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ADDIS ABABA UNIVERSITY

ADDIS ABABA UNIVERSITY

COLLEGE OF DEVELOPMENT STUDIES

CENTER FOR RURAL DEVELOPMENT (CRD)

DEPARTMENT OF RURAL LIVELIHOOD AND DEVELOPMENT

CAUSE AND EFFECTS OF OUTMIGRATION ON RURAL LIVILHOODS IN OFLA DISTRICT SOUTHERN TIGRAY, ETHIOPIA

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As members of the examining Board of the Final M.Sc. Open Defense, we certify that we have read and evaluated the thesis prepared by: **Nigus Birhanu Agezew**. Entitled **CAUSE AND EFFECTS OF OUTMIGRATION ON RURAL LIVILHOODS IN OFLA DISTRICT SOUTHERN TIGRAY, ETHIOPIA** and recommend that it be accepted as fulfilling the thesis requirement for the degree of Master of Art in development study (Rural livelihood and development study).

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Final approval and acceptance of the thesis is contingent upon the submission of the final copy of the thesis to the Council of Graduate Studies (CGS) through the Departmental Graduate Committee (DGC) of the Department Rural livelihood and development study.

I hereby certify that I have read this thesis prepared under my direction and recommend that it be accepted as fulfilling the thesis requirement.

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DECLARATION

I declare and affirm that this thesis is the result of my own work; I have defense in March followed all ethical and technical principles of scholarship in the preparation, data analysis and compilation of this Thesis. Any scholarly matter that is included in the Thesis has been given recognition through citation.

This thesis is submitted in partial fulfillment of the requirements for an MSc degree at the Addis Ababa University and I have finished all comities submitted to department.

Name: Nigus Birhanu Signature: ----------

Date: June 4/ 2024

Department: Rural livelihood and development study

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LIST OF ABBREVIATIONS

ALA	Agricultural Labor Availability
CSA	Central Statistics Agency
MOA	Ministry of Agriculture
MOFED	Ministry of Finance and Economic Development
RUM	Rural _Urban migration
UPFCC	United Nations Framework on Climate Chang

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ABSTRACT

The study has assessed to the causes and effects of out migration on rural livelihoods. In developing countries like Ethiopia rural-urban migration affects socio-economic realities in both urban and rural areas. This study aims identifying the causes and effects of out migration on rural livelihoods in Ofla district southern zone, Tigray region. Both primary and secondary data were employed and were analyzed both qualitatively and quantitatively by using SPSS version 20. Primary data were collected from 90 non-migrant and 66 migrant member households. There are many causes for the movement of the people to the town. Among them the search for job, to gain education and training, and problem related with land and agricultural productivity was the major one. The finding of the research showed that the economic reasons are greater than none economic reasons. Rural push factors have stronger than urban pulling factors. In general, the high flow of migrants to Korem has accentuated different socio-economic and demographic problem on the regions of origin and destination.

Key words: Migration, labor outmigration, Binary Logit Model, Propensity Score Matching (PSM)

CHAPTER ONE:

1. INTRODUCTION

1.1. Background of the Study

Migrants move from areas with limited economic activity to areas with better economic opportunities, and the primary cause of migration is the economic discrepancy between migrant-sending and migrant receiving areas (World Bank, 2020). Between 2000 and 2019, the number of international migrants in the world increased from 174 to 272 million people (UNDESA, 2020). Between 2000 and 2019, the total amount of remittances from international migrants increased from 121.6 billion to 714.2 billion United State dollars in the world (UNCTAD, 2020). Further, about 77 percent of the remittance flow is directed to developing countries. Added to this, the number of internal migrants has been mounting and reached 1.3 billion in developing countries in 2016 (FAO, 2019).

Migration is the movement of a person or group of persons, either across an international border, or within a state. It encompasses any kind of movement of people as migration of refugees, displaced persons, economic migrants, and persons moving for other purposes, including family reunification. Researches show that orderly movement has been largely the norm and has contributed to growth in economies, increased human development, the capacity to protect large numbers of people facing persecution, and the ability of hundreds of millions of people to forge meaningful lives abroad (McAuliffe et. al, 2017).

In the history of migration in Ethiopia, Internal migration flows in Ethiopia over the last few decades have been forced due to complex phenomena of the country‟s political, economic, social, climatic and political condition and factors, including drought, war, political turmoil, forced migrations and poverty. In recent years small plots of farmland, which are inadequate to support a family have seen a surge in migration in all parts of Ethiopia, are a driver of migration. Because of increasing land scarcity it has become difficult to fulfill this right for the young generation, although access to farm land is a constitutional right to village residents of country. This is particularly characterizes for the highlands of Ethiopia where population densities have become very high. The increase in farmland scarcity in the highlands of Ethiopia coupled with lack of non-farm employment opportunities in the rural areas have pushed youth away from their agricultural livelihoods and rural villages. On the other hand, youth migration to cities and towns in search for better livelihoods, which actually have better education, technology, and other basic social services

compared to rural areas, increases the existing problem, adding to the urban unemployment and underemployment , increasing pressure on inadequate housing resources and increasing social and psychological stresses among the urban population, poverty, destitution, prostitution, streetism, beggaring, and crime are widespread and rampant in cities and towns of Ethiopia (Habtamu, 2020).

In Ethiopia, the rate of rural out-migration was lower during the socialist government (1974-1991) due to the then restrictions on migration. But following the demise of the socialist government, the share of rural-urban migrants has been mounting in Ethiopia. This partly resulted from the removal of restrictions on migration by the federal democratic republic of Ethiopia (FDRE). For instance, the percentage of rural-urban migrants was 21.6, 25.7, and 33.5 percent in 1999, 2005, and 2013 respectively (Bundervoet, 2018). Besides, from 2000 through 2019, the number of international migrants of Ethiopia increased from 445,891 to 871,747 migrants (World Bank, 2019). However, this outflow of labor from rural areas has led to an increased inflow of capital in the form of remittance. For example, from 2000 through 2019, official development assistance, foreign direct investment, and remittance increased from 688, 136, and 53 million to 4930, 3310, and 531 million US dollars respectively (World Bank, 2019).

Migration is a complex, multi-causal, and nonlinear demographic phenomenon that has occurred throughout human history at a variety of scales and touches the lives of many people in sub-Saharan Africa (Mueller, and Lee 2014; Atsede, 2016). Previous research findings for Ethiopia indicate that migration can be caused by natural population increase, insufficient access to food, inadequate income and limited access to farm land, ecological degradation and drought (Kassieet *al.* 2008;Ezra and Kiros 2001,Gebru and Beyene 2012;Bezu and Holden 2014).Although international migration and remittances will act as a catalyst in reworking the subsistence farming sector into an additional productive and business one by removing some of the constraints it faces. However, its policy connection, there's no sufficiency of studies on the impact of migration on agriculture.

In the case of Tigray Region, the Regional State Bureau of Labor and Social Affairs (2013), estimated that more than 42,000 people migrated from the region both legally and illegally between 2009 and 2012, in a period of four years only (Kelemework *et al.,* 2017).

Information collected in Ofla woreda is particularly harsh in highlighting the wide roots and diffusion of migration practices. A real migration is in place and involves directly and indirectly many persons and entities Families and peers have an important role in the migrant decision, and social influences are nurturing a culture of migration.

1.2. Statement of the Problem

Migration usually takes place at a variety of scale; intercontinental (between continents), between countries of a given continent, and interregional (within countries) (National Geographic Society, 2019). According to International Committee for Migration Policy Development cited in Bisrat W. (2014) Population mobility in and from the Horn of Africa has a longstanding tradition. However, conflict, environmental deterioration and economic decline paired with growing economically active populations have increased labor and forced migration both in the region and beyond.

People migrate from place to place for different reasons. As it is expressed by the International Organization for Migration cited in (Abrha, 2017) the main reasons for the migration of people from one place to another place are: economic, social, political and environmental. As this organization justified it, economical migration is related to moving to another place to find work or peruse a particular career. Social migration is common to families or friends for a better quality of life while political migration is moving to another place to escape war or political persuasion and environmental migration occurs as a result of natural disasters like an earthquake (IOM).

Agriculture in Ethiopia is the foundation of the country's economy, accounting for 33.3% gross domestic product (GDP), 83.9% of exports (NBE, 2018). In the country about 83.9 % of total population is lives in rural area and agriculture is the primary source of rural income as 80% percent of the rural labor force is engaged in this sector agriculture is main source of their livelihood.

Due to severe civil war numerous Ethiopians migrate outward, recently migration has increased as farmers in the rural areas struggle to reconcile livelihood degradation and extreme rural poverty coupled with oppressive political conditions. These factors continue to adversely affecting the livelihoods of the poor farmers, who mainly depend on rain-fed agriculture (Carter et. al, 2016).

The negative impact through labor loss isn't sufficiently replaced by payment investment in farming, thereby resulting in overall negative impact on production yield. Report that the foremost reason for the lower crop output may be attributed to changes within the kind of labor concerned in farming, with less family labor and a lot of employed labor, resulting in discount parturient efforts. (Azam and Gubert (2002).

In distinction, there are different studies that have found that migration ends up in associate degree improvement in agricultural production. In one such study, grey (2009) reports that

migration and remittent absolutely influence agriculture production. The study reports that „outmigration has lost-labor effects however international remittances have investment-promotion effects that lead to accumulated production. Migration might improve or cut back agricultural production. Whereas migration contains a positive impact on agricultural investment because it reduces credit and risk constraints featured by the farming household; this positive impact depends on the number of Remittances received by the family. However, as far as the researcher‟s information, there is no empirical study conducting before that quantifies the impact of migration on agricultural production and productivity. Therefore, this research was aimed to conduct to fill this gap. grey (2009).

The labor migration decision is a common agreement among household members to send one or more member(s) outside the village (in another district) to find additional sources of income so as to increase household resilience to negative shocks. Indeed, for the households living in the rural areas, the labour migration provides a kind of insurance in times of bad harvest and a source of financial support to smooth household consumption, expand household‟s business(es), launch a new business, or invest in education. This is more important for the poorest households in the rural areas of most developing countries, because the access to credit is virtually non-existent without any collateral. The researches of the Ethiopian investigate push, pull and re-in force factors such as networks of actors promoting and sustaining irregular migrations. Push factors appear to be the main motivations of migration and particularly: unemployment and underemployment, low salaries, scarce land accessibility and fertility, and poverty in general. Economic motivations are the most underlined by respondents, while local governance and political factors are the least reported (Henok et al., b. 2017).

Migration of rural Tigray youth to different towns Addis Ababa,jijga, diradawa within the region was a common trend in earlier times and still now the movement of people particularly youth is high . Population growth accompanied by poverty, lack of education and employment opportunities are the major driving forces of rural persons to migrate from the villages to towns in search of better opportunities. The incidence of poverty level in Tigray is about 32.6% (Kelemework *et al.,* 2017). The most often migrated a part of the society in the study areas Ofla *woreda tabiya* Hashenge and selam bekalse are the adults, the foremost fruitful one. Adults are migrating because of different reasons like shortage of financial gain, lack of land of plough, theneed tobe wealthy inavery short a mount oftime to some individuals get wealthy with such reasonably opportunities, and lack of awareness on the social, political, economic and educational and psychological consequences of

migration. Identifying what are the ground level effects of out migration on rural livelihoods has indispensable contribution for policy recommendation.

1.3. Objectives of the Study

1.3.1. General objectives of the study:

The general objective of the study is to examine causes and effects of rural out migration on rural livelihoods in ofla district southern Tigray, Northern, Ethiopia.

1.3.2 Specific objectives of the study:

1) To assess factors that aggravates cause of rural out migration in the study area.
2 To quantify the effects of rural out migration on rural livelihoods.

1.4. Research Question

1) Does out-migration cause on rural livelihood?
2). what is the cause that influences out-migration in Ofla District areas?

1.5. Significance of the study

This research paper has used who are engaged in rural development policy especially youth and migration aspect. And important reference document for research who conduct rural migration. This study will try to identify the to examine causes and effects of rural out migration on rural livelihoods. As a result, it will help youths to have good awareness on the impact of migration or avoids the negative attitude towards migration.

1.6 Limitation of the Study

The topic of migration is an immense area of systematic investigation and needs an ample devotion of time and attention to acquire knowledge. So many scholars and academicians attempt to deal with the topic and forwarded their own contribution in varies school of thoughts. Some of the limitations of the study were: shortage of time, restricted geographical coverage, limitation of variables in extant, number or scope and exclusion of newly arrived migrants; those who live in the study town only for one year hence they may further leave the town or go back to the departure places. The absence of similar research works done in the study area and/or data regarding number of out-migrants, remittance receiving households and remittance inflows at regional and district levels was also the other limiting factor which makes difficult to determine an appropriate sample size. As the result, the study heavily relied on the memories of the respondents which may not always be accurate.

CHAPTER TWO:

2. LITERATURE REVIEW

2.1 Theoretical and Conceptual Review

2.1.1 Definitions and conceptualizations of terminologies

Migration is, first and foremost, a normal human activity. Human beings have always moved from „one country, locality, and place of residence to settle in another". We tend to migrate from the homes of our families or guardians into our own homes. We migrate between regions, cities and towns. (Satterthwaite: 2015, p.4)

Urbanization is primarily the result of rural urban migration, and it is reasonable to treat it as such. Urbanization involves both the net movement of people towards and into urban areas and also the progressive extensions of urban boundaries and the creation of new urban centers. International migration can influence urbanization (Satterthwaite: 2015, p.4).

Rural-urban migration is a movement of a rural resident(s) to an urban destination for different reasons. The area of origin (departure) is a place from which a move is made whereas area of destination (arrival) is a place where the move is terminated (UN 1970:2) cited in (Assefa: 2012,)
In-migration:- to move into or come to live in a region or community- Rural-urban Migrant is someone who moves from his/her usual location of dwellings from aural to an urban area. Urban area is a place people were established a community with the number of 2000 and internal migration is the movement of people from one place to another, within the boundary of a state of which they are citizens, in order to take up employment.

Agriculture is the process of producing food, feed, fiber and many other desired products by the cultivation of certain plants and the raising of domesticated animals (livestock). Subsistence farming, who farms a small area with limited resource inputs, and produces only enough food to meet the needs of his/her family. At the other end is commercial intensive agriculture, including industrial agriculture. Such farming involves large fields and/or numbers of animals, large resource inputs (pesticides, fertilizers, etc.), and a high level of mechanization. These operations generally attempt to maximize financial income from grain, produce, or livestock. (Satterthwaite: 2015,)

A remittance refers to money that is sent or transferred to another party. The term is derived from the word remit, which means to send back. Remittances are often used as a way to help raise the standard of living for people abroad and help combat global poverty. In fact, since the late 1990s,

remittances have exceeded development aid, and in some cases make up a significant portion of a country's ***gross*** domestic product (GDP).(Skeldon 1997:19).

2.1.2 The neo-classical equilibrium perspective

Migration as an inseparable part of development, and asserted that the major causes of migration were economic. Migration patterns were further assumed to be influenced by factors such as distance and population densities. This perspective, in which people are expected to move from low income to high income areas, and from densely to sparsely populated areas, that is, the general notion that migration movements tend towards a certain partial economic equilibrium. (Skeldon 1997:19).

At the macro-level, neo-classical economic theory explains migration by geographical differences in the supply and demand for labor. The resulting differentials in wages cause workers to move from low-wage, labor-surplus regions to high-wage, labor scarce regions. Migration will cause labor to become less scarce at the destination and scarcer at the sending end. Capital is expected to move in the opposite direction. In a perfect lyneo-classical world, this process of "factor price equalization" (the Heckscher-Ohlin model) will eventually result in growing convergence between wages at the sending and receiving end (Todaro 1970; Lewis 1954; Ranis &Fei 1961; Schiff 1994

At the micro-level, neo-classical migration theory views migrants as individual, rational actors, who decide to move on the basis of a cost-benefit calculation. Assuming free choice and full access to information, they are expected to go where they can be the most productive, that is, are able to earn the highest wages. This capacity obviously depends on the specific skills a person possesses and the specific structure of labor markets (Skeldon 1997:19).

2.1.3 Harris-Todaro Model of Migration

Harris-Todaro (1969) and Harris-Todaro (1970) put their own feet print in the literature of migration. In the mid of 20th century, the hot debate in the realm of economic school of thought about the under development of less developed countries were population booming in country side and absences of industrialization in town. The debate only exists for short period of time hence the level of inequality and poverty remaining the same when the GNP increases even more the rural urban migration was considered as one factor for the under development of the LDCS. Todaro (1969) and Harris-Todaro (1970).

The key ideas of the models were /are

1. Rural urban migration is related with an economic aspect
2. The rise of job opportunity in cities mean the rise of urban joblessness in town and even more reduced national product i.e. Todaro contradiction,
3. Migration considered as tuning means of workers in the labor markets in country side or cities in order to increase the income,

2.1.4 Neoclassical economics: Macro theory

1. The international migration of rates between countries.
2. The elimination of wage differentials will end the movement of labor, and migration will not occur in the absence of such differentials.
3. 3 Labor markets are the primary mechanisms by which international flows of labor are induced; other kinds of markets do not have important effects on international migration.
4. The way for governments to control migration flows is to regulate or influence labor markets in sending and receiving countries.

2.2 Migration patterns rural-to-urban and rural-to-rural migration

As economies bear structural transformation on their development path, folks move from agricultur e to different sectors of the economy, like producing and services. Throughout this method, labor moves from rural areas to urban areas, and agriculture becomes progressively reduced in terms of its share in an exceedingly country‟s gross domestic product (GDP) and total employment. Structural transformation and urbanization patterns, however, disagree among countries (Ezra and Tesfaye in 2011 and 2006).

Some countries foster labor movements out of agriculture and into rural, non-farm sectors in little cities (many of that were antecedently rural settlements that have swollen. Different countri es have toughed a fast agglomeration in megacities. In 2014, around fifty-four % of the worldwide population lived in urban areas, compared with forty-three % in 2000. near half the world‟s urban dwellers reside in comparatively little cities of but five hundred inhabitants, whereas solely around one in eight board the twenty eight megacities round the world (i.e., those with quite t en million inhabitants) (Ezra, 2011 and Tesfaye, 2007).

Main reason for migration shows variation between men and girls. Evidently wedding arrangement is that the second main reason for migration among feminine, but it's not vital in any respect among men. For men education is that the main reason for migration. A pull issue is spectacular regarding the place an individual migrates to. it's by and enormous an honest issue that pulls individuals to a specific place. The move of young /rural youth from rural areas in seeking of higher chance in cities. (Ezra, 2011 and Tesfaye, 2007). High chance of access to employment, increased approach of life , adequate provisions of social serves- medication, education ,electricity, piped water delivery et al. - state of feeling safe , recreation, relatives relation were/ are thought of as a number of the pull factors for rural urban migration. Access to info has either facilitating or preventative iss ue for the agricultural urban migration. The suggests that of knowledge could vary from friends World Health Organization comes from migration, electronic or printing media (Ezra, 2011 and Tesfaye, 2007).

2.3 Migration patterns in the Horn of Africa

The migration downside within the Horn of continent has been substantial within the past four decades. Throughout the amount between 1978 and 1995, flows of refugees within the region peaked. The political overthrow of the Ethiopian Imperial Government in 1974, the independence struggle of State of Eritrea, the war between Abyssinia and African country between 1977 and 1978, and therefore the civil conflict in Sudan and (Bariagaber, 1997). He Says that African country within the Nineteen Eighties have all been mentioned as major catalysts of enormous involuntary movements of individuals within the region exploring the causes of the migration patterns within the Horn of continent is complicated thanks to the actual fact that there is such a large amount of agent‟s gift at the identical time. (Bariagaber, 2006).

2.4 Migration in Ethiopia

Ethiopia is one amongst the countries with sizable number of migrants in North America, Europe, and also the Midlist. By the tip of 2005, quite 1,000,000 Ethiopians migrated to the remainder of the globe. Searching for higher education, employment opportunities, and political stabilities are thought about major causes for migration. Political migration was intense in Ethiopia throughout 1970- 1990 because of political instability at the time. Though the stock of migration is decreasing since 1990, migration remains necessary and a hot stock within the current

day Ethiopia. in step with the population and housing census conducted in 2007, Ethiopia‟s population grew by regarding two million individuals. (Tefere and Beruk; 2005).

At the identical time, near one hundred twenty thousand Ethiopian left their country terribly year. Political and economic reasons accounted for the rise of Ethiopian migrants since the Nineteen Seventies. But these are by no suggests that those solely reasons. Some migrants come back from a well to try and do family World Health Organization will afford the travel and living expenses aboard. Those that face arduous ship reception aren't those that migrants as a result of the poor cannot afford to travel. Hence, it will be argued that though the initial reason of migration is political instability, the recent migration trend will be accounted for by the will to accumulate Western civilization and revel in higher normal of living. This, however, doesn't embrace people who migrant to the center East whose case is usually economic (Ezra, 2011 and Tesfaye, 2007).

2.5 Agricultural Production System in Ethiopia

Agricultural production is dominated by smallholder households which produce more than 90% of agricultural output and cultivate more than 90% of the total cropped land. Smallholders drive their income either in cash or through own-consumption from agricultural production. According to the national accounts, the agricultural sector consists of crop, livestock, fishery and forestry sub-sectors. Crop production is the dominant sub-sector within agriculture, accounting for more than 60% of the agricultural GDP followed by livestock which contributes more than 20% of the agricultural GDP. The contributions of forestry, hunting and fishing do not exceed 10% (Mulat et al., 2004).

The viability of the agricultural production systems in Ethiopia, as in many areas in developing countries, is highly constrained by degraded soils and increasing lack of reliability in rainfall resulting from climate change (Menale et al., 2010). There are two main production systems in Ethiopia: the pastoral nomadic system, and the mixed crop production system. The pastoral livestock production system dominates the semiarid and arid lowlands (usually below 1500 meters above sea level). These regions cover a vast area of lands with a small livestock production.

The crop production system can be classified into smallholders‟ mixed farming, producers‟ cooperative farms, state farms, and private commercial farms based on their organizational structure, size, and ownership. The major objectives of small holder farmers‟ production are to

secure food for home consumption and to generate cash to meet household needs such as clothing, farm inputs, taxes and others. Ethiopia has a variety of fruits, leafy vegetables, roots and tubers adaptable to specific locations and altitudes. The major producers of horticultural crops are small scale farmers, production being mainly rain fed and few under irrigation. Shallot, garlic, potatoes and chillies are mainly produced under rain fed conditions. Tomatoes, carrots, lettuce, beetroot, cabbage, spinach and swiss chard are usually restricted to areas where irrigation water is available (Girma, 2003).

Ethiopia has got an immense potential to develop intensive horticulture on small scale as well as on commercial scale. According to Girma (2003), some of the favorable factors that contribute to an overall investment are:

- Proximity to lucrative markets,
- Agro-climatic suitability and rich water resources for diversified irrigated agriculture,
- Growth/rise of demand for horticultural crops, particularly in urban areas,
- Diversified agro-climatic conditions that facilitate the diversification of the crops,
- The high productivity of horticultural crops as compared to cereals,
- Export possibilities of these crops are very encouraging and
- If fully exploited, these crops are highly remunerative and would be undoubtedly help to improve the standard of living of small scale resources poor farmers

2.6 Challenges of Agricultural Production and Productivity in Ethiopia

The agricultural production trends throughout the 1980ʺs up to mid-1990ʺs were characterized by wide fluctuations in total output and weak growth, with grain production increasing at rate of 1.37% annually compared to population growth of 2.9 % (World Bank, 2004).

Despite large scale extension efforts since mid-1990s, agricultural performance over the past decade has continued to be weak, with production gains mainly driven by weather and area expansion, and weak yield gains limited to maize. There are multiplicity of factors explaining this poor performance; high rainfall variability, the lack of irrigation investment, weak rural institution limited modern varieties, the lack of animal traction, the lack of mechanization, under investment in agricultural research, weak rural infrastructure and skills on the demand side, poor market linkages, high transaction costs, and weak purchasing power leading to thin and volatile markets, make agriculture more risky and reduce production incentives (World Bank, 2004).

Soil erosion is one of the major agricultural problems in the highlands of Ethiopia. Deforestation, overgrazing, and cultivation of slopes not suited to agriculture together with the farming practice that do not include conservation measures are the major causes for soil erosion in much of Ethiopia‟s highland areas. Degraded soils are also the major constraints to agricultural production and food security in the Southern Ethiopian highlands (Abay, 2011).

Land degradation is one of the major causes of low and in many places declining agricultural productivity and continuing food insecurity and rural poverty in Ethiopia. As stated by Berry (2002) the major interacting root causes of land degradation in Ethiopia are the following; the impact of natural conditions especially periodic drought, inaccessibility of rural areas due to topographic constraints, steady growth of population and livestock totals without changes in agricultural and other economic systems, historical patterns of feudal ownership of land followed by government ownership and despite policy changes uncertain status of land ownership, institutional overlap, duplication of effort and shortage of financial resources, lack of rural infrastructure and markets, lack of participation of stakeholders in management decisions especially at the local level, weak extension services and low technology agriculture, leading to risk aversion and reliance on cattle as wealth.

2.7 Empirical Review

2.7.1 Economic causes of rural urban migration

Lack of availability of sufficiently productive land, lack of meaningful employment in rural areas is the most common economic cause of rural-urban migration (Morrissey: 2007, McCatty: 2004, p.28). One of the most commonly reported challenges facing large rural households were that the plots of land available to each family member to use to support their own family were too small to support them. Restrictions on the abilities of rural people to buy or sell land mean that it is difficult for many to use their capital, tied up in land for another purpose (Zeitlyn: 2014,).

The provision of services such as electricity, piped water supply and public services make urban areas attractive. Increasing awareness of the urban areas through media, improved communication facilities, such as, transportation, impact of television, good network communication, the cinema, the urban oriented education and resultant change in attitudes and values also promote migration (Asmame: 2011, p), (Thet: 2009).

2.7.2 Social and cultural cause of rural urban migration

Main reason for migration shows variation between men and women. As expected, forced marriage arrangement is the main reason for migration among female, while it is not important at all among men (Altaye: 2015,). Other important demographic factor in internal migration is marriage because females are used to follow their spouses (Thet: 2009, p.4). Early marriage, violence and sexual abuse were found to be both drivers of migration for girls and women and the high probability of their employment in the cities, particularly for domestic workers (Zeitlyn: 2014,

2.7.3 Effects of Migrations on migrants‟ livelihood

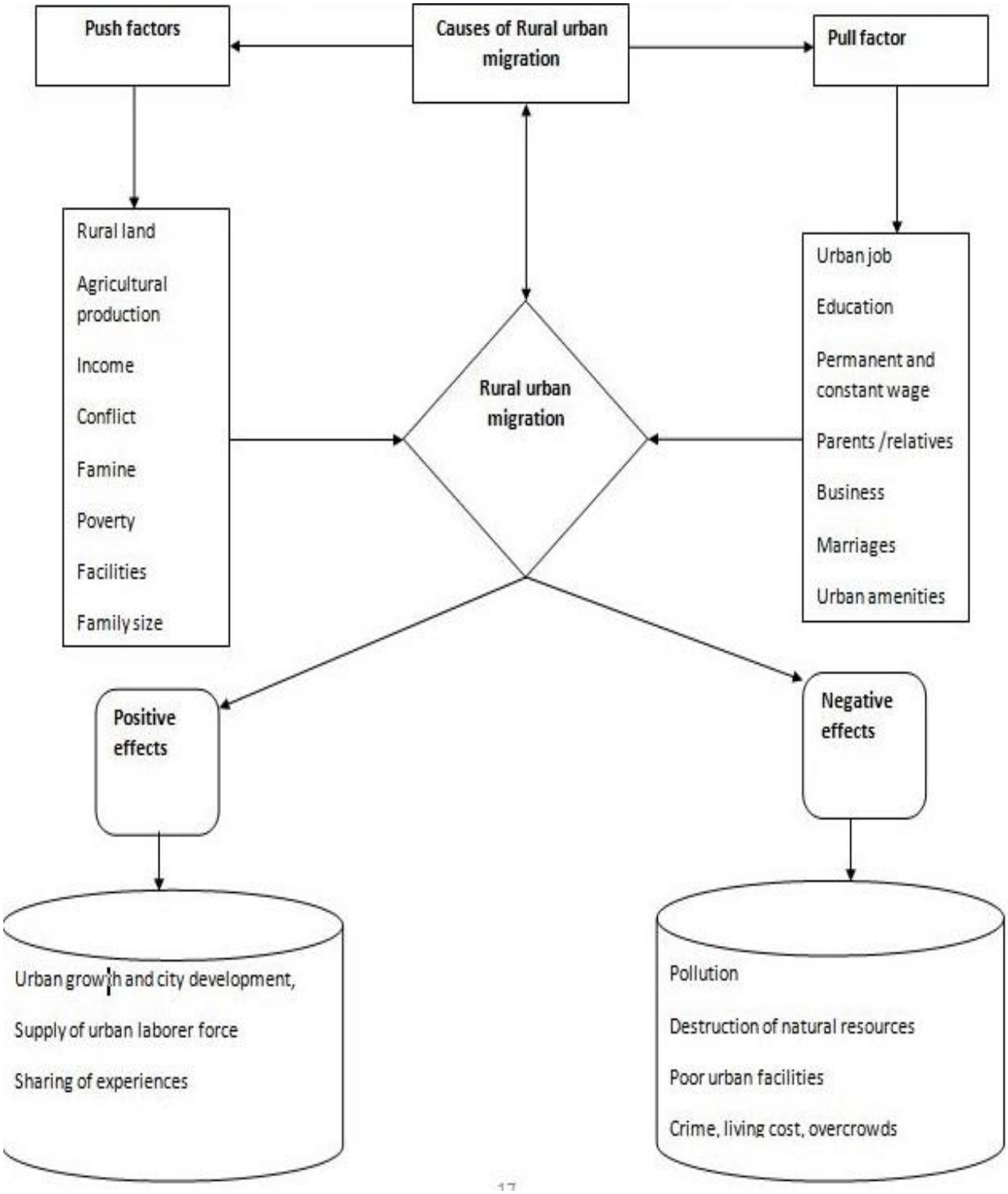
According to Deshingkar (2004), migration can also be viewed in negative terms because of the adverse experiences encountered by a migrant in the host environment. For example, weak social status, harassment, violence, lack of redress against mistreatment by employers and public officials, exploitation by middlemen, vulnerability to illness such as HIV/AIDS and malaria, absence of social protection and the like are experiences encountered by migrants. It is observed that educational level of informal sector participants is not higher than primary school level in average. The study also shows that operators of the sector works for relatively longer hours per day and most of them enter the sector recently. Moreover, they found out that lack of access to credit facilities and the national & municipal laws and regulations

governing the business environment in the country are the major problems faced by informal sector operators (Ibid).The role of information in facilitating rural-urban migration is also worth mentioning. Thus, access of information from relatives in the urban areas, returnee migrants or through mass Medias would play a catalytic role in rural-urban migration (Kinfe, 2003

2.7.3 Environmental causes of rural urban migration

Discussion of the potential for environmental change to drive migration has often assumed migration to be an inevitable outcome of adverse environmental change. Environmental changes put stress on rural livelihoods (Morrissey: 2007,). The economic base of rural areas solely depended on the agriculture, when the productivity of land declines and the environment not conducive to maintain of the livelihood of the peasants which enforces to depart from rural residences to the cities (Altaye: 2015,). In general, the productivity of labor resource in the agriculture sector is considered to be low and changes with respect to the variability in weather conditions that affect the performance of the sector (EEA, 2006) cited in (Assefa: 2012,).

2.8 Conceptual framework



- Fig; 1 conceptual framework

CHAPTER THREE:

3. METHODOLOGY

3.1 Description of the study area

3.1.1 Location of study district

The study area, Ofla woreda is found in Southern Zone of Tigray Region. It is found at a distance from the capital city of region Mekelle 160 km and about 620 km north of Addis Ababa. The Woreda comprises 21 tabiyas administrations. Among these, one of them are urban areas and nineteen of them are rural tabiyas (OWFED, 2018). The total population of Ofla woreda is estimated to be 147674. Among these 75860are female and the rest 71,814 are males (OWFEDO, 2018). According to the same source, the total number of households in the woreda is estimated to be 34720 households with an average family size of 5 persons per household.

Ofla *wored*a it is bordered with Enda-Mehoni in the North, Raya Azebo in the North East, Raya Alamata in the South East and Amhara region in the West. The total area of the district is 104,712.4 ha having the Agro-climatic zone of 0.2% Kolla (lowland „<1500 m asl"), 40.6% Weynadegua (midland „1500 – 2300 m asl), 58.5% Dega (highland „2300 – 3200 masl and 0.7% of Wurch (upper highland „>3200 m asl.).

Agriculture is the main source of income of the people in the study areas. The common rain fed crops produced by almost all farm households include maize, wheat and barley etc, most of the farmers grow vegetables such as onion, pepper, potato, garlic, maize, wheat and tomato etc in the irrigated agriculture. In addition to crop production, livestock production is also an important source of household income in the area. Much of livestock income is derived from the sale of cattle, goat and sheep.

Source: - OWADO map of the woreda, Ofla 2018

3.1.2 Topography (land form and slope)

The land form of the select district area is moderately to high mountainous dissected side slope i.e. undulating and upland and some part of an adulate land forming.

3.1.3 Climatic condition

The daily temperature of the district ranges from 20 ºC to 26 ºC and the annual rainfall ranges from 350 - 1500 mm per year (5-year data between 2011 and 2015) (Ofla woreda Agricultural Office, 201 8).

3.1.4 Human and Animal population

The total population of Ofla woreda is estimated to be 147264. Among these 75660are female and the rest 71,604 are males (OWFEDO, 2018) and the total number of animal population also143592 of Cattles, 108829 of Sheep,64821 of Goats, and21349 of Equines are in the select study areas (Ofla woreda Agricultural Office, 201 8).

3.1.5 Land use/cover type

The major land use types of Ofla district arable land (21.83%), forest land both natural and artificial plantation (22.10%), grassland (3.49%), homestead 17.42%, range land 27.87%, miscellaneous land 5.95% and water body (Hasheng lake 1.34%) of the total area of the district which is104712.4ha (Ofla woreda agricultural office, 2018)

3.2 Research Design

This based on researcher is conducted in southern zone of Tigray region, in woreda Ofla at two tabiya and the nature of the research is primarily quantitative and, in some way, qualitative with descriptive type of research design. The overall objective of this study is to investigate the of impacts of labor out migration on agricultural productivities in southern Tigray Zone Ofla *woreda.* requires a mixed-research approach thought provided due attention for exploratory part (what and how is going on) and explanatory (why it is happening) approaches. Therefore, to gather relevant data and come up with sound findings, the study employed mixed approach (both quantitative and qualitative).

3.2.1 Type, sources and methods of Data collection

Primary data were collected from both migrated and non-migrant households thorough interview scheduled. Secondary data were collected from related literatures articles, journals, reports of the office and documents. The instruments used to gather data from the sample respondents was questionnaire and key informant interview. The questionnaire contained both close and opened ended formats and was prepared for migrants and non-migrants‟ respondents

3.2.2 Sample size and sampling techniques

The total population of this research paper was all migrants and non-migrants which currently exist in two tabiya in Ofla woreda (hashange, selam bekalse). An optimum sample is one which fulfills the requirements of efficiency, representativeness, reliability, flexibility and should be determined through the principle of data saturation point. The parameters are research interest, heterogeneity/ homogeneity, costs and budgetary constraint must invariably be taken into consideration when we decide the sample size (Kohtari, 2004).

3.2.3 Data Collection Instruments

In order to gather as much information as possible for triangulation and to ensure that the data is reliable and trustworthy, a variety of equipment was used as follows:

3.2.3.1 Survey Questionnaire

In this study, survey questionnaire was used to collect quantitative data from the sample population. The questionnaire includes both close-ended and semi closed questions. Besides, the questionnaires covered demographic, socio-economic and background variables such as age, sex, land size, marital status and family size.

3.2.3.2 Key informant interview

In-depth interview was also employed with intention of getting rich and deep information from the key informants. Key informant interview was utilized to collect data from the local government officials in different sectors who are expected have knowledge with migration related issues. Heads of the following offices were interviewed: administration authorities of the selected Woredas, youth and sports office, labor and social affairs office, justice desk, and women‟s affairs. In addition to this, border security officers and some *kebeles* level administrators were interviewed according their relevance to the objective of the study.

3.2.4 Sample size determination

156 sample farm household respondents (99 non migrant and 66 migrant) were drawn from 4012 the total District households randomly based on probability proportion of the size. The sample size is determined by using Cochran (1977) formula developed to calculate a representative sample for proportions as considering confidence level, the degree of variability and level of precision. The formula is:

$$n = \frac{n_o}{1+\frac{n_o - 1}{N}} \quad where, n_o = z^2 pq / \varepsilon^2$$

Where, N is the population size, no is the sample size, z is the selected critical value of desired confidence level, p is the estimated proportion of an attribute that is present in the population, q =p - 1 and e is the desired level of precision.

Table1: sample of households of each kebele

Name of kebele	TN of HH	THH of migrants	SHH from migrant	THH of Non-migrants	Sample HH from non- migrant
Hashnaga	2382	870	39	1415	58
Selam bekalse	1720	811	27	850	32
Total	4102	1752	66	2350	90

3.2.5 Methods of data analysis

The data obtained from this research was analyzed by busing SPSS version 20 and was summarized in descriptive analysis such as mean, percentage, standard division, tables, and. This study also used econometric model binary logistic to analyze the factors affecting migration and propensity score matching (PSM) used to measure the impact of labor out migration for agricultural productivity.

3.3 Definition of variables and working hypothesis

3.3.1 Definition of Variables and Hypothesis

3.3.2 Dependent Variable

Labor out-migration: is a dichotomous dependent variable in the model taking the value of 1 if a household is a migrant and 0 if a household is non-migrant otherwise.

3.3.3 Independent variables:

Various socioeconomic and household characteristics variables are expected to affect household food security in the study area. The major explanatory variables hypothesized to influence positively or negatively on the household to be migrant or not are described below.

Age of household head (AGE**):** rural households mostly devote their time or base their livelihoods on Agriculture. The older the household head, the more experience has in farming. Moreover, older persons are more risk averters, and mostly they intensify and diversify their production activities.

Number of livestock (TLU): livestock is expected to have a positive relation on increasing households‟ agricultural productivities. Since households with more livestock obtain more milk, milk products and meat for direct consumption, particularly during food crisis, large size livestock owners could be more food secured. The livestock sale is also used as the major coping strategy

during famine and seasonal food shortage. Therefore, it is logical to expect that a higher value of livestock increases the probability to cope with food shortage.

Land size (LSZ): this refers to the total land owned by a household in the area. Since, cultivated land is used for production of crop for consumption and cash; it has direct relationship in increasing production and income.

Labor: Labor is one of the factors of production. Family labor plays an important role, particularly in rural families. Therefore, the household with more agricultural labor, which results in more production and hence more income if enough land is available to accommodate the available labor. Increase in the availability of labor has positive influence in terms of increasing production and have positive contribution to household.

Access credit Service (ACT): Institutional loan plays an important role in agricultural production. Farmers who have access to credit will able to produce due to use of agricultural inputs which would enhance production and ultimately increase agricultural productivities.

Use of fertilizer: Farmers are using fertilizer as one of input that supports them to improve farm productivity. Uses of fertilizer increase productivity of crop per unit area will have improved total production per household and more food will be available for farmers who use fertilizer.

Distance from the nearest market (MDTS): it is a continuous variable measured in Kilometers. Distance to the nearest market and the frequency of contact that the farmer maintains with it is likely to influence the probability of agricultural production technology. Reported that the probability of participation in agricultural production for a household, with a reasonably good access to market information would by nearly twice than households who do not have access to market information. Therefore, in this study it is hypothesized that distance from market was negatively related to agricultural production.

Table 2: Definitions of hypothesized explanatory Variables

Variable	Symbol	Expected Sign	Types
Age of the household head	AGE	+	Continuous
Sex of household head	SEX	+	Dummy
Cultivated land size	LSZ	+	Continuous
Adult labor availability	ADLAB	+	Continuous
Number of Livestock	TLU	+	Continuous
Access to credit	ACT	+	Dummy
Distance to the nearest market	MTDS	-	Continuous

3.5 Model Specification

The objective of the study is to investigate the impact of labor out migration on agricultural productivity. Therefore, irrespective of its shortcomings, propensity score matching (PSM) method was used to measure the impact of labor out migration on agricultural productivity. It is chosen among other non-experimental methods because it does not require base line data, the treatment assignment is not random and considered as the best alternative to experimental methods in minimizing selection bias. PSM also attempts to balances treatment and control groups on a large number of covariates without losing a large number of observations (Paul, 1983).

Estimation of the propensity scores:

The first step in PSM method is to estimate the propensity scores. As described by Rosenbaum and Rubin (1983) matching can be performed conditioning on P(X) alone rather than on X, where P(X) = Prob (D=1|X) is the probability of participating in irrigation conditional on X. If outcomes without the intervention are independent of participation given X, then they are also independent of participation given P(X). This reduces a multi-dimensional matching problem to a single dimensional problem.

A logit model was used to estimate propensity scores using a composite of pre-intervention characteristics of the sampled households (Rosenbaum and Robin, 1983) and matching will be performed using propensity scores of each observation. In estimating the logit model, the dependent

variable was users of irrigation, which takes the value of 1 and 0 otherwise. The mathematical formulation of logit model is as follows:

$$\mathbf{P_i} = \frac{\mathbf{e^{Zi}}}{\mathbf{1 + e^{Zi}}}$$

Where, P_i is the probability of participation in out-migration?

$$Z_i = a_0 + \sum_{i=1}^{n} a_i X_i + U_i$$

Where, $i = 1, 2, 3, ---, n$ $a_0 = \text{Intercept}$, $a_i = \text{Regression coefficients to be estimated}$

$U_i = \text{Disturbance term, and}$ $X_i = \text{Pre-intervention characteristics.}$

The probability that a household belongs to non-participant is:

$$1 - P_i = \frac{1}{1 + e^{zi}}$$

The odds ratio is $= \frac{P_i}{1 - p_i} = e^{Z_i}$

Taking the natural logarithm, then $Z_i = a_0 + \sum_{i=1}^{n} a_i X_i + U_i$

CHAPTER FOUR:

4. RESULT AND DISCUSSION

The findings of impact of labor out migration on agricultural productivities from descriptive and econometric analyses are presented and discussed. Descriptive statistics were employed to analyses and presented the explanatory variables in the form of mean, standard error, frequency distributions and percentages as discussed below. Presents the descriptive statistics of the variables used in the econometric analysis, by district and migration status in the two districts

Table 2: Descriptive Statistics of Selected Variables

	Migrant			Non-migrant			Total			T-value
Variable	Observation	Mean	St. Err	Observation	Mean	St. Err	observation	Mean	St. Err	
Age of household head	66	45.590	1.653	90	48.922	1.626	156	47.512	1.174	1.405
land size	66	.229	.011	90	.236	.01159	156	23317	.008360	0.409
Fertilizer	66	20.454	2.851	90	23.055	3.2630	156	21.955	2.22317	0.574
Seed k.g	66	21.041	1.664	90	21.275	1.991	156	21.176	1.34367	0.085
Market distance	66	8.405	.171	90	8.544	.13141	156	8.485	.10474	0.655
Productivity	66	28.121	1.052	90	29.333	82954	156	28.820	.6332	0.916
Livestock	66	9.575	1.028	90	11.811	.9568	156	10.865	.706175	1.571
ox cost	66	6.833	.225	90	11.811	.9568	156	6.961	.13409	0.817
Chemical cost	66	43.181	4.378	90	39.583	4.444	156	41.105	3.158	0.561
Seed in birr	66	213.560	17.004	90	212.025	20.058	156	212.674	13.586	-0.0557
Fertilizer in birr	66	271.121	42.8025	90	350.1	316.685	156	316.685	35.166	1.1104

4.1 .1 Age of the household head

The age of the household head influences whether the household benefits from the experience of an older person or has to base its decisions on the risk-taking attitude of a younger farmer. The maximum and minimum ages of the sampled household were 76 and 24 respectively. The mean age of migrant sample household heads was 45.590 with a standard error of 1. 653 and the mean age of heads of non-migrant sample households was 48.922 with a standard error of 1.626.

4.1.2 Cultivated land size

The maximum and minimum land size holding of the sampled household were 0.5 and 2 ha respectively. The mean size of land holding of migrants and non-migrants is 0.229 with a standard error of 0.011 and 0.36 with a standard error of 0.01159 respectively.

4.1.3 Livestock holding

Livestock are the most important productive assets in the household. In the study area, livestock are an important source of power for Plunging, transportation, and riding. Livestock also consolidate the social organization as they serve in payment for blood compensation and gifts for relatives. They play a role in religious and cultural ceremonies and serve as a source of prestige. It is also considered a saved asset used during periods of food shortage. In the study area, the main livestock species owned by the sample households include cattle, sheep and goats, donkeys, and poultry. The mean size of livestock holding of migrants is 9.575 with a standard error of 1.653 respectively.

Most household heads have livestock with a minimum of 0 and a maximum of 13.71, with a mean of 5.22 and a standard deviation of 3.79. Livestock ownership is a continuous variable and is measured in TLU (Tropical Livestock Unit). Rural households accumulate their wealth in terms of livestock. They are prominent sources of wealth to farm households and supply manure to improve soil fertility. And therefore, livestock are one of the major sources of income in rural areas.

This is true in areas where mixed farming is practiced particularly where the ownership of farm oxen forms the cornerstone of farm economy in the rural households. Livestock ownership determines the household‟s food security status and the level of vulnerability to different migrations internally or internationally.

The result indicated that a unit increase in TLU leads to a reduction of the probability of rural out-migration by a factor of 0.415. The result is in line with the findings of Beyene and Much depicting that households with large livestock sizes are found to be to be less vulnerable to food insecurity

especially in times of drought when crops fail to yield. Therefore, possession of large size of livestock increases the likelihood of the household being food secure and reduces the probability of rural out-migration.

4.1.4 Family Size

It is the total number of family members who live under one roof (number of people living together and utilizing scarce resources together). Family is an important source of labor supply in the area. The family size for the respondents was a minimum of one and a maximum of eleven household members. The mean family size was 5.06 and the standard deviation was 2.08. Since labor is the main input in crop production, larger households face fewer lab our bottlenecks at critical points in the farming cycle such as land preparation and harvest time.

Thus, family size is hypothesized to determine migration positively in one or other ways. Results show that there is a positive association between the migration of family members and the size of the family. As the size of the family increased the per capita income of the household decreased and the household faced the problems of livelihood. Therefore, the family members had to migrate in search of jobs in urban areas.

4.1.5 Distance from the nearest market

It is measured in kilometers. Regarding the market distance from the main market, the mean difference in distance between the migrant and the non-migrant group is statistically significant at a 5% probability level of significance and the average distance of the sample household from the main market was 9.94km with a standard deviation of 3.098. The mean distance of the treated and control group from the mean market was 8.405 and 0.17152 with a standard deviation of 8.544 and 0.13141respectively

Table 3 Cause of rural outmigration

	Cause of out migration				
sex	***Lack of housing services***	***Lack of food***	***Lack of job***	***Conflict***	***Total***
male	***23(14.5)***	***11(7.5)***	***37(23.5)***	***19(12)***	***90(57.5)***
female	***13 (8.5)***	***10(6.5)***	***25(16)***	***18(11.5)***	***66(42.5)***
total	***36(23)***	***21(14)***	***62(39.5)***	***37(23.5)***	***156(100)***

Sex as far as the sex composition of sample respondents is concerned, 57.5% and 42.5% respondents were male and female respectively. Thus, as shown in the table, male people (23.5%) were found to migrate mainly due to lack of job and other reasons like conflict and lack of peace (12%) respectively. The remaining 14.5% and7.5% were found to migrate due to lack of housing service and lack of food respectively. Similarly, females were found to migrate mainly due to other reasons (16%). Further, lack housing service, lack of food, and lack of job take equal share (10%) as cause of migration for females.

4.1 Characteristics Migrants by family livelihood in Ofla woreda

The family livelihood of migrants describes the migrant‟s economic base. Thus, 85% of the Ethiopian population lives in rural areas, and most of the rural household dwellers do the farming practice to live. In line with this, previous research studies in general and this research study, in particular, identifies most of the migrants come from a farmer household head, which implies the economic base is mainly based on the agricultural sector. And it accounts in this study for 52.5% of migrants coming from a farmer-based economic activity. Other than the agricultural activity taking place in the rural economy, pastoralist economic activity plays the second greatest role in some regions of the nation Thus migrants coming from pastoralist economic-based families account for

21%. The second larger portion of migrants in this research i.e. 12.8% of migrants comes from household head families who are private and public employees. 12.8% of migrants state their families are working as merchants selling vegetables, acquiring small shops, and selling traditional liquors such as Areke, Tella, Tej, etc.

Table 4; Cause of Increased unemployment

Cause of out migration					
Increased unemployment	***Lack of housing services***	***Lack of food***	***Lack of job***	***Conflict***	***Total***
yes	***30(19)***	***17(11)***	***54(35)***	***14(9)***	***115(74)***
no	***13(8)***	***--***	***15(10)***	***13(8)***	***41(26)***

As indicated in Table most of the respondents (45%) replied migration to aggravate unemployment out of which 27%, 26.5%, and 17.5% migrated due to lack of job, other reasons and lack of housing services respectively whereas the remaining 5% migrated due to lack of food. About 45% of the total respondents replied migration might not have aggravated unemployment.

Table 5: Distributions of respondents by family livelihoods

	Family livelihoods									
	Farmer		pastoralist		Merchants		Others		Total	
	Freq	%	Freq	%	Freq	%	Freq	%	Freq	%
Male	49	54.44	11	12.22	10	11.11	20	22.22	90	57.7
Female	27	40.5	15	27.5	10	15	14	21	66	42.3
Total	76	48.7	26	16.7	20	12.8	34	21.8	156	100

Table 6; Cause of moral and psychological damage

Cause of out migration					
moral and psychological damage	***Lack of housing services***	***Lack of food***	***Lack of job***	***Conflict***	***Total***
yes	***21(13)***	***14(8.5)***	***31(19.5)***	***21(13.5)***	***87 (54.5)***
No	***11(17)***	***25(16)***	***24(15.5)***	***9(5.5)***	***69 (45.5)***

As can be seen in Table 42% of the sample respondent replied migration to have high moral and psychological damage. And, they were found to migrate due to reasons like conflict (13.5%), lack of job (19.5%), lack of food (8.5%), and lack of housing services (13%). And, it was evident that 47.5 % of the sample respondents were female about 25% of the sample respondent was children below 15 years of age Thus migration has brought moral and psychological damage on females and children below 15 years. The remaining 35% of the sample respondent replied migration to have no remarkable moral and psychological damage; and migrated due to lack of job (15.5%), lack of housing services (17%), lack of food (16%) and some other reasons like conflict (5.5%).

Table 7; Cause of Housing services

Cause of out migration					
Housing services	***Lack of housing services***	***Lack of food***	***Lack of job***	***Conflict***	***Total***
yes	***17(10.5)***	***15(9.5)***	***37(23.5)***	***11(8)***	***80(51.5)***
No	***28(17.5)***	***21(13.5)***	***19(12.5)***	***8(5)***	***76 (48.5)***

As shown in Table about 51.5% of the sample respondents have access to housing services but still found to migrate due to lack of job (20.5%), some other reasons like conflict (16%), lack of food (14%) whereas about 51.5% have no housing services and migrated to the town due to some reasons like conflict (5%), lack of housing services (17.5%), lack of job (12.5%) and lack of food (13.5%). Thus, other factors like lack of peace, conflict, crime, etc.

Table 8; Cause of landholding(hectare)

Cause of out migration					
landholding(hectare)	***Lack of housing services***	***Lack of food***	***Lack of job***	***conflict***	***Total***
Land less	***26(17)***	***13(8.5)***	***42(27)***	***11(7 .5)***	***92(60)***
Very small size (>0.25	***4(2.5)***	***-***	***16(10.5)***	***13(8)***	***33(21)***
Very small and not productive	***3(1.5)***	***--***	***18(11.5)***	***10(6)***	***41(19)***

As can be seen in Table most of the respondents (60%) were landless. And, the land less was found to migrate due to lack of food (8.5%), lack of job (27%), other reasons (17%) and lack of

housing services (7.5%). Further, 21% of respondents were used to have a very small size (<0.25 hectare) of land who migrated mainly due to lack of job (10%). The remaining 19% respondents owned very small (<0.25 hectare) but not productive land who were

found to migrate due to lack of job (10) and other reasons (12.5%). Therefore, migration in one hand brings a remarkable pressure up on land holding; and in other hand it can be caused due to a lack of land or small and nonproductive land.

Table 9: Problem of agricultural labor due to migration at Ofla Woreda

Labour problem due to migration			
	Frequency	Test value	
Yes	66	Chi-square	17.959**
No	90	Sig.	.000
Total	156		

Significant result was found between labor problems and migration. Its means that migration leads to problems in labor force. In fact remittances are seldom invested in land or other capital inputs needed to improve the agricultural sector which is accordance to our finding. The study reported that „outmigration has lost-labor effects but international remittances have investment-promotion effects that result in increased yield production.

4.8 Econometric Results

4.8.1 Age of household's head (AGE)

This variable was negatively related and had a significant effect on the participation of households in agricultural production at a 1% probability level. The possible reason was older farmers are less likely to adopt to migrate and are conservative in accepting and implementing labor-out migration. This implies that as the household age increases, the participation of the household in migration decreases.

Use of fertilizer: There is no significant difference in the use of fertilizer between migrant and non-migrant households in both, even though there is a significantly higher use of fertilizer in migrants than in non-migrant.

Table 9: summarize cause of out migration

```
summarize $treatment $ylist $xlist
```

Variable	Obs	Mean	Std. Dev.	Min	Max
productiv	156	7.012821	2.588248	5	28
age	156	42.73718	10.40292	26	74
sex	156	.4807692	.5012392	0	1
creditacc	156	.5192308	.5012392	0	1
crops	156	3.00641	1.407339	1	6
landsize	156	.2628205	.0553207	.25	.5
unitprice	156	10.83333	5.755035	7	26
totalcost	156	7166.987	4420.332	700	33800
labman	156	189.7436	44.25656	0	200
noofday	156	3.730769	1.438396	0	8
fertinbir	156	703.1923	339.7418	0	1556
seedinbir	156	193.1731	181.4053	22	1176
oxencost	156	700	143.2345	600	1400
cheminbr	156	78.41346	17.54967	7.5	150

4.8.2 Characteristic of Migrants by Sex and Age

Most of the migrants who left their residences are indeed young and energetic. This is because, as their age is transformed from childhood to adultery, they will be left with the burden of administering themselves economically and also mostly handles the responsibility of looking after their family. This will bring the quest for self-independency, which results in finding a source of

income both for them and their family. However, that source of income isn‟t plenty option in two Tabiya Ashanga and Selambekalse rural due to the existence of scarce arable land and the extreme Limited job opportunities for migrants. The only indispensable option left in hand is to migrate to cities in search of jobs and better lives.

Shows about 69.8% of migrants are at their youth age which implies the rural population is feeding urban areas the youth, the young and strong. This could impact the working productivity of the rural areas particularly the agricultural sector which is mostly done through oxen and needs strong and young people on it.

Table 10: impacts of labor out on agricultural productivities push factors

productiv	Coef.	AI Robust Std. Err.	z	P>|z|	[95% Conf.	Interval]
ATE						
migrant (1 vs 0)	-.930914	.2365413	-3.94	0.000	-1.394526	-.4673016

4.8.3 Cultivated land size (LSZ)

It was found to be negative and statistically significant at a 1% probability level to agricultural production. This implies that sampled households having more cultivated land have the chance to apply crop diversification while those being have fragmentation of cultivated land were normally poor and less likely to agricultural production.

The land is a basic asset of people‟s livelihoods in rural areas of the Tigray region in general and the study area in particular. The number of populations has been increasing and thus the average landholding and its productivity are decreasing from time to time. In addition to the decline of land productivity due to the reduction of the fertility of the soil, other natural shocks such as drought, pest infestation, and scarcity of farmland are important factors of the out-migration of rural people seeking wages and related employment opportunities. About 7% of respondents have no farmland at all, 38.5% have a hectare of land, 1.5% have 2 hectares, and the majority have below 1 hectare of land. This shows that most household heads have small plots of land (below 1 hectare) that have not been enough to feed the total household member or their family, thus leading to both seasonal and permanent migration to secure the household food security situation. The size of land cultivated, as a basic input in farming, is significantly associated with the food security status of a household. Land in this district serves as a means of coping mechanism during serious food shortages and

collateral to receive credit service. This means households with large cultivated land produce more for household consumption and sale and have a better chance to be food secure than those having relatively small sizes of cultivated land.

Table 11: factors determining migrant and non-migrant

```
. teffects nnmatch (productiv creditacc age crops landsize unitprice totalcost) (migrant)

Treatment-effects estimation                    Number of obs      =        155
Estimator      : nearest-neighbor matching      Matches: requested =          1
Outcome model  : matching                                  min =          1
Distance metric: Mahalanobis                               max =          3
```

productiv	Coef.	AI Robust Std. Err.	z	P>|z|	[95% Conf.	Interval]
ATE						
migrant (1 vs 0)	-.8919355	.2241145	-3.98	0.000	-1.331192	-.4526792

Table 12: impacts of productivities in agriculture (Push Factors)

productiv	Coef.	Std. Err.	t	P>|t|
age	-.006906	.0058375	-1.18	0.239
sex	.125255	.1314962	0.95	0.342
creditacc	.1661452	.1166179	1.42	0.156
crops	.2596332	.052426	4.95	0.000
landsize	0	(omitted)		
unitprice	-.0823757	.0375401	-2.19	0.030
totalcost	.0001385	.0000502	2.76	0.007
labman	0	(omitted)		
noofday	0	(omitted)		
M	-.0244272	.0010764	-22.69	0.000
fertinbir	.0357536	.0018628	19.19	0.000
seedinbir	-.0062073	.0005089	-12.20	0.000
oxencost	-.0023882	.0012327	-1.94	0.055
cheminbr	0	(omitted)		
_cons	.3121237	.6546115	0.48	0.634

Source: own result, 2024

4.8.4 Seed in birr (sd)

Seed in birr was negatively related and statistically significant at a 1% probability level to agricultural production. The possible reason the price of seed increase in birr in agricultural production affected the economic activities of farming production activities. This implies impacted the decrease in farming production.

4.8.5 Productivity

Productivity was negatively related and statistically significant at 10% probability level to agricultural production. The possible reason for this was there are multiplicity of factors explaining this poor performance; erratic rainfall distribution, the lack of irrigation investment, limited rural institution, the lack of mechanization, poor market linkages, high transaction costs, and make agriculture riskier and reduce production incentives. The survey also reveals that the cultivation of non-cereal crops is rare in both and almost non-existent at a commercial level; farming households are almost exclusively involved in subsistence farming.

Table 13: factors determining migrant and non-migrant

```
. teffects psmatch (productiv) (migrant age sex crops  totalcost)

Treatment-effects estimation                   Number of obs      =        152
Estimator      : propensity-score matching     Matches: requested =          1
Outcome model  : matching                                  min =          1
Treatment model: logit                                     max =          4
```

productiv	Coef.	AI Robust Std. Err.	z	P>|z|	[95% Conf. Interval]	
ATE						
migrant (1 vs 0)	-1.774671	.3547921	-5.00	0.000	-2.470051	-1.079291

4.8.6 Cultivated land size

The maximum and minimum land size holding of the sampled household were 0.5 and 2ha respectively. The mean size of land holding of migrant 0.229 with standard error 0.011 respectively.

4.8.7 Livestock holding

Livestock are the most important productive assets in the household. In the study area, livestock are important source of power for Plunging, transportation, and riding. Livestock also consolidate the social organization as they serve in payment for blood compensation and gifts for relatives. They play role in religious and cultural ceremonies and serve as source of prestige. It also considered as a saved asset used during periods of food shortage. In the study area, the main livestock species owned by the sample households include cattle, sheep and goat, donkey and poultry. The mean size livestock holding of migrant 9.575 with standard error 1.653 respectively. Most household heads have livestock with the minimum of 0 and maximum of 13.71, with mean of 5.22 and standard deviation of 3.79. Livestock ownership is a continuous variable and measured in TLU (Tropical Livestock Unit). The rural households accumulate their wealth in terms of livestock. They are prominent sources of wealth to farm households and supply manure to improve soil fertility. And therefore, livestock are one of the major sources of income in rural areas.

This is true in areas where mixed farming is practiced particularly where the ownership of farm oxen forms the cornerstone of farm economy in the rural households. Livestock ownership determines the household‟s food security status and the level of vulnerability to different migration internally or internationally.

The result indicated that a unit increase in TLU leads to reduction of the probability of rural out-migration by a factor of 0.415. The result is in line with the findings of Beyene and Much depicting that households with large livestock size are found to be to be less vulnerable to food insecurity especially in times of drought when crops fail to yield. Therefore, possession of large size of livestock increases the likelihood of the household to be food secures and reduces the probability of rural out-migration.

4.8.8 Family Size

It is the total number of family members who live under one roof (number of people living together and utilizing scarce resources together). Family is an important source of labor supply in the area. Family size for the respondents was a minimum of one and maximum of eleven household members. The mean family size was 5.06 and the standard deviation was 2.08. Since labor is the

main input in crop production, larger households face fewer lab our bottlenecks at critical points in the farming cycle such as land preparation and harvest time.

Thus, family size is hypothesized to determine migration positively in one or other ways. Results show that there is positive association between migration of family members and size of family. As the size of family increased the per capita income of the household decreased and the household faced the problems of livelihood. Therefore, the family members had to migrate in search of a job in urban areas.

Table 14: factors productivity age sex credit access crops total cost (migrant)

productiv	Coef.	AI Robust Std. Err.	z	P>|z|
ATE				
migrant (1 vs 0)	**-1.241883**	**.2492337**	**-4.98**	**0.000**

4.8.9 Family Size

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Table 15: impacts of productivities on migrants and non-migrants

productiv	Coef.	AI Robust Std. Err.	z	P>|z|
ATE				
migrant (1 vs 0)	-.8919355	.2241145	-3.98	0.000

4.8.10 Distance from nearest market (MTDS)

Distance from nearest market was negatively related and statistically significant at 5% probability level to agricultural production. The possible reason for this was transport facilities are limited in the area and farmers fail to get the market to sell their produce at the right time and place.

This implied that seasonality and perishes ability of agricultural products making farmers to incur cost and face the risk of loss. This tends to farmers disadvantage Therefore as the market distance increases, the probability of using agricultural production decreased.

4.8.10.1 Seed in birr (sd)

Seed in birr was negatively related and statistically significant at 1% probability level to agricultural production. The possible reason the price of seed increase in birr in agricultural production affected the economic activities of farming production activities. These imply impacted the decrease of on farming production.

4.8.10.2 Productivity

The productivity was negatively related and statistically significant at 10% probability level to agricultural production. The possible reason for this was there are multiplicity of factors explaining this poor performance; erratic rainfall distribution, the lack of irrigation investment, limited rural institution, the lack of mechanization, poor market linkages, high transaction costs, and make agriculture riskier and reduce production incentives. The survey also reveals that the cultivation of non-cereal crops is rare in both and almost non-existent at a commercial level; farming households are almost exclusively involved in subsistence farming.

4.8.10.3 Overall impact of Migration and Remittances

Migration has continuously been posing challenging questions regarding the nature of Production itself. In one side, Poverty alleviation is a step towards development, which Migration evidently accomplishes. Migration remittances unarguably raise the migrant-sending families‟ incomes and are a living for many poor families. Great share of that migration/additional income are spent on basic consumptions like food, health care, education and Housing. Thus, migration and remittances contribute to progress toward some of the UN‟s 8 Millennium Development Goals (MPI, 2003). As to the neoclassical model‟s assumption of returnees‟ coming back however, this study reveals different story. That is, not only ofla returnees buy houses and reside in urban centers in their return to Tigray; but also significant number of migrant-sending households resettle as soon as they manage to buy or at least, rent houses in towns. So, let alone the returnees, the families are leaving ofla instead of investing locally.

On the other side, however, the improvements in the households‟ basic needs/wants do not necessarily account for development. In other words, development needs long-term structural changes in terms of knowledge and technology advancements, efficient businesses creation, good governance, public services and so forth.

Migration arguably robs developing countries of their most motivated and innovative people, delaying institutional change. With the same sense, Fessu (2013) hold that out-migration from rural areas depletes the rural labor forces and thereby cuts down agricultural production. Because, he says, most of the out-migrants are in their productive age while the population/labor left at home is often composed of females, children and aged with low productive capacity is less efficient.

The migrants and their families‟ farm land did not pass through the necessary land preparations especially for cultivation of their land just before the rainy season. The implication is that the output per unit of land would be less than the land can give if it is properly prepared and even there are times when the migrants‟ family gives their land for sharecropping due to labor shortage(Belay, 2013: 60) The point is that the current youth out- migration is further deteriorating already low agricultural production. Socio-economic effects of International migration and its remittances are not always taken to be positive; it is often debated on due to which it is variously termed as unsettled (Ellerman 2005;

Several people fear family disintegration as a primary side effect of outmigration. Those who did have a migrant family member stated that though it generates some remittances, it dramatically increased their work burden. This was mainly because of the sheer inadequacy of local income sources including agriculture. The respondents, however, did not promote migration for different reasons. First of all, it involves an active labor force and thus, it is partly an explanatory reason for furthering agricultural production and productivity of the area. Also, remittances are used only for temporary consumption while the gradual effect is dependency syndrome.

The other and the most important fright is that Ofla, being one of the smallest ethnic groups in the country, may slowly cease its integrated existence. Because, out migrants, even in their return Hardily come back to settle in their original village; rather, often reside in larger towns of the region well as Addis Ababa. The worse, not only the returnees but also families of Ofla migrants, if acquire financial capacity to buy or at least to rent house in towns, they leave their village behind and resettle in other nearby towns, mainly Korem and Alamata. As a result, the continuation of the community as an ethnic group with its identity is sabotage

CHAPTER FIVE:

5. CONCLUSION AND RECOMMENDATION

5.1 Conclusion

The result shows that most migrants of the town are of rural origin. Furthermore, the temporal distribution of migrants reveals that the majority of the migrants have entered the town after 1974, more specifically after 1984.There are several factors that induced flow of people to korem town. The main determinants are low per capita income, and education, The availability of better employment opportunities and career advancements are concentrated in the urban areas. Therefore, the relevant measures that can be taken on these determinants are expected to increase the rate of migration and did not arrest the people in their rural areas in particular. One important issue related to rural migration is the net and gross effects on their places of origin. The main sources of employment opportunities and household income in rural Ethiopia is agriculture.

Sizeable depopulation of rural labor forces as a result of increased rate of out-migration from rural areas can hamper agricultural production which in turn can stimulate further withdrawal of people from the region because of low land productivity. The survey reveals that most of the migrants are in their productive age leaving behind the rural areas for females, children and aged people with low labor efficiency and productive capacity. As such, this condition can lead to adverse impact on agriculture because of less efficient and low agricultural labor input, particularly because small-scale subsistence agriculture can be hardly made mechanized and still requires hard manual labor.

The amounts of remittances sent by migrants home essentially were meager and negligible in amount. This is because most migrants are only on the level of self-sustenance and can ill afford to send any sizeable amount. Although the amount that goes to villages is too small, it is used mostly for consumption purposes rather for investments in agricultural or other activities such as housing. It hardly has contributed to the improvement of quality of life and welfare and wellbeing of the people in the rural areas.

Most of the research works in the impact of migration revealed that the ``push`` or ``pull`` factors become more underlying one; and directly link with economic and non-economic aspects of the migrants. The finding of the research showed that the economic reasons are greater than none economic reasons. Rural push factors have stronger than urban pulling factors. In general, the high flow of migrants to korem has accentuated different socio-economic and demographic problem on

the regions of origin and destination. Thus, the overall effects of rural-urban migration in the town are discouraging and hence the following recommendations are suggested to solve some of the socio-economic problems of both the places of origin and destination.

- ***There is high migration trend by young and male population in study area.***
- ***Young male outmigration is also cause of the agricultural productivity of the study area.***
- ***Based on the findings and conclusion of the study the following recommendations are consider***
- ***creating awareness for young and male on the social, political, economic and educational and psychological consequences of migration.***
- ***support for young, adult's diversification to off –farm activities and effective services.***
- ***provision of different social services such as education, infrastructure, water and electricity to the rural areas may reduce the amount of flow of population to urban centers.***
- ***Collaboration and integration woreda labor and social affairs ,women and youth affairs to reduce and avoided the negative attitude of labor out migration.***

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