full injera accompanied with _____
e. Bread like toasts (Chornake) with tea
f. Qolo
g. Left over from Lunch
h. Escape Dinner without eating
i. Other (specify): _____

4.4 Have **you ever borrowed money to buy food?** (Circle one) 1 = Yes 2 = No **If Yes, How often? How much?**
_____ times a month Amount of birr _____

4.5 How **indebted are you now?** Amount of birr _____

4.6 Have **you ever got food assistance from NGOs or Government?** (Circle one) 1 = Yes 2 = No if yes, then
a. How much does the assistance help you in copping with food insecurity?

_____
_____

Thank you very much for your time!

Approved by: _____

ANNEX 4: Key Informant Interview Checklist

Interview Questions Designed for Kebele 13/14 Administration

1. Do you know the existence of chronic food insecurity in your Kebele?
2. Was there any assistance given to the vulnerable community in the Kebele?
3. What measures are you and your administration taking to mitigate the problem of food insecurity in the Kebele?
4. What is your plan for the future regarding the food insecure population of the Kebele? What have you planned to do in the near future?

Thank you for your time.

DECLARATION

I, the undersigned, declare that this thesis is my original work and has not been presented for a degree of master in any other university, and that all sources of materials used for the thesis have been duly acknowledged.

Name: **Bisrat Teshome**

Signature: _____

Date: _____

This thesis has been submitted by my approval as a university advisor.

Name: **Dr. Solomon Mulugeta**

Signature: _____

Date: 15/07/2010

