ADDIS ABABA UNIVERSITY

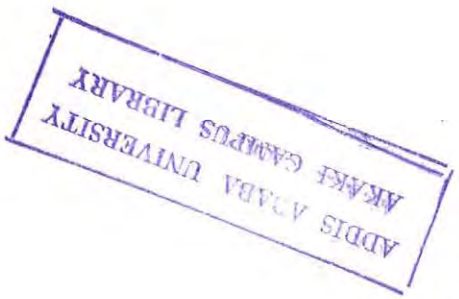
SCHOOL OF GRADUATE STUDIES

CENTRE OF REGIONAL AND LOCAL DEVELOPMENT STUDIES

THE ROLE OF INFORMAL SECTOR IN FOOD SECURITY: THE CASE OF ADDIS ABABA

BY

SAMRAWIT SELESHI



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A Thesis Submitted to the School of Graduate Studies of the Addis Ababa University in Partial Fulfillment of the Requirement for the Degree of the Masters of Art in Regional and Local Development Studies

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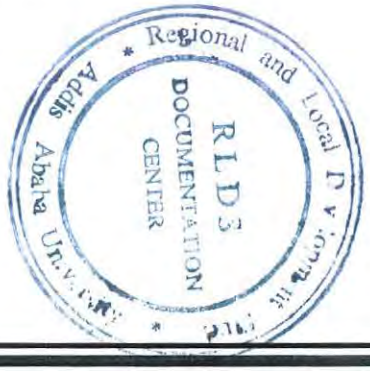

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ACRONYMS

LDCs	Least Developed Countries
CIA	Central Intelligence Agency
SEWA	Self Employed Women Association
ILO	International Labor Organization
GNP	Gross National Product
GDP	Gross Domestic Product
WIEGO	Women in Informal Employment; Globalizing and Organizing
IDRC	International Development and Research Center
CIDA	Canadian International Development Agency
WFP	World Food Program
FCS	Food Consumption Score
N.D	Publication Year Not Defined
IGAs	Income Generating Activities
NUNUW	National Union of Namibian Workers
DFID	Department for International Development
FAO	Food and Agricultural Organization
ANOVA	Analysis of Variance
SPSS	Statistical Packages for Social Sciences

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ABSTRACT

Over the past decades, informal sector has been growing fast in Ethiopia. The major reason cited for this is the growing rate of rural-urban migration and inability of the formal employment sector to provide job for the active labor force. Because capacity of formal employment sector is very limited, those migrants and urban poor dwellers are urged to join informal sector. Thus, this master thesis deals with the contribution of informal sector towards enhancing food security status and vulnerability level of households in the city of Addis Ababa.

The study employs both primary and secondary data collection techniques to gather the desired facts and information. The primary data was selected using questionnaire in which around 222 respondents were participated. For sampling purpose the researcher divided Addis Ababa in to four groups using the city map. From these four groups one sub-city was selected purposively by considering time and money constraints. The selected sub-cities are Bole, Arada, Nefas Silk Lafto and Akaki Kaliti sub-city. In turn, secondary data was collected from different journals, books, researches, magazine and other published and unpublished materials from library and internet searching. In order to analyze the collected data both descriptive and econometrics data analysis techniques were applied. The descriptive analysis was used to examine the characteristics of informal sector operators, their demographic characteristics, sources of capital, income status, participation, planning, saving habit, food security status and vulnerability level of respondents. Further, income inequality is analyzed by using Lorenz curve and ANOVA. In addition, to analyze determinants of food security and vulnerability status of the informal sector operators, probit and ordered probit regression models were employed.

The findings of the study show an important contribution of informal sector employment towards enhancing food accessibility of the poor. Around 67.3% percent get adequate income to cover their daily food expenses. On the other hand, almost 62.7 % of the respondents claim that they cannot survive any further without their business. They are more vulnerable. The major determinants that affect both food security and vulnerability status of informal sector operators are age, sex, household size, experience in the business, working time per day, saving, total earnings, borrowing and livelihood strategies.

The researcher advocates that the government should give sufficient attention to this neglected but prominent sector in the country's economy. This could be done through improving the capacity of poor informal sector operators and facilitating credit sources with low collateral and bureaucratic procedures.

Key words: Informal sector, Food security, Urban poor dwellers, Addis Ababa

CHAPTER ONE: INRODUCTION

Ethiopia is considered as one of the most economically poor nations in the world. In fact, the country is endowed with natural resources. However, due to inefficient utilization of resources and several other factors, large number of people lives in sluggish growth and abject poverty. As such, they struggle for mere survival. The country suffers from both chronic and transitory food insecurity (Kaluski *et al.*, 2001). Agriculture is the back bone of the country's economy. It accounts for about 45% of GDP and 85% of total employment. But because of the fact that the productivity of the sector is highly elastic with nature and does not utilize modern means of production, it is affected by periodic drought (CIA, 2010).

1.1 STATEMENT OF THE PROBLEM

Like that of developing countries in Sub Saharan Africa, rural-urban dichotomy is the basic feature of Ethiopia. In Ethiopia, majority of the population are residing in rural areas in which basic socio-economic infrastructures such as road, school and electricity are scarce. Due to excess labor force in these areas, the bulk of the population is unemployed and/or underemployed. As a result, with the expectation of a better way of life, people migrate to urban areas of the country. Consequently, the situation escalated the rate of rural-urban migration which, on the other hand, creates urban poverty with meager living condition of the people. But this high rate of urbanization surpasses the economic performance of the country. As such, the formal sector fails to provide employment opportunities for those who are seeking for job opportunities. The formal employment sector is characterized by limited absorption of surplus labor, and barriers to entry, as it required education, training and infrastructure (Stevenson and St-Onge, 2005). Thus, because the majority of migrants do not

meet minimum requirements to join the sector, creating employment opportunities for the poor is the major development challenge in the country.

For poor urban dwellers, the informal sector creates employment opportunities and absorbs the active labor force. This informal sector is unregulated and unregistered portion of the economy which provides remunerative work for the bulk of the society. Informal sector activities provide services, which are utilized by the majority of community members.

In the last decades, the sector has been growing fast in Ethiopia. It is preferred by the poor mainly due to the following reasons. First, it has major characteristics of low entry requirements in terms of capital and professional qualifications. Second, it requires skills often acquired outside of formal education. Third, it uses labor-intensive methods of production and adapted technology. In addition, it favors labor over capital.

Due to its basic features, informal sector continues to play a prominent role in less developed economies by way of income and employment generation activities. However, difficulty of the work but low payment is the major challenge that the poor face in the informal economies. The other typical feature of the informal sector is that it is anti-cyclical which expands and grows fast at the period of economic recession and shrinks when the economy begins to recover (Charmes, 2000).

Informal sector employment can be categorized in to two groups. The first one is home-based employment, which includes dependent sub-contract jobs, independent own account producers and unpaid family business jobs. The other group is street-based employment which incorporates shoe-shinning, lottery and news paper selling, car washing, selling coffee, taxi driving, vending agricultural products, selling clothes and the like (Becker, 2004).

According to Chen's explanation, street-based employment has a significant share of urban informal sector. These vendors are one of the largest and most visible occupational groups in the informal sector.

A research conducted by ILO (2002) asserts the significant role of street vending informal sector activities towards generating employment in Africa and South East Asia. Almost it has 72 percent share of non-agricultural employment in Sub-Saharan Africa. It has also a prominent share of GDP from trade (ILO, 2002). In addition, Chen and two other researchers from SEWA (2003) describe the important trade share of street vending employment in India. However, business performance of the sector is affected by the products they sell, the volume of trade, the terms of trade and the location of vending.

Even though informal sector offers an employment opportunity for the poor, it is exposed to gender bias due to socio-cultural and economic discrimination. Thus, in most LDCs women have fewer opportunities for personal growth, education and employment than men. In addition, in the household level, women are highly occupied by doing reproductive work which includes rearing children, cleaning houses, preparing food and the like. To play their basic role of being a wife and mother they have been involved in the informal sector employment to generate income.

Therefore, as Sethuraman's (1998) investigation shows, the proportion of women in the informal sector is greater than the share of men. But due to their double burden of work, they are involved in less favorable type of vending for fewer hours. This in turn brings less earning for them than men (Chen, *et al.*, 2003). Thus, the nature of the work is the basic determinant of economic condition of women and men in the informal economy.

The contribution of informal sector towards food security could not be undermined. Seturaman (1998) finds out the significant contribution of informal sector employment to mitigate households' food insecurity because majority of the poor are engaged in this sector.

According to Becker (2004), if countries want to be successful in reducing poverty, they should give emphasis to the vulnerable people in the informal economy and address their employment needs. Besides, empirical works reveal that informal sector activities are important livelihood strategies for the urban poor in different corners of the world which should be given due emphasis. For instance, Evers and Mehmet (1994) studied petty traders in Central Java (Indonesia), Cargoklu and Eder (2006) focused on informal sectors in Ankara (Turkey), Floro and Malapit (2007) conducted their research on urban poor households in Thailand and Philipines, and Dabir-Alai (2004) studied the vulnerability of street vendors in India.

Though the above-mentioned studies have shown interesting results, our knowledge about the role of informal sectors in enhancing food security status of households and reducing their vulnerability level is limited in Ethiopia. Therefore, this research was conducted to fill this observed gap.

Against the backdrops of the above mentioned issues the following questions are set for investigation;

- Does the informal sector have a significant role towards meeting households' food security level?
- What are the most important factors that determine vulnerability level of informal sector operators in the study area?

- What is the income inequality of informal sector operators?
- What are the basic challenges of working in the informal sector?

1.2 OBJECTIVES OF THE STUDY

The major objective of this study is to investigate the role of informal sector employment to enhance food security level and reduce vulnerability of the poor in Addis Ababa. Regarding this, the following specific objectives are set:-

- To examine the socio-economic status of informal sector operators in Addis Ababa.
- To evaluate food security level and vulnerability status of informal sector employees and their households.
- To identify the major challenges and prospects of the sector.

1.3 SIGNIFICANCE OF THE STUDY

The significances of this study are enormous. First, results of this study will be beneficiary for the government and development planners to take an apt measure in alleviating food insecurity in the study area. In addition, collecting and analyzing data about the sector, in which the majority of work force are engaged, is important to know the economic performance of the sector. Furthermore, by looking at the prospects of the informal sector that will be find out at the end of this study the poor society can get the path to get out of the crowd, vicious cycle of poverty. In addition, this study will have a crucial importance of contributing to the body of literature, as there are limited empirical studies about informal sector employment and its contribution towards food security in Ethiopia.

1.4 SCOPE AND LIMITATION OF THE STUDY

In Ethiopia, informal sector has a significant share of urban employment sector. This comprises both home-based and street-based activities undertaken by the poor who have limited or no access to operate in the formal employment sector. As a result, the study looks at the urban dimension of the informal sector. Due to lack of sufficient time and resource, the study considers only street-based informal sector workers who live and work in Addis Ababa. There are numerous types of activities that are performed on the street. But the study collected information only from three randomly selected activities namely shoe-shinning, vending agricultural products and selling tea & coffee in the street. The basic limitation of this study is lack of reliable and recent evidence about the total number of informal sector operators in Addis Ababa which creates a difficulty in identifying the total population from which to select representative sample size. This arises mainly due to the operation of the sector outside the formally registered economy.

1.5 ORGANIZATION OF THE STUDY

This research paper is organized into five parts. While the first part discuses the introductory section, problem statement, objectives and scope, the rest of the thesis incorporates literature review, methodology, results and discussions, and conclusions and policy implications. Literature review includes theoretical literatures, empirical literatures conceptual framework and hypotheses. The third chapter touches description of the study area and research methodologies employed in sampling, data collection and analysis. Chapter four goes on dealing with the results and discussions and finally chapter five presents summary and policy implications based on the findings of the research.

CHAPTER TWO: REVIEW OF RELATED LITERATURE

This chapter comprises three major components. The first part is theoretical review about the concepts of informal sector and food security, debates about informal sector employment, measurements of food security and the linkages between informal sectors with food security. The other component is review of empirical investigations related with informal sector. At last, the researcher draws conceptual framework to clarify the relationship between variables. Based on theoretical and empirical findings as well as conceptual framework, research hypotheses were then developed.

2.1 THEORETICAL LITERATURE

2.1.1 THE CONCEPT OF FOOD SECURITY AND VULNERABILITY

Food security is a concept that has evolved considerably over time. The World Bank's (1986) definition of food security refers to access to enough food, which is sufficient for an active and healthy life. All people should get access to this food at all times.

This definition is refined in "The state of food security", 2001:

> *"Food security is a situation that exists when all people, at all times, have physical, social and economic access to sufficient, safe and nutritious food that meets their dietary needs and food preferences for an active and healthy life."*

Thus, the definition of food security reveals that it is a broad concept composed of four essential elements, namely, availability, accessibility, stability, and utilization. which refer to

the appropriate good health conditions required to adequately utilize food to meet specific dietary needs and security (Maxwell and Frankenberger, 1992).

The first component of food security, food availability, is about sufficient quantities of appropriate, necessary types of food from domestic production, commercial imports, or donors are consistently available to individuals or are in reasonable proximity to them. It refers to the physical presence of food at the household level.

Access is the second core food security component. It is the ability of individuals or households to acquire adequate income or resources to purchase appropriate foods needed to maintain consumption of an adequate diet at nutritional level through production, exchange or transfer. Achieving adequate access to food by using only a small proportion of available resources indicates food security of households.

The third main component is the utilization. It is about proper exploitation of food, existence of proper food processing and storage practices, adequate knowledge and application of nutrition. It includes preparation of food in a manner that yields the best nutritional value.

The food security concept of time is securing access to enough food at all times. The distinction between chronic and transitory food insecurity exists due to the value of time in the definition of food security. This dimension of food security further incorporates the vulnerability level of people.

Most of the time vulnerability and food insecurity are used interchangeably to mean the risk of access to enough food by the household. Vulnerability refers to people's propensity to fall or stay below a predetermined food security line. It is a function of exposure to risks/shocks and the resilience to these risks. Risks/shocks are events that threaten households' food

security status, mainly, food access, availability and utilization. A neat definition is provided by Devereux (2002) to the effect that "vulnerability denotes both exposure and sensitivity to livelihood shocks".

There is a long-term and a short-term aspect of food insecurity. When the household is not capable to meet the food requirements of its members over a long period of time, then there is a long-term problem which is known as chronic food insecurity. On the contrary, sudden reduction of a household's access to food to below the nutritionally adequate level creates a short-term problem which is known as transitory food insecurity. It has been argued that this category can be further divided in to cyclical and temporary food insecurity (CIDA, 1989). Temporary food insecurity happens for a limited time because of unforeseen and unpredictable circumstances whereas cyclical food insecurity exists when there is regular pattern in a periodicity of inadequate access to food. Generally, a household can be food secure if it has protection against both kinds of insecurity.

2.1.2FOOD SECURITY MEASUREMENTS

There is no fixed rule as to which method to employ due to the diversified characteristics of food insecurity and the different level of consideration. The decision to rely on a particular method usually depends on resource and time constraints, objectives of the study, availability of data, type of users and degree of accuracy required (Debebe, 1995).

Measurement is necessary to characterize the severity of the food security problem and to provide a basis for measuring impact. The major household and individual food security measurements are discussed below.

1) Household Calorie Acquisition: Here, the data are to be collected from the person who is responsible for preparing meals regarding foods prepared over specific period of time usually a week or couple of weeks. This measure provides simple calorie estimation available for consumption in the household level. The advantage is that, it produces easy estimate of the number of calorie available for consumption in the household. The disadvantage of the method is that, the method generates a large quantity of numerical data that needs to be carefully checked both in the field and during data entry (Smith *et al.*, 2006 cited in Adugna, 2008).

2) Individual Intake: This is a measure of the amount of calories or nutrients consumed by individual in a given time period usually a day. In this case there are two methods of generating data. The first method is that by making an enumerator to reside in the household throughout the entire day and measure amount of food served to each person. The second method is recall of the previous 24 hour consumption for each household member. The advantage of this method is if implemented correctly, it produces the most accurate measures of individual caloric intake (and other nutrients). Second, it is possible to measure food security status within household dynamics, because the data are collected on an individual basis. The basic disadvantage of this food security measurement is that it requires highly skilled enumerators who can observe and measure quantities quickly and accurately (Hoddinott, 2002).

3) Dietary Diversity: One or more persons within the household are asked about different items they have consumed in a specified period. Where it is suspected that there may be differences in food consumption among household members. The disadvantage of this measure is that the simple form of this measure does not record quantities. If it is not possible

to ask about frequency of consumption of particular quantities, it is not possible to estimate the extent to which diets are inadequate in terms of caloric availability (Hoddinott, 2002).

4) Indices of Household Coping Strategy: This is used based on how households adapt to the presence or threat of food shortages. This method is undertaken by asking enquires about their reaction at the time of food shortages. According to the study of Maxwell *et al.,* (2002) there are three attractive features of this measure. First, it is easy to implement. Second, it directly captures concepts of adequacy and vulnerability. Third, the questions asked are easy to understand both by respondents and by analysts. Some disadvantages of this measure includes: as it is a subjective measure, different people have different ideas as to what is meant by "eating smaller portions" comparison across households or localities is problematic. Next, its simplicity makes it relatively straightforward to misreport a household's circumstances (Smith *et al.*, 2006).

5) Food Consumption Score (FCS): it is calculated using a combination of dietary diversity, food frequency, and relative nutritional importance of different food groups. Food items are grouped into 8 standard food groups with a maximum value of 7 days/week. Based on its nutrient content, each food group has an assigned weight (WFP, 2008).

Like the above mentioned food security measurements Food Consumption Score has also some strengths and weaknesses. Its prominent feature is that it shows current food security situation and severe conditions well. The basic demerit of FCS measurement is that it provides conclusions by depending on last week information only.

2.1.3 DETERMINANTS OF FOOD SECURITY AND VULNERABILITY

There are numerous determinants of vulnerability and food security. Food security level of households depends on their access to natural, physical and human resources as well as their production, income and consumption level (WFP, 2005). According to this study, the major determinants of food security and vulnerability also include; educational level, age, sex, household size, income of households, livelihood strategies and credit access.

Bocquier *et al.* (2009) indicates that casual labor is a determinant of vulnerability. On the other hand, Pages (2003, cited in Bocquier *et al.* 2009) states that vulnerability is the result of lack of socioeconomic security at work associated more with institutional variables such as employment contracts, compliance with labor code, etc. It is also related with time-related factors such as being casual and unstable.

According to Cargoklu and Eder (2006), the degree of informality determines the extent of economic vulnerability in Ankara, Turkey. On the other hand, Floro and Malapit (2007) revealed that financing basic needs is a major determinant of the incidence of vulnerability rather than income *per se* in Thailand and the Philippines. Results of the study conducted by Evers and Mehmet (1994) in Central Java, Indonesia found that petty traders who faced high risk and uncertainty designed several risk-avoiding strategies in response to vulnerable situations. Brata (2008), on the other hand indicates that vulnerability depends on the type of informal sector in which the urban poor are engaged in Indonesia. In this study, food vendors were found to be more vulnerable than non-food vendors or street vendors who provide services.

2.1.4 CONCEPTS AND DEBATES ABOUT INFORMAL SECTOR EMPLOYMENT

The nature of informal sector is difficult to be defined, measured and observed. It is commonly defined as a sector in which non taxed and unregulated goods and services are exchanged. Informal sector activities are described as unregistered either because their turnover is below the level requiring registration for tax purposes or due to their illegal status. However it has an economic value, it is not included to government's Gross National Product (GNP) as opposed to a formal economy.

Due to the different facets of informal sector there is no clear consensus about the definition of the term informal sector. In western industrialized countries, informal sector includes all income or production that escapes taxation and/or GDP estimate. However, in developing countries the term refers to household enterprises aimed at generating income and employment for households.

The employment based definition of the informal sector which is recommended by Women in Informal Employment; Globalizing and Organizing (WIEGO) includes all non-standard wage workers who work without minimum wage, assured work, or benefits whether they work in formal or informal firms.

International Development and Research Center (2004) has adopted a definition of informal employment, and its constituent groups, as follows:

> *The informal economy comprises informal employment (without secure contracts, worker benefits, or social protection) of two kinds:*

- *Self-employment in informal enterprises (small unregistered or unincorporated enterprises) including: employers, own account operators, and unpaid family workers in informal enterprises.*

- *Paid employment in informal jobs (for informal enterprises, formal enterprises, households, or no fixed employer), including: casual or day laborers, industrial out-workers, unregistered or undeclared workers, contract workers, and unprotected temporary and part-time workers.*

The Kenya employment mission was the first to use the term "informal sector" in terms of "traditional sector" to elaborate economic activities of poor workers which were not recognized, recorded, protected or regulated by public authorities. The mission's report reveals the existence and the expansion of the informal sector which includes profitable and efficient enterprises (ILO, 1972).

The term "informal sector" was first coined by a British anthropologist Keith Hart in 1971 in his study of economic activities in urban Ghana (Hart, 1973). He defined informal employment as economic activity in which the workers operate in unregulated markets, use labor intensive technology and local resources, and learn their business skills outside of school. However informal sector has a heterogeneous nature, it can be explained on the basis of its workforce or by its economic units which takes place in it (Chen, *et al.* 2002).

Today, the concept of "informal sector", actually the word informal sector has been replaced by the term informal economy, which includes "all economic activities by workers and economic units that are not covered or insufficiently covered by formal arrangements". It is a

major provider of employment, goods and services for lower-income groups and it contributes a significant share of GDP.

Generally, there is a common agreement that informal sector consists of very small-scale producers and distributors of goods and services, and independent self-employed persons in urban and rural areas which are carried out without formal approval from formal authorities. In developing countries like Ethiopia, the term has largely been associated with urban household enterprises whose main purpose is to generate income and employment for the households concerned.

In development arenas the concept of informal sector has got an ambiguous meaning. The first notion of the informal sector which is supported by many observers is its marginality which is not linked to the formal sector. Those scholars believe that the informal sector would disappear in developing nations when they gain sufficient level of economic growth. Other scholars put their view in such a way that the industrial or modern sector might have a unique face in developing countries than it had in developed countries. It might assist the informal economic activities to be expanded further. Over the years, these debates crystallized to three schools of thoughts to explain various features of the informal sector. These are the dualist, structuralists, and the legalist schools of thought.

The dualist's school is popularized by the ILO in 1970s. Their view about the informal economy is that it is a sector which provides income or safety net for the poor in times of crises (ILO, 1972). Their argument is that the existence of the informal economy is mainly due to less capability of the formal or industrialized sector to absorb informal sector workers by providing employment opportunities for them. It might happen due to slow rate of economic growth or faster rate of population growth.

In the late 1970s and 1980s, the structuralist school was popularized by, among others, Moser and Portes (Chen, 2004). The structuralists view the informal economy as a subordinated economic units and workers who toil to mitigate labor costs and to enhance their competitiveness. The structuralist model also depicts the co-existence and interdependence of various modes of production.

On the other hand, legalists, who were popularized by De Soto in the 1980s and 1990s, argued informal employment sector establishment as a rational human behavior to escape from over-regulation of government bureaucracies. They believe that people work in the informal businesses to reduce costs, time and effort of formal registration, and to increase their own wealth. From this view we can perceive that informal sectors arose due to unreasonable government rules and regulations (IDRC, 2004).

2.1.5GENDER AND INFORMAL SECTOR EMPLOYMENT

International Labor Office depicts that there is a linkage between working in the informal economy, especially in the lowest-return activities, and being poor. The linkage has a strong impact on women than men who work in the informal sector. In Sub-Saharan African countries, informal employment is a larger source of generating income for the poor (ILO, 2002).

Sethuraman (1998) investigated and finds out the existence of gender discrimination in the informal sector employment. Women are the most vulnerable and marginalized group of the society than men. As far as they tend to be employees in the informal sector, they operate at a lower level. Further, there is wider wage gap between men and women workers in the

informal sector. Charmes (2000) attribute that men undertake more profitable jobs than women.

In least developed countries the proportion of female workers in the informal sector are larger than in the formal sector. Several reasons could be put for the participation of women workers in the lower- earning informal sector activities. First, due to different role of women in the society, productive and reproductive, they need flexibility in location and time schedule. Thus they choose to participate in food production, trading and retailing activities. Second, women have less access to credit, education, etc, which are basic criterion to get job in formal employment sector. Whereas working in the informal sector employment need low beginning capital and little or no formal schooling requirement. Therefore, as studies demonstrate most women workers are employed in lower paying types of businesses with unsecured working environment (Maria and Swain, 2009).

2.1.6THE ROLE OF INFORMAL SECTOR IN FOOD SECURITY

Food security at macro level implies the provision of safe, nutritious, and quantitatively and qualitatively adequate food, as well as access to it by all people. Whereas the micro concept of food security implies that a household has the necessary purchasing power to buy food grains and access to the required amount of it (Unni & Rani, 2002). In least developed nations, where millions of poor suffer from persistent hunger and malnutrition and some others are at the risk of having food in the future, improving food security at the household level is a great issue. The level of urban household food security is affected by different factors like the size of the land, available factors of production and person's income purchasing power (FAO, 2003).

In many African countries, in which there is less job opportunities in the formal sector, informal sector has an increasing importance for those who have less access to formal employment or credit to meet the food need of the household. In many developing countries, informal sector has a very significant role in alleviating poverty especially ensuring household food security. This could be seen in two ways; first it serves as food supply channel for the majority of urban poor population. Next, it provides a source of livelihood for many poor workers, mainly for women, in urban areas (FAO, 2001).

The growth in the number of people who are working in informal sector boosts the level of household food security. But, it depends on the person who earns and controls the income. Different evidences suggest that women are likely to allocate large proportion of their income to household food compared to men (Breman, 1996).

2.2 EMPIRICAL LITERATURE

Poverty alleviation issue dominates the current international development agenda. With regard to this, informal sector has a prominent role to play. Various aspects of informal sector are discussed by different researchers from different countries.

Kapunda and Mmolawa (N.D) from Botswana investigated the role of informal sector employment in poverty alleviation using survey results. They found out that informal sector, in which women and youth domination is high, has a prominent position in mitigating poverty. They also claim that the income of informal sector operators shows an increasing trend. Therefore, staying in the business is advantageous for those activists of the sector.

The study which is conducted in Malawi by Mulwafu (N.D) about the role of informal sector in poverty reduction and food security examines the basic role of the sector towards meeting

households' basic needs. It provides for the poor dwellers Income Generating Activities (IGAs). Majority of the respondents in this study feed their family from their own production. Individuals who are operating in the informal sector are safe from hunger during food shortage periods.

Research from Kenya by Nyang'au (2002) depicts that the basic reason of people to join informal sector is to escape from poverty and to better enhance their livelihood assets. In the country, informal sector absorbs significant proportion of new entrants in to the job market. The study investigates that the majority of the people in the sector, especially female, are less educated. They drop out education due to poverty and other social constraints. Further, the study depicts that the sector is characterized by numerous challenges. From these problems lack of availability of market for the products they sell is the basic obstacle of informal sector in the rural areas of Kenya.

The study conducted in Sudan by Osman (2009) shows the significant contribution of informal sector employment to foster household food security from gender perspective. It articulates that women spent much of their income to buy food items for their household than men. Thus, the involvement of women in the informal sector has a crucial importance in maximizing access for food by household.

Sookram & Watson (N.D) tried to explore the relationship between informal sector and gender through analyzing the data obtained from Trinidad & Tobago, Caribbean. The fundamental feature of this study is the methods it employs to analyze the collected data. The first model which was employed to analyze the socio-economic and demographic characteristics of informal sector participants was Multinominal Logit model. In addition, Heckman Selection model & Oaxaca decomposition techniques were used to measure wage

discrimination between formal & informal sector employment and also between male and female participants within the informal sector. The findings of the study depicts that wage in the informal sector is lower than in the formal sector. This wage punishment is highly imposed in female who are working in the informal sector than in male. This study put experience as the basic factor for wage differentials.

Reddy, Naidu & Mohanty (Fijian Studies, vol.1 No.1, N.D) studied urban informal sector in Fiji using primary data. In the country, the participation of urban labor force in informal sector is growing from time to time. The result of the survey shows the significant contribution of the sector in enhancing income and assets of those who are operating in the sector. It is observed that educational level of informal sector participants is not higher than primary school level in average. The study also shows that operators of the sector works for relatively longer hours per day and most of them enter the sector recently. Moreover, they found out that lack of access to credit facilities and the national & municipal laws and regulations governing the business environment in the country are the major problems faced by informal sector operators.

Almost similar result is obtained from the study of the informal sector in Namibia by Labor Resource and Research Institute for the National Union of Namibian Workers (NUNW) (2004). Response of informal sector employees indicates that they have short to medium duration in the business. Because of various obstacles that they faced while operating their businesses, they experience low level of earnings. The problems found out from the survey are lack of funds, lack of space, licensing regulations, lack of demand for their products, high cost of raw materials, lack of transport and eviction by force and theft.

2.3 CONCEPTUAL FRAMEWORK AND HYPOTHESES

2.3.1 CONCEPTUAL FRAMEWORK

Definitions of food security and sustainable livelihoods both emphasize well-being over time; both focus on access to food and incomes; and both demonstrate a concern with risk and vulnerability. These close linkages suggest that livelihoods approaches might provide a practical toolkit for linking the analysis of food insecurity with a multi-dimensional and people-centered analysis of poverty – looking beyond income and consumption levels to include an assessment of people's strategies, assets and capabilities. The potential for a livelihoods based conceptual framework to generate improved approaches to poverty and food security measurement is very promising.

Therefore, from theoretical literature and empirical works, the conceptual framework shows the following (fig1) feature. Livelihood Approaches emphasizes understanding of the context within which people live, the assets available for them, livelihood strategies they follow and livelihood outcomes they intend to achieve (DFID, 1999). The framework therefore highlighted three interacting elements: contexts; strategies; and impacts.

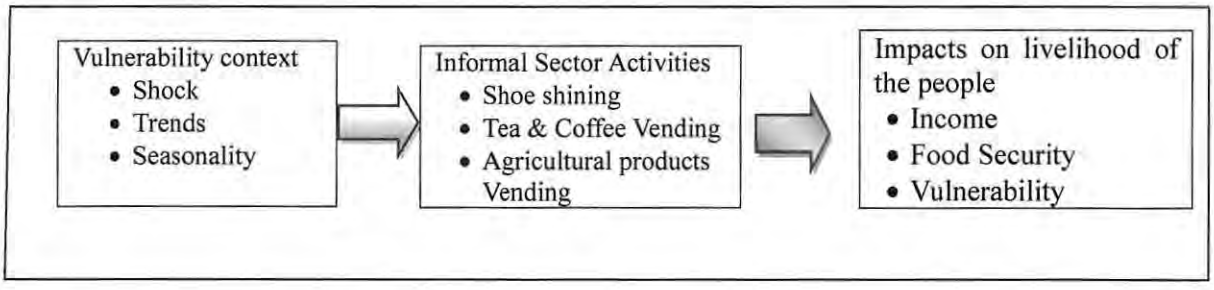


Figure 1: Conceptual frame work[1]

1 Source: Own Presentation

The above conceptual framework elaborates the interrelated issues in livelihood of the people in the informal sectors. It attempts to present the major factors that affect the livelihood of the poor and the relation between them.

Vulnerability context is an external environment in which people exist and have no control over it. It is a major factor that forced the people to be poor and faced difficulties in their life. It includes uncontrollable factors like trends (population trends, national/ international economic trends, governance trends, technological trends), shocks (human health shocks, natural shocks, economic shocks, livestock/crop shocks, conflicts) and seasonality (prices, production, employment opportunities). The key attribute of these factors is that they are not susceptible to control by local people themselves, at least in the short and medium term (DFID, 1999). These factors results in the erosion of livelihood assets. In addition, the impact of these factors urges the poor to choose livelihood strategies to attain their livelihood outcomes.

Livelihood strategies are composed of activities that generate the means of household survival and are the planned activities that men and women undertake to build their livelihoods (Ellis, 2000). Livelihood strategies include how people combine their income generating activities, the way in which they use their assets, which assets they chose to invest in and how they manage to preserve existing assets and income (DFID, 2001). Informal sector activities are prominent livelihood strategies for the urban poor. Among different activities which are undertaken with in the informal sector, shoe shining, tea & coffee vending and agricultural products vending take the largest share in urban areas.

Livelihood outcomes/impacts are the achievements of livelihood strategies, such as more income, increased well-being, reduced vulnerability, improved food security and a more sustainable use of natural resources. Livelihood Outcomes directly influence the assets and change dynamically their level. This will offer a new starting point for other strategies and outcomes (DFID, 1999). The present study, made use of food security measures as the outcome of livelihood strategies pursued by urban poor dwellers.

2.3.2 HYPOTHESES

The above discussion of empirical studies articulates that there is a positive relationship between informal sector employment and poverty alleviation. On the other hand, they claim that there is gender gap with in the sector. As this study stands to examine the role of informal sector employment in food security, it is hypothesized that

- Participation in the informal sector has a significant contribution to households' food security status.
- Working in the informal sector significantly reduces vulnerability of respondents.
- There is gender based occupational variation in the informal sector.

CHAPTER THREE: STUDY AREA, SAMPLING AND METHOD OF DATA ANALYSIS

In order to attain the research questions data were acquired from three economic activities which are undertaken in the informal employment sector mainly shoe shinning, tea & coffee vending and agricultural products vending. This chapter starts by presenting background issues of the study area. It also goes through the detail methodology followed to conduct the survey such as method of data collection, sampling and data analysis.

3.1 Study Area

The research was conducted in Addis Ababa, Ethiopia. Addis Ababa is an administrative and communications center of the country. It has three layers of government: City Government at the top, 10 Sub City Administrations in the Middle, and 99 Kebele Administrations at the bottom, now this kebeles are changed into Woredas. Addis Ababa city cover a total land area of about 54,000 Hectares. More than 3 million populations live in the city. It is one of the most densely populated areas in the country. The major reason for this is the growing rural-urban migration. Addis Ababa is selected as a study area because informal sector is a widespread activity in the city. It incorporates 69% of total informal sector operators in the country (Jan & Meine, 2008).

About 40% of Addis Ababa's workforce is government employee, 31% private organization employees, 25% own-account workers, 2% employers and 2% unpaid family workers and others. There is a substantial engagement in the informal sector. Women accounted for only 27% of the total self-employed population (UN-HABITAT, N.D).

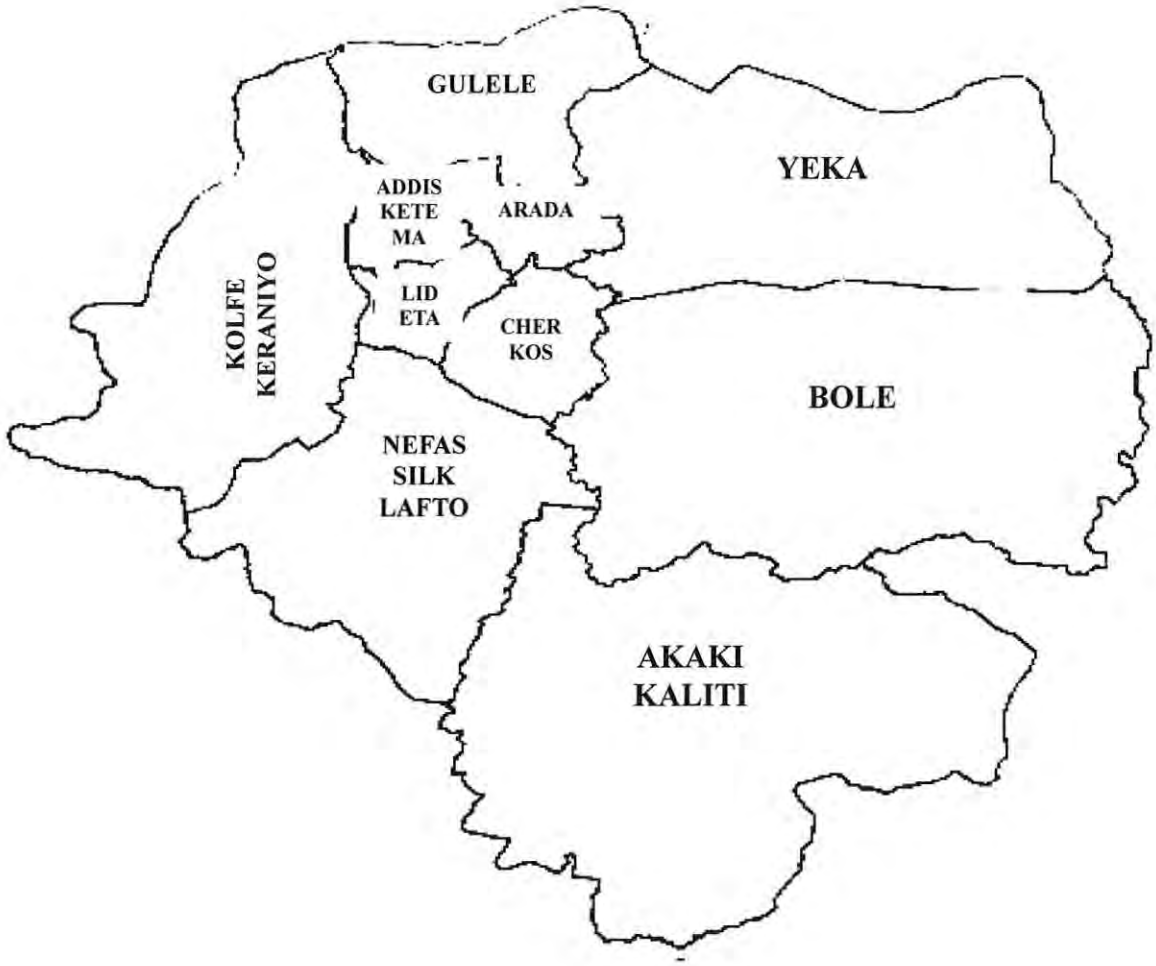


Figure 2: Map of Addis Ababa[2]

3.2Method of Data Collection and Sampling

This study relied on both primary and secondary sources of information. The primary data were collected through the aid of questionnaire which is administered to the selected respondents. The questionnaire comprised of issues related to work place structure, economic status after entering the sector, the kind of work they are engaged in, the business environment and its growth, their household food security conditions and challenges/risks of

2 Source: Tessema (2010)

the job. Using this tool of data collection technique, both qualitative and quantitative data were gathered from respondents.

Informal sector takes place outside the formally registered economy and hence, there is hardly any evidence about the total informal sector operators in the city of Addis Ababa. In fact, observations reveal that the informal sectors are scattered all across the city. Thus, to select the respondents the city was divided in to four groups based on geographic location i.e., North East, North West, South East and South West.

From each group, one sub-city was randomly selected. In accordance with this, the selected sub-cities are Bole, Nefas Silk Lafto, Arada and Akaki Kality. Next, 60 respondents were selected on incidental basis from each sub-city. An attempt was made to select respondents from areas where informal sector operators were believed to work in relatively large numbers. In addition, the researcher tried to collect information by considering the sex of the operators in each activity to better understand the gender based occupational variation. A total of 240 questionnaires were administered from which 222 questionnaires were used for analysis.

In addition to the above mentioned primary data, secondary information was gathered for providing background information which includes journals, researches, magazine, books and other published & unpublished materials from library & internet searching.

3.3 Methods of Data Analysis

In order to meet the objectives of this study the collected data were analyzed by employing several approaches. The socio-economic characteristics of informal sector enumerators are analyzed briefly using descriptive statistics of means, frequencies, percentiles, tables and charts.

In addition, to better articulate economic situations of respondents within the three informal livelihood strategies the researcher employs Lorenz curve and Gini coefficient index, which are the most popular measurements of income inequality. The Lorenz Curve is a tool used to represent income distributions as proposed by Lorenz (1905); it relates the cumulative proportion of income to the cumulative proportion of individuals. The researcher adopts Lorenz curve because it shows the degree of inequality that exists. It is also easy to make a comparison and interpretation. Gini Coefficient employed here is used primarily to summarize distributions of income among individuals and across activities. It varies between 0, which reflects complete equality and 1, which indicates absolute inequality. The Gini coefficient can be easily represented by the area between the Lorenz curve and the line of equality. The formula which is implemented to calculate Gini coefficient is that;

$$G = [(N+1) / (N-1)] - [(2 / N (N-1) \mu) (\sum P_i X_i)]$$

(Where, G = Gini Coefficient Index, N = Total Number of Population, μ = Mean Income, P_i = Number of Individual, X_i = Individual Income)

Further, one-way ANOVA analysis technique is employed to compare mean income across the three informal sector livelihood strategies. The results obtained from this technique only make sense when the P-value is tiny.

As the literature in this study depicts food security has different dimensions i.e. availability, accessibility, utilization and time (vulnerability). This paper covers the last three dimensions of household food security. Household food accessibility is evaluated based on the enumerators' response whether they acquire adequate income from their livelihood strategies. Thus, the dependent variable, food accessibility, is a dichotomous variable (i.e. yes or no). Other households' socioeconomic variables were included as independent variables in the model.

Major determinants of food accessibility of respondents were analyzed using Probit model which is the best model in explaining the behavior of dependent dichotomous variables. Probit model helps to identify determinants and their relative importance in determining the probability of having adequate access to food. The dependent variable takes the value "1" for those respondents who have adequate access to food and "0" otherwise.

The explicit form of the model is expressed as;

$$Y_i = \alpha + \beta_i X_i + U_i$$

$$Y_i = 1, \text{ if } \alpha + \beta_i X_i + U_i > 0$$

$$Y_i = 0, \text{ if } \alpha + \beta_i X_i + U_i < 0$$

The other dimension of food security, utilization, is measured by employing household dietary diversity score which is an element of high quality diet. Household dietary diversity is defined as the number of different food groups consumed over a given reference period. However there is no universal cut-point for defining low diet quality, knowing that households consume an average of four different food groups implies that their diets offer some diversity (Swindale and Bilinsky, 2006). FAO food group classification was employed to calculate Household Dietary Diversity; Cereals, White roots and tubers, Meat, Fish, Eggs,

Milk and dairy, Oils and fat, Fruits, Vegetables, Pulses, legumes and nuts, Sweets, Spices, condiments and beverages (WFP - FAO, 2008). The result of Household Dietary Diversity is analyzed using descriptive data analysis technique. The basic reason of the researcher for adopting Household Dietary Diversity measurement is its simplicity and validity for diet quality (WFP - FAO, 2008).

Next, undertaking vulnerability assessment is also the objective of this study which is another basic dimension of food security. Because the response of the dependent variable had more than two outcomes, the researcher employed Ordered Probit model to analyze determinants of vulnerability status (dependent variable) of respondents in addition to descriptive analysis. Its equation is expressed as follow;

$$Y^* = X'\beta + \varepsilon$$

Y* is unobserved, but what we observe is;

$$Y = 1, \text{ if } Y^* \leq 0,$$

$$Y = 2, \text{ if } 0 < Y^* \leq \mu 1$$

$$Y = 3, \text{ if } \mu 1 < Y^* \leq \mu 2$$

$$Y = 4, \text{ if } \mu 2 < Y^* \leq \mu 3$$

$$Y = 5, \text{ if } \mu 3 < Y^* \leq \mu 4$$

Where, Y for ordered probit model vulnerability status of respondents is as follows:

1. I cannot survive any further without my job
2. I can stay for less than a month
3. I can survive from a month to three months
4. I can survive from three months to six months
5. I can survive more than six months

Variables Name	*Value*
Age	Years
Sex	Female = 0 and Male = 1
Marital Status	Single = 1 and 0 = otherwise
Household Size	In number
Economic activity	Dummy variables 1- Shoe shining & 0- otherwise 1- tea & coffee vending & 0- otherwise 1- agricultural products vending & 0- otherwise
Experience of employment in the informal sector	Years
Working Hour Per day	Time per hour
Saving	Birr
Total Earning	Birr
Borrowing	Yes = 1 and No = 0
Cut points	μ_i
Coefficients	β_i
Error terms	ε
Constant term	α

Furthermore, to meet the objectives of exploring gender aspect of occupational variations and investigating challenges and prospects of the sector a brief descriptive analysis was undertaken.

A brief summary of the data matrix is provided in here:

Table 1 Summary of Data Analysis Methodology

R.N.	Objective of the study	Methods of Data analysis
1	- Examining socio-economic status of informal sector operators	- Descriptive data analysis method using percent, table, graph, charts.
	- Income inequality of informal sector operators	- Lorenz curve and Gini coefficient
	- comparison of mean income across the three informal sector	- ANOVA
2	- Food security level of households	- Descriptive method of data analysis using household's food accessibility, household dietary diversity.
	- Vulnerability status of informal sector operators	- Descriptive data analysis method.
	- Determinants of food security and vulnerability	- Econometrics method of data analysis i.e., binary Probit and Ordered Probit model.
3	- Identifying major challenges and prospects of the sector	- Descriptive data analysis method

CHAPTER FOUR: RESULTS AND DISCUSSIONS

This chapter is divided in to two sections. The first section deals with descriptive analysis of issues related to household demographics characteristics, saving habits and income inequality. On the other hand, the second section presents econometrics analyses with regard to food insecurity and vulnerability.

4.1 DESCRIPTIVE ANALYSIS

4.1.1 General Characteristics of Informal Sector Activities

Informal employment is the most widespread sector in the country. The largest shares of activities in this sector are dealing with services and trade. The three economic activities mainly; Shoe shining, Coffee and Tea vending and Agricultural products vending, receive a great proportion of the total informal sector activities in the city. Because all the activities are done on the basis of street, it is characterized by hard & tedious working environment. Local market centers are suitable areas to undertake these activities. The services provided by these all activities are highly connected with daily life of urban dwellers.

As already known all the three activities are labor intensive in nature. Inputs used to provide these services are cheap and easily accessible by the employees of the sector. Majority of employees in these activities are migrants from different parts of the country. But due to limited absorption of the formal employment sector they will be urged to join the informal sector to achieve their goals that they are dreamed off.

4.1.2 Demographic Characteristics of Respondents

Understanding the nature of the household setup helps to better describe the role of informal sector activities towards achieving food security in the household level. It involves a descriptive analysis of the various socio-economic characteristics of respondents. Among the several features, presented and discussed are: age, sex, marital status, household size and educational level.

4.1.2.1 Age of the Respondents

From table1 it is observed that majority of the respondents were aged less than 29 years representing 78.44%. Of these respondents 53.21 % are aged between 20-29 followed by those aged between 10-19 years (25.23%), 30-39 years (13.76%), 40-49 years (5.96%) and finally those aged between 50-59 years representing 1.83%. The age of the household head is an essential component because it determines the main decision making unit in a number of household needs and activities. Thus, average age of the respondents is 24 years indicating that majority of the respondents are fairly young.

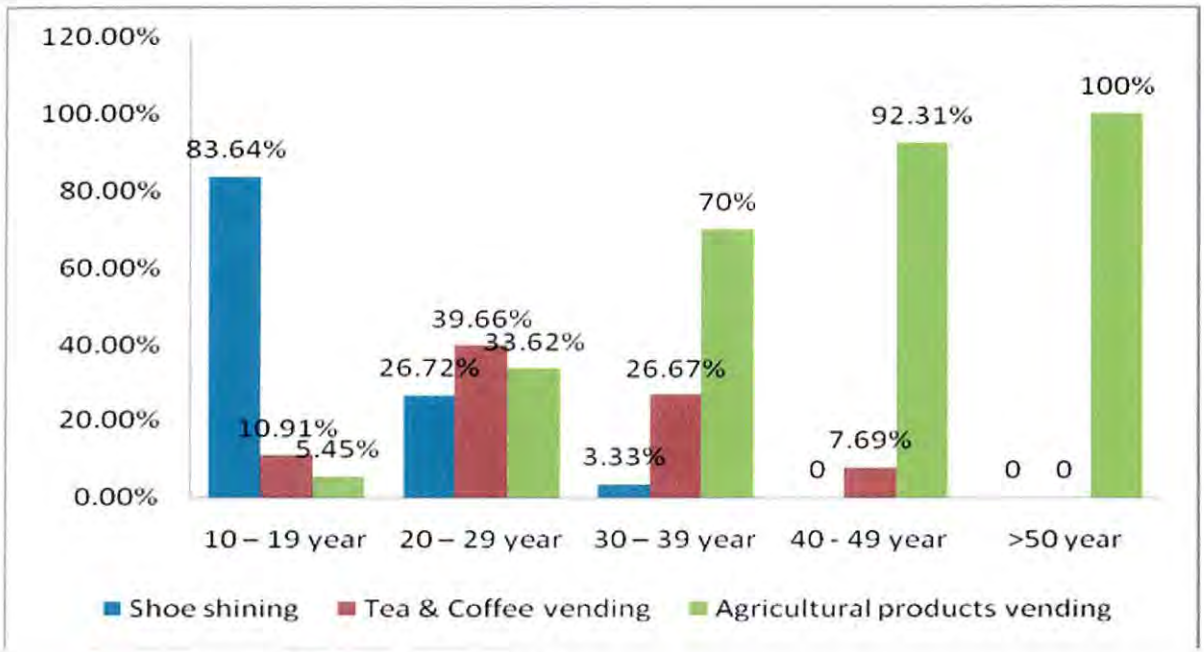
Table 2 Distribution of Respondents by Age

Age group	Frequency	Percent
10 – 19	55	25.23
20 – 29	116	53.21
30 – 39	30	13.76
40 – 49	13	5.96
>50	4	1.83
Total	**218**	**99.99**

Source: Own Data Survey, 2011

The survey result shows the age distribution of respondents within the three economic activities. Almost 98.71% of operators in shoe shining activity are less than 29 years of age.

Of which 58.97% are under 19 years of age. The rest 1.28% aged above 30. Majority of both Tea & Coffee vendors and Agricultural product vendors are aged from 20 to 29 years which is followed by operators aged between 30& 39 years. 9.84% of operators in tea & coffee vending activity are aged between 10 & 19. Whereas there are only 3.79% of operators in agricultural products vending activity ranges between 10 & 19 years of age. The percentage of respondents engaged in agricultural products vending with age greater than 40 are 20.25 %. Of which 5.06% are above 50 years of age.



Source: Own Data Survey, 2011

Figure 3: Distribution of Respondents by Age and Livelihood Strategies

As we can perceive from the bar chart 25.23% of all respondents are at the age of 10 to 19. From which 83.64% of the respondents are shoe shiners, 10.91% are tea & coffee vendors and 5.45% are agricultural products vendors. This shows that there are large numbers of employees who join informal sector shoe shining activity at their early age compared to the other two livelihood strategies.

The total percentage of respondents aged between 20 & 29 are 53.21 %. Of which tea & coffee vendors take the largest share i.e. 39.66 percent followed by vendors of agricultural products i.e. 33.62 percent. The age of 21.56% of the total respondents is greater than 30 years. From this, 13.76% of the total respondents are between 30 & 39 years. 70 percent of which are vendors of agricultural products followed by tea & coffee vendors which has 26.67 percentages share.

Respondents who are greater than 40 years of age have 7.78 % share of the total respondents of all informal sector activities. There are only agricultural product vendors and tea & coffee vendors in this age level. From which the largest 92.32% share is taken by agricultural product vendors.

Therefore, as years of age increases the number of employees in shoe shining activity decreases. This shows operators in this activity join the sector at their early age and withdrawn the sector early. Agricultural product vendors are the only ones who operate in the sector at their highest years of age.

4.1.2.2 Sex of the Respondents

The data collected from the selected market centers reveals that most of the people actively involved in shoe shining activity are male (Table 3). There are only 2.5% of female respondents who are involved in this activity.

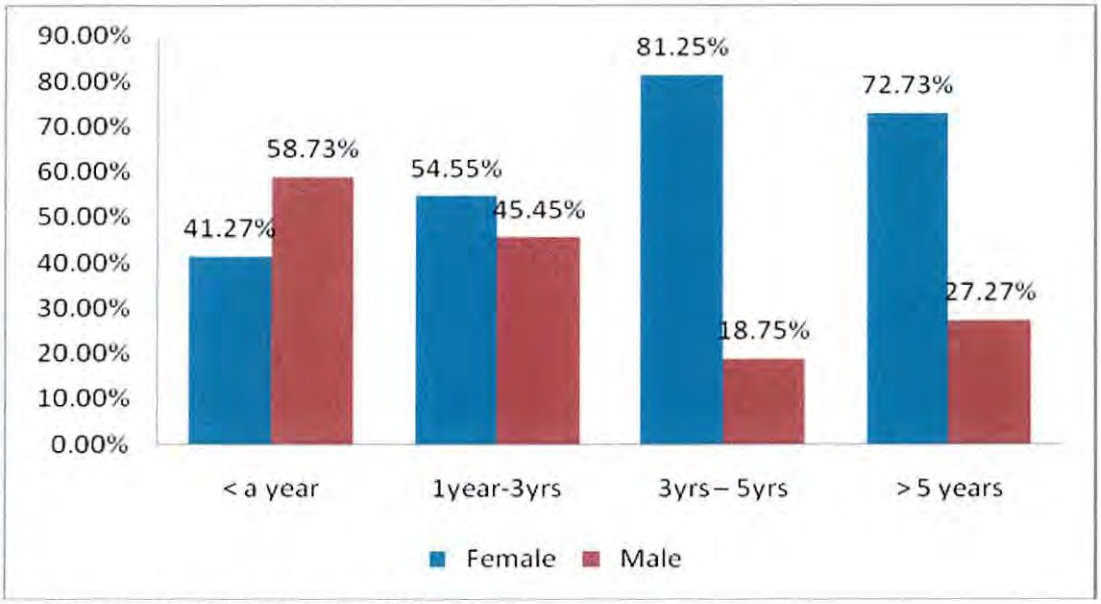
Table 3 Distribution of Respondents by Sex and Livelihood Strategies

Sex		Livelihood Strategies			**Total**
		Shoe Shining	Vending Tea & Coffee	Vending Agricultural Products	
Female	Count	2	62	61	**125**
	% within sex	1.6%	49.6%	48.8%	**100.0%**
	% within activities	2.5%	100.0%	76.3%	**56.3%**
Male	Count	78	0	19	**97**
	% within sex	80.4%	0.0%	19.6%	**100.0%**
	% within activities	97.5%	0.0%	23.8%	**43.7%**
Total	**Count**	**80**	**62**	**80**	**222**
	% within sex	**36.0%**	**27.9%**	**36.0%**	**100.0%**
	% within activities	**100.0%**	**100.0%**	**100.0%**	**100.0%**

Source: Own Data Survey, 2011

In the other side, male are completely absent in the activity of tea & coffee vending. According to this study, female & male represent 76.3 & 23.8 %, respectively, of the total respondents of agricultural products vendors. The table further shows that almost 98% of female respondents engaged in vending tea & coffee and agricultural products.

The drawn analysis shows that there is high proportion of female operators in the informal sector. Male operators enter to and withdrawn from the sector early. When compared to male, female informal sector operators stay in such business for long period of time.



Source: Own Data Survey, 2011

Figure 4: Distribution of Respondents by Sex and Duration in the Business

The data obtained depicts that the proportion of women and men who stayed in their business for less than three years is nearly equal. On the other hand, there is a huge gap between male and female respondents who stayed in their business for more than three years. From total respondents, 75 percent are female and 25 percent of them are male. Most of them cited that the main reason for not changing the job is due to their subsistence living condition.

Table 4 Distribution of Respondents by Sex and Working Time

Sex		Working time				Total
		< four hours	4 – 8 hours	9 – 12 hours	>12 hours	
Female	Count	0	23	68	32	**123**
	% within sex	0.0%	18.7%	55.3%	26.0%	**100.0%**
	% within working time	0.0%	79.3%	53.5%	54.2%	**56.2%**
Male	Count	4	6	59	27	**96**
	% within sex	4.2%	6.3%	61.5%	28.1%	**100.0%**
	% within working time	100.0%	20.7%	46.5%	45.8%	**43.8%**
Total	**Count**	**4**	**29**	**127**	**59**	**219**
	% within sex	**1.8%**	**13.2%**	**58.0%**	**26.9%**	**100.0%**
	% within working time	**100.0%**	**100.0%**	**100.0%**	**100.0%**	-

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	11.879	3	0.008
Number of Valid Cases	219		

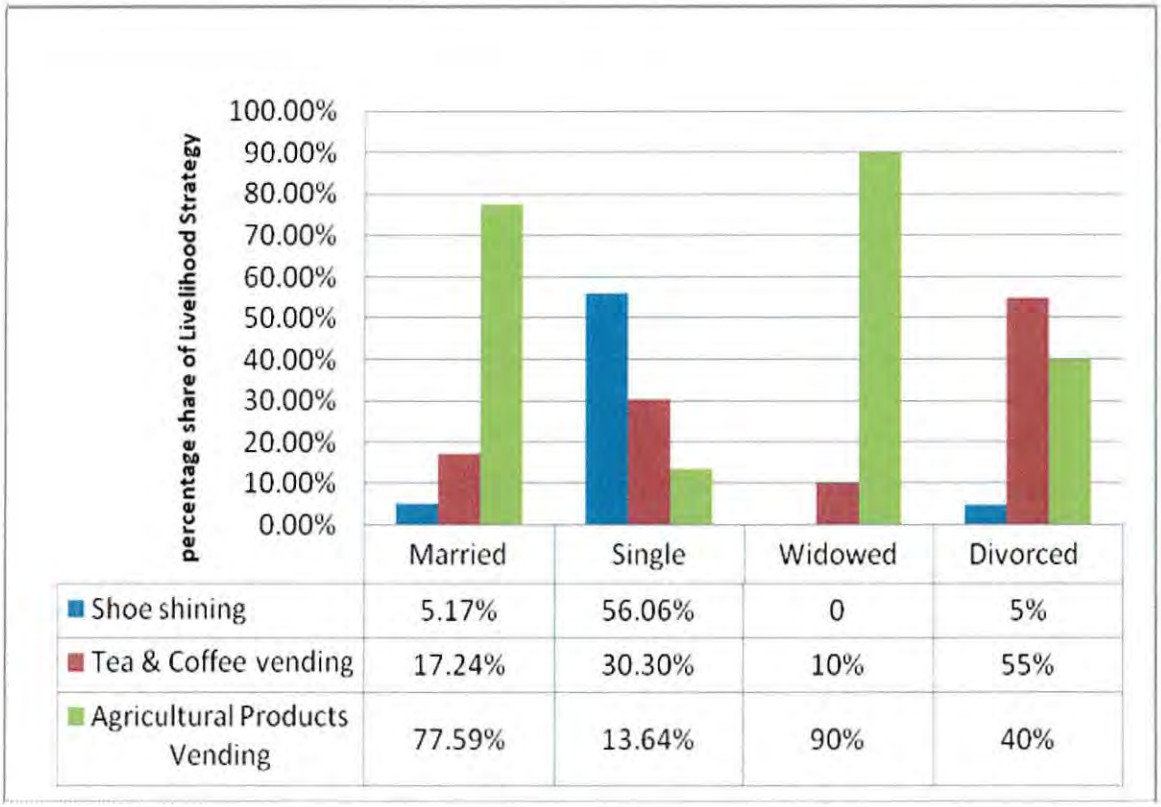
Source: Own Data Survey, 2011

Pearson's chi-Square test shows that there is a significant difference between female and male respondents with regard to their working hour per day. In the sectors that females engaged in, they work for large number of time per day. They choose place of work near their home to handle both home management and their business as well.

In average, according to the data gathered, both male and female informal sector operators work for 9 to 12 hours per day. Thus, it is founds out that operators of the sector works for relatively longer hours per day. Almost the same result is obtained from the survey result of Reddy, Naidu & Mohanty in Fiji (Fijian Studies, Vol.1 No.1, N.D). Only 15.07% of operators in all activities work for less than eight hours per day. The rest (84.93 percent of operators) work for more than eight hours per day. From this, 26.94% work for more than 12 hours per day. Of this share of respondents 54.24% represents female operators of the informal sector.

4.1.2.3 Marital Status of the Respondents

Distribution of respondents by marital status indicates that 26.1% of them are married, 59.5 percent are single, 9 percent divorced and 4.5 percent widowed. This shows that most of the respondents in the study area are single.



	Married	Single	Widowed	Divorced
Shoe shining	5.17%	56.06%	0	5%
Tea & Coffee vending	17.24%	30.30%	10%	55%
Agricultural Products Vending	77.59%	13.64%	90%	40%

Source: Own Data Survey, 2011

Figure 5: Distribution of Respondents by Marital Status and Activities

From the total 59.5% share of single respondents, 56.6% are shoe shiners. It is followed by tea & coffee vendors i.e. 30.30%. Almost 77.59% of all total married respondents are vendors of agricultural products. Tea & coffee vendors take the second percentile share of married respondents. The reason cited for this is related with the age of the respondents.

In addition, because large numbers of workers are immigrants from country side they joined informal sector to better improve their life most importantly to fulfill their basic human needs. Thus, they are unable to feed additional mouth.

Table 5 Distribution of Respondents by Marital Status and Sex of the Respondents

Marital Status		Sex		**Total**
		Female	Male	
Married	Count	46	12	**58**
	% within marital status	79.3%	20.7%	**100.0%**
	% within sex	36.8%	12.6%	**26.4%**
Single	Count	50	82	**132**
	% within marital status	37.9%	62.1%	**100.0%**
	% within sex	40.0%	86.3%	**60.0%**
Widowed	Count	9	1	**10**
	% within marital status	90.0%	10.0%	**100.0%**
	% within sex	7.2%	1.1%	**4.5%**
Divorced	Count	20	0	**20**
	% within marital status	100.0%	0.0%	**100.0%**
	% within sex	16.0%	0.0%	**9.1%**
Total	**Count**	**125**	**95**	**220**
	% within marital status	**56.8%**	**43.2%**	**100.0%**
	% within sex	**100.0%**	**100.0%**	**100.0%**

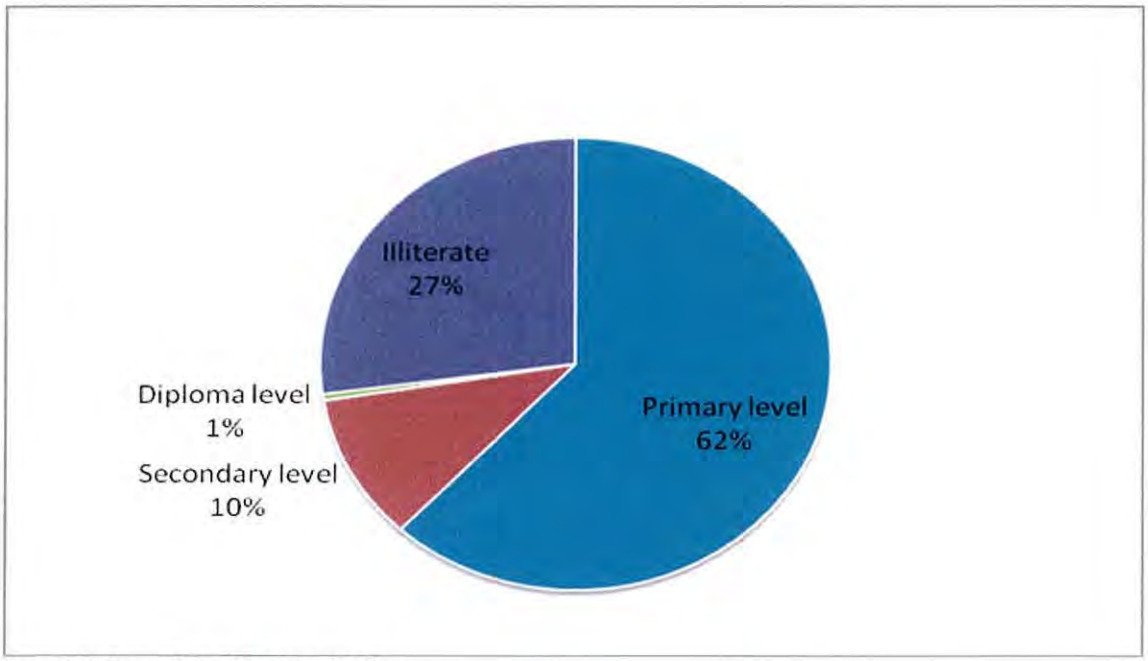
	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	50.945	3	0.000
Number of Valid Cases	220		

Source: Own Data Survey, 2011

Table 5 above helps to make a comparison between male and female respondents with regard to their marital status. In addition, Pearson Chi-Square shows it is worthwhile to interpret results of the table. From 56.8 percent of female respondents almost 36.8 percent are married whereas 40 percent are single. In reverse, from 43.2 percent total male respondents 12.6 percent are married and 86.3 are single. This reveals that female informal sector operators are more likely to get married than male operators. Because the proportion of married female respondents is relatively high, their percentile share of all widowed and divorced respondents is also high.

4.1.2.4 Educational Status of Respondents

From the beginning one of the basic forces that urge the poor to work at informal sector activity is their low level of education. This study also reveals that large numbers of employees in the informal sector are less educated.



Source: Own Data Survey, 2011

Figure 6: Distribution of Respondents by Educational Background

As figure 6 indicates, those with primary and secondary education are 61.99 & 10.41 percents of the total respondents respectively. Those 27.15% are illiterate respondents. On average, majority of respondents in this survey have primary level education.

Table 6 Distribution of Respondents by Education and Sex

Sex		Education				Total
		Primary	Secondary	Diploma	Illiterate	
Female	Count	64	4	0	57	125
	% within sex	51.2%	3.2%	0.0%	45.6%	100.0%
	% within education	46.7%	17.4%	0.0%	95.0%	56.6%
Male	Count	73	19	1	3	96
	% within sex	76.0%	19.8%	1.0%	3.1%	100.0%
	% within education	53.3%	82.6%	100.0%	5.0%	43.4%
Total	Count	137	23	1	60	221
	% within sex	62.0%	10.4%	0.5%	27.1%	100.0%
	% within education	100.0%	100.0%	100.0%	100.0%	100.0%

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	57.153	3	0.000
Number of Valid Cases	221		

Source: Own Data Survey, 2011

From the Pearson Chi-Square test it is possible to draw the difference between male and female enumerators' educational level. Most of the respondents have primary level education i.e. 62%. Percentage share of female and male respondents who have a primary level education is 46.7 and 53.3 percents respectively. The number of female illiterate respondents is higher than male respondents which is 95.3%. Literacy amount of female is low due to less opportunity given to them to get educated. As many researchers agreed in least developed countries, like Ethiopia, female faces great challenge in having formal education than male. This finding of the study is also supported by Nyang'au (2002) who investigated the basic reasons of informal sector operators to join the sector in Kenya.

4.1.2.5 Household Size of Respondents

Household size of respondents was grouped into those who have between 1-3, 4-7 and more than 8 household members. The distribution shows that 81.98 % have sizes ranging between 1 & 3. On the other hand, 15.77% have household member between 4 & 7 and about 2.25 % of the respondents have more than 8 household members. Respondents from shoe shining activity have less family size. Relative to other two informal sector economic activities, agricultural products vendors have large family size i.e. more than four. The above analysis is tested using Pearson Chi-Square test at 5% significance level.

Table 7 Distribution of respondents by household size and activities

Household Size		Livelihood Strategy			Total
		Shoe shining	Tea & Coffee Vending	Agricultural Products Vending	
1-3	Count	77	56	49	**182**
	% within household	42.31%	30.77%	26.92%	**100.0%**
	% within activities	96.3%	90.32%	61.25%	**81.98%**
4-7	Count	3	6	26	**35**
	% within household	8.6%	17.1%	74.3%	**100.0%**
	% within activities	3.8%	9.7%	32.5%	**15.8%**
>8	Count	0	0	5	**5**
	% within household	0.0%	0.0%	100.0%	**100.0%**
	% within activities	0.0%	0.0%	6.3%	**2.3%**
Total	**Count**	**80**	**62**	**80**	**222**
	% within household	**36.0%**	**27.9%**	**36.0%**	**100.0%**
	% within activities	**100.0%**	**100.0%**	**100.0%**	**100.0%**

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	60.486	6	.000
N of Valid Cases	222		

Source: Own Data Survey, 2011

4.1.3 Sources of Capital to Finance their Businesses

From the household survey conducted, there is statistically significant relation between business starting capital and their livelihood strategy. It is learnt that out of all the respondents 39.17% gets finance to begin the business from own saving which was accrued from their previous work. The second source of initial capital, almost 28.57% of respondents used, is from informal money lenders. Approximately 27.19% of the respondents get their initial capital to launch their business from gifts which are freely given from families, relatives or friends. From all shoe shiner respondents almost 45.45% of them obtain initial capital from free gifts, 36.36% from their own saving, and 10.39% of all respondents receive loan from informal money lenders.

Table 8 Distribution of Respondents by Starting Capital and Livelihood Strategies

Starting capital	Livelihood Strategies						Total	
	Shoe shining		Tea & Coffee vending		Agricultural products vending			
Gift	35	45.45%	15	25%	9	11.25%	**59**	**27.19%**
Inheritance	6	7.79%	0	-	3	3.75%	**9**	**4.15%**
Formal credit associations	0	-	0	-	2	2.5%	**2**	**0.92%**
Informal money lenders	8	10.39%	22	36.67%	32	40%	**62**	**28.57%**
Own saving	28	36.36%	23	38.33%	34	42.5%	**85**	**39.17%**
Total	**77**	**100%**	**60**	**100%**	**80**	**100%**	**217**	**100%**

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	39.774	8	0.000
Number of Valid Cases	217		

Source: Own Data Survey, 2011

Table 8 further shows that 38.33 percent of the respondents who are engaged in tea & coffee vending activity get business starting capital from their own saving whereas 36.67% get from informal money lenders. The rest (25%) get gift from their family, relatives or friends.

On the other hand, the majority of agricultural product vendors launch their business from their own saving from their previous job and from informal money lenders which makes up 42.5 and 40 percent of the total respondents, respectively. From all respondents of the three activities only two respondents who are engaged in agricultural products vending indicated that they have received financial assistance from formal credit institutions to support their business. However, large numbers of respondents prefer to lend money from informal credit sources. The reason cited for this is that it can be accessed easily by the poor without bureaucratic procedures. Therefore, they consider it as the basic source to finance their businesses. This shows that there is a room for microfinance institutions to reach out to the poor but active ones.

Table 9 Distribution of Respondents by Activities and Other Sources of Income

Other Sources of Income	Livelihood Strategies						Total	
	Shoe Shining		Tea & Coffee Vending		Agricultural Products Vending			
Yes	8	10%	4	6.56%	10	12.5%	22	9.95%
No	72	90%	57	93.44%	70	87.5%	199	90.05%
Total	80	100%	61	100%	80	100%	221	100%

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	1.364	2	0.506
Number of Valid Cases	221		

Source: Own Data Survey, 2011

The gathered data reveals that only 9.95% of total respondents have other source to generate income in addition to their business. Pearson Chi-Square test shows that there is no statistically significant relation between having other sources to finance their expenses and

their chosen livelihood strategies. Even though they are independent to each other, respondents who have other financial sources claim that they received financial assistance from their husband/wife, and formal credit institutions. Some of them also claim that they get additional income from working other part time job and donation from NGOs.

4.1.4 Income Level of Respondents

Respondents' distribution by income level shows approximately 49% of total operators earn between 5,001 & 10,000 Birr annually. From this total amount the share of Tea & Coffee vendors is higher than others which are followed by agricultural products vendors. Almost 12% of total respondents earn less than 5,000 birr per annum. These people are at a risk to fill their basic needs considering the current cost of living. In this case, vendors of agricultural products take the largest share than the other two livelihood strategies. In addition, the data depicts that there are only 38.9 percent of respondents who earn income more than 10,000 Birr per annum. Shoe shiner respondents have a relatively larger share from this high income group of the respondents, i.e. 58%. Therefore, as the Pearson Chi-Square test depicts, livelihood coping strategy affects the income level of respondents.

Table 10 Distribution of Respondents by Income Level and Activities

Income Range (Birr per annum)	Livelihood Strategy							
	Shoe Shining		Tea & Coffee Vending		Agricultural Products Vending		Total	
< 5,000	6	24%	4	16%	15	60%	**25**	**100%**
5, 001 – 10,000	25	24.5%	41	40.2%	36	35.3%	**102**	**100%**
10,001 – 15,000	33	64.7%	3	5.9%	15	29.4%	**51**	**100%**
15,001 – 20,000	9	50%	5	27.8	4	22.2%	**18**	**100%**
> 20, 001	5	41.7%	1	8.3%	6	50%	**12**	**100%**
Total	**78**	-	**54**	-	**76**	-	**208**	-

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	368.642	298	0.003
Number of Valid Cases	208		

Source: Own Data Survey, 2011

Income Inequality

The measurement and analysis of income inequality is crucial for understanding well-being conditions of people. It is highly affected by family size and total wage from the informal sector. Analyzing individual income distribution within livelihood strategy is an essential component to measure income inequality.

Table11 Individual Income Inequality within Informal Sector Livelihood Strategies

Quintiles	Total Income	Proportion of Income	Cumulative Proportion of Income	Proportion of Population	Cumulative Proportion of Population
1	480,780	0.2	0.2	0.2	0.2
2	422,310	0.19	0.40	0.2	0.4
3	383,582	0.17	0.57	0.2	0.6
4	305,026	0.13	0.70	0.2	0.8
5	668,110	0.3	1	0.2	1
Total	**2,259,808**	**1**	-	**1**	-

Source: Own Data Survey, 2011

However there is different amount of income earned by each individual, the drawn inequality curve (Fig.7) shows that there is no significance income inequality within informal sector operators. In addition, the calculated value of the Gini coefficient from the drawn Lorenz curve is 0.26 which indicates that there is almost fair income distribution within informal sector livelihood strategies.

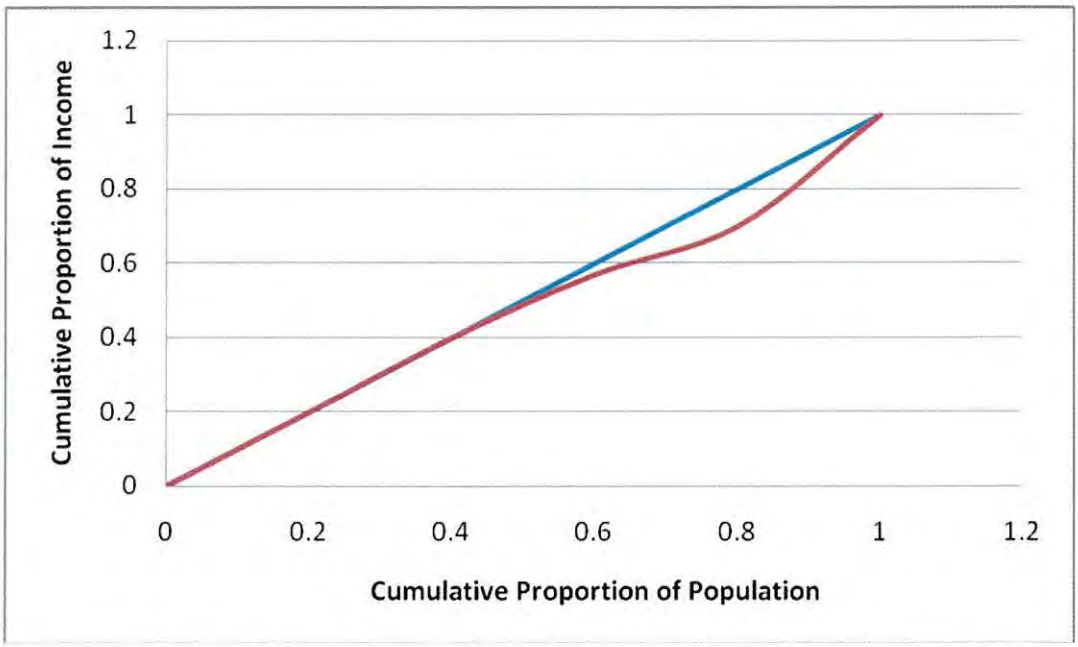


Figure 7. Individual Income Inequality within Informal Sector Activities

Table12 Income Inequality of Individual Respondents by Livelihood Strategy

Quintiles	Income of Shoe shiners	Income of Tea & Coffee Vendors	Income of Agricultural Product Vendors	Proportion of Income of Shoe shiners	Cumulative Income shoe shiners	Proportion Income of Tea & Coffee Vendors	Cumulative Income of Tea & Coffee Vendors	proportion of income of Agricultural Product Vendors	cumulative Income of Agricultural Product Vendors	Proportion of Population	Cumulative population
1	140,398	62,690	130,098	0.13	0.13	0.14	0.14	0.14	0.14	0.2	0.2
2	174,242	71,480	137,355	0.16	0.29	0.16	0.3	0.14	0.28	0.2	0.4
3	187,605	78,720	179,000	0.17	0.46	0.17	0.47	0.19	0.47	0.2	0.6
4	206,504	101,190	235,796	0.18	0.64	0.22	0.69	0.24	0.71	0.2	0.8
5	412,180	138,920	279,530	0.36	1	0.31	1	0.29	1	0.2	1
Total	**1,120,929**	**453,000**	**961,779**	**1**	-	**1**	-	**1**	-	**1**	-

Source: Own Data Survey, 2011

Lorenz curves of all the three livelihood strategies do not far from the equidistribution line, which depicts egalitarian distribution of income. There is low income gap between individuals wihthin each activity. Thus, distribution of income among those operators within the three informal sector livelihood strategies is more likely equal.

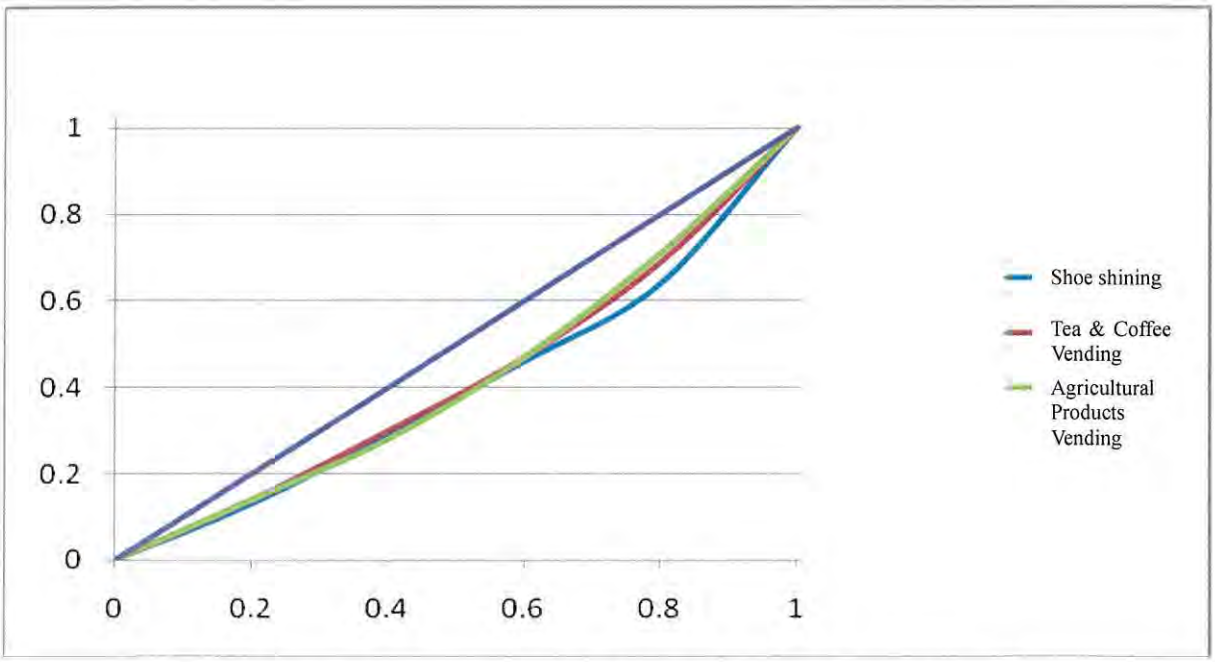


Figure 8 Income Inequality of the three Informal Sector Activities

From the drawn Lorenz curves of the three informal sector activities it is not possible to show which income distribution has more income inequality by looking at Lorenz Curves only. Because there is a point in which the three Lorenz Curves intersect. Thus, to depict Lorenz dominance of one income distribution over the other calculating Gini coefficient is needed.

Gini Coefficient value of Shoe shiners, Tea & Coffee Vendors and Agricultural product vendors is 0.26, 0.20 and 0.21 respectively. Even though the inequality of income in all the three informal sector livelihood strategies is low, but relatively there is higher income inequality within shoe shinning activity than within others activities.

To further illustrate income inequality, comparison of mean income across the three informal sector livelihood strategies is prominent.

Table 13 Comparison of Mean Income across Livelihood Strategies

	N	Mean	Std Dev	Mini	Max	Df	F	Sig
Shoe Shining	78	11,372.9	10001.7	696.7	61,600.0	2	19.500	0.000
Tea and Coffee Vending	54	6,831.9	3366.2	1,800.0	19,250.0			
Agricultural Products Vending	76	4,783.2	3332.0	620.0	21,100.0			
Total	208	7,786.2	7247.8	620.0	61,600.0			

Source: Own Data Survey, 2011

Table13 shows that there is statistically significance difference between the mean incomes across livelihood strategies. Average income earned from shoe shining activity is relatively higher than the other two livelihood strategies followed by tea & coffee vending. This implies shoe shining livelihood strategy provides the highest earning followed by tea and coffee vending. Agricultural products vendors' earning from informal sector is relatively least. This difference is statistically significant at 1% level.

Income Trend

With regard to their income, since respondents have started their business, around 38.2 percent of them claim that they observe a decreasing trend of income. On the other hand, 14.5 & 13.6 percent of operators show an increasing and fluctuating income trends, respectively. But still, such a significant number as 33.6 percent declare that they are facing no significant change in their income since they begin their businesses. These issues are further elaborated in table 14.

Table 14 Distribution of Income Trends by Livelihood Strategy

Income Trend		Livelihood Strategy			Total
		Shoe Shining	Tea & Coffee Vending	Agricultural Products Vending	
Increasing	Count	17	6	9	32
	% within income trend	53.1%	18.8%	28.1%	100.0%
	% within activities	21.3%	10.0%	11.3%	14.5%
Decreasing	Count	29	19	36	84
	% within income trend	34.5%	22.6%	42.9%	100.0%
	% within activities	36.3%	31.7%	45.0%	38.2%
Fluctuating	Count	4	10	16	30
	% within income trend	13.3%	33.3%	53.3%	100.0%
	% within activities	5.0%	16.7%	20.0%	13.6%
No change	Count	30	25	19	74
	% within income trend	40.5%	33.8%	25.7%	100.0%
	% within activities	37.5%	41.7%	23.8%	33.6%
Total	Count	80	60	80	220
	% within income trend	36.4%	27.3%	36.4%	100.0%
	% within activities	100.0%	100.0%	100.0%	-

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	16.627	6	0.011
Number of Valid Cases	220		

Source: Own Data Survey, 2011

Pearson Chi-Square test shows the existence of significant relation between livelihood strategies and trends of their income since they have started their business. Respondents were asked as to why their income stagnates and/or declines. They clearly stated that the major reason is the current inflation rate. This rises up general prices of different goods and services. Its impact is two-fold i.e. supply and demand side. It is difficult for informal sector operators to purchase inputs to run their businesses. On the other hand, they lose their customers as they add prices on their product. Thus, market demand decreases.

The other factor that affects income level of the respondents is the seasonal nature of activities that they are engaged in. The responsiveness of each economic activity with the seasons is highly elastic. Further, because the sector experiences excess labor supply due to

high internal migration and rising unemployment rate, the income earned by each individual worker will be affected. Lastly, most respondents claim that lack of having a particular portion of land to sell their products is the other major factor which affects their level of income. As stated in the literature investigation of Kapunda and Mmolawa (N.D) shows that majority of informal sector operators in Botswana face an increasing income trend where as the reverse is true in Addis Ababa.

4.1.5 Participation of Respondents in Social Affairs

Having chance to participate in community and social affairs of the society is an important dimension of empowerment. Around 23.4 percent of respondents have been participating in social affairs. Almost all respondents who have participation in their society assert that engaging in this informal sector activity allows them to enhance their confidence and acquire communication skill.

But approximately 64.4 percent of all respondents affirm that they have no any such kind of participation. The reasons put forwarded are lack of enough time & unwillingness in such affairs due to the difficult load of the job that they are engaged in. Further, because the sector incorporates large number of immigrants, they do not yet adopt with the situation of the city.

4.1.6 Planning to Expand Business

Planning is important to better improve the ability of a household to accomplish livelihood objectives. It helps to articulate purposes, to predict challenges and to solve problems. Usually it is a best means to illuminate a path during hard time (Synthesis Partnership, 2011).

The result of the survey shows that there is statistically significant difference between respondents across the three livelihood strategies and there business expansion plan. Around 58.6% of all respondents have no plan to expand or change their business. Relatively, most of the operators in shoe shining activity plan for the betterment of their future career followed by agricultural products vendors. Compared to the other two livelihood strategies, tea & coffee vendors have less intention to plan.

Table 15 Distribution of respondents by Livelihood Strategy and plan

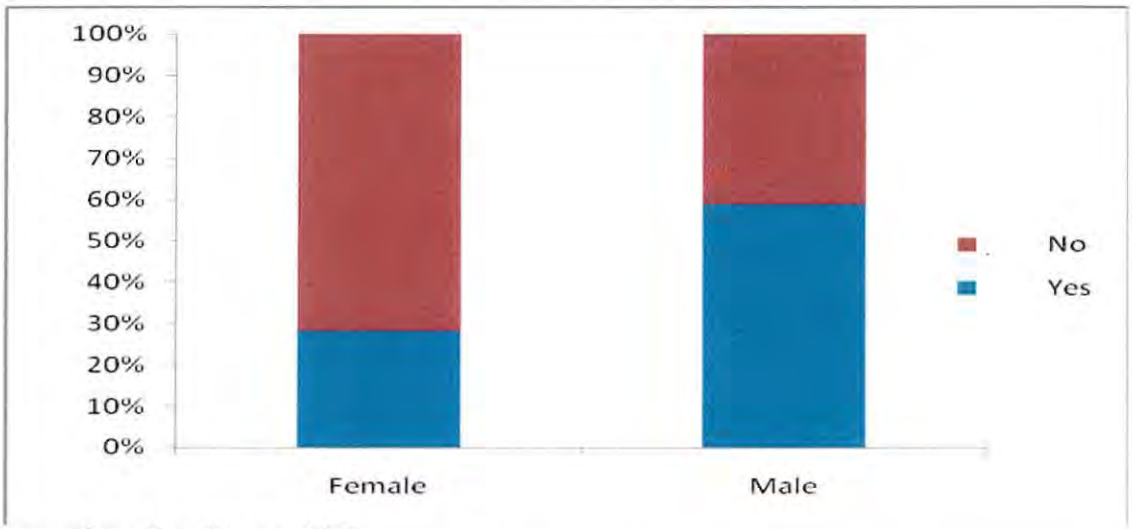
Livelihood Strategy		Planning Nature		Total
		Have a Plan	Not Have a Plan	
Shoe Shining	Count	49	31	**80**
	% within activities	61.3%	38.8%	**100.0%**
	% within plan	53.3%	17.8%	**36.0%**
Tea & Coffee Vending	Count	12	50	**62**
	% within activities	19.4%	80.6%	**100.0%**
	% within plan	13.0%	42.2%	**27.9%**
Agricultural Products vending	Count	31	49	**80**
	% within activities	38.8%	61.2%	**100.0%**
	% within plan	33.7%	40.0%	**36.0%**
Total	**Count**	**92**	**130**	**222**
	% within activities	**41.4%**	**58.6%**	**100.0%**
	% within plan	**100.0%**	**100.0%**	**100.0%**

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	26.791	4	0.000
Number of Valid Cases	222		

Source: Own Data Survey, 2011

Figure 9 illustrates the proportion of female and male respondents by considering their planning habit. Even though there are large numbers of females in different activities of informal sector employment, they have less intention to planning. From the total female respondents 72% have no plan to improve their businesses. The major reason cited for this is

the instability of the job. It does not allow them to think about their future. On the other hand, around 59% of all male respondents have a plan to improve their current businesses.



Source: Own Data Survey, 2011

Figure 9: Distribution of Respondents by Sex and Plan

4.1.7 Saving Habit of Respondents

Regarding the saving habit of those who are operating in the informal sector, 48 percent of all the respondents in all activities save nothing for their future investment. The basic reason mentioned for this is the money that they get from the sector is not even enough to cover their living expenses.

Results further reveals that around 20.8 percent of all respondents save less than 100 Birr per month and 24.2 percent save between 100 & 300 Birr per month. The percentage shares of respondents who save beyond 300 Birr per month are 7.8 percent. Out of which 4.5 percent of them save above 500 Birr per month. The reason put forwarded by some of the respondents for saving money is to better expand and change their current business. But some of them cited that they save money to utilize it in times of emergency.

To better understand the contribution of the sector towards saving, disaggregating the data in to the three economic activities is necessary. From all respondents of vendors of agricultural product 49 persons save nothing followed by 33 persons of tea & coffee vendors. Only 21 persons from all shoe shiner respondents do not save.

Table 16 Saving Habit of Respondents by Livelihood Strategy

Saving		Livelihood Strategy			Total
		Shoe shining	Tea & Coffee Vending	Agricultural Products Vending	
Nothing	Count	21	33	49	103
	%	20.4	32.04	47.57	100
< 100 Birr per month	Count	14	17	22	53
	%	26.4	32.07	41.5	100
From 101-300 Birr/month	Count	29	9	8	46
	%	63.04	19.57	17.39	100
From 301-500 Birr/month	Count	6	1	-	7
	%	85.7	14.29	-	100
>500 Birr/month	Count	10	-	-	10
	%	100	-	-	100
Total	**Count**	**80**	**60**	**79**	**219**
	% of Total	**36.53**	**27.4**	**36.07**	**100**

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	111.321	48	0.000
Number of Valid Cases	219		

Source: Own Data Survey, 2011

Pearson Chi-Square test reveals that people from shoe shining activity save more followed by tea & coffee vendors. In reverse, the lowest savers are from agricultural products vendors. Relatively shoe shining economic activity provides high income for the operators according to the assumption of economists a person who earn high income are more likely to save more, citrus paribus.

4.1.8 Food Security Status of Respondents

Food security generally means, as it is previously indicated in the literature section of this study, getting nutritious food quantitatively and qualitatively at adequate amount in all time. Thus, herein respondents' food security status is assessed by considering their access to acquire food, frequency of meal per day and variety of meal they take per week.

Table 17 Distribution of Livelihood Strategies by Adequate Income to Cover Food Expenses[3]

Income Adequacy		Livelihood Strategies			Total
		Shoe Shining	Tea & Coffee Vending	Agricultural Products Vending	
Adequate Income	Count	59	48	41	**148**
	% within adequate income	39.9%	32.4%	27.7%	**100.0%**
	% within activities	73.8%	80.0%	51.3%	**67.3%**
Inadequate Income	Count	19	12	39	**70**
	% within adequate income	27.1%	17.1%	55.7%	**100.0%**
	% within activities	23.8%	20.0%	48.8%	**31.8%**
Not Related	Count	2	0	0	**2**
	% within adequate income	100.0%	.0%	.0%	**100.0%**
	% within activities	2.5%	.0%	.0%	**.9%**
Total	**Count**	**80**	**60**	**80**	**220**
	% within adequate income	**36.4%**	**27.3%**	**36.4%**	**100.0%**
	% within activities	**100.0%**	**100.0%**	**100.0%**	-

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	19.975	4	.001
Number of Valid Cases	220		

Source: Own Data Survey, 2011

Food security is an issue of income used to gain access to food. The survey result shows that there is statistically significant relation between participating in different livelihood strategies and having adequate income to cover their food expenses. Around 67.3% of all enumerators get adequate income to cover their food expenses from their livelihood strategy whereas 31.8 percent claim that the income that they earn from their informal sector livelihood strategy is

3 Determinants of food security status are examined in section 4.3.1using Probit regression model.

inadequate to cover food expenses of themselves and their households. This indicates, therefore, informal sector employment has a significant contribution towards enhancing food security status of operators. The same result is obtained in Malawi, by Mulwafu (N.D), and in Sudan, by Ibnuf (2009).

From those enumerators who earn inadequate income, 52.9 percent forced to reduce the amount of meal they take, 34.3 percent get credit from informal money lenders, there are 2.9% of respondents who used their previous saving and the rest get gift/donation or get money from their husband/wife.

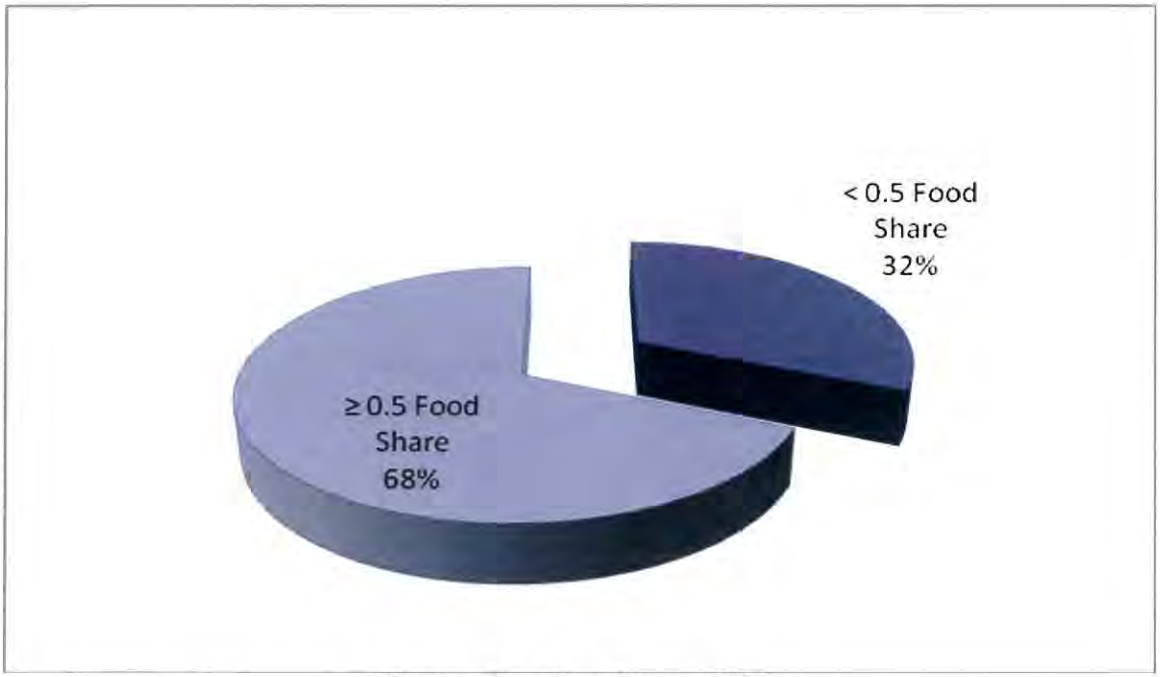
Table18 Distribution of Respondents by Livelihood Strategy and Mechanisms they Take to Feed their Households

Mechanisms		Livelihood Strategy			Total
		Shoe shining	Tea & Coffee Vending	Agricultural Products Vending	
Borrow	Count	7	4	13	**24**
	% within mechanism	29.2%	16.7%	54.2%	**100.0%**
	% within activities	36.8%	33.3%	33.3%	**34.3%**
Gift/Donation	Count	2	0	2	**4**
	% within mechanism	50.0%	.0%	50.0%	**100.0%**
	% within activities	10.5%	.0%	5.1%	**5.7%**
Saving	Count	1	1	0	**2**
	% within mechanism	50.0%	50.0%	.0%	**100.0%**
	% within activities	5.3%	8.3%	.0%	**2.9%**
Reduce house hold meal	Count	8	5	24	**37**
	% within mechanism	21.6%	13.5%	64.9%	**100.0%**
	% within activities	42.1%	41.7%	61.5%	**52.9%**
Husband/ wife share	Count	1	2	0	**3**
	% within mechanism	33.3%	66.7%	.0%	**100.0%**
	% within activities	5.3%	16.7%	.0%	**4.3%**
Total	**Count**	**19**	**12**	**39**	**70**
	% Within Mechanism	**27.1%**	**17.1%**	**55.7%**	**100.0%**
	% within activities	**100.0%**	**100.0%**	**100.0%**	**100.0%**

Source: Own Data Survey, 2011

Respondents' categorization based on the proportion of food share from their total income reveals that there are more respondents who spent their large proportion of income to cover food expenses. The data shows that 68.5 percentiles of the total respondents have large food

share from their income. This implies that they used these coping strategies to get means for survival. When compared with male 61.87% are female who have large food share. The reason attributable to this is that female's income is usually shared to meet obligations of household members in terms of food and other basic necessities.



Source: Own Data Survey, 2011

Figure 10 Food Share of Respondents from their Total Income

The percentage share of respondents who eat one meal, two meals and more than three meals per day is 2.7, 32.2 and 65 percent respectively. This reveals that great number of informal sector operators eat three times per day i.e. breakfast, lunch and dinner. From 65 percent of operators who eat three times per day, shoe shiner respondents take the largest share. 56.3% of respondents who eat twice per day are vendors of agricultural products followed by tea & coffee vendors. The respondents of all the three informal economic activities claim that their participation in this employment sector allows them to cover their food expenses.

52.5 percent of respondents who live with their household members assert that they feed all

the household members equally. Whereas 47.5 percent depicts that it is difficult for them to feed all household members equally. Thus, almost 97.9 percent give priority to feed for their children.

Table 19 Distribution of respondents by activities and number of meal they take per day

Meal per day		Livelihood Strategies			Total
		Shoe Shining	Tea & Coffee Vending	Agricultural Products Vending	
1 meal	Count	0	0	6	**6**
	% within meal per day	.0%	.0%	100.0%	**100.0%**
	% within activities	.0%	.0%	7.5%	**2.7%**
2 meals	Count	6	25	40	**71**
	% within meal per day	8.5%	35.2%	56.3%	**100.0%**
	% within activities	7.5%	41.7%	50.0%	**32.3%**
3 meals	Count	74	35	34	**143**
	% within meal per day	51.7%	24.5%	23.8%	**100.0%**
	% within activities	92.5%	58.3%	42.5%	**65.0%**
Total	**Count**	**80**	**60**	**80**	**220**
	% within meal per day	**36.4%**	**27.3%**	**36.4%**	**100.0%**
	% within activities	**100.0%**	**100.0%**	**100.0%**	**100.0%**

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	51.092	4	0.000
Number of Valid Cases	220		

Source: Own Data Survey, 2011

The response of enumerators reveals that almost 58.3 percent eat more than three variety of food per week. The percentage share of respondents who eat only one variety of food and two variety of food are 14.2 and 27.5 percent respectively. They frequently used foods prepared from cereals and vegetables. From cereals sorghum, teff, maize and wheat are frequently used by informal sector workers. From vegetables they use potato, tomato, cabbage, and salad to prepare food. The common food items used by majority of the respondents are Teff and Shiro.

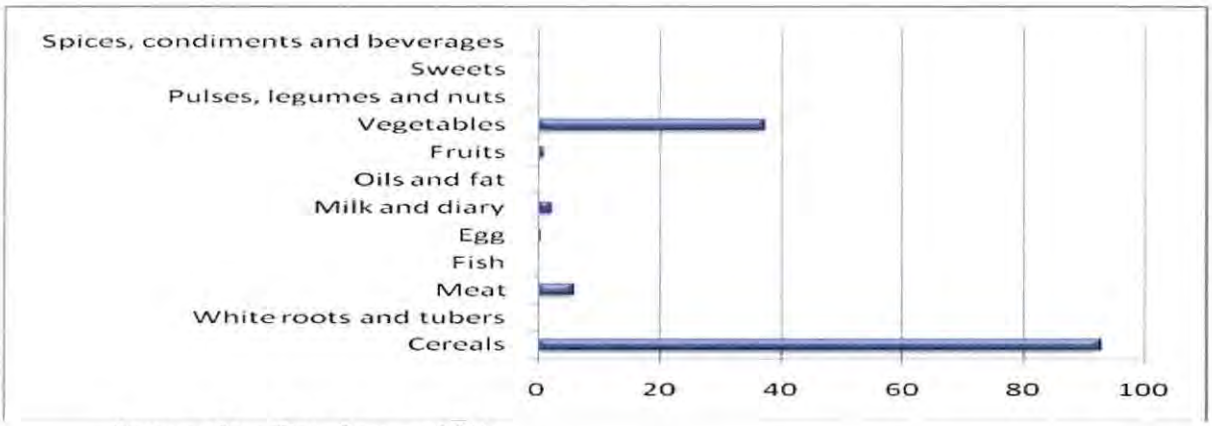
Table 20 Distribution of Respondents by Activities and Variety of Food they Eat

Food variety per week[4]		Activities			Total
		Shoe shining	Tea & Coffee Vending	Agricultural Products Vending	
1food Variety	Count	8	7	16	**31**
	% within food variety	25.8%	22.6%	51.6%	**100.0%**
	% within activities	10.0%	11.7%	20.5%	**14.2%**
2 food variety	Count	18	16	26	**60**
	% within food variety	30.0%	26.7%	43.3%	**100.0%**
	% within activities	22.5%	26.7%	33.3%	**27.5%**
3 food variety	Count	54	37	36	**127**
	% within food variety	42.5%	29.1%	28.3%	**100.0%**
	% within activities	67.5%	61.7%	46.2%	**58.3%**
Total	**Count**	**80**	**60**	**78**	**218**
	% within food variety	**36.7%**	**27.5%**	**35.8%**	**100.0%**
	% within activities	**100.0%**	**100.0%**	**100.0%**	**100.0%**

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	8.409	4	0.078
Number of Valid Cases	218		

Source: Own Data Survey, 2011

From the illustration on Table 19 above it is difficult to conclude about the quality of respondents' food intake. There is statistically insignificant relation between chosen livelihood strategy and variety of food they take. Thus, further analysis using the collected information on dietary consumption is needed.



Source: Own Data Survey, 2011

Figure 11. Food Groups Intake per Week and Percentile Share of Enumerators

4 Variety of food items that observed in the data includes sorghum, maize, wheat, teff, shiro, vegetables and fruits.

From the drawn bar chart it is perceived that preponderance of enumerators use cereals for their usual food preparation. In addition to their cereals consumption, around 37.4% of respondents consume vegetables, 5.9% meet, 0.9% fruits and 0.5% egg. Swindle and Bilinsky (2006) pointed out that households consume an average of four different food groups implies that their diets offer some diversity. However, the collected information shows that almost all respondents consume less than four food groups which imply low diet quality.

4.1.9 Vulnerability of the Respondents

Distribution of all the respondents in the three informal economic activities shows that almost 62.7 percent cannot survive any further without their business. Of which 36, 32.4 and 31.7 percent are agricultural product vendors, tea & coffee vendors and shoe shiners, respectively. They are very reliant on their business. Those respondents claim that they join the sector to get money for means of survival. Therefore, living without their job is impossible. This implies that the sector provides temporary solution for their basic needs only.

Table 21 Distribution of Activities by Vulnerability Context[5]

Vulnerability		Activities			Total
		Shoe shining	Tea & Coffee Vending	Agricultural Products Vending	
I Cannot Survive	Count	44	45	50	**139**
	% within vulnerability	31.7%	32.4%	36.0%	**100.0%**
	% within activities	55.0%	75.0%	62.5%	**63.2%**
< a month	Count	21	10	16	**47**
	% within vulnerability	44.7%	21.3%	34.0%	**100.0%**
	% within activities	26.3%	16.7%	20.0%	**21.4%**
1 – 3 months	Count	7	4	12	**23**
	% within vulnerability	30.4%	17.4%	52.2%	**100.0%**
	% within activities	8.8%	6.7%	15.0%	**10.5%**
3 -6 months	Count	0	1	0	**1**
	% within vulnerability	.0%	100.0%	.0%	**100.0%**
	% within activities	.0%	1.7%	.0%	**.5%**
>6 months	Count	8	0	2	**10**
	% within vulnerability	80.0%	.0%	20.0%	**100.0%**
	% within activities	10.0%	.0%	2.5%	**4.5%**
Total	**Count**	**80**	**60**	**80**	**220**
	% within vulnerability	**36.4%**	**27.3%**	**36.4%**	**100.0%**
	% within activities	**100.0%**	**100.0%**	**100.0%**	**100.0%**

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	17.757	8	.023
Number of Valid Cases	220		

Source: Own Data Survey, 2011

On the other hand, 21.4% of all the respondents declare that they cannot survive more than a month. Around 15.5 percent can survive beyond a month by using the money they saved and being dependent on their relatives. This figure is statistically significant at 5% significant level by Pearson Chi-Square test.

Further, from the total 67% food secured respondents who get adequate access from informal sector employment, around 64% are vulnerable who are dependent on their job. Out of these enumerators 39% are those who cannot survive at all without their job.

5 Determinants of vulnerability are further illustrated in section 4.3.2 by using ordered Probit regression model.

4.2 ECONOMETRICS ANALYSIS

4.2.1 Determinants of Food Security Status of Informal Sector Operators

The basic aim of this study, as already indicated in chapter one, is to analyze the role of informal sector activities towards assuring food security level of the poor. As indicated in the literature part of this study, having enough income to access food is an essential component of household food security. Hence, the probability of having income to spent on food expenses is considered as an indicator of food security in this study.

Table 22 shows the results of binary Probit regression coefficients of factors affecting food accessibility status of informal sector workers. A positive sign indicates that higher values of the variable increase the probability that an informal sector workers being food secured and the lower the variables the less food secure the household become.

Table 22 Results of the Binary Probit Regression Model on Determinants of Food Security Status of Households

Variables	Coefficients	Standard Errors	Z	P-value
Age	0.0281321	0.0166558	1.69	0.091
Sex	0.6575521	0.379472	1.73	0.083
Household size	-0.3911791	0.1509672	-2.59	0.010
Working time per day	0.3762215	0.1542881	2.44	0.015
Saving	0.0014596	0.0007292	2.00	0.045
Total income	-0.000022	0.0000287	-1.31	0.191
Borrowing	1.201721	0.5156462	2.33	0.020
Shoe Shining	-0.0424457	0.4236449	-0.10	0.920
Tea & Coffee Vending	0.9680702	0.3102443	3.12	0.002
Constant	-3.45107	1.32262	-2.61	0.009

Source: Own Data Survey, 2011

- *Number of observations = 205*

The result of the regression reveals that variable age, sex, household size, working time, saving, borrowing and livelihood strategies have statistically significant effect on food

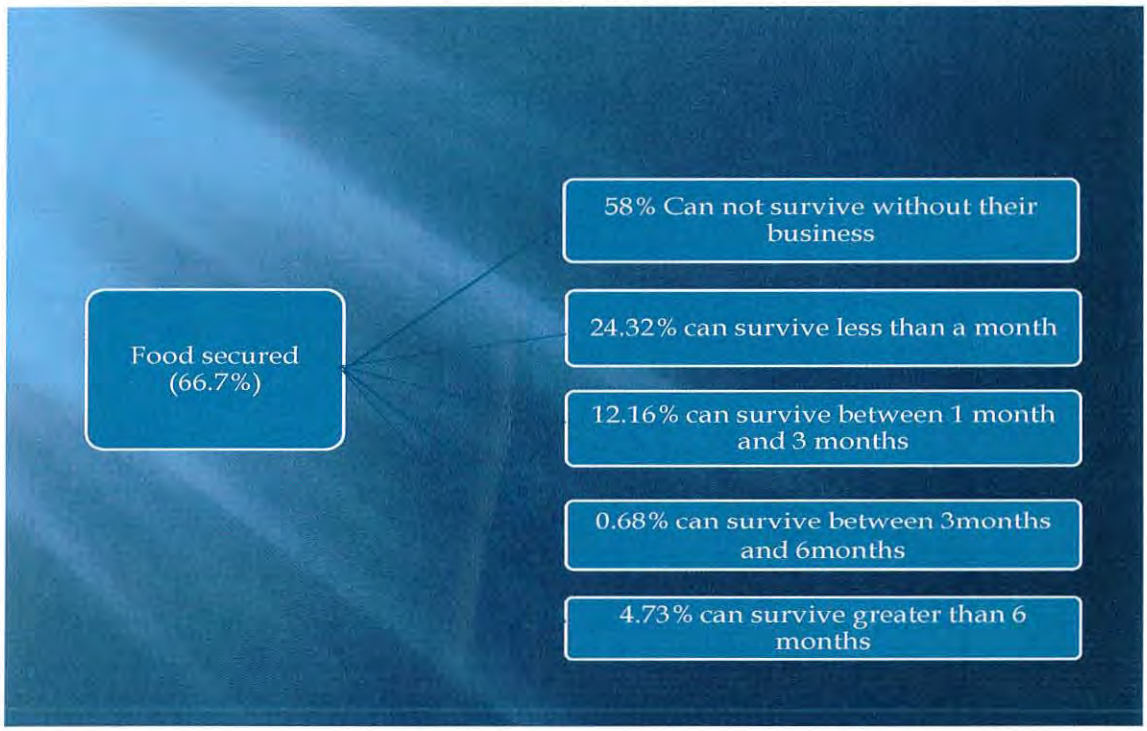
security status of informal sector operators.

Age, sex, working time, saving and borrowing variables have a positive impact on food security level of the operators. This implies that as the operators become more matured, work for long hour per day, save more and receive credit the probability of their food security status improves. This result tallies with results of the World Bank's (2005) study. Again male operators are more likely to be food secured compared to female. On the other hand, household size and total earning, though it has no significant impact, of the operators has negative impact on food security status of informal sector workers. The implication is that respondents with a large household size are more exposed to food insecurity than those with small size. As the most known economist Malthus argued, large number of people within a household brings mouths to feed. Thus, for least developed countries like Ethiopia it is so difficult to get adequate income to feed all household members. This is because as a household size increases, income per head decreases and the less food secure the household becomes. This result is in line with that of Bocquier *et al* (2009).

In comparison with agricultural products vendors, livelihood strategy of tea and coffee vending has a significant positive impact on food security status of enumerators. The participation of enumerators in this activity increases the odds of being food secured.

4.2.2 Determinants of Vulnerability Level of Informal Sector Operators

Before dealing with the determinants of vulnerability, it looks rather logical to examine how many of the food secured households are vulnerable in cases where a shock occurs. Figure 12 illustrates that a significant proportion (58%) of the food secured respondents cannot survive if a shock happens. Only a negligible proportion can survive more than 6 months.



Source: Own Data Survey, 2011

Figure 12. Vulnerability Level of Food Secured Households

Table 23 below explains determinants of vulnerability level of respondents using ordered Probit regression model. Variables that have significant impact on the vulnerability status of respondents are age, years of experience on the job, working time per day, saving nature, total earning per year and livelihood strategies. This indicates that as the age of respondents increases their vulnerability reduces.

Table 23 Ordered Probit Regression Coefficients on Determinants of Vulnerability level of the Respondents

Variables	Coefficient of Variables	Standard Error	Z	P-value
Age	-0.0492658	0.0172727	-2.85	0.004
Sex	0.1866693	0.3317109	0.56	0.574
Marital Status	-0.4330362	0.2805555	-1.54	0.123
Household size	0.0751035	0.1591889	0.47	0.637
Experiences on informal sector employment	0.2086592	0.1056749	1.97	0.048
Working time per day	0.0015297	0.0006938	2.20	0.027
Saving	0.0011467	0.0005095	2.25	0.024
Total income	0.0000122	6.34e-06	1.92	0.055
Borrowing	-0.0033331	0.0120927	-0.28	0.783
Shoe Shining	-0.6382396	0.3533044	-1.81	0.071
Tea & Coffee Vending	-0.5111498	0.2840486	-1.80	0.072

Source: Own Data Survey, 2011

❖ *Number of Observations 203*

From the above discussions we perceived that the bulk of informal sector operators are young. Thus, probability of operators to become more vulnerable goes up. This result corroborates with results of Brata (2008). The model articulates that years of experience in the informal sector employment determines the vulnerability status of enumerators to have less than a month survival without their job. Respondents who are engaged in shoe shining activity, in which great number of operators have less experience in the sector, are less vulnerable than respondents who are participating in agricultural products vending in which large number of participants are highly experienced in the sector. The same is true in tea & coffee vending activity.

Again, as the number of working hours per day increases it will be more likely to prevent vulnerability. Analysis of respondents' data reveals that the amount of total earning and saving are important in determining vulnerability. This implies that as total earning and saving of respondents increases the level of vulnerability reduces. As a result, respondents

who save large amount of money got the potential to survive for long period of time without their job than others.

4.3 Prospects and Challenges of Informal Sector Employment

The contribution of informal sector employment in developing countries is high. It provides employment opportunity for the poor who are struggling for mere survival. Results of the study show that the basic reason for the respondents to join the sector is to get advantage from the promises of the sector. As it is a self employment sector, it provides greater freedom for the operators than working at wage employment. This and other features of the sector, like no entry barrier, needs no education and so on, attract most of the people to join and remain in the sector.

The result of the survey affirms that the contribution of the sector to meet basic human needs could not be undermined. It provides income to cover their living expenses most importantly to cover their food expenses. In addition, it helps them to cover the costs of housing, education, cloth and the like. Further some of the operators help their parents from the benefit of the sector. Moreover, the sector builds self confidence and strength of operators essentially for women.

As the three economic activities which are covered by this study are totally out of government regulation, they faced tremendous challenges. Some of them are discussed below.

The survey on the three informal sector activities reveals that operators of these activities face different kinds of problems. It is known that many markets, which includes product and

factor, in least developed countries do not function accurately. The most important factor input for informal sector activists is land. But its availability for these activists is low. Deprivation of this basic input obstructs the poor from enjoying the benefits of informal sector employment.

Informal sector activities are not under the regulation of government. Thus, the state does not give due consideration to provide factors of production to those activists. This shows that the concerned government body perceives the activities of informal sector as economically unviable activity. Informality restricts the ability of informal operators to augment their productive capacity and income. Especially the current government action to better develop Addis Ababa city directly injure operators of informal sector activities. It prohibits them from working at the city centers in which market demand for their products is high.

The second major challenge that operators of the sector claim is lack of finance to better improve their businesses. Formal credit institutions' bureaucratic procedure and collateral requirements are beyond the capability of informal sector operators. As a result they are unable to strengthen their financial capital.

Market seasonality and fluctuating market prices are the other problems cited by the respondents. Market prices of agricultural prices are determined by seasonal peasantry production. This creates instability in the output of those activities. On the other hand, in the summer time shoe shiners' income raises. In addition, Tea & Coffee vendors claim that at summer time the weather condition brings them with low market and income.

Informal workers typically lack social protection afforded to formal paid workers. Because their working place is at street, they are exposed to thieves and cheaters. They have no any

legal protection to prevent them from this disaster. This situation became worse for women operators.

Working environment is also considered as another challenge to these workers. The market place at which the products of informal sector activities are bought and sold is covered with discarded wastes. This exposed those workers and their families to severe health risks.

CHAPTER FIVE: CONCLUSIONS AND POLICY IMPLICATIONS

5.1CONCLUSIONS

The daily life of majority of urban dwellers is highly connected with services rendered by informal sector employment. Nowadays, the sector is widely distributed in the city of Addis Ababa as it is a metropolitan area in the country. Informal sector employment incorporates different types of economic activities. Most importantly it is a promising sector for the poor who missed the opportunity to join formal employment.

According to the survey conducted on the three informal sector employments, female are overrepresented in the sector because they have low access to formal education. Majority of operators in the sector are young. The study depicts that most of the employees of the sector are at their primary level of education and are dropouts from school. Due to lack of employment opportunity outside informal sector female operators stay in the business longer and work for large number of hours per day.

The income earned from the informal sector activities has a significant contribution towards assuring food security status of respondents. The major determinants of food security status that are investigated throughout this study are age, sex, household size, economic activity, experience in the sector, working hour per day, saving, total earning, and borrowing. It is observed that the existence of informal sector employment could potentially improve food security status of the operators more importantly it enhances their access to food. Nevertheless participation in the informal sector foster enumerators food access, it is observed that they have low quality of food intake. To sum up, informal sector employment

is a means to achieve household's livelihood objectives mainly to meet household's food needs and to enhance their food security level. Because informal sector livelihood strategies are bounded by numerous obstacles it provides temporary solution for the poor. So that operators in the sector are exposed to vulnerability.

In addition, participating in the informal sector allows operators to save money for future use. It enhances productive capacity of the poor through financing their business for further growth and expansion. Saving has a great contribution in improving vulnerability status of the poor.

Beside its benefits, different economic activities within this sector face various challenges. The basic challenge comes from government policy. The sector is neglected and totally out of government regulations. Hence, the state does not give a due consideration to support informal sector operators by providing inputs of production, especially land. Lack of access to credit is another obstacle for informal sector operators to run their subsistence business.

5.2 POLICY IMPLICATIONS

The findings of this research articulate that informal employment sector plays a prominent role towards ensuring food security in the city, Addis Ababa. Regarding the problems that the sector faces and to utilize the benefits of the sector the following policy implications are forwarded:

- As informal sector is a supportive sector to the formal employment economic activity, it needs due consideration from the government and development practitioners as well. This should be undertaken through designing an enabling policy environment

that can empower the participants of the sector, especially women.

- In fact, the above-mentioned strategy will be viable only when informal sector operators are encouraged to better improve their business through assisting them to be formal so that they can also generate revenue for the government.

- Facilitating credit sources with low collateral requirements and less bureaucratic procedures to mitigate financial problems of the poor will also be essential.

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INFORMAL SECTOR AND FOOD SECURITY IN ADDIS ABABA: THE GENDER FACTOR

By SAMRAWIT SELESHI

The major objective of designing this questionnaire is to gather data about the role of informal sector activities in reducing food insecurity. Your genuine response is vital for the successful accomplishment of this objective. Thus, you are kindly requested to answer the questions. I would like to assure you that your response will be used solely for academic purpose.

Thank you!!!

A. Demographics

1. Age _____
2. Sex _____
3. Address of the respondent,

   Home address; Sub-city_____ Kebele_____

   Working address; Sub-city_____ Kebele_____
4. Educational status

   A. primary education (From grade 1 to grade 8)

   B. Secondary education (From grade 9 to grade 12)

   C. Technical and Vocational School (TVET)

   D. Diploma level

   E. Degree level graduate

   F. Illiterate
5. Marital status

   A. Single B. Married C. Widowed D. Divorced
6. Family size and status

R.N	Relationship with household member	Sex	Age	Height	Weight	Education level

B. Business specific information

1. Type of employment

   A. Self- employment B. paid employment

2. Type of informal sector

   A. Shoe-shinning B. Vending agricultural products C. Vending coffee, tea and bread

3. What is your main reason for choosing this type of business?

   _____

4. How long did you stay in this business?

   _____

5. Do you have a plan to change or expand the business? Why?

   _____

   _____

   _____.

6. What problems did you face while operating your business?

   _____

   _____

   _____.

7. What significant changes do you gain after engaging in this business?

   _____

   _____

   _____.

8. Do you think that there is gender discrimination in the informal sector employment?

   A. Yes B. No

9. If your response to the above question is "Yes", could you please explaining it briefly?

   _____

   _____.

C. Income

1. Do you have any source of income other than the informal sector employment?

   A. Yes B. No

2. If your response to the above question is yes, could you describe them?

   _____

3. What are your monthly expenditures?

   A. food _____ E. Health _____

   B. Cloth _____ F. Leisure _____

   C. Shelter _____ G. Other expenses_____

D. Education _____

4. How much do you save from your monthly earning?

   A. Nothing B. From 10 to 50 Birr C. From 51 to 100 Birr

   D. From 101 to 150 Birr E. More than 151 Birr

5. What trend has your income shown for the last years?

   A. Increasing B. Decreasing C. No change D. Fluctuating

6. What factors affect your income level?

   _____

   _____

   _____

   _____.

D. Food Security Situation

1. How much meal do you eat per day?

   A. One meal only B. two meals C. more than two meals

2. How many variety of food do you eat per week?

   A. only one food type B. two food types C. more than two food types

3. Is your income adequate enough to supply food?

   A. Yes B. No

4. If your response for the above question is "no" what mechanisms do you take to feed the household?

   A. Borrow money B. Gift from friends or family

   C. Sell house items D. Reduce household meals

   E. From saving F. Other (If any) _____

5. If something bad happens to your business, for how much months could you survive?

   A. Less than one month B. From one month to three months

   C. From three months to six months D. more than six months

   E. I cannot survive longer without my business

6. Do all the household members get food equally at all the time?

   A. Yes B. No

7. If your response for the above question is "No", for whom do you give priority to feed from the household members?

   A. For children B. For Husband / Wife C. Other_____

E. Credit sources

1. What was your initial source of capital to launch the business?

   A. Gift free from friends / family

   B. Inherited business

   C. Formal credit institutions

   D. Informal money lenders

   E. Other_____

2. Did you ever try to borrow money from formal credit institutions?

   A. Yes B. No

3. If your response for the above question is "Yes", was the response positive?

   A. Yes B. No

F. Empowerment

1. Do you have any participation in the society? If so, since when and in what particular issues?

   _____
   _____
   _____
   _____.

2. Have you seen any significant improvement in social and household decision making process after engaging in this business?

   A. Yes, How?

   _____
   _____
   _____.

   B. No, Why?

   _____
   _____
   _____
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DECLARATION

I, undersigned, declared that the thesis entitled "THE ROLE OF INFORMAL SECTOR IN FOOD SECURITY: THE CASE OF ADDIS ABABA" is my original work and has not been presented for a degree or diploma program in any other university or institution and all sources of materials used for this thesis have been duly acknowledged.

Declared by:

Name: Samrawit Seleshi

Signature:_____

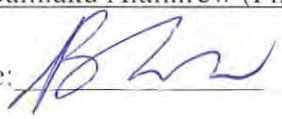
Place: Addis Ababa

Date: July, 2011

This thesis has been submitted for examination with my approval as a university advisor of the candidate.

Approved by:

Name: Bamlaku Alamirew (Ph.D)

Signature: 

Date: July, 2011