ST. MARY'S UNIVERSITY
SCHOOL OF GRADUATE STUDIES

ANALYSIS OF CROP MARKET PERFORMANCES: THE CASE OF MASALEMIA MARKET IN ADDIS ABABA, ETHIOPIA

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BY

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ENDORSEMENT

This thesis has been submitted to St. Mary's University, School of Graduate Studies for examination with my approval as a university advisor.

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APPROVED BY BOARD OF EXAMINERS

External Examiner	**Signature**
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DECLARATION

I declare that this thesis is my original work; prepared under the guidance of Dr.SisayDebebe. All sources of materials used for the thesis have been properly acknowledged.

Name _____ Signature _____ St. Mary's University, Addis Ababa May, 2019

DEDICATION

The Almighty God, the most gracious, for giving me the strength and determination to complete this study. I would also like to dedicate this paper to my mother Mrs.AsegedechMeresa for her sacrifice, encouragement and support.

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LISTS OF ACRONYMS

AMC	Agricultural Marketing Corporation
ANOVA	Analysis of Variables
CR	Concentration Ratio
CSA	Central Statistics Agency
Das	Development Agents
DAP	Demonian Phosphates
ECX	Ethiopian Commodity Exchange
GDP	Gross Domestic Product
GMM	Gross Marketing Margin
LDCs	Local Domestic Consumptions
MLR	Multiple Linear Regression
NPP	NormalProbability Plot
PPS	Probability Proportional Sample Size
RHS	Right-Hand Side
SCP	Structure, Conduct and Performance
SPSS	Statically package for social science
TOL	Tolerance Level
VIF	Variance Inflation Factor

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ABSTRACT

An efficient agricultural marketing is crucial for effective agricultural and rural development, which areprecondition for sustained increase in agricultural production, and producer's income. This study examined crop marketing performance in Mesalemia crop market of Addis Ababa, were very densely populated which comprise more than 2500 traders and unknown number of producers and consumers in Addis Ababa.The study was based thegathered data 200 sample from population using probability sampling design of multi-stage sampling technique with two stages, in the first stage is stratified based on trading tribute of producers, traders, consumers and stakeholdersandin the second stageprobability proportional sample size (PPS), to each strata of market actors were50 from producers, 100 from traders, 20 from Consumers and 30 from Stakeholders was also collected fromthe farm of the producers, from the bureau of concerned stakeholders and from Mesalemia crop market of traders and consumers. Data was collected through the interview by using survey methodby degree of semi structured questionnairefrom all market actors and stakeholders. The market concentration indicated that the crop market structure at Mesalemiais fairly competitive. The major barriers to entry and constraints to crop trade in Mesalemia included lack of working capital; market information and high competition with unlicensed traders have a negative impact on the performance of the crop marketing system. The possible recommendations forwarded are support formal access to credit for traders and farmers, strengthen access to market information encourage licensing of traders, intervention to increase production by using improved agricultural inputs, strengthen and conduct a research on the different components of the Mesalemia marketing system.

Key words: *Crop marketing performance, multiple linear regression models, Mesalemia, Ethiopia.*

CHAPTER ONE

1. INTRODUCTION

1.1. Background of the Study

Agriculture is a corner stone for development in Ethiopia, and its success is mainly dependent on the performance of the sector that contribute 49% of the total GDP, 60% of foreign exchange earnings and absorbing 84% of the labor force of the total population of the country, agriculture remains to be the mainstay of the economy CSA (2017). However, recurrent drought, population pressure, environmental degradation and other manmade factors have seriously been affecting its contribution to the economy.

About 90 percent of the agricultural output is produced on subsistence farming in small holder farmers in the highlands. In Ethiopia the long term economic development strategy 'Agricultural development led industrialization' has been designed to target of the small holder private agricultural economy with aim of maintaining food security and strengthen economic growth Asefa (2005).

A major role of agricultural policy is to changes that may induce technological innovation and productivity growth throughout the food system, in order to increase the living standards of people who must relate to it in one way or another. In Ethiopia the consumers expend in agriculture products through the market at marketing costs account for 60% of the price that consumers pay for staple cereal commodities in Ethiopia CSA (2017) for 16 years until 1990, Government policy has suppressed private grain marketing revolution in 1974 introduced a socialist-oriented government that directly engaged in wholesale and retail trading.

The Agricultural Marketing Corporation (AMC) was created in 1976, initially with World Bank support, to buy grain from farmers and sell to urban consumers by the state organizations.Both from Government and donors over the potential adverse effects of food aid on market prices, but a dearth of strong empirical information has limited for discussion on the topic. However, for attaining these benefits, marketing system and marketing technology have to keep pace with the production technology and socio economic development of the country Asfaw and Jayne (1997).

The experience of many countries suggests that in the absence of an efficient marketing system strategy, agricultural development cannot go very far to stimulate production and contribute to price stability. In Ethiopia Particularly, marketing of crop products do complex especially own to its perishability, seasonality and bulkiness nature leading to high fluctuating consumer prices and unfair share of the retailer price that results the existence of inefficient marketing system in the market.But, efficient marketing system plays an important role in the economic development as it stimulates production, avoids unnecessary fluctuation in output, prices and reduces costs of production and unfair share of consumer's priceAndargachew (1990).

According to the proclamation No. 813/2013 trade competition and consumers protection proclamation, the fact that consumer protection rights are largely influenced by the interactions between public and private actors in the consumer protection law. The need for consumer protection arises because of the exploitation of consumer and the denial of consumers' rights in the absence of strong protective measures, but the Government has a great role to play in encouraging consumer movement. At same time, the livelihood of many smallholder farmers is becoming dependent on the cash income from commerce of agricultural product like crop products. As a result, there has been due concern in recent years regarding the efficiency of marketing of cop products. There are many similar studies done in marketing system of agricultural products which employed different approaches and most of themfocused on the value chain analysis while other relied on market supply merely. According to Ashenafi (2010) for proper interventions and strategies in solving those problems and making the playing field more competitive, able suppliers get fair price and consumers pay reasonable price, comprehensive knowledge and empirical evidences are important to suggest the structure, conduct and performance. Similarly it should be understandable to know how the current marketing system is going on at Mesalemia crop product market is operating and to what extent the challenges are prevailed is needed.

A number of studies have examined on how the crop product market and marketing status is efficient for various industries as input, agricultural commodities and products at different market of the towns in EthiopiaKindie (2007).But in AddisAbaba yet not a strong research

have been conducted on analysis on crop market performance, which is a largest, central and the main initial for all crop market in Ethiopia.

This study is to investigate the biggest, crop market structure and conduct factors affecting the performance using measures of profit and profit margin as the indicator of Mesalemia crop market performance in AddisAbaba. Alternatively, the market SCP hypotheses can be examined by technical efficiency of the firm instead of profit and profit margin as the Market development is considered as one of the priorities for boosting agricultural production Abrham (2009).

marketing activities also have an intrinsic productive value that adds time, place, information and possession utilities to products and commodities, even though, the technical functions of storage, processing, and transportation and through exchange, marketing increases consumer satisfaction from any given quantity of output. An efficient agricultural marketing is crucial for effective agricultural and rural development, particularly with regard to sustained increase in agricultural productionMengesha (2016).

the famous crop market in Addis Ababa which is found at Addis ketema sub city at woreda 4, which is a traditional market named by “Mesalemia crop market” is also characterized by old crop market place of the city which is known all over the city of Addis Ababa and Ethiopia.

1.2. Statement of the Problem

Ethiopia have a good potentials of production almost in all region whether condition of the country, but not adequately market-oriented and competitiveness of smallholders is limited by low productivity and poor quality of traditional varieties. But there is poor policy and institutional environment in Addis Ababa to improve the crop marketing efficiency, inadequate infrastructures; storage, transport and communication facilities, inadequate market information and lack of market intelligence, the system of the market is accompanied with long chain and channel that have many market actors together with absence of strict Rule and Regulation in crop marketing that exposed to the existing of illegal trade.

This all creates an increasing trend of the share of poor population in the city, high inequalities in income distribution, high and instable food price and low job creation all

combine results in rapid increase of demand of goods and services that creates inflation and price fluctuation CSA (2017).

In Addis Ababa there is rapid population growth has been putting tremendous pressure on the city suffered by inflation which results 28.1% of the residents of the city were recorded under general poverty CSA (2013).Therefore, among different strategies that, the Administration of Addis Ababa City must facilitates and organize to establish for improving their socio economic status to alleviate the crop products marketing problem.

However, not much research has done to show whether these are effective on the contribution of marketing performance, but there are some related researches have done in different discipline of agricultural products in Ethiopia.

Such as Meron (2015) studied the performance and challenges of vegetable market in Kombolcha district the result of the study address that, the cost and difficulties of transporting perishable goods within volatile markets and their determinants.

Similarly, studied by Mengesha (2016) studied on marketing system analysis of vegetables and fruits in Amhara regional state: major findings of the study exhibited that various factors such as; socio-economic, marketing institutional and infrastructure factors are main determinants of marketing performance of vegetables and fruits.

Another, studied by Astewel (2010) studied on analysis of rice profitability and marketing chain: the case of Fogeraworeda, south Gondar zone, Amhara national regional state, Ethiopia and the major findings of the study exhibited that various factors such as; poor quality of agricultural produce, lack of market facilities, weak extension services which ignored marketing development and absence of marketing information.

In addition, studied by Birhanu (2010) assessment of bread wheat production, marketing and selection of n-efficient bread wheat varieties for higher grain yield and quality in north western Ethiopia, observed various factors such as; poor quality of wheat product, lack of access and quality inputs for wheat production and marketing institutional and infrastructure.

Moreover, studied by Woldemichael (2008) dairy marketing chains analysis: the case of Shashemane, Hawassa and Dale district's milk shed, southern Ethiopia, limited marketing and processing of milk product, lack of marketing information long marketing channels. These all observed agricultural marketing problems are similar to the crop market. But there

is lack of theoretical and empirical literatures used for evidence on the structure, conduct and performance of crop market in Mesalemia, Addis Ababa. Therefore this study fills this gap by undertaking cross-sectional research.

1.3. Objectives of the Study

1.3.1. General Objective

The general objective is to analyze crop market performances and its marketing system at Mesalemia market in Addis Ababa, Ethiopia.

1.3.2. Specific Objectives

- To characterize marketing system of Mesalemia crop market in Addis Ababa.
- To analyze the structure-conduct and performance of market at Mesalemia crop market in Addis Ababa.
- To identify the opportunities of Mesalemia marketing in Addis Ababa ; and
- To identify the constraints ofMesalemia marketing in Addis Ababa.

1.4. Basic Research questions

The research appraised the Mesalemia crop market performance and tries to answer the following research questions

- What potential and opportunities of the marketing among producers, traders and consumers at Mesalemia crop market?
- What are the major problems and constraints in Mesalemia crop market?
- How is the Mesalemia crop marketing system organized?
- What are the factors that determine the level of the structure-conduct and performance of Mesalemia crop market?

Information is generated through the evaluation of crop marketing system, its components, marketing facilities, services and intermediaries, and understanding factors affecting variation in crop products price could be a critical input in designing appropriate policymaking for crop marketing in Mesalemia crop market.

1.5. Scope and Limitations of the Study

The research focuses on "*Analysis of crop market performances: the case of Masalemia market in Addis Ababa, Ethiopia*", the study was conducted on the market structure, conduct

and performance of crop market to the producers, traders and consumer in, Addis ketema sub city at woreda 4, which is a traditional market named by “Mesalemia crop market” is also characterized by old crop market place of the city which is known all over the city of Addis Ababa and Ethiopia.

The study was focused in woreda 4, that is densely populated approximately above 2,500 crop product traders (wholesalers and retailers) are legally registered and too many unregistered illegals traders, producers and brokers also included in the market, but there is large number of consumers meet for exchanging the agricultural crop product commodities and producers are arrive from Amhara regional state, South people nation and nationalities and Oromia regional state, which all are adjacent and around to the cityand some of the producers are from Akakikality and Kolfekeranio sub cities.

This study is cross-sectional type as the data used for the study were collected in a single period of time (within two months, March to April 2019). Most of the data for the study were collected from consumers, traders and producers at Mealemia crop market and from farm survey through interviewing sample traders with the help of interview schedule in the sample market locations. The data are analyzed with the help of descriptive statistical tools and through analysis of market concentration ratio. The researcher doesn’t conclude that, these are the only tools to measure the performance of crop marketing system.

Theoretically, in this study, the factors like market facilities and services, access to market and transportation, availability of market information and credit services, market structure and conduct, and pricing practices that frequently affect the marketing performance were analyzed.

As the data collected from stakeholders, consumers, traders and producers survey through interviews, except the consumers and stakeholders were very realistic to interview, but most of the traders and producers were considering the interview for other governmental purpose and the study is not free from the enumerator’s bias during the data collection period. These constraints may comprise limitations on the finding of the study.

1.6. Significance of the Study

The study is expected to bring some solutions for Mesalemia crop market by indicating overall the market problems exist in marketing system that faced to producers, traders and

consumers. The Research may be also important to indicate in any endeavor improvement of the structure, conduct and performance of the existing market status related to infrastructures, market information, quality parameters, and installing Rule and Regulation by responsible Institution to control the overall the system of marketing for convenience by solving the practical, societal and institutional problem of Mesalemia crop market.

Moreover, the paper might be used as reference for further research conducting on analysis of crop market performance and related issues in the academic arena.

1.7. Organization of the Thesis

This study organized in to five chapters. The first chapter is introduction includes; back ground of the study,statement of the problem, objective of the study, Basic research question, scope and limitation of the study, significance of the study and organization of the thesis. The second chapter is literature review deals which consist ofdefinition of terms, theoretical literature review, empirical literature review and conceptual frame work of the study. The third chapter is research methodology that consists of research design, data types, sources and methods, sample and sampling techniques, methods of data analysis. The fourth chapter is result and discussion consists of descriptive analysis and econometric analysis. Finally chapter five which is consists of conclusion and recommendations form findings.

CHAPTER TWO

2. LITERATURE REVIEW

2.1. Definition of Terms

Market:-the economic institution which enable selling and buying of the defined good and services to negotiate the legitimate transfer of goods or service between them over space and time Wolday (1994).

Marketing:-is a group of business activities for direct flow of goods and services from the original producers to the final consumer in the process of distributionAshenafi (2010).

Agricultural marketing:-can be defined as the performance of all business activities involved in the flow of agricultural commodities and food productsRichard and Joseph (2005).

Marketing system:-is the concept of comprises physical distribution of economic input and products as well as the mechanism of process or coordinating production and distributionMengesha (2016).

Market actors:-means someone who is active in the crop market such as producers, middlemen, wholesalers, retailers, transporters, consumers, etc. is equivalent to market participant Dawit (2015).

Market channel:-group of people or organizations that direct the flow of crop products in Mesalemia crop market in which products from production areas to consumers Ashenafi (2010).

Market margin:-means the difference between the price paid by the crop products consumers and that obtained by the crop products producers. Margins can be calculated all along the market chain and each margin reflects the value added at that level of the market chainMendoza (1995).

Market structure can be defined as characteristics of the organization of a market, which seem to strategically influence the nature of competition and pricing behavior within the

market and structural characteristics may be used as a basis for classifying of markets may be perfectly competitive, monopolistic competitive, oligopoly and monopoly Dawit (2015).

The organizational features of a market should be evaluated in terms of the degree of seller concentration, entry barriers (licensing procedure, lack of capital, know-how, and policy barriers), degree of transparency and degree of product differentiation that condition or influence the conduct and strategies of competitors Wolday (1994).

The most widely used is seller concentration, which refers to the extent to which the economic activity is concentrated in the hands of a few large firms Kindie (2007). Other major characteristics of structure are buyer concentration, barriers to entry, and the degree of product differentiation.

Market conduct: refers to the patterns of behavior that firms follow in adopting or adjusting to the markets in which they sell or buy. Such a definition implies the analysis of human behavior patterns that are not readily definable, obtainable, or quantifiable. It explains price policy, advertising policy, output policy and legal tactics Ashenafi (2010).

Market performance: depends on conduct of (sellers and buyers) which in turn is stronglyinfluenced by the structure of the relevant market. It also shows allocated efficiency, technical efficiency, equity and innovation Mengesha (2016).

According to Wolday (1994) the S-C-P model postulates a predictable relationship between the structure of the industry and the conduct (behavior) of firms within that industry, and the performance of the firms or industry sub-system.

In developing the method or conceptual framework to study the performance of the entire marketing system and the main indicator of performance of marketing used by many economists is perfectly competitive market, i.e., the market under study is compared with a perfectly competitive market. The entire study was examined whether elements, which are characteristics of competitive in market, are present in the marketing system under studyDawit (2015).

2.2. Theoretical Literatures

Meron (2015) studied the performance and challenges of vegetable market in Kombolcha district focused on the factors that, determine the farmers to participate in the vegetables market.The cost and difficulties of transporting perishable goods within volatile markets,

using poor roads, present the traders with many risks. In order to cover these risks, traders include for themselves high profit marginsthe study had identified the determinants of participation decision on vegetables market and its effect on the quantity supply.

Age, family size, access to credit, total land owned, frequency of irrigation and frequency of extension contact was the most important and significant variable influencing the decision to Participate in vegetables market positively. However, education and non-farm income affected vegetables market participation adversely.

Therefore, strengthening the extension systems supporting Development Agents (DAs) by giving continuous capacity building or continuous trainings for vegetable producer's separately.

DAs extension work from other administrative activities increases vegetable supply to the market and proper method of handling, storing, transporting can keep quality of vegetables. Hence, it is recommended to assign efficient extension system, updating the producer's knowledge and skill with improved production, handling, storing and marketing system that enables to increase benefits of producers.

Even if the researcher discuss more on the market structure and its parameters of measurement, but the researcher gap was not consider and do not show the marketing margins and marketing channels affect the marketing performance, more over focusing on determinants to solve the production and productivity system of the vegetable supply.

Another researcher, Mengesha (2016) studied on marketing system analysis of vegetables and fruits in Amhara regional state: survey evidence from Raya, Kobo and Harbuworedas and the major findings of the study exhibited that farmer's access to main road and market was very limited due to poor road network, limited transport services and more than 70% of the respondent of his questionnaire were reopened in both vegetable and fruit production didn't have any market information and the also the researcher indicate that of the intervention of brokers influenced them to get good buyers directly.

The researcher elaborate the market integration, concentration ratio, barrier to entry and variable and data description for determinant of demand for vegetable and fruit were deeply expressed and traders' price setting strategy which will make efficient for the marketing of traders purchasing and selling strategy in the market is affected by intervention of brokers

was observed, but the gap of the researcher is on conclusion and recommendation of the of the research in market conduct that, is not indicate any solution to be done in future for the market success.

Similar study of Wolday (1994) stated that grain trade was highly concentrated in the hands of few licensed wholesalers but an increasing participation of un-licensed traders helped improved competition. The study also found that spatial price spreads were higher compared to the estimated transfer costs and cost of transporting grain from rural to urban markets were particularly high for small trucks. He stated the high market concentration, barriers to entry in terms of capital and credit, evidence of collusion in the rural market, high marketing margin and high seasonal price variation in his study area revealed the inefficiency of the food grain marketing.

2.2.1. Theoretical literatures on agricultural marketing and approaches

Market is traditionally defined as a specific geographical area where buyers and sellers meet for exchange of goods and services. The most common way we obtain goods and services we do not produce ourselves is to buy them from others who specialize in producing them. To make such purchases, buyers seek out sellers in markets. Markets are ways in which buyers and sellers can conduct transactions resulting in mutual net gains that otherwise would not be possible Ashenafi (2010).

As of Kotler and Armstrong (2003) marketing is a societal process, by which individuals and groups obtain what they need and want through creating, offering, and freely exchanging products and services and value with others. In general, it is an institutional arrangement for buying and selling of products.

The most observable features of a market are its pricing and exchange processes. This investigation adopts the product definition of market. A market is also defined to include people, money and willingness to buy in this context, market is another name for demand Andargachew (1990).

2.2.2. Marketing efficiency

As Crawford (1997) stated an efficient marketing system creates movement of goods from producers to consumers at the lowest cost consistent with the provision of services that consumers demand.

Efficiency is an important index of performance of agricultural marketing. The usefulness of a particular method to estimating marketing efficiency mainly depends upon the purpose for which evaluation is being made. There are numerous ways of estimating the performance of agricultural marketing. The characteristics of performance vary based on the measurability and in the implicit weighting given to each society Scarborough and Kydd (1992).

2.2.2.1. Market supply

Marketed supply refers to the amount actually taken to the markets irrespective of the needs for home consumption and other requirements. Whereas, the marketable surplus is the residual with the producer after meeting the requirement of seed, payment in kind, and consumption by farmer Wolday (1994).

2.2.2.2. Marketing System

Marketing system can be regarded as a multi-layered sequence of physical activities and of transfers of property rights from the farm-gate to the consumerAshenafi (2010).

2.2.2.3. Marketing channel

Marketing channels are pathways taken by goods as they flow from points of production to points of consumption. Depending on the state of a given economy, the pathways could be direct and short or indirect and long. The decision to use direct or indirect distribution is affected by the number and concentration of potential customers in the market, the volume of the product and costs associated with distribution operations and warehousing. The analysis of marketing channels is intended to provide a systematic knowledge of the flow of the goods and services from their origin (producer) to their final destination (consumer) Dawit (2015).

2.2.3. Approaches to the study of agricultural marketing problems

Studying and analyzing the system of agricultural market and marketing performances require different approaches for analyzing marketing performance; structure, conduct and functioning are the major and most commonly used approaches are functional, institutional (organizational) and the commodity approaches which combine the previous two approaches,

and the mixed systems approach are a few examples of the different ways of analyzing (understanding) marketing Mendoza (1995).

2.2.3.1. Functional approach

Is study marketing is to break up the whole marketing process into functions specialized activities performed in accomplishing the marketing process Kohls and Uhl (1985).

The approach helps to evaluate marketing costs for similar marketing middlemen and or different commodities and costs and benefits of marketing functions and this approach promotes careful identification of corrective measures as it pays special attention to particular functions Ashenafi (2010).

2.2.3.2. Institutional approach

The institutional approach to the studies on agricultural marketing problems pays attention to the nature and characteristics of the various middlemen and related agencies and organization of marketing machinery Kohls and Uhl (1985).

The institutional analysis is based on the identification of the major marketing channels and it considers the analysis of marketing costs and margins Mendoza (1995).

2.2.3.3. Commodity Approach

This approach is said to be the most practical as it helps to locate specific marketing problems of each commodity and improvement measures, that follows the commodity along the path between producer and consumer and is concerned with describing what is done and how the commodity could be handled more efficiently Richard and Joseph (2005).

2.2.4. Methods of Evaluating Efficiency of Agricultural Marketing System

Evaluation of the efficiency with which the agricultural marketing system operates forms the crux of analysis of marketing problems, structure as well as behavior and quantitative evaluation of the efficiency of the marketing system requires concepts, theories, methods, data and workable frameworks and extremely difficult tasks but in order to study the functioning of markets many researchers have applied the Structure-Conduct-Performance (SCP) paradigm Kohls and Uhl (1985).

2.2.4.1. Structure-Conduct-Performance

The structure-conduct-performance (SCP) approach was developed in the United States as a tool to analyze the market organization of the industrial sector and it was later applied to assess the agricultural marketing system.

Wolday (1994) applied the neo-classical theory and the structure-conduct-performance paradigm to explain the efficiency of the food grain marketing system in Ethiopia. The relationships between the structure-conduct-performance (SCP) parameters can be explained. The interrelationship between these factors and their influence on firm's behavior vary within the society and will change through time, that the structure-conduct-performance model (SCP), which appears to provide significant part of the theoretical support for the policy formulation. The S-C-P approach analyses the relationship between functionally similar firms and their market behavior as a group and is mainly based on the nature of various sets of market attributes, and relations between them and market performance Scarboroug and Kydd (1992).

2.3. Empirical Literatures

Food item markets in less developed countries (LDCs) are seasonal and highly unstable. These features are primarily responsible for market failures in physical and economic access to food. However, physical access has improved with investment in market infrastructure, market regulation and adoption of new seed- fertilizer technology since the mid- 1960s. Nevertheless mass poverty, frequent droughts with temporal fluctuations in prices and production, and regional differences in food grain production have affected economic access to food in LDCs Welelaw (2004).

Similarly in Astewel (2009) quantity of paddy produced, access to market information, extension contact and total livestock values had affected positively the decision to participate in rice marketing. For the second-stage OLS results, the inverse mills ratio (lambda) for the level of rice sales was significant, implying that selection bias would have been resulted if the level of sales in rice had been estimated without taking into account the decision to participate. Quantity produced and Education level were positively associated with the level of rice sales, and family size is associated negatively.

Wolday (1994) identified the major factors that affect the marketable supply of grain (teff, maize and wheat) of farm households at Alaba-Siraro district. He examined the relationship of marketable supply and the determinant factors using cross sectional data. Factors that have been identified to affect the household level of grain marketable supply include; size of output, family size, and market access. The method adopted to capture the influence of the above variables on the marketable supply of food grain was the multiple regression analysis. Distance to market negatively affected marketable supply of food grain.

The study was conducted by Abrham (2009) in Lumewereda, the structural organization of the grain marketing system appeared to be competitive for teff and wheat. The study found the market conduct, the behavior that traders manifest in issues like price setting, was found to be influenced by factors like timing of loans return by farmer, the presence of informal traders, and uncertainties created by price fluctuations in the terminal markets. Contrary to Wolday (1994) he stated that the competition from the informal traders also did not result in a real increase in income of producers'; but has just made the market unstable and created unprofitable environment for all.

Gebremeskel et.al (1998) stated in his study on constraints of performance in the Ethiopian Grain market, the degree of inequality in market share at the local market level varies from market to market and from crop to crop; the computed Four-firm Concentration Ratio (CR4), however, does not indicate a high degree of market domination by large traders. For most markets and crops the CR4 is less than 33%.

The above mentioned studies provide useful information on the organization and functioning of the crop market system. However, the previous studies did not give a complete picture, because of their limited area coverage. This study attempted to bridge the current information gap on the crop marketing system, and the factors affecting crop market supply in Mesalemia crop market in Addis Ababa.

2.4. Conceptual Framework of the Study

There many crop market in Addis Ababa but the most oldest and complicated to understand and densely populated market actors are participating in purchasing and selling of crop products in every morning. Market supply quantity at Mesalemia crop is the numerous links that connect all actors and transactions involved in the movement of agricultural products

from the farm to the consumer. Transaction of products not issued by the receipt and mostly without license to hide the income tax from the government, but there is no controlling mechanism due to the case of many too much buyers from the city and from other regional states and too much both legal and illegal sellers at the market. Mesalemia crop market has poor infrastructure of road, storage and other facilities accompanied with low availability of market information and irregular distribution of supply with high demand but instable price generally the market need be supported by privet merchants, government and with concerned bod and institution to have better market performance.

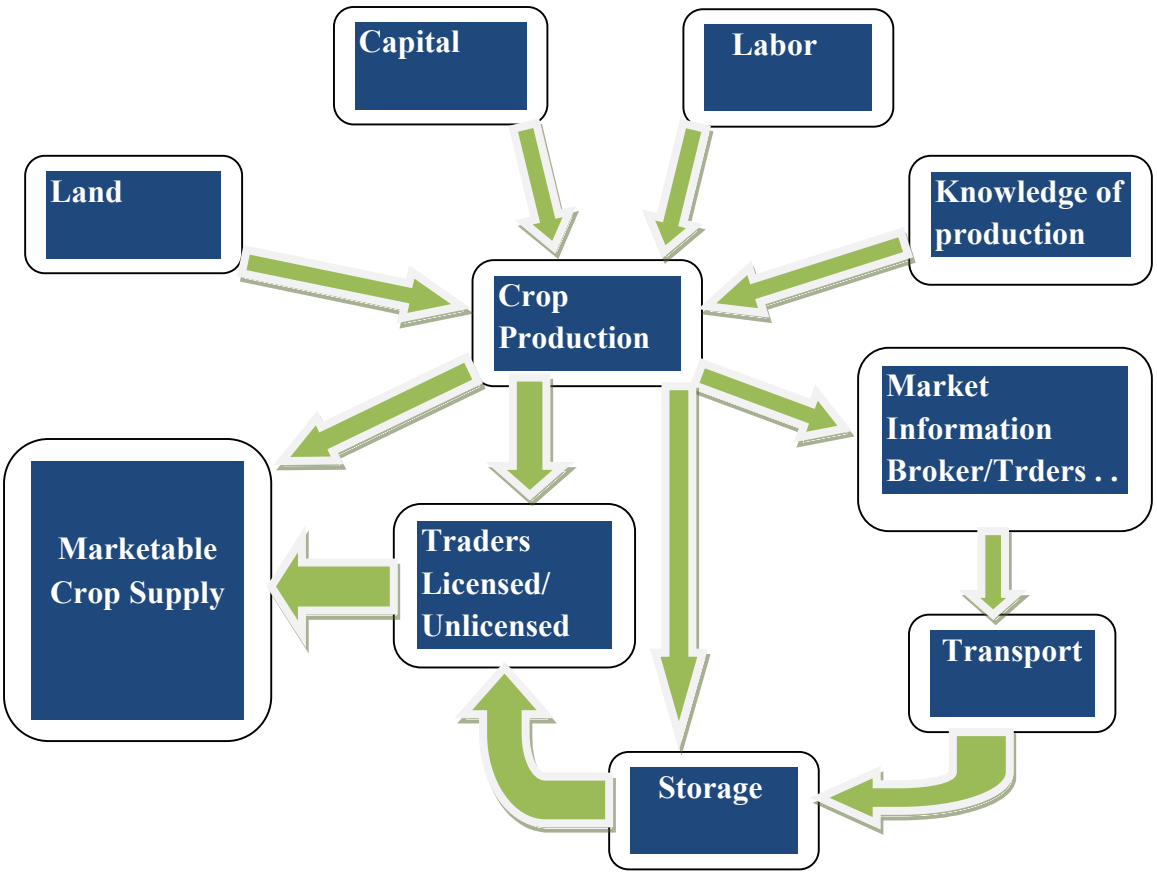


Figure2.1.Inter-connection of variables

Source: MengeshaYayo, 2016

CHAPTER THREE
3. RESEARCH METHODOLOGY

3.1. Description of the study area

Addis Ababa city administration has ten sub cities and one of the most business area of all sub cities is Addis ketema sub city has comprised of 10 woredas, that is a very densely populated. Addis ketema sub city which has 144,954 male, 152,839 female and total populations is 297,793. The total area coverage of Addis Ababa city is 519.49 km^2, out of the total area Addis ketema sub city is a very small which covers 8.64 km^2 and its total population density is 34,466.78 per km^2.

The study was focused only in wereda4, which is densely populated approximately above 2,500 market actors including producers, consumers and traders (wholesalers and retailers) are legally registered. But too many unregistered illegals traders and brokers also included in the market, but there is large number of consumers meet for exchanging the agricultural crop product commodities, but some producers are produce crop at the peripheral sub cities like Akakikality and Kolfekeranio, but most producers are arrive from Amhara regional state, South people nation and nationalities and Oromia regional state, which all are adjacent and around to the city.

3.2. Research Design

It is the conceptual structure with in which the cross-sectional research design was expected to study. It constitutes a blue print for the collection, measurement and analysis of data. Saunders et al (2007), Research design is the general plan of how the research questions would be answered.

The research design for the study was survey research design which involved on gathering primary data and information by using questionnaire that were tested by conducting a survey research on 200 respondents of various demographical structures based on factual and reliable data from sample that can be generalized from all market actors and stakeholders of the study area.

3.3. Data types, Sources and Methods of Collection

3.3.1. Data types and Sources

The study was based on both primary and secondary data. The primary data information was generated from qualitative and quantitative type of data and the research was done by interview of the respondents through questionnaire and the secondary data and information was obtained from internal and external sources.

3.3.2. Methods of data Collection

The data was collected by using survey methodby using semi structured questionnaire by the use of personal interview and collecting from sample individuals from all market actors and stakeholders.

The steps that, was followed the methods before and after the data collection process are listed sequentially

3.3.2.1. Primary data Collection

The numbers of sample were 200, based on the strata different questionnaires were prepared and five data collectors were selected as their relativeness and effectiveness to the work. From the population of Mesalemia crop market the sample individuals was selected randomly from all market actors; producers, traders and consumers and from stakeholders; experts, employees and officials.

3.3.2.2. Secondary data

The secondary data and information was collected from Addis ketemawereda 4 trade and industry officeand revenue office of the annual reports and the related documents that are scientifically maintained by concerned officials, published books, Journals, reports and unpublished reports, internet.

3.4. Sample and sampling techniques

Mesalemia have large amount of population in the market either directly or indirectly participating in the marketing activities the market actors those participating in the marketing activities market there are around 2,500 traders and unknown number of producers and consumers.

The study was planned to gather data sample from population using probability sampling design of multi-stage sampling technique with two stages, in the first stage is stratified based

on trading tribute and second stage random proportional to sampling technique, those are market actors; **producers** (producers are produce crop at the peripheral sub cities from Akakikality sub city and Kolfekeranio sub city was taken ten samples from each sub cities at farm level and the most producers are arriving from adjacent and around to the Addis Ababa city, but the sample will take from the market not from the farm of the states; these are Oromia Regional State, Amhara regional state and South people nation and nationalities ten samples was taken from each regional states and total fifty samples was obtained from producers), **traders** (from wholesalers and retailers fifty samples was taken from each and total hundred samples was obtained from traders), **consumers** (twenty consumers was taken as the sample from the Mesalemia crop market) and **stakeholders** from the Addis ketema sub city Mesalemiaworeda 4 administrative trade office and revenue office(ten samples was taken from each sub division of the stakeholders like; officials, experts and institution managers or association representatives of the Mesalemia crop market total thirty samples was obtained fromstakeholders.

Table 3.1.Summary of the samples population

No	Types of stratified samples	Participant in market	Proportional rate	Proportional numbers of samples from each strata
1	Producers	625	12.5	50
2	Traders	1250	12.5	100
3	Consumers	250	12.5	20
4	Stakeholders	375	12.5	30
	Total	2,500		200

Source: Own data, 2019

Due to the time and financial limitation, and the nature of the population density, the researcher was preferred the sample determination method that developed by Carvalho (1984), as it is cited in the table below the population size is between 1201-3200 the largest sample size was expected be two hundred (200) samples that was selected for thestudy ofanalysis of Mesalemia crop market performance. The following table shows the breakdown of population range the small, medium and large sample that can be drown from the study.

Table 3.2.Sample Size Determination of the Study

Population size	Sample size		
	Small	Medium	Large
51-90	5	13	20
91-150	8	20	32
151-280	13	32	50
281-500	20	50	80
501-1200	32	80	125
1201-3200	50	125	**200**
3021-10000	80	200	315
10001-35000	125	315	500
35001-150000	200	500	800

Source: C. MarinhoCarvalho (1984).

3.5. Methods of data analysis

After data collection the study was decided to use both descriptive, econometric data analysis by different statistical tools like tables and figures. Econometric analysis regression model was examined the effect of independent variable and dependent variable and the descriptive analysis and econometric analysis regression model was based on SPSS software version 21.

3.5.1. Econometrics model

There are several occasions where the variable to be modeled is limited in its range. Because of the restrictions put on the values taken by the regressed, such models can be called (MLR) multiple linear regression models (Gujarati, 2003).

The use of Tobit models to study censored and limited dependent variables has become increasingly common in applied social science researches. Tobit is an extension of the Probit model and it is one approach to dealing with the problem of censored data (Gujarati, 2003). Statistically, we can express the Tobit model as

$Yi = \beta 0 + \beta iXi + Ui$ if RHS > 0

$Yi = 0$ otherwise

Where RHS = right-hand side. Note: Additional X variables can be easily added to the model.

Where Yi = market supply of crop (dependent variable)

$\beta 0$ = an intercept

βi = coefficients of i^{th} independent variable

Xi = independent variable

Ui = unobserved disturbance term Estimation of the whole system of supply function would give more efficient estimates, but excluding inconsistencies or biases. In this context, the dependent variable of the supply function is censored by unobservable latent variable influencing the decision of whether or not to supply crop standard estimates biased.

Multicollinearity test

The situation where the explanatory variables are highly inter correlated is referred to as multicollinearity, i.e when two explanatory variables are highly inter correlated it becomes difficult to disentangle the separate effects of each of the explanatory variables on the dependent variable (Maddalla, 1977). The existence of this situation in this study is tested using the methods of variance inflation factor and contingency coefficients.

Tolerance (TOL) and Variance Inflation Factor (VIF): this method is used to detect multicollinearity of continuous variables. As Ri2 increases towards one that is as the collinearity of repressor Xi with other repressors increases its variance inflation factor (VIF) also increases and in the limit, it can be infinite. The larger the value of VIF, the more troublesome or collinear is the variable Xi.

$TOL= (1- R i^2) = 1 /VIF$

As a rule of thumb, if the VIF of a variable exceeds 10 (this will happen if Ri2 exceeds 0.90), that variable is said to be highly collinear (Gujarati, 1995). Tolerance (TOL) can also be used to detect multicollinearity. Clearly, TOL is one if Xi is not correlated with the other repressors, whereas it is zero if it is perfectly related to other repressors.

3.5.2. Definition of variables, measurements and hypothesis

Definition of variables

In the course of identifying factors influencing grain supply, the main task is to analyze which factor influences and how? Therefore, potential variables, which are supposed to influence the decision to participate and quantity of grain supply, need to be explained. Accordingly, the major variables expected to have influence on the decision to participate and on volume of supply are explained as follows

The dependent variables

Supply of crop market (Y): It is the dependent variable, and it is the marketable actual supply of crop to the market in 2010-11 harvest seasons which is measured in quintals.

The independent variables:

Age of the producers(X1): This variable can be measured using formal years of the household head and hypothesized to affect marketable supply positively. This is due to the fact that a farmer will more responsible for better production. But most literature concludes that the young than the aged one can produce more, and as the age increase the increase marketable supply will decrease.

Family size (X2): It is a continuous variable, measured in man equivalent i.e. the availability of active labor force in the household, which affects farmer's decisions to participate in market. However, family size is expected to have positive impact volume of sales, but larger family size requires larger amounts for consumption, reducing marketable surplus.

Education back ground (X3): This variable will be measured using formal schooling of the household head and hypothesized to affect marketable supply positively. This is due to the fact that a farmer with good knowledge can adopt better practices than illiterates that would increase marketable supply.

Nonfarm income (X4): It is a continuous variable which refers to part of the total amount of income measured in birr that is earned from nonfarm activities which are not related to agriculture. Therefore, in this study it is hypothesized that non-farm income affects crop supply to the market.

Total land holding(X5): This variable is a continuous variable measured in terms of number of hectares the farmer has and is expected to affect the household level of crop products supply positively. This is because, producers who own big area holding can produce more than a producers who own less area and thus to supply more to the market.

Distance from the market (X6): It is a continuous variable that will be measured in kilometers from the household residence to the nearest market center. The closer to the market the lesser would be the transportation cost and time spent and the more is the quantity of marketable supply.

Extension service (X7): It is a continuous variable, measured the frequency of the advice household head has contact with a development agent. Extension is expected to have positive effect for quantity supplied through its stimulation of production and productivity. Farmers that have frequently contact with DAs will have better access to information and could adopt better technology that would increase their marketable supply of crop.

Mode of transportation(X8) It is a continuous variable, measured by the use different transportation system to bring product in the market which will make more available if the supplies use vehicles.

Production per hectare (X9): It is an economic factor and continuous variable that can affect the household level of marketable supply and measured in quintals per hectare and assumed to affect the marketable supply positively, because a farmer that obtains high yield can supply more to the market than a farmer who has fewer yields.

Input utilization (X10): It is an economic factor and continuous variable that can affect the household level of marketable supply and measured the amount of the products change as the input production is increase total output per unit area.

Farming experience of the producers(X11): This variable can be measured using informal schooling of the household head and hypothesized to affect marketable supply positively. This is due to the fact that the more experienced the farmers; the more can adopt better practices than fewer experiences as the result would increase marketable supply.

Access to market information(X12): This variable is not measured and it is dummy variable either but it is difficult to conclude the market information service that

supplied,collected facts and data about price, demand and supply for marketable specific crop products.

Table 3.3.Definition of variables, measurements and hypothesis

No	Variables	Measurements	Hypothesis
1	Age of the producers	Years	Negative effect
2	Number of family	Number	Positive effect
3	Education back ground	Years	Positive effect
4	None farming activities	Dummy	Negative effect
5	Total land holding	Hectare	Positive effect
6	Distance from the market	Kilometers	Negative effect
7	Extension advice	Frequency	Positive effect
8	Mode of transportation	Continuous	Positive effect
9	Production/hectare	Quintals	Positive effect
10	Input utilization	Percent	Positive effect
11	Farming experience	Years	Positive effect
12	Access to market information	Dummy	Negative effect

Source: Own data, 2019

CHAPTER FOUR

4. RESULT AND DISCUSSIONS

This chapter is the study findings and gives a detailed discussion on the findings. It begins by discussing findings on demographic characteristics descriptive results of socio-economic, institutional and market characteristics in relation to supply of Mesalemia crop market participation and channels of marketing outlets. It also presents empirical results of the multiple linear regression models providing an in-depth explanation of significant variables.

4.1 Descriptive Analysis

4.1.1. Production and characteristics of the producers

4.1.1.1. Demographic characteristics of the producers

In an agrarian society, household members are the major source of labor for agricultural activities. The household characteristics such as age, sex, educational levels etc. differ from one household to the others. Among the total 50 sample respondent farmers, the majority of crop producers, they involved primarily in production of both teff and wheat crops.

Out of the 50 sample respondents of the producerswere 92% males and the rest 8% were female. With regard to marital status from the total sample respondents 6%, 86%, 6% and 2% were single, married, divorced and widow respectively. The Regarding religion 12.0%, 38.0%, 22.0%, and 28.0% of the respondents is Muslim, orthodox, protestant and catholic respectively.

With respect to the Educational status, 46%, 48% and 6% of the sample respondents were religious school, secondary school and college educated respectively. The family size of the from the total sample respondents 6%, 32%, 14%, 26% and 22% were one, two, three, four and above four family member respectively.

Age of sample households ranged from 25 to 70 years old, out of the total sample respondents 4%, 36% and 60% age ranged from 30 to 39 years old, 40 to 49 years old and above 50 years old respectively but regarding to the farming experience from the sample of respondents 8.0%, 12.0%, 22.0%, 22.0% and 36.0% were starting from 1 to 5 years, 6 to 10 years, 11 to 15 years, 16 to 20 years and above 21 years respectively. Table 4.1 depicted the details of these characteristics for the sampled households in the study areas.

Table 4.1.Demographic characteristics of the producers

		Frequency	Percent
Sex of the household	Male	46	92.0
	Female	4	8.0
Age of the household	30-39	2	4.0
	40-49	18	36.0
	above 50	30	60.0
Religion of the household	Muslim	6	12
	Orthodox	19	38
	Protestant	11	22
	Catholic	14	28
Marital status of the household	Single	3	6.0
	Married	43	86.0
	divorced	3	6.0
	widowed	1	2.0
Family size	1	3	6.0
	2	16	32.0
	3	7	14.0
	4	13	26.0
	above 4	11	22.0
Education back ground of the household	Secondary School	3	6.0
	Religious school	23	46.0
	College Education	24	48.0
Farming experience	1-5	4	8.0
	6-10	6	12.0
	11-15	11	22.0
	16-20	11	22.0
	Above 21	18	36.0

Source: own data, 2019

4.1.1.2. Farm and nonfarm experience and income

Farming experience for total sample households ranged from 15 to 50 years. There is enormous demand for cash to cover household expenses as education, clothing, social contributions, tax, health service, and other emergency and an average. To spend for these expenses, the households need additional income. It is possible only when the household member contribute family labor to earn income from nonfarm sources. Out of the total sample households 83% were involved in nonfarm activities.

The farmers are experienced with different type of activities out of farming activities together with farming and main nonfarm activities that the sample respondents participated in were petty trading, handicrafts, carpeting, Guarding, driving and daily laboring.

4.1.1.3. Farm characteristics

4.1.1.3.1. Landholding of the sample of the producers

Adequate size of landholding is a basic factor in the process of boosting productivity and production. As elsewhere in Ethiopia the farmers in the study area have a land fragmented and small in size and the land size of sample households varies from 2 to 11 hectares.

4.1.1.3.2. Access to services

The institutional services are required to increase agricultural productivity through the adoption of new technology and providing updated information, extension services, input availability and access to transportation servicesare among the institutional services which support farmers in boosting productivity and production.

4.1.1.3.3. Access to extension services

The survey showed that the sample households have a better access to extension services by frequent visit of development agents and having built farmers training centers in nearby. With regard to the frequency of extension contact during the 2011 cropping season among the total respondents 32.1% had one contact per week, 17% had twice contact per month, 8% one contact in a month and the rest 43.7 per cent had contact any time they wanted. The average distance to the nearest farmers training center was 1.9k.m.

Table 4.2: revealed that on the 33.3%, 23.3%, 16.7%, 16.7% and 10.0% of the sample households had get advice on chemical applications,post-harvest handling,crop choice, fertilizer applications andother by the extension agent during the contact in 2011 cropping season.

Table 4.2. Advice of extension agent for producers

What type of advice did you receive?		Frequency	Percent
	Chemical applications	14	33.3
	Post-harvest handling	11	23.3
	Crop choice	9	16.7
	Fertilizer applications	9	16.7
	Other	7	10.0
	Total	50	100.0

Source: own data, 2019

4.1.1.3.4. Access to transportation services

Table 4.3 depicted that 43.3%, 30.0% and 26.7% of total sample of the farmers were use head/back loading, vehicle and pack animals respectively to take crop product from farm to market.

Table 4.3 Access to transportation Services

Which type of transportation mostly accessed		Frequency	Percent
	Head/back loading	19	43.3
	Vehicle	16	30.0
	Pack animals	15	26.7
	Total	50	100.0

Source: own data, 2019

4.1.1.3.5. Access to market and market information

Most of the sample farmers have to walk a long distance from home to the nearest market center to sell their agricultural products. Access to physical market infrastructure is fairly low in the villages thus farmers have to take their commodities to the Mesalemia market centers and the average distance from home to the nearest market center was found to be 8.9k/m.

Access to market information is extremely limited in the Ethiopian grain market. At the producer level, farmers have very limited information on price prevailing even in nearby markets (Wolday, 1994). It is assumed that producers and traders who have market information can decide how much to produce and market. However, Table 4.6 revealed that the producers had get market information from the trader, Cooperative and Personal

observation 53.3%, 30.0% and 16.7% respectively from the total sampled about the supply, demand andprice information about the nearby market price before they sold their crop.

Table 4.4.Access of information supply, demand & price in the market

How did you get information on supply, demand & price of crop in other markets?	Frequency	Percent
Trader	23	53.3
Cooperative	15	30.0
Personal observation	12	16.7
Total	50	100.0

Source: own data, 2019

4.1.1.3.6. Access to improved input

Improved agricultural inputs help to increase productivity and thereby increase production and supply. The survey revealed that 84.8%, 88.3% and 65.5% of the total sample households have used Urea, DAP and improve d Seed respectively.

4.1.2 Corp marketing system

4.1.2.1. Crop market structure

The structural organization of the crop market in the study area was assessed to identify if it is competitive enough to fairly benefit both producers and the grain traders. Market structure includes the characteristics of the organization of a market that appear to exercise a strategic influence on the nature of competition and pricing within the market (Bain, 1968, in Wolday, 1994). The most relevant aspects of market structure are; marketing participants, degree of sellers and buyers concentration and barriers to entry.

4.1.2.1.1 Major actors and roles of participants

A variety of market actors are involved in moving crop from producers to consumers. The most important actors of crop marketing in Mesalemia at woreda 4 particular from different region in general are listed as: producers(farmers), cooperatives(primary and Union), traders processors and consumers. Primary actors include farmers, who produce and sell crop; to the cooperatives, to the processors, to the traders, including wholesalers, retailers and assemblers and sell to other traders; and to the consumers who purchase the final good in rural or urban markets.

4.1.2.1.2. Degree of market concentration

Market concentration refers to the number and relative size distribution of buyers and sellers in a market. Concentration is felt to play a larger part in the determination of market behavior within a market since it affects interdependence of action among firms. The greater the degree of concentration, the greater the possibility of noncompetitive behavior occurs such as collusion existing in the market. Concentration ratio measures the per cent of traded volume accounted for by a given number of participants and is designated by the formula:

$$C = \sum_{t=1}^{r} Si \qquad t = 1, 2, 3, 4 \ldots r$$

Where: C = concentration ratio,

Si = the percentage market share of i^{th} firm, and

r = the number of large firms for which the ratio is going to be calculated

There are a number of measures of market concentration but the most commonly used is the market concentration index, which measures the percentage of traded volume accounted for by a given number of participants. The concentration ratio is expressed in the terms CRx, which stands for the percentage of the market sector controlled by the biggest x firms. Four firms (CR4) concentration ratio is the most typical concentration ratio for judging the market structure (Kohls&Uhl, 1985).

The degree of market concentration was estimated for the licensed crop traders of Mesalemia using the four firm concentration ratios. The four firm concentration ratios were computed using the above equation. The information of the prices and amount of crop traded annually market report of the last year were obtain from the wereda revenue office and the total sales of crop product at Mesaemia were estimated about 1,113,636 quintals from the list of traders for tax payment and from the interviews conducted with the sample traders.

The larger four traders sale were 19,488.63 quintals, 30,624.99 quintals, 38,977.26 quintals and 97,999.96 quintals the largest wholesalers (traders) handled annually only 1.75%, 2.75%, 3.5% and 8.8% respectively and the total sale were 187,090.8 quintals. The four largest traders from the survey the concentration ratio was computed 16.8 of the total volume of the

crop purchased by the sample traders at Mesalemia. When the CR4 is over 50 it is generally considered a tight oligopoly, the CR4 is between 25 and 50 it is generally considered a loose oligopoly and the CR4 is fewer than 25 it is generally considered no oligopoly at all.

Mesaemia crop market concentration (CR4) is below 25 so, is not oligopoly therefore the market concentration would be considered as a nearly perfect competitive market. The result was similar to G/meskel et.al (1998) in which he stated that at the local market level, for most markets and crops the CR4 is less than 33.

4.1.2.1.3. Barriers to entry

The barriers to entry into the crop market reflect the competitive relationships between existing traders and potential entrants. If the barriers to entry are low, new traders can easily enter into crop markets and compete with established traders. Trade barriers have often laid the ground work for market imperfection. Whether by intent or not, many regulatory actions by state and woreda trade and revenue offices have no result of restricting freedom to entry and the free flow of goods and services (Kohls and Uhl, 1985).

The major barriers to entry in to crop trade at Measlemia included lack of working capital, price information and high competition with unlicensed traders. Lack of Capital Lack of capital is the major problem in crop marketing. It is the real barrier to enter into the crop markets.

In the survey about 96% of the sample traders respond that major problem to run their business was lack of capital and high taxation rate. Although the working capital required was reported to vary depending upon the price level and quantity of crop to be purchased, high amount of initial working capital was required to compute with wholesalers, collectors and the emerging marketing cooperative and with unlicensed retailers.

To enter in to the market more capital is needed because they have to purchase more crop and they have to pay cash on hand at the time of purchase. In addition high capital is required for store construction and for appropriate and adequate storage facilities. In these cases, capital requirement discourage entry into crop trading. Even if there was credit access from Addis microfinance the amount given was very small for the retailers, wholesalers and assemblers.

Marketing information can help prediction strategy, plan and act conveniently, rationally and efficiently, thus reducing business risk, transaction costs and enabling market participants to explore business opportunities. About 67% of the sample traders stated willingness to pay for information cost, if there are well organized and transparent information center. However, in the sample markets, all traders had information through different sources. Crop traders rely on contact with brokers and other traders to obtain market information regarding price in other markets.

4.1.2.2. Crop market conduct

Market conduct refers to the patterns of behavior that firms follow in adopting or adjusting to the markets in which they sell or buy Gebremeskel, et.al (1998). In this report conduct of the crop market is analyzed in terms of the trader's characteristics, price setting and purchasing and selling strategies.

4.1.2.2. 1.Characteristics of traders

The characteristics of sample traders are presented in Table 4.5. Out of the 100 sample respondents were 43% and 57% were females and males respectively. With regard to marital status from the total sample respondents 13% and 87% were single and married respectively. The Regarding religion of the sample respondents of the traders 23.0%, 59.0% and 18.0% of the respondents were Muslim, Orthodox, and Protestant respectively. With respect to the Educational status, 46%, 48% and 6% of the sample respondents were religious school, secondary school and college educated respectively. The family size of the from the total sample respondents 6%, 32%, 14% and 26% were one, two, three and four family member respectively.Age of sample households ranged from 25 to 70 years old. Family size of the sample respondents 4%, 36% and 60% age ranged from 30 to 39 years old, 40 to 49 years old and above 50 years old respectively.

Table 4.5. Demographic characteristics of traders

		Frequency	Percent
Sex of the household	male	57	57.0
	female	43	43.0
Age of the household	20-29	8	8.0
	30-39	36	36.0
	40-49	49	49.0
	above 50	7	7.0
Religion of the household	Muslim	23	23.0
	Orthodox	59	59.0
	Protestant	18	18.0
Marital status of the household	single	13	13.0
	married	87	87.0
family size	1	24	24.0
	2	42	42.0
	3	18	18.0
	above 4	16	16.0
Education back ground of the household	illiterate	15	15.0
	Primary School	25	25.0
	Secondary School	26	26.0
	Religious school	17	17.0
	College Education	17	17.0

Source: own data, 2019

As the major agricultural production is based upon the summer rainy season, storage plays an important role in market performance and traders' marketing operations. About 58% of the sample traders used to store when supply was high, with a higher percentage of wholesalers store more. From the sample traders 42% of the traders own store and 12% rented store permanently. The rest 46% of the traders used to rent storage space temporarily. All of the wholesalers own weighing scale, cell phone and radio.

Out of the 100 traders only 54 use vehicle modes of transportation and only 4 wholesalers have their own vehicle for transportation. The average initial capital for the source of the working capital were obtain from own, loan and share were respond by samples were 73%, 8% and 19 % respectively. The average current working capital of the traders was 209,366.00(two hundred nine thousand three hundred sixty six birr) which is huge capital.

4.1.2.2.2. Traders purchasing and selling strategy

The method of price formation is critical importance. About 64%of the sampled traders set purchasing and selling price themselves, 36%of sample traders reported that they set price by colluding with other traders and the traders set price by negotiation. Consequently, price information is important information for traders' marketing strategies. In order to obtain market information on prices, supply and demand, traders follow an average of 2 markets on a weekly basis.

In light of traders' reliance upon personal and commercial contacts with farmers for obtaining market information, recent telecommunication changes have played an important role in traders' access to information. Among those traders who own cell phones, all traders reported that their cell phones have had an important impact upon their commercial operations. It enables traders to search for prices over a greater number of markets and to have more market contacts and sell in more markets. This suggests that the majority of traders' operations occur on their principal markets, with a more limited number of traders trading between markets. Of all the traders and assemblers change their purchase and sales markets the most frequently followed by wholesalers.

The critical period for crop products purchase was immediately after harvest during December to January.

Wholesale traders primarily use intermediaries to purchase from farmers and other traders out of the wereda, rather than purchasing directly.

The trader's purchase the crop supplies from the producers were by themselves, through broker and Commission agent were responded 64%, 14% and 22% respectively. According to the survey intermediaries are important for saving time to the traders, for buying at lower prices and to get higher quality crop products.

Out of the total samples 87% of the sample traders claimed that prices of grains in 2011 increased compared to the previous year and to the contrary supply increased, but out of the total the samples they respond the supply of crop in 2011 compared to the previous year decreased and no change were 70% and 30% respectively.

4.1.2.3. Crop market performance

Market performance was determined by using marketing costs and marketing margins. Marketing costsis movement of every function or services involve cost from crop products to consumers and marketing margins is the difference between the price paid by consumers and the price received by the crop producers for an equivalent quantity of product. Prices at successive stages of marketing at the producers, wholesalers and retailers were compared. Marketing performance can be analyzed by different indicators.

However, for this study at Mesalemia crop market, marketing margin and channel comparison were only used.

Table 4.6. Constraints and Opportunities in Mesalemai

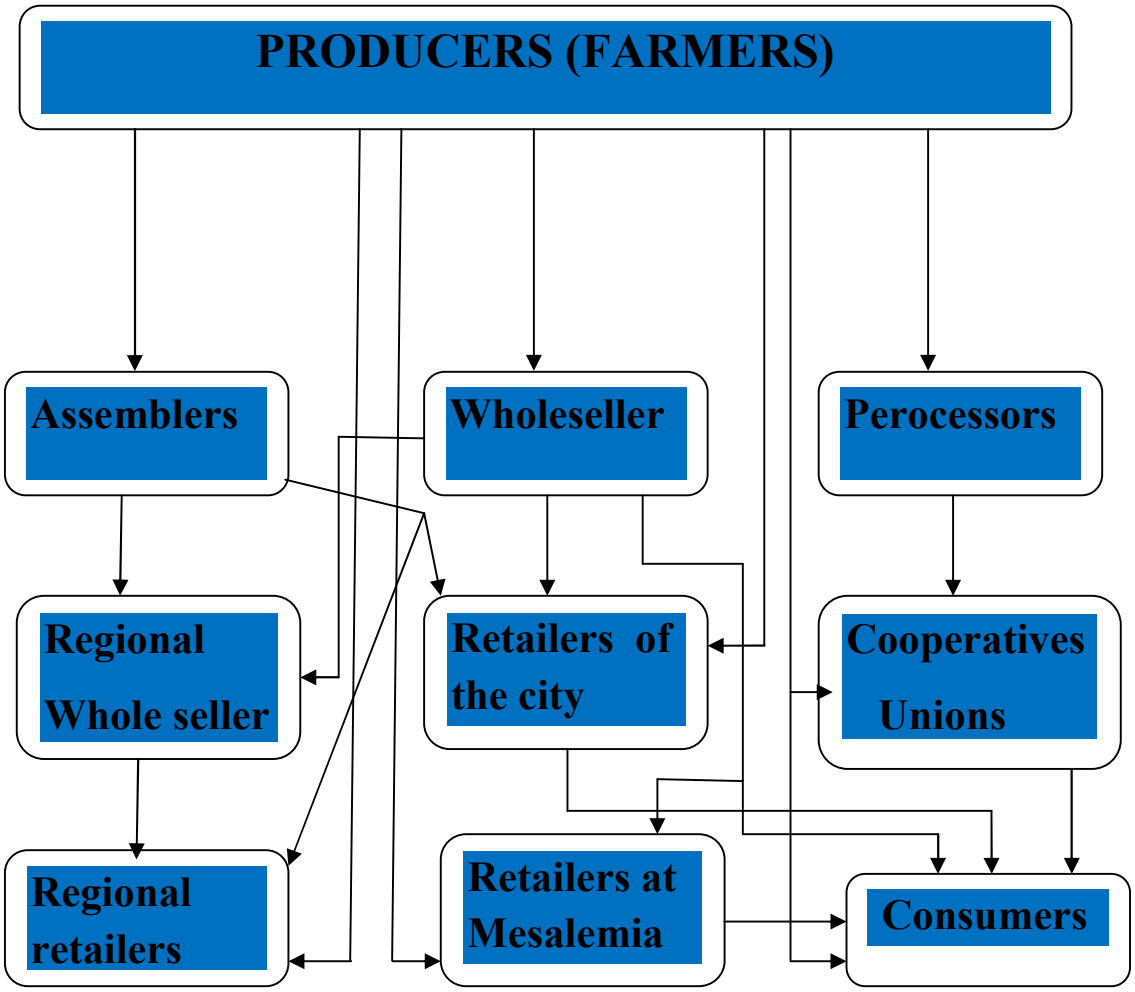
No	Constraints	Opportunities	Remark
1	High competition of licensed trader with unlicensed trader	Existence of competitive market many buyers and sellers in the market	
2	Accurate market information		
3	Access to credit		

Source: own data, 2019.

4.1.2.3.1. Marketing channels

The marketing channel in Mesalemia crop market connects farmers, traders and consumers. The crop market channel was drawn based on the data collected from the interview. The crop flow begins with the farmer who after harvest decides how much he wants to store for consumption and seed and sells the remaining product to traders or consumers. The routes that products pass through from producer until it reaches the ultimate consumers represent the organizational structure of the crop market.

The actual marketing channel is more complicated, but the main marketing channels of the products markets in terms of quantity flow from producer to consumer through different intermediates.



Source: Own data, 2019.

Figure 4.1. Crop marketing channel at Mesalemia crop market

1. Producer ⇨ Assemblers ⇨ Wholesaler ⇨ Retailer ⇨ Consumer
2. Producer ⇨ Assemblers ⇨ Wholesaler ⇨ Consumer
3. Producer ⇨ Wholesaler ⇨ Retailer ⇨ Consumer
4. Producer ⇨ Assemblers ⇨ Retailer ⇨ Consumer
5. Producer ⇨ Processers ⇨ Consumer
6. Producer ⇨ Assemblers ⇨ Out of Addis Ababa
7. Producer ⇨ Wholesaler ⇨ Consumer

8. Producer ⇨ Retailer ⇨ Consumer

9. Producer ⇨ Cooperatives (unions) ⇨ Consumer

10. Producer ⇨ Consumer

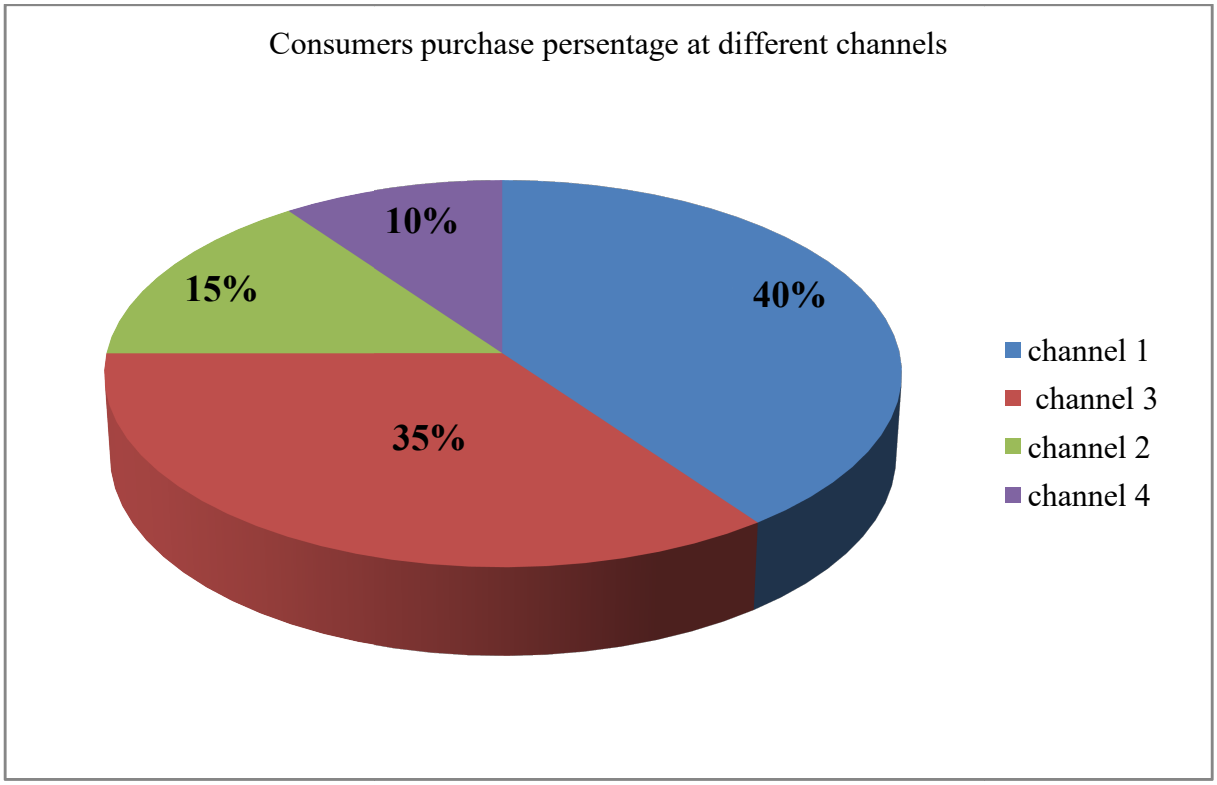
There are four most dominant and common crops marketing Channels are identified at Mesalemia crop market for all type of products; these are

1. Producers ➡ Wholesalers ➡ Retailers ➡ Consumers

2. Producers ➡ Wholesalers ➡ Consumers

3. Producers ➡ Processers ➡ Consumers

4. Producers ➡ Consumers are the most dominantly used for teff and Wheat products purchasing in marketing.



Source: Own data, 2019

Figure 4.2.Consumers purchase percentage at different channels

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Out of the total sample interviewed the consumers indicate that the consumption were 40% from retailers, 35% from wholesaler,15% from processers and 10% from producers at channel 1, channel 3, channel 2 and channel 4 respectively.

4.1.2.3.2. Marketing margins

Market efficiency assesses whether profits are too high for different market actors. To test market efficiency, we calculate the net marketing margins, i.e., comparing the difference in prices between two prices, minus marketing costs. Payments to transporters and market taxes are the highest marketing costs of traders, followed by loading and unloading, personal travel to markets, labor and storage costs. Of all the marketing costs, transport costs and market taxes represent more than 85 percent of traders' total marketing costs. Marketing costs (in total) represent 10-15 per cent of traders' final sales price, depending upon the markets and the period of year. The calculations of traders' profits observed during the 2009/10 marketing season's show that marketing margins are similar for wholesalers and assemblers and profits are higher for assemblers.

Estimation of marketing margin for the various crop traders was estimated using the following formulas.

TGMM = $\frac{(Cp-Pp)}{CpCp}$ x 100 GMMp = $\frac{(Cp-MGM)}{CpCp}$ x 100

Where

TGMM = Total gross marketing margin

Cp = Consumer price

Pp = Producer price (taken as producers selling price per unit less producer's marketing costs)

GMMp = Gross marketing margin producers

MGM = gross marketing margin

The producer's share of consumer price was determined as = $\frac{(CP-Pp)}{Cp}$

Average crop prices received by producers and paid by consumers during on-peak and off-peak was used for this calculation.

Table 4.7. Performance of crop market at different channels

No	**market agents**		**Crop marketing channels**							
			1		**2**		**3**		**4**	
			Teff	Wheat	Teff	Wheat	Teff	Wheat	Teff	Wheat
1	Producer	Selling price / Quintal	1800	1000	1800	1000	2000	1150	2400	1400
		Cost of production/ Quintal	500	200	500	200	500	200	500	200
2	Wholesaler	Purchase price/ Quintal	1800	1000	1800	1000	-	-	-	-
		Market cost /Quintal	50	50	50	50	-	-	-	-
		Selling price Quintal	2000	1150	2000	1150	-	-	-	-
		GMMws%	10	**13.04**	10	**13.04**	-	-	-	-
3	Retailer	Purchase price/ Quintal	2000	1150	-	-	-	-	-	-
		Market cost / Quintal	40	40	-	-	-	-	-	-
		Selling price/ Quintal	2400	1400	-	-	-	-	-	-
		GMMr%	**16**	**17.85**	-	-	-	-	-	-
4	Millers/ Processer	Purchase price/ Quintal	-	-	-	-	2000	1150	-	-
		Market cost /Quintal	-	-	-	-	500	200	-	-
		Selling price /Quintal	-	-	-	-	2300	1300	-	-
		GMMm%	-	-	-	-	**13.04**	11.53	-	-
		TGMM%	**25**	**28.5**	10	13	4.16	7.14	0.0	0.0
		Production portion	75	71.5	90	87	95.84	92.86	100.00	100.00
Rank of channels by producers' share			**4**	**4**	**3**	**3**	**2**	**2**	**1**	**1**

Source: Own data, 2019

Analysis of Mesalemia crop market performance

- The greatest gross marketing margins were 28.5% and 25% in channel "1" (producer - wholesaler - retailer - consumers) for teff and for wheat crop products respectively, of consumers' price.
- Among different marketing agents retailers received the highest gross marketing margin in channel 1 (producers - wholesalers - retailers - consumers) which accounted for 17.85% and 16% for teff and wheat products respectively, of consumers' price followed by processors at channel 3 (producers - processors - consumers) which accounted for 13.04%teff product of consumers' price. Likewise, at channel 1 and channel 2 were exhibited the second highest gross marketing margin for wholesales which accounted for 13.04% for wheat product of consumers' price.
- Generally, Producers' share of consumers' price was the highest in channel 4 (producers - consumers) which accounted for 100% of consumers' price.

4.2. Econometric model results

In this part, major results and explanations of econometric analysis for production participation, determinants of market supply and demand are given. The estimation and analysis was done separately for each test.

4.2.1. Diagnostic tests of assumptions

Five assumptions tests of linearity, Multicollinearity, homoscedasticity, autocorrelation**,** and normality were conducted and discussed below and refer appendix 1 for analysis results of each assumptions.

4.2.1.1. Linearity test

Multiple linear regression model assumptions assume there is a linear relationship between the independent variables and the dependent variables. The linearity assumption of multiple linear regressions is that the relationship between the independent variable and the dependent variable can be characterized by a straight line. The linearity assumption already linear from the equation of multiple linear regression models of the independent variables and dependent variable (Gujarat, 2004).

Linearity assumption was not serious threat to the study since we can draw one straight line to approximate the observations for all independent variables number of family, Education back ground, none farming activities, total land holding, distance from the market, extension advice, mode of transportation, production per hectare and input utilization against the dependent variable, supply of crop on the market, and also the variance between the upper and lower cases of the observations were reasonably similar.

4.2.1.2. Multicollinearity test

The Variance Inflation Factor and Tolerance Statistics were used to test for multicollinearity. A variance inflation factor greater than 10 (vif> 10) or Tolerance Statistics less than 0.10 (1/vif< 0.10) shows the possible existence of multicollinearity problem (Gujarati, 2004).

Table 4.8. Multicollinearity test result

Variables	Collinearity Statistics		
	Tolerance	VIF	1/VIF
(Constant)			
Age	.538	1.860	0.537634
Number of family	.463	2.162	0.462535
Education back ground	.495	2.020	0.49505
None farming activities	.791	1.264	0.791139
Total land holding	.819	1.222	0.818331
Distance from the market	.811	1.233	0.81103
Extension advice	.413	2.424	0.412541
Mode of transportation	.699	1.430	0.699301
Production/hectare	.766	1.305	0.766284
Input utilization	.683	1.464	0.68306
Farming experience	.677	1.477	0.677048
Access to market information	.926	1.079	0.926784

Source: Model result, 2019.

The results indicated on the table show that all the independent variables had a variance inflation factor less than 10 (vif< 10) and a tolerance statistics greater than 0.10 (1/vif> 0.10). The study therefore concluded that there was no trouble with multicollinearity.

4.2.1.3. Homoscedasticity test

This assumption assumed that the variance of the errors is constant. Assumptions can be checked by scatter plot diagram. The result plots the values the model would predict, against the residuals obtained. As the predicted values increase, the variation in the residuals should be roughly similar. The graph looks like a random array of dots. So, the model is homoscedasticity.

Scatter plot

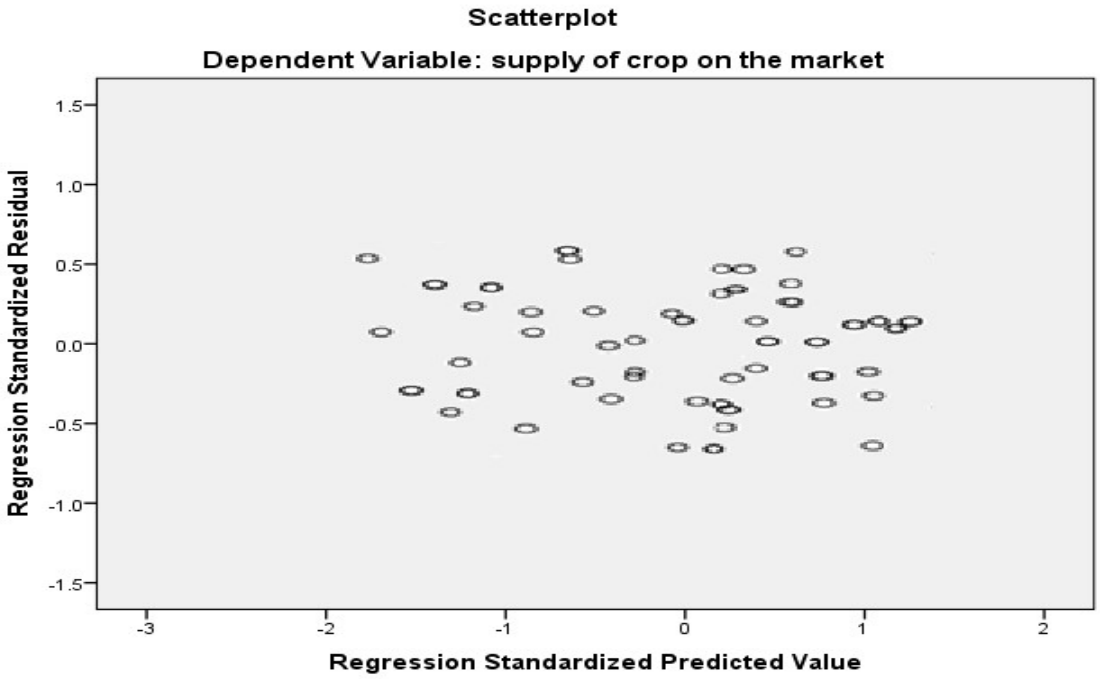

Figure 4.3.Homoscedasticity test result

Source: Model result, 2019

4.2.1.4. Autocorrelation test

Multiple linear regression models assume the residuals are independent of one another. The Durbin-Watson statistic is used to test for the presence of serial correlation among the residuals. The residuals are not correlated if the Durbin-Watson statistic is approximately 2, and an acceptable range is 1.50 - 2.50.

Table 4.9. Durbin-Watson test for autocorrelation

Model	Durbin-Watson
1	1.770
a. Predictors: (Constant), access to market information, none farming activities, Education back ground , distance from the market, total land holding, input utilization, production/hectare, farming experience, mode of transportation, age, number of family, extension advice	
b. Dependent Variable: supply of crop on the market	

Source: Model result

From the result Durbin-Watson, the residuals are not correlated since the Durbin-Watson statistic 1.770which indicates that there is no autocorrelation among residuals.

4.2.1.5. Normality test

This assumption test whether the data is well modelled by normal distribution or not. This test of normal distribution could be checked by graphical (histogram and dot plot) method of tests. The normality assumption assumes a critical role when a study is dealing with a greater sample size, data less than 100 observations (Gujarati, 2004). The assumption was tested by using normalprobability plot (NPP).

The decision rule is, if the fitted line in the NPP is approximately astraight line, one can conclude that the variables of interest are normally distributed (Gujarati,2004).

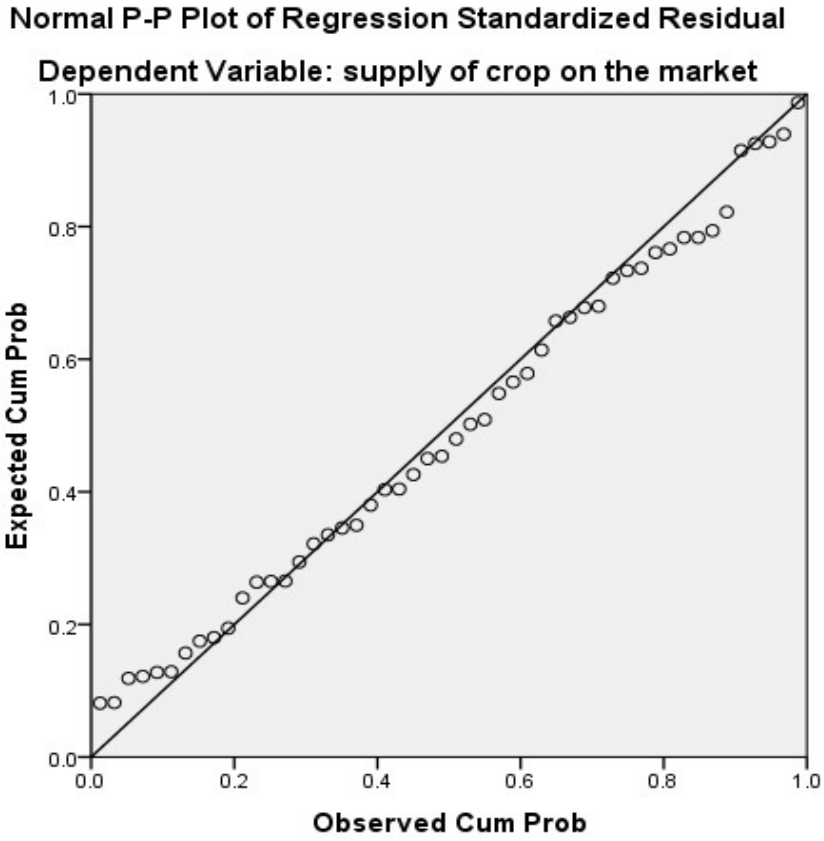

Figure 4.4.The normal P-Plot

Source: Model result, 2019.

From the result residuals of the model were approximately normallydistributed, because the fitted line on the NPP approximately straight line.

The study discussed five major assumptions that must be fulfilled for one to analyse data using multiple linear regression models. So, since all the five assumptions were not violated, the researcher examined the data collected by the questionnaires using correlation and multiple linear regression models.

4.2.6. Correlation analysis

In this section the correlation of independent variables age, number of family, education back ground, none farming activities, total land holding, distance from the market, extension advice, mode of transportation, production/hectare, input utilization, farming experience, access to

market information against the dependent variable, supply of crop on the market. The possible range of correlation coefficient values is form -1 to +1. A correlation value without a positive sign indicates the relationship is positive, whereas, negative sign indicates negative relationship. According to Cohn's (1988) classification of the strength of relationship is based on the following table.

Table 4.10.Classification of the Strength of Relationship

Correlation strength	Positive values	Negative values
Small	r=0.10 to 0.29	r = -10 to -.29
Medium	r=.30 to .49	r= .30 to -.49
Large	r=.50 to 1.0	r= -.50 to -1.0

Source:Cohen (1988)

Table 4.11: Econometrics Model Result

Variables	Coefficients	Std. Error	P-value
(Constant)	.183	.535	.734
Age	-.222**	.108	.047
Number of family	.138*	.051	.010
Education back ground	.380***	.107	.001
None farming activities	-.049	.043	.265
Total land holding	.191***	.051	.001
Distance from the market	-.036	.034	.300
Extension advice	.059	.101	.559
Mode of transportation	.065	.056	.251
Production/hectare	.199***	.044	.000
Input utilization	.081	.061	.190
Farming experience	.043	.043	.320
Access to market information	-.021	.043	.623
F (12, 37)	.839***		
R^2	.703		
Adjusted R^2	.607		

Note: ***, **, * represent statistical at 1%, 5% and 10% significant level respectively.

Source: Model result, 2019.

4.2.2. Regression model results and interpretation

Regression analysis concerned with describing and evaluating the relationship between a given dependent variable and one or more independent variable(s). It is used to understand the relationship between variables and to predict the value of one variable based on another variable. This also indicated in the model summary aboveit shows the age, number of family, education back ground, none farming activities, total land holding, distance from the market, extension advice, mode of transportation, production/hectare, input utilization, farming experience, access to market information with the dependent variable, supply of crop on the market.

From the above table except farming experience, distance from the market, extension advice, mode of transportation, non-farming activities, access to market information and input utilizationwe can summarize that all independent variables have significant impact on supply of crop on the market that is supported by p-value less than the alpha value of 0.1.

The above table depicted that the correlation between the independent variablesage, number of family, education back ground, none farming activities, total land holding, distance from the market, extension advice, mode of transportation, production/hectare, input utilization, farming experience, access to market information with the dependent variable, supply of crop on the market. It shows with the exception of age, none farming activities, distance from the marketand access to market information, butother independent variables have positive relationship with dependent variable, supply of crop on the market.

4.2.2.1 Goodness of the model

Over all the goodness of the models is measured by using F statistics result is 0.00 indicates at 1% statistics significance level. In addition to the goodness of the regression model is measured by the adjusted R^2 which is 0.607 indicates that about 60.7% of the variation on supply of crop in the market explained by the independent variables in the model .Therefore both the result indicates that the model is well fit.

4.2.2.2. Interpretation and justification of the independent variables results

Age of the producers

Age is negatively and significant at 5% statistically significance levels in affecting the amount of market supply. Which means as age of household is one of the cause for production of the house hold as age increase by one year in the house hold, the quantity supply will decreased by 0.222 units. Even if as age increase the responsibility for production is increase, in contradiction to the others research findings, on this paper show that as the age increase the labour force for production in the household will decrease.

Number of family size

The number of family size has positive and significant effect at 10% level of statistical significant level on amount of market supply. This is due to the fact that more number of families can also be used as addition number of labour force one of the causes for production of the house hold. As number of family increase by one adult equivalent person in the household, the quantity supply will increase by 0.138 units. As the number of family size increase the productive labour in the household will increase.

Education back ground

Education back ground has positively and significant at 1% statistically significance levels in affecting the amount of market supply. This indicates that education improves the use and adoption of new technology as the result the household increase capacity to crop production related and market related information, which in turn improves bargaining position.Which means as education of household is one of the cause for production of the house hold. As education back groundaddition of one-year formal schooling of the house hold, the quantity supply will increase by 0.380 units.

Total land holding

Total land holding amount has positively and significant at 1% statistically significance levels in affecting the amount of market supply. This is the fact that the total amount of the land has direct

effect on crop production amount. As the total land holdingis increase by one hectare, the quantity marketable supply will increase by 0.191 units.

Production/hectare (productivity)

Production per hectare the productivity level of the land has positively and significant at 1% statistically significance levels in affecting the amount of market supply. This is the general truth that,as the land productivity is increase per hectare by one quintal the total amount of production will increases in the household as the result the quantity of marketable supply will increase by 0.199 units.

CHAPTER FIVE

5. CONCLUSSION AND RECOMENDATIONS

5.1. Conclusion

The study has focused on marketing system of the market structure, market conduct and market performance of the Mesalemia crop market that were identified the factors affecting the supply and demand of crop by households and the major constraints of crop marketing. The study was based on primary data from producers, traders, consumers and stakeholders' and secondary data were generated from wereda trade and industry office, revenue office and CSA.

The study was conducted in Addis Ababa city administration at Mesalemia old and traditional crop market was supplied by producers produce crop at the peripheral sub cities like Akakikality and Kolfekeranio, but most producers are arrive from Amara regional state, South people nation and nationalities and Oromia regional state, which all are adjacent and around to the city.

Hundred traders, fifty producers, twenty consumers and thirty stakeholders and total two hundred different market actors were interviewed and were identified the main challenges and constraints exist at Mesalemia crop market .

Generally in this study descriptive statistics and econometric models were used. To analyze the data SPSS version 21 were applied. The main findings of this research are summarized as follows.

The average family size of producers participating in the survey was four members, with family labor force of three per household. The average years of farming experience for total sample households were twenty one years. Out of the total sample households 83% were involved in income generating on nonfarm activities like petty trading, handicrafts, carpeting, Guarding, driving and daily laboring.

The landholding size of sample households varies from 2 to 11 hectares. Seventy nine percent of the total samples of the producers have taken agricultural inputs in credit from their cooperative that revealed 84.8%, 88.3% and 65.5% of the total sample households have used Urea, DAP and seed respectively.

The average distance from home to the nearest market center was found to be 8.91 km with a The marketing channels of the crop markets in terms of quantity flow from producer to consumer passed through different intermediaries. The important marketing chains have been identified. Much of the marketed surplus was channeled through wholesalers, cooperatives, assemblers, processors, retailers and direct to consumers.

The structure of the crop market indicated that the four-firm Concentration Ratio (CR 4), that is the share of the largest four traders in the total volume of purchased was very low below 25. The four largest traders from the survey the concentration ratio was computed 16.8 of the total volume of the crop purchased by the sample traders as the result Mesalemia crop market can be considered as a nearly perfect competitive market.

The major barriers to entry in to crop trade at Mesalemia included lack of working capital, market information and high competition with the unlicensed traders. All traders have information from different informal sources; however, the information system is not transparent among traders.

Regarding the conduct of crop market, 43% of the sample traders were female and more than 85% of the traders had attended formal schooling. 94% of the traders buy and sell crop products throughout the year suggesting that trading is their primary occupation.Pricing strategy of the sample traders indicates that about 64%, 14% and 22% by theme selves, through broker and commission agent respectively.

The market performance analysis clearly showed that the net earnings retailers received the highest gross marketing margin was at channel “1” which accounted for 17.85% and 16% for teff and wheat products respectively;of consumers’ price Transport cost was identified as the major cost component of marketing costs which accounted 2.77% and 3.5%, for wholesalers and for processors respectively.

In addition to descriptive analysis econometric regression also made including all theoretically important factors was estimated by multiplelinear regressionmodel. Among the variables included in analysis of independent variables is age, number of family, education back ground, non-farming activities, total land holding, distance from the market, extension advice, mode of transportation, production/hectare, input utilization, and farming-experience and access to market

information of the producers as well as the traders at Mesalemia crop market with the dependent variable, supply of crop on the market. The result shows with the exception of age, none farming activities, distance from the market and access to market information other independent variables have positive relationship with dependent variable, supply of crop on the market.

The common problems perceived by sample farmers in the production and marketing are shortage of land, access to credit, market availability, market information and access to vehicle transportation. The main crop marketing constraints for traders are shortage of capital, shortage of supply, lack of timely and accurate market information, poor access to credit and competition with unlicensed traders were few of the inherent problems.

Generally, Oromia regional state is potential for crop production, the agro ecology is suitable for teff, wheat and pulses production and the farmers are well acquainted to the use of improved agricultural inputs and have high yield per unit than other interviewed farmers. Hence, the region has to explore these opportunities.

5.2. Recommendations

Based on the findings of this study, the following policy measures could be recommended,

- Access to credit at low interest rate for traders specially the wholesaler needs huge capital for crop purchase and farmers have costs for inputs production. Improving access to credit for farmers and traders should therefore be a priority for improving crop market performance, in turn, increasing efficiency and improving consumers' welfare.
- Strengthen access to market information including prices, supply and demand for all market actors by strengthening Media's contribution on production and marketing of agricultural products. Dissemination of relevant market information through the electronics display like Ethiopian commodity exchange (ECX) is essential for the efficient functioning for providing accurate and timely information to market participants.
- Improving access to information, reducing transport costs can have a significant impact upon producers and traders' profits. High transport costs not only reduce farmers' profits, but also increase the price dispersion between markets, thereby increasing consumers' price.

- At Mesaemia crop market the licensed crop traders are not competitive enough in buying and selling because of absence of strict control on unlicensed traders who do not have the obligation of paying taxes imposed on licensed traders.
- Strengthen and encouraging the processors or millers are vital in increasing crop production, value addition, providing market information and improving the bargaining power of the farmers. More ever processors play significant role in adding form utility by processing teff and wheat to flour at different level of package.
- Conduct a research on the different components at Mesalemia crop marketing system on the impact of the emerging market structure on producers' and traders' incentive.

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APPENDIX 1

Table 4.12.Model Result

Variables	Coefficients	Std. Error	P-value
(Constant)	.183	.535	.734
Age	-.222	.108	.047**
Number of family	.138	.051	.010*
Education back ground	.380	.107	.001***
None farming activities	-.049	.043	.265
Total land holding	.191	.051	.001***
Distance from the market	-.036	.034	.300
Extension advice	.059	.101	.559
Mode of transportation	.065	.056	.251
Production/hectare	.199	.044	.000***
Input utilization	.081	.061	.190
Farming experience	.043	.043	.320
Access to market information	-.021	.043	.623

Source: model result

Table 4.10.Classification of the Strength of Relationship

Correlation strength	**Positive values**	**Negative values**
Small	r=0.10 to 0.29	r = -10 to -.29
Medium	r=.30 to .49	r= .30 to -.49
Large	r=.50 to 1.0	r= -.50 to -1.0

Source:Cohen (1988)

Table 4.13. Model Summary

Model Summary										
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.839[a]	.703	.607	.321	.703	7.308	12	37	.000	1.770
a. Predictors: (Constant), access to market information, none farming activities, Education back ground , distance from the market, total land holding, input utilization, production/hectare, farming experience, mode of transportation, number of family, age, extension advice										
b. Dependent Variable: supply of crop on the market										

Source: model result

Table 4.15. ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	8.311	9	.923	8.191	.000[b]
	Residual	4.509	40	.113		
	Total	12.820	49			
a. Dependent Variable: supply of crop on the market						
b. Predictors: (Constant), input utilization, production per hectare, extension advice, distance from the market, none farming activities, total land holding, mode of transportation, Education back ground , number of family						

Source: model result

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	.183	.535		.342	.734		
	age	-.222	.108	-.251	-2.054	.047	.538	1.860
	number of family	.138	.051	.357	2.713	.010	.463	2.162
	Education back ground	.380	.107	.452	3.552	.001	.495	2.020
	none farming activities	-.049	.043	-.114	-1.133	.265	.791	1.264
	total land holding	.191	.051	.370	3.735	.001	.819	1.222
	distance from the market	-.036	.034	-.105	-1.051	.300	.811	1.233
	extension advice	.059	.101	.082	.590	.559	.413	2.424
	mode of transportation	.065	.056	.125	1.167	.251	.699	1.430
	production/hectare	.199	.044	.467	4.562	.000	.766	1.305
	input utilization	.081	.061	.145	1.335	.190	.683	1.464
	farming experience	.043	.043	.110	1.009	.320	.677	1.477
	access to market information	-.021	.043	-.046	-.495	.623	.926	1.079

Dependent Variable: supply of crop on the market

Source: model result

Table 4.11.Correlation between the independent variables and dependent variable

		age	number of family	Education back ground	none farming activities	total land holding	distance from the market	extension advice	mode of transportation	production/ hectare	input utilization	farming experience	access to market information	supply of crop on the market
age	Pearson Correlation	1												
	Sig. (2-tailed)													
	N	50												
number of family	Pearson Correlation	-.305*	1											
	Sig. (2-tailed)	.032												
	N	50	50											
Education back ground	Pearson Correlation	.478**	-.343*	1										
	Sig. (2-tailed)	.000	.015											
	N	50	50	50										
none farming activities	Pearson Correlation	.037	.266	-.065	1									
	Sig. (2-tailed)	.800	.062	.653										
	N	50	50	50	50									
total land holding	Pearson Correlation	-.027	-.102	.175	-.092	1								
	Sig. (2-tailed)	.852	.482	.224	.526									
	N	50	50	50	50	50								

distance from the market	Pearson Correlation	.181	-.049	.056	.017	-.062	1							
	Sig. (2-tailed)	.209	.736	.701	.907	.667								
	N	50	50	50	50	50	50							
extension advice	Pearson Correlation	.058	-.605**	.455**	-.142	.221	-.071	1						
	Sig. (2-tailed)	.690	.000	.001	.325	.122	.624							
	N	50	50	50	50	50	50	50						
mode of transportation	Pearson Correlation	-.121	.209	.119	-.079	.241	.213	-.020	1					
	Sig. (2-tailed)	.403	.145	.412	.587	.092	.138	.891						
	N	50	50	50	50	50	50	50	50					
production/hectare	Pearson Correlation	.388**	-.125	.157	.216	-.075	.209	-.034	-.098	1				
	Sig. (2-tailed)	.005	.388	.277	.133	.604	.146	.814	.497					
	N	50	50	50	50	50	50	50	50	50				
input utilization	Pearson Correlation	-.109	.160	.181	-.181	.224	.021	-.124	.398**	-.017	1			
	Sig. (2-tailed)	.452	.267	.209	.209	.118	.885	.392	.004	.908				
	N	50	50	50	50	50	50	50	50	50	50			
farming experience	Pearson Correlation	.041	.333*	-.151	-.005	-.266	.221	-.459**	.064	.069	.029	1		
	Sig. (2-tailed)	.776	.018	.296	.974	.062	.124	.001	.657	.636	.840			
	N	50	50	50	50	50	50	50	50	50	50	50		
access to market	Pearson Correlation	.108	.024	.016	.008	-.009	-.103	.018	-.081	.026	-.110	.128	1	
	Sig. (2-tailed)	.455	.868	.913	.956	.951	.477	.902	.577	.858	.446	.377		

informati on	N	50	50	50	50	50	50	50	50	50	50	50	50	
supply of crop on the market	Pearson Correlation	-.022	.192	.410**	-.041	.453**	-.017	.075	.380**	.311*	.452**	.030	-.049	1
	Sig. (2-tailed)	.879	.181	.003	.775	.001	.906	.602	.006	.028	.001	.836	.734	
	N	50	50	50	50	50	50	50	50	50	50	50	50	50

Table 4.6.Business Characteristics of Traders

		Frequency	Percent
For how long have you been in this business?	1-5	59	59.0
	6-9	7	7.0
	10-20	34	34.0
	Total	100	100.0
What was the source of the working capital in 2011?	Own	73	73.0
	Loan	8	8.0
	Share	19	19.0
What was the reason behind the loan?	To purchase a car	10	10.0
	For working capital	65	65.0
	Other	25	25.0
What was the reason for your crop choice to purchase?	High supply	35	35.0
	High demand	65	65.0
Who purchase crop for you in 2011?	Myself	64	64.0
	Through broker	14	14.0
	Commission agent	22	22.0

How did you attract your supplier?	By visiting them	33	33.0
	By fair scaling (weighing)	18	18.0
	By giving better price relate to others	49	49.0
How did you attract your buyers?	By giving better price relate to others	12	12.0
	By visiting them	13	13.0
	By providing Quality product	32	32.0
	By giving credit	22	22.0
	By fair scaling weighing	21	21.0
Who were your major buyers in 2011?	Wholesalers	28	28.0
	Urban assembler	20	20.0
	Urban consumers	44	44.0
	Other	8	8.0
Who set your purchasing price in 2011?	Myself	42	42.0
	The seller	11	11.0
	By market	15	15.0
	Other traders	32	32.0
Who decided on your selling price in 2011?	Myself	66	66.0
	By market	34	34.0
When did you set selling price?	One day before the market day	100	100.0
How was the supply of crop in 2011 compared to the previous year?	Decreased	70	70.0
	No change	30	30.0
What was the major problem to enter crop trade?	Lack of capital	68	68.0
	Other	32	32.0
Are there restrictions imposed on unlicensed traders?	yes	66	66.0
	no	34	34.0

Did you pay tax for the crop you purchase in 2011?	no	100	100.0
Did you pay tax for the crop you sell?	yes	26	26.0
	no	74	74.0
Is crop trading in your locality needs a trading license?	yes	100	100.0
Did you have crop - trade license?	yes	85	85.0
	no	15	15.0
How did you get information on supply, demand & price of crops in other markets?	Myself	20	20.0
	From other sellers	42	42.0
	From the market	38	38.0
Is there any transportation problem in the Mesalemia crop market?	yes	61	61.0
	no	39	39.0
What mode of transportation did you use from collection point to store?	Head/back load	15	15.0
	Pack animal	31	31.0
	Trucking/Vehicle	54	54.0
Are there problems on crop marketing in Mesalemia crop market?	yes	67	67.0
	no	33	33.0

APPENDIX 2

I. Producers' Questionnaire for Analysis on the gap of Mesalemia Crop Market performance in Addis Ababa, Ethiopia.

- Questionnaire number _____
- Date _____
- Regional state /Sub city _____ Wereda (District) _____

A. Characteristics of the Producer

1. Sex of the producer 1. Male 2. Female

2. Age of the producer _____ in years

3. Religion of the producer _____

1. Muslim 2. Orthodox Christian 3.Protestant 4.Catholic

5. Other (specify) _____

4. Marital status of the producer_____

1. Single 2. Married 3. Divorced 4. Widowed

5. Education back ground of the producer _____

1. Illiterate 2. Primary School 3. Secondary School 4. Religious school

5. College Education 6.Other (Specify) _____

B. Production

6. Farming experience since started farming _____years.

7. How many of your family members do permanently work on farm? _____

_____

8. Did you participate in Non-farming activities? 1. Yes 2. No

9. If Q.8 answer is yes specifies the type of activity they are engaged in? 1. Petty trading 2. Handicrafts 3. Employed 4. Daily laborer 5. Other (specify)

_____

10. Total land holding _____ in hectare?

11. How was crop production in 2010 belg and in 2010/11 kiremt cropping season?

S.No	Type of crop	2010 belg season		2010/11 kiremt season Area	
		Area (hectare)	Quantity (qt)	Area (hectare)	Quantity (qt)
1	Wheat				
2	Teff				
3	Maize				
4	Sorghum				
5	Barley				
6	Faba bean				
7	Field pea				
8	Others(specify)				
8.1					
8.2					

12. What was the reason for crop choice in 2011? _____
_____

13. What was your input for crop production & their sources in 2011? _____

S.No	Type		**1=Yes 2=N0**	Source (code)	Amount use (kg)	Value (Birr)	1=Cash 2=Credit
1	Fertilize	Urea					
		DAP					
		Organic					
2	Insecticide						
3	Herbicide						
4	Seed	Local seed					
		Improved seed					

Source (code) From: 1. Market 2. Bureau of agriculture 3. Own production 4. Cooperatives 5. Other fellow farmers 6. NGOs 7. Other (specify) _____

14. How was the yield of crops in 2011 compared to the previous season?

1. Very high 2. High 3. Medium 4. Low 5. Very low

15. How was the weather condition for crop production in the last season? 1. Good 2. Bad

16. If Q. 15 is bad, what was the existing problem? 1. Shortage of rain fall 2. Flood 3.others (specify) _____

17. Did you face problem in crop production? 1. Yes 2. No

18. If Q. 17 is yes, what were the causes & your suggestions to solve each problem? _____

Ser .No	Problem faced	**1=yes 2=No**	If yes,what do you think was/were thecause/s of the problem	What is your suggestion to solve each problem
1	Shortage of land			
2	Shortage of Seed supply			
3	Shortage of Fertilizer supply			
4	Shortage of Chemical supply			
5	Inaccessible loan			
6	High tax			
7	Other (specify)			
7.1				
7.2				
7.3				

C. Access to Services

19. Distance of your residence from the nearest market center _____ K.m

20. Distance of your residence to the nearest development center _____ K.m

21. Did you have extension agent contact in the 2011 cropping season? 1. Yes 2. No

22. If Q. 21 is yes how often the extension agent contacted you?

1. Weekly 2. Twice in a month 3. Monthly. 4. At any time when asked

5.Other (specify) _____

23. What was the extension agent advice on? 1. Chemical applications

2. Post-harvest handling 3.Crop choice 4.Cultivation system

5.Fertilizer applications 6. Other (specify_____

24. Are you a member of any cooperative? 1. Yes 2. No

25. Where do you sell your crop products? 1. At farm gate 2. Taking to local market

3. In the cooperative store 4. Others (specify) _____

26. Do you think you have received a fair price for your crop sold? 1. Yes 2. No

27. When did you sell it? 1. October - December 2011 2. January - March 2011

3. April - June, 2011 4. July – September 2011/12

5. Others (specify) _____

28. How was the selling price of your crop in 2011 compared to the previous season?

1. Increased 2. Decreased 3. No change

29. If Q.28 is increased or decreased how were the difference between last and this season?

No	Types of Crops	Price of the crop Last season (Birr)	Price of the crop this season (Birr)	Remark
1	Wheat			
2	Teff			
3	Maize			
4	Sorghum			
5	Barley			
6	Faba bean			
7	Field pea			
8	Others(specify)			
8.1				
8.2				
8.3				

30. Did you face difficulty in finding buyers when you want to sell? 1. Yes 2. No

31. If Q. 30 answer is yes, what was the reason: 1. Lack of information 2. Low price offer

3.Inaccessibility of market 4. Other (specify) _____

32. What did you do, when the crop you offered to the market was not sold?

1. Took back home 2. Sold at lower price 3. Took to another market on the same day

4. Sold on other market day 5. Took to another market on another day

6. Other (specify) _____

33. Who set your selling price in 2011? 1. Yourself 2. Set by demand and supply 3. Buyers

4. Other (specify) _____

34. When did you get the money after your sale? 1. As soon as you sold

2.Other days after sale 3. Other (specify) _____

35. How did you transport the crop from home to market? 1 Head/back loading 2. Vehicle
3. Animal's cart 4. Pack animals. 5. Other (specify) _____

36. Did you know the nearby market price before you sold your crop? 1. Yes 2. No

37. If Q.36 answer is yes, did you sell your crop as what you expect? 1. Yes 2. No

38. How did you get information on supply, demand & price of crop in other markets?
1. Traders 2. Cooperative 3. Telephone 4. Personal observation
5. Radio 6. Newspaper 7. Brokers 8. Other farmers
9. Other (specify) _____

39. How did you qualify your source of information? 1. It was reliable 2. It was timely
3. It was adequate 4. Other (specify) _____

II. Traders' (Wholesaler) Questionnaire for Analysis on the Gap of Mesalemia Crop Market performance in Addis Ababa, Ethiopia.

- Questionnaire number _____ Date _____
- Sub city _____ Wereda (District) _____

A. Socio-demographics

1. Sex of the trader (Wholesaler) 1. Male 2.Female

2. Age of the trader (Wholesaler) _____Years old.

3. Religion of the trader (Wholesaler)? 1. Muslim 2. Orthodox Christian 3. Protestant
4. Catholic 5. Other (specify) _____

4. Marital status of the trader (Wholesaler)? 1. Single 2. Married 3. Divorced
4. Widowed 5. Other (specify) _____

5. Total family size of the trader (Wholesaler) _____

6. Educational level of the Wholesaler? 1. Illiterate 2. Primary School 3. Secondary School
4. Religious school 5. College education 6. Others (Specify) _____

7. What is your major businesses in 2011 in order of importance write 1st for the most important 2nd for the next important etc. 1. Wholesaler _____ 2. Urban assembler_____ 3. village collector____ 4. Broker ('delala') ____5. Retailer ____6. Other (specify) _____

B. Capital

8. What was an initial fixed capital when you have started the business?

S. No.	Assets	Total No.	Average capacity of each (Qt)	Total Value
1	Store			
2	Mobile Telephone			
3	Vehicle personal truck			
4	Weighing Scale			
5	Motorcycle			
6	Others (Specify)			
6.1				
6.2				

9. For how long have you been in this business? _____in Years.

10. How much was the amount of your working capital in 2011? _____birr

11. What was the source of the working capital in 2011? 1. Own 2. Loan 3.Gift 4.Share 5. Others (specify) _____

12. If Q.11 answer is loan, from whom did you borrow? 1. Relative/family 2.Private money lenders 3.NGO 4. Friends 5. Other traders 6.Micro finance institution 7.Bank 8. Other (specify) _____

13. How much was the rate of interest? _____ birr

14. What was the reason behind the loan? 1. To build store 2. To purchase a car 3. For working capital 4. Other (specify)_____

_____

C. Purchase Practice

15. What are the major crops you purchased in 2011? Rank 1st, 2nd, 3rd . . . 1. Wheat _____ 2. Barley_____3. Sorghum_____4. Maize_____5. Teff _____6. Faba bean_____ 7. Field pea _____ 8. Others (specify) _____

16. What was the reason for your crop choice to purchase? 1. High supply 2. High demand 3. Other (specify)_____

17. Who purchase crop for you in 2011? 1. Myself 2. Family members 3. Friends 4. Through broker 5. Commission agent 6. Other_____

18. If Q. 17 answer is through broker or commission agent is there 1. Advantage 2. Disadvantage

19. If Q. 18 answer is advantage, what was the advantage of using brokers or commission agent?
1. You could get enough quantity 2. You could get quality crop 3. Save your time
4. Reduce transaction cost. 5. Purchased at low price
6. Other (specify) _____

20. How did you attract your supplier? 1. By visiting them 2. By fair scaling (weighing)
3. By giving better price relate to others 4. Other (specify) _____

21. How did you attract your buyers? 1. By giving better price relate to others 2. By visiting them 3. By providing Quality product 4 By giving credit 5. By fair scaling weighing 6. Other (specify) _____

22. Who were your major buyers in 2011? Rank 1. Wholesalers
2.Retailers 3. Urban assembler 4. Millers/processors 5.Urban consumers
6. Gov't organizations 7. Other (specify) _____

23. Who were your major suppliers in 2011? Rank 1. Wholesalers
2.Retailers 3. Urban assemblers 4. Village collectors
5.Farmers 6. Gov't organizations 7. Other (specify)_____

24. How is your usual purchasing price compared to your competitors?

1. Higher 2. Lower 3. The same

25. If Q. 24 answer is higher what was the reason? 1. To attract more supplier

2. To get better quality crop 3. To kick out your competitor from the market

4. To buy more quantity 5.Others (specify) _____

26. Who set your purchasing price in 2011? 1. Myself 2.The seller 3. By market

4. Other traders 5. Others (specify) _____

27. If Q.26 answer is number 1, how did you set the price? 1. Consulted with other traders

2. Individually 3. Other (specify)_____

28. Who decided on your selling price in 2011? 1. Myself 2.Purchaser 3. By the market 4. Other traders 5. Other (specify) _____

29. If Q.28 answer is number 1, how did you set selling price? 1. Individually

2. Consult with other traders 3. Other (specify) _____

30. How is the selling price this season compared to the last season? _____

No	Types of Crops	Price of the crop last season (birr)	Price of the crop this season (birr)	Remark
1	Wheat			
2	Teff			
3	Maize			
4	Sorghum			
5	Barley			
6	Faba bean			
7	Field pea			
8	Others(specify			
8.1				
8.2				
8.3				

31. When did you set selling price? 1. Early in the morning of the market day 2. At the evening of the market day 3. At midday of the market day 4. One day before the market day 5. At the time of selling 6. Others (specify) _____

32. How was the supply of crop in 2011 compared to the previous year?

1. Increased 2. Decreased 3. No change

33. What was the major problem to enter crop trade? 1. Government policy 2. Lack of capital 3. License 4. Other (specify) _____

34. Are there restrictions imposed on unlicensed traders? 1. Yes 2. No

D. Marketing Services

35. Did you pay tax for the crop you purchase in 2011? 1. Yes 2. No

36. Did you pay tax for the crop you sell? 1. Yes 2. No

37. Is crop trading in your locality needs a trading license? 1. Yes 2. No 3. Not mandatory

38. If Q.37 answer is yes, how do you see the procedure to get the license?

1. Very complicated 2.Complicated 3. Easy 4.Very easy

5. Other (Specify) _____

39. Did you have crop - trade license? 1. Yes 2. No

40. How much did you pay for crop trade license? _____birr

41. How did you get information on supply, demand & price of crops in other markets?

1. Myself 2. From other sellers 3. From the market 4. From institutions

5. Other (Specify)_____

42. Is there any transportation problem in the Mesalemia crop market? 1. Yes 2. No

43. If Q. 42 answer is yes, what was the transportation problem? 1. No transportation service

2. Seasonal transportation service 3. All year round transportation service

4.Other (specify) _____

44. What mode of transportation did you use from collection point to store?

1. Head/back load 2. Pack animal 3. Trucking/Vehicle 4. Cart

5. Other (Specify)_____

45. Are there problems on crop marketing in Mesalemia crop market? 1. Yes 2. No

47. If Q.46 answer is yes, what are the problems & your suggestions to overcome each problem?

No.	Problem faced	**1=Yes 2=No**	If the answer is **''yes''** what do you think was/were the cause/s of the problem	What is your suggestion to solve each problem
1	Infrastructure:			
1.1	Road			
1.2	Telephone			
1.3	Electricity			
1.4	Transport facilities			
2	Shortage of supply			
3	Information flow			
4	Capital shortage			
5	Access to credit			
6	Lack of demand (low price)			
7	competition with licensed traders			
8	competition with unlicensed traders			
9	Personal travel & other expense			
10	Others (specify)			
10.1				
10.2				
10.3				
10.4				
10.5				

III. Consumers' Questionnaire for Analysis on the gap of Mesalemia Crop Market performance in Addis Ababa, Ethiopia.

- Questionnaire number _____
- Date _____
- Sub city _____Wereda (District)_____

1. Sex of the Consumer 1. Male 2. Female

2. Age of the Consumer_____Years old.

3. Religion of the Consumer?

1. Muslim 2. Orthodox Christian 3. Protestant 4. Catholic

5. Other (specify) _____

4. Marital status of the Consumer? 1. Single 2. Married 3. Divorced 4. Widowed 5. Other (specify) _____

5. Total family size of the Consumer _____

6. Educational level of the Consumer? 1. Illiterate 2. Primary School 3. Secondary School 4. Religious school 5. College Education 6.Other (specify) _____

7. What are the major crops you purchased in 2011? Rank 1^{st}, 2^{nd}, 3^{rd} . . .

1 . Wheat_____2. Barley_____ 3. Sorghum_____ 4. Maize_____ 5. Teff_____

6. Faba bean_____ 7. Field pea _____ 8. Others (specify) _____

8. What was the reason for your crop choice to purchase at Mesalemia?

1. High supply 2. Lower price 3. Quality of the crop

4.Other (specify) _____

9. Who purchase crop for you in 2011?1. Myself 2 . Family members 3. Friends 4. Through broker 5. Commission agent 6. Other (specify) _____

10. What is impact of using brokers or commission agent in Mesalemia crop market?

1. Advantage in marketing facilities 2. Disadvantage in marketing

11. If Q.10 answer is 1 what is the advantage of using brokers and of commission agent?

1. You could get enough quantity 2. You could get quality crop 3. Save your time

4. Reduce transaction cost 5. Purchased at low price

6. Other (specify) _____

12. Who was your major Seller in 2011? Rank 1^{st}, 2^{nd}, 3^{rd} . . .

1. Wholesalers_____ 2.Retailers_____ 3. Urban assembler_____

4. Millers/processors_____ 6. Gov't organizations _____7.

Other (specify) _____

13. On average, how many markets did you visit to buy crop? 1. One 2.Two

3. Three 4. Four 5. Above four

14. What is the price of the same crop on the same day in a marketing center in 2011?

1. Yes 2. No

15. How is the purchasing price this season compared to the last season?

No.	Types of Crops	Price of the crop last season (Birr)	Price of the crop this season (Birr)	Remark
1	Wheat			
2	Teff			
3	Maize			
4	Sorghum			
5	Barley			
6	Faba bean			
7	Field pea			
8	Others(specify			
8.1				
8.2				
8.3				

16. Who set your purchasing price in 2011? 1. Myself 2.The seller 3. By market

4. Other traders 5. Others (specify) _____

17. If Q.16 answer is 1 how did you set the price? 1. Consulted with other traders

2. Individually 3. Other (specify) _____

18. How was the supply of crop in 2011 compared to the previous season?

1. Increased 2.Decreased 3. No change

19. Did you pay tax for the crop you purchase in 2011? 1. Yes 2. No

20. How did you get information on supply & price of crops in other markets?

1. My self 2. From other sellers 3. From the market 4. From institutions

5. Other (Specify)_____

21. What mode of transportation did you use for the purchases?

1. Head/back load 2. Pack animal 3. Trucking/Vehicle 4. Cart

5. Other (Specify)_____

22. Are there problems on crop marketing in Mesalemia crop market? 1. Yes 2. No If

23. If Q.22 is yes, what are the problems & your suggestions to overcome each problems?

No.	Problems faced	**1=Yes 2=No**	If the answer is **''yes''** what do you think was/were the cause/s of the problem	What is your suggestion to solve each problem
1	Infrastructure:			
1.1	Road			
1.2	Transport facilities			
2	Shortage of supply			
3	Information flow			
4	Access to credit			
5	Lack of demand (low price)			
6	Personal travel & other expense			
7	Others (specify)			
7.1				
7.2				
7.3				

IV. Stakeholders' Questionnaire for Analysis on the gap of Mesalemia Crop Market performance in Addis Ababa, Ethiopia.

- Questionnaire number _____
- Date _____
- Address of the organization of the stakeholder _____

1. Sex of the stakeholder 1. Male 2. Female

2. Age of the stakeholder _____ years

3. Religion of the stakeholder _____

1. Muslim 2. Orthodox Christian 3.Protestant 4.Catholic

5. Other (specify) _____

4. Marital status of stakeholder 1. Single 2. Married 3.Divorced 4.Widowed

5.Other (specify)_____

5. Education level of stakeholder _____1.

Primary School 2. Secondary School 3. Diploma 4.Degree 5.Masters and above

6.Other (specify)_____

6. What is the name of the organization (Institution) that you work as stakeholder for Mesalemia crop market? _____

_____

7. Years of service (Experience) 1. 1-3 years 2. 3-7 years 3. 7-10 years

4. Above 10 years 5. Other (Specify) _____

8. Your current post of stakeholder organization (Institution) _____

_____

_____

9. Are there problems in Mesalemia crop market in marketing?

1. Yes 2. No

10. If Q.9 answer is yes, what are the problems? What are your suggestions to overcome each problem and who are the responsible body for the solutions? _____

No.	Problems Observed	1=**Yes** 2=**No**	If the answer is ‘‘yes’’ what do you think was/were the cause/s of the problem	What is your suggestion to solve each problem observed in the market	Responsible body for the solution of the problems observed in market
1	Infrastructure:				
1.1	Road				
1.2	Telephone				
1.3	Electricity				
1.4	Transport facilities				
2	Shortage of supply				
3	Information flow				
4	Capital shortage				
5	Access to credit				
6	Lack of demand (low price)				
7	Too much competition with licensed traders				
8	Too much competition with unlicensed traders				
9	Personal travel & other expense				
10	Others (specify)				
10.1					
10.2					
10.3					