Temporary Rural-rural Migration, Vulnerability of Migrants at the Destination and Its Outcomes on Migrant Households: Evidence from Temporary Migrant Sending Households in Quarit District, Northwestern Ethiopia

Linger Ayele Mersha

A Dissertation Submitted to

The Center for Environment and Development Studies, College of Development Studies

Presented for the Fulfillment of the Requirements for the Degree of Doctor of Philosophy in Development Studies (Environment and Development Studies)

Addis Ababa University

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June 2018

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Addis Ababa University
School of Graduate Studies
College of Development Studies
Center for Environment and Development Studies

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School of Graduates

This is to certify that the dissertation prepared by Linger Ayele entitled: *Temporary Rural-rural Migration, Vulnerability of Migrants at the Destination and Its Outcomes on Migrant Households: Evidence from Temporary Migrant Sending Households in Quarit District, Northwestern Ethiopia* and submitted for the fulfillment of the requirement for the Degree of Doctor of Philosophy (Environment and Development Studies) complies with regulation of the university and meets the accepted standards with originality and quality.

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Declaration

This dissertation is my original work, is not copied, has not been presented for a degree in any other university, and all the sources of the material used have been duly acknowledged.

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This dissertation has been submitted for examination with my approval as university supervisor

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Abstract

In many developing countries, temporary rural-rural labor migration is a widely practiced livelihood diversification strategy of households, but poorly recognized in migration literature and policy making. Based on data from migrant and non-migrant sending households in Quarit district, Nortwestern Ethiopia, this study examines the patterns and determinants of migration, and the outcomes of migrants' vulnerability at the place of destination on migrant sending households. It is informed by ideas from sustainable livelihoods approach, translocal vulnerability approach and double exposure framework. Data were gathered mainly through household survey, focus group discussions, key informant interviews and collection of secondary sources. For the survey, 398 households were selected via stratified random sampling technique. Chi-square test, one-way ANOVA, and binary and multinomial logstic regressions were used for quantitative data analyses. Qualitative data analyses were employed to supplement quantitative data analyses. The results show that there are three types of migration in terms of the livelihood activities in which migrants engage at the place of destination: casual wage labor, full-time wage labor and crop farming migration. It is found that temporary rural-rural labor migration is a decision of households with poor access to key livelihood assets such as land, livestock and access to irrigable water. However, types of migration disaggregated analysis show that households that are poor in land and livestock ownership migrate more for casual wage and full-time wage labor than crop farming. This implies that temporary rural-rural labor migration is not a homogeneous activity taken by the poorest of the poor. Although migration supports the livelihoods of migrant sending households, livelihood activities at the place of destination are subjected to multiple and interacting shocks related to crop failure, market, health, employment and crime shocks. The exposure of migrants to these shocks is a function of networked socio-economic, environmental and institutional factors at different scales that converge at the place of destination. Migrants use different ex-ante and ex-post risk management strategies where there are possibilities of enhancing their vulnerability. Different forms of migrants' vulnerability have some similarity and difference. The study also shows that the vulnerability of migrants at the place of destination has detrimental outcomes on migrant sending households. This makes the vulnerability of migrant sending households embedded in the vulnerability contexts at the place of destination. The findings convey a message that the vulnerability of households cannot be fully captured in a localized livelihood approach alone. This, in turn, indicates that vulnerability analysis needs to take translocal approach as a central lens of analysis. Finally, the translocal nature of vulnerability suggests that the reduction of migration related vulnerability requires mainstreaming migration within development policies and strategies that are designed in a spatially integrated platform.

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Dedication

This dissertation is dedicated to the memory of my sister, Melkam Birhanu (1986-2016). I lost her care and love at the middle of my research project. May God give you a place in the heaven.

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List of Abbreviations

ADB	Asian Development Bank
AfDB	African Development Bank Group
ALZR	Amhara Livelihood Zone Report
CSA	Central Statistical Agency
DFID	Department for International Development
DTRC	Demographic Training and Research Center
EC	European Communities
ECX	Ethiopian Commodity Exchange
FDRE	Federal Democratic Republic of Ethiopia
FGD	Focus Group Discussion
GAIN	Global Agricultural Information Network
GCC	Gulf Cooperation Council
HH	Household
ICI	Informal Conversational Interviews
IDC	International Development Committee
IFAD	International Fund for Agricultural Development
IOM	International Organization for Migration
KII	Key Informant Interview
LaSAO	Labor and Social Affairs Office
m.a.s.l	Mean Above Sea Level
MSH	Migrant Sending Household
MoARD	Ministry of Agriculture and Rural Development
NBE	National Bank of Ethiopia
NGO	Non-governemental Organization
NLFS	National Labor Force Survey
SOECD	Southern Organization for Economic Co-operation and Development
OSSREA	Organization for Social Science Research in Eastern and Southern Africa
PSTC	Population Studies and Training Centers
QDAdO	Quarit District Administration Office

QDAgO Quarit District Agricultural Office

SBN Sesame Business Network

SLA Sustainable Livelihood Approach

SLF Sustainable Livelihood Framework

SNNPR Southern Nations Nationalities and Peoples' Region

STD Sexually Transmitted Diseases

TGE Transitional Government of Ethiopia

UNDP United Nations Development Program

WB World Bank

CHAPTER ONE
INTRODUCTION

1.1. Background of the Study

Migration represents one of the key demographic and livelihood issues of contemporary world (IDC, 2004). It occurs over a wide variety of spatial and temporal contexts and for multifaceted reasons with multitude of impacts on both the place of origin and destination. In recent time, the causes and impacts of migration assume dramatic change with the change of situations at different scales (Singh & Varghese, 2011), turning out migration as a dynamic and complex human phenomenon (Srivastava & Sasikumar, 2003; Waddington & Sabates-Wheeler, 2003).

Migration predominantly occurs within national borders. Estimate shows that there are about 740 million internal migrants compared to 214 million international migrants at a global level (UNDP, 2009). As compared to international migration, internal migration commonly involves poor people from poor areas as a key component of livelihoods (Blumenstock, 2011; Deshingkar, 2006a; UNDP, 2009). Among the various forms of internal migration, rural-rural migration is the most dominant in many developing countries mainly in Asia and Africa (Carr, 2009; IOM, 2005; Lucas, 2015; Tacoli, 2011). In Ethiopia, the three consecutive census results clearly indicate the dominance of rural–rural migration. It comprised 56% of internal migration in 1984 (CSA, 1991), 49% in 1994 (CSA, 1998) and 47% in 2007 (CSA, 2010) followed by rural-urban migration with a share of 29%, 25% and 27% during the census years, respectively.

Rural-rural migration to exploit temporary employment opportunities is a common livelihood diversification strategy of households in many developing countries (Banerjee & Duflo, 2007; de Haan & Rogaly, 2002; Deshingkar, 2004, 2006b; Geest, 2010), often referred as seasonal migration due to its seasonal character. It occurs when employment opportunities at the place of origin decline that pave the way for people to migrate to other areas where crop calendars do not coincide with that of the origin. However, it may not necessarily occur following seasonal crop calendars especially in the context where employment opportunities at the place of origin are absent. Accordingly, this type of migration is better characterized as labor division within the household where parts of household members migrate to other rural areas to get temporary

employment opportunities, whereas others engage in livelihood activities at the place of origin (Tacoli, 2011).

In Ethiopia, temporary rural-rural migration has been occuring for a long time (see Aschale, 2011; Dorosh et al., 2011; Schicker et al., 2015; Sharp, Devereux & Amare, 2003; Tsegaye, 2016; Woldie, Degefa, & Gete, 2010; Wood, 1983; World Bank, 2007) even though the spatial patterns of migration vary across different periods. Before mid-1970s, the key pattern of migration was towards coffee growing areas of the south and southwest and to sugar and cotton commercial farms in the Rift Valley area (Markos, 2003; World Bank, 2007). When the *Derge* regime came into power (1974-1991), private lands including privately owned commercial farms were confiscated. The introduction of the check points along main roads and the requirement of official registration for people living in particular areas are also considered as important factors for halting movement out of one's peasant association (Feleke, Pankhurst, Bevan & Lavers, 2006; World Bank, 2007).

Post 1991 has witnessed ethnic based form of administration that tends to direct the pattern of migration to occur within the same region (CSA, 2000; DTRC & PSTC, 2000; Markos, 2003). This is reinforced by resettlement programs (Pankhrust, Mengistu, Valerie & Maji, 2013; Pankhrust & Piguet, 2004) that are designed to occur within the same region. But, some argue that regardless of federal government policies that are expected to control inter-regional resettlement and migration, spontaneous migration has persisted in Ethiopia (Zelalem, 2009).

Post 1991 comes with elevated temporary rural labor migration to lowland areas of the country. The growing demand of Ethiopian sesame in the global market in recent years leads to the expansion of sesame farming in the lowland areas of the country which, in turn, increases temporary employment opportunities for migrants coming from highland areas of the country (Tsegaye, 2016; Woldie et al., 2010). It is estimated that annually about 350,000 people migrate to the lowland areas of Northwestern Ethiopia alone for seasonal agricultural wage labor employment (Schicker et al., 2015). However, despite its contribution to create livelihood opportunities, temporary rural-rural migration in Ethiopia exposes migrants to shocks at the place of destination related to health (Schicker et al., 2015; Tsegaye, 2016; Woldie et al., 2010),

employment (Woldie et al., 2010) and conflict (Tsegaye, 2016). This study argues that the exposure of migrants to these and other shocks at the place of destination are governed by linked and multiple factors at different scales that can ultimately form the vulnerability of migrant sending households. This nature of vulnerability is taken as a translocal vulnerability (Lohnert & Steinbrink, 2005) which allows understanding a networked vulnerability of migrants and their households across places and scales.

1.2. Statement of the Problem

Migration is a common livelihood strategy of rural households in developing countries (Ellis, 2003; Woldie et al., 2010), but it has not received the required attention from the academic and political arena (Bag, 2011; de Haan, 2006; de Haan & Rogaly, 2002; McDowell & de Haan, 1997). It is also indicated that the existing studies come up with divergent arguments whether migration is a viable livelihood strategy that needs to be promoted (Hagen-Zanker, 2010). These conflicting arguments emanate mainly from the fact that the effects of migration are highly contextual in nature (Hagen-Zanker, 2010; IFAD, 2007; IOM, 2011; Srivastava & Sasikumar, 2003). In light of this, this study contends that there are three key migration and development issues that are neglected from the existing academic discussions.

Firstly, temporary migration from temporal perspective (Schmidt-Kallert, 2009, 2012) and rural-rural migration from spatial perspective (Lucas, 2007) are the dominant but the overlooked types of migration in the literature of migration and development. From spatial context, the existing literature provides more emphasis to rural-urban migration than rural-rural migration (Bhattacharya, 2000; Carr, 2009; Lucas, 2007, 2015; Oucho, 1984). The focus of academic concerns on rural-urban migration seems to be a result of the assumption that developing countries would repeat the processes of industrialization and urbanization experienced by Europeans in 18th and 19th centuries (A. de Haan, 2000). Internal migration studies in Ethiopia appear to follow this line of assumption (e.g. Abeje, 2012; Adamnesh, Oucho & Zeitlyn, 2014; Berhe, 2011; Mberu, 2006; Teller et al., 2013; World Bank, 2010). From temporal point of view, temporary migration is a dominant type of migration in developing countries (Schmidt-Kallert, 2009, 2012). However, existing literature gives more emphasis to permanent migration than temporary migration (Banerjee & Duflo, 2007; Konseiga, 2005; Schmidt-Kallert, 2012) resulting

from the assumption driven by the empirical findings of migration process in North America, Europe and Japan (Schmidt-Kallert, 2009, 2012). Unlike permanent migration, temporary migration is not commonly included in the census counts in many countries (Deshingkar, 2006b; Ellis, 2003; Schmidt-Kallert, 2012). Lack of data on temporary migration obviously means the dynamics of internal migration are not fully known (Wiggins & Deshingkar, 2007). As a whole, the academic inattention towards both temporary and rural-rural migration reflects the fact that temporary rural-rural migration is less recognized in academic discussions.

Secondly, it is commonly stated that migration spreads risks, smoothes consumption, creates saving, provides investment capital, loosens constraints and reduces the vulnerability of migrant sending households (de Haan, 2002; Waddington, 2003). These arguments are stated without considering the hurdles of life migrants could face at the place of destination (Sakdapolrak et al, 2016). Studies reveal that migrants could support themselves and their households at the expense of their exposure to shocks at the place of destination (Nunan, 2010; Winkels, 2004). This points to a question related to the root causes of migrants' exposure to these shocks where most studies fail to address (Cutter, 1996). The argument is vulnerability researches need to provide more emphasis to a thorough understanding of relationships and 'casual linkage' between shocks than a mere identification of shock(s) (Casale et al., 2010).

In Ethiopia, Tesfaye (2007), Tsegaye (2016) and Woldie et al. (2010) attempt to study the vulnerability of rural-rural migrants at the place of destination, but their focus is somewhat partial and inadequate. While Tesfaye (2007) gives an account of the factors behind rural-rural migrants' exposure to conflicts, Tsegaye (2016) considers the issue of temporary migrants' exposure to health shocks and conflicts. Woldie et al. (2010) also provide some evidences on the causes of migrants' exposure to employment shocks, health shocks and exploitation. These studies do not consider the fact that migrants are exposed to multiple and interdependent shocks where there are interdependent and multiple contextual factors behind these shocks.

Thirdly, the existing literature on the effects of migration on the livelihoods of migrant sending households tends to focus on the 'lost labor effect' of migration (e.g. Adamnesh et al., 2014; de Brauw et al., 2014; Jokisch, 2002; Khandker & Mahmud, 2012; Rigg, 2007; Singh et al., 2011; Singh, Singh & Jha, 2012; World Bank, 2015) and/or the financial contribution of migration to

various form of livelihood outcomes of migrant sending households (e.g. Atsede & Penker, 2016; Deshingkar, 2004; McCarthy, Carletto, Davis & Maltsoglou, 2006; Mohapatra, Joseph, & Ratha, 2012; Singh et al., 2012; Woldie et al., 2010). This study argues that despite reducing the vulnerability of migrant sending households through transfer of remittances (Stark & Bloom, 1985), migration can work as an agent to introduce and exacerbate households' vulnerability through the vulnerability of migrants at the place of destination (Hammond, Bush, Savage, & Harvey, 2005; Islam & Herbeck, 2013; Winkels, 2004). However, vulnerability linkages between migrants' place of origin and destination lack adequate evidences from migration literature.

In the context of the study district, the author observes the reiterating concerns among temporary labor migrants and their households at the place of origin about the multiple shocks involved at the place of destination. Thus, the present study argues that the vulnerability of migrants at the place of destination is a result of multiple and interacting contextual factors at wide range of scales that converge at the place of destination and then transferred to the place of origin via migrants to form the translocal vulnerability of migrant sending households.

1.3. Objectives of the Study

In the light of the above key arguments, the principal objective of the study is to investigate the outcomes of temporary rural-rural labor migrants' vulnerability at the place of destination on the vulnerability of migrant sending households in Quarit district. Specifically, the study is designed to:

1. Identify the patterns of temporary rural-rural labor migration from the study district to other rural districts of the country;
2. Analyze the determinants of households' decision to participate in temporary rural-rural labor migration;
3. Explore the vulnerability of migrants at the place of destination; and
4. Assess the outcomes of migrants' vulnerability at the place of destination on the vulnerability of their households at the place of origin.

1.4. Research Questions

The study seeks to address the following research questions:

1. What are the spatial, temporal and occupational patterns of temporary rural-rural labor out-migration?
2. What livelihood asset ownership of households determine migration decision in general and the types of migration in particular?
3. What, why and how shocks occur and interact with each other in shaping the vulnerability of migrants at the place of destination?
4. What types of risk management strategies do migrants use to minimize their exposure to shocks and how do these strategies increase or reduce their vulnerability?
5. To what extent does the vulnerability of migrants at the place of destination determine the vulnerability of migrant sending households?

1.5. Rationale of the Study

As noted earlier, the discussions on the relationship between migration and development in many developing countries focus on rural-urban migration. What is lacking from these undertakings is any organized discussions on temporary rural-rural labor migration. It is mostly out of official statistics and out of policy agenda. More specifically, the researcher gets the chance to observe the general situation that temporary rural-rural labor migration is a common practice in the study district. This form of migration emerges with not only opportunities, but also exposing migrants to multiple shocks at the place of destination which could have detrimental outcomes on their households. However, these facts have generated comparatively inadequate attention from both scientific studies and government bodies. This study is, hopefully, a response to the need for making these issues visible to policy makers and practitioners.

Besides, the study district lies in the chain of Choke Mountains. Those districts along these mountains suffer from different problems like land scarcity and degradation, food insecurity, poor supply of public services, etc. (ALZR, 2007; Belay, Zaitchik & Ozdogan, 2013). However, the literature on poverty, environmental degradation and vulnerability in Ethiopia largely focuses on drought stressed areas in north and central highlands and associated lowlands. Thus, this

study emerges with further argument that Quarit district is relatively less researched regarding livelihood issues in general and migration studies in particular. Furthermore, the investigator's familiarity with the study district (as a neighboring district to the birth place of the researcher) is another good reason for the selection of the district as the study area.

Finally, the academic background of the researcher is another worth mentioning practical reason for selecting migration issue as the topic of investigation. The fact that the researcher successfully carried out his MA thesis on migration gave him the inspiration to inquire migration with different and emerging perspectives.

1.6. Scope and Limitation of the Study

This study basically aims at looking into the outcomes of migration by giving more emphasis to the vulnerability of migrants at the place of destination and the subsequent negative outcomes on migrant sending households. The analysis of the outcomes targets at food insecurity and asset decumulation although these are not complete lists of negative livelihood outcomes of migration. To that end, it was based on those households who send temporary labor migrants to other rural districts. Thus, it did not consider other types of migration which might be prevalent in the study district. This may include international migration and rural-urban migration from spatial perspective, permanent migration from temporal perspective and migration due to illness, conflict, schooling etc. from the perspective of reasons for migration. It is also important to aware the fact that collected income data may not be accurate as respondents may not fully capture the amount of income they obtained from each source or might not be willing to inform the actual amount they earned.

The study provides more focus on vulnerabilities and thus, relatively less discussion is given to livelihood opportunities associated with migration. Besides, it gives more attention to analyzing migrants' vulnerability at the place of destinations which are known for growing sesame as these areas become key centers for creating employment opportunities, but subjects migrants to different forms of shocks (see Tsegaye, 2016; Woldie et al., 2010). In the analysis of migrant households' vulnerability, emphasis is also given to retrospective questioning of the overall outcomes of shocks at the place of destination regardless of the type, intensity and frequency of

shock across time to make the study manageable. As a result, comparison between the findings of this study with others may not be easy because of variation in recall period, the nature of the survey and the like.

The study was also based on the context of one migrant sending district. Thus, its findings are less likely to reflect the average migration experiences of rural areas of the country or any other lower level of administration. This is because different areas may experience different forms of migration-driven vulnerability depending on context specific socio-economic, environmental and institutional setting under which migration takes place.

The gender dimension of migration such as the way employers treat males and females, the type of work they are employed, the opportunities they manage to access and the nature of their vulnerability are not addressed in the present study. Another worth mentioning point that is not well noted in the present study is the legal issues of migrants' right to access land across administrative regions and the practical experience of migrants to access land, and associated opportunities and risks to migrants and their households at the place of origin.

Due to inability to track migrants from their place of origin to destination, it was not managed to see the actual working and living condition of study migrants at the place of destination. The field visit at the place of destination was carried out to see the general living and working condition of casual wage labor migrants coming from the different corners of the country. During this field visits, interviews were not also conducted with these migrants.

The study also did not consider the psychological shock to which migrants may be exposed at the place of destination, its relation to other forms of shocks and the outcomes of the shock on migrant sending households. The issue of resilience of migrant households to shocks was also not treated in this study. Studying the resilience of migrant households might provide a better information to understand the outcomes of shocks.

Accessing theoretical and empirical literature related to temporary rural-rural migration and its links to the vulnerability of migrants and their household has also be challenging. It rather alternatively consulted literature related to other types of migration which had more relevance to

the present study. Finally, caution is needed in the interpretation of the vulnerability of migrants and their households. Since the data were collected based on households' self-evaluation of exposure and outcomes of shocks, there might be over reporting or underreporting the vulnerability of migrants and households.

1.7. Ethical Considerations

Ethical consideration for this study spans from data collection to reporting of the results. Before collecting data, attempts were made to get the informed consent of the respondents and other concerned bodies. To that end, written consent was first obtained from concerned government offices.

Consent was also obtained from respondents by explaining the objectives of the research, the potential benefits of their participation, and by ensuring confidentiality where disclosing the identity of individuals might cause a problem. Participants were also given right to withdraw from participating as respondent at any stage of the interviews. They were also made aware of the means by which the finding of the research might be publicized. In order to avoid conflict over working hours, attempts were made to interview rural respondents after working hours.

1.8. Organization of the Dissertation

The dissertation is organized to have six chapters. The first one is an introductory chapter that comprises background of the study, statement of the problem, objectives of the study, research questions, rationale of the study, scope and limitation of the study and ethical considerations organization of the dissertation. Chapter two deals with literature review. This chapter has four sections. The first section provides the definitions of key concepts used in the study. The second section considers the theoretical literature that critically reviews the potential of existing theories in terms of explaining the issue at hand. The third part discusses relevant empirical literature. Finally, this chapter ends with the conceptual framework of the study.

Chapter three describes the study area and research methodology. Chapter four and five present the results and discussions sections. While chapter four focuses on the patterns and determinants of migration, chapter five presents vulnerability of migrants and the outcomes on migrant

sending households. The last chapter draws conclusions and recommendations based on major findings and their implications for policy, theory and further study.

CHAPTER TWO
LITERATURE REVIEW

This chapter has four sections. The first section provides a working definition for key terms. The second section is devoted to theoretical literature where it presents migration theories, sustainable livelihoods approach, translocal approach and double exposure framework. Migration theories are considered basically to highlight the historical development of theories towards migration and their drawbacks to handle the contemporary patterns of migration, while the rest provides the basis for the conceptual framework of the study. The third section reviews empirical literature related to the determinants of rural labor migration, and translocal vulnerability. The last section displays the conceptual framework of the study. In view of scanty theoretical and empirical literature on temporary rural-rural labor migration, there is a wide use of literature written on other forms of migration (such as rural-urban and international migration) that contains much relevance to the study.

2.1. Definitions of Key Concepts

2.1.1. Migration

The term migration is an ambiguous concept. Different definitions are used in the literature (Kothari, 2002). IOM defines it as "a movement of a person or group of persons from one geographical unit to another across an administrative or political border, wishing to settle definitely or temporarily in place other than their place of origin" (IOM, 2003, p. 34). From livelihood perspective, it is defined as a process of "...spatial separation between the location of a resident household or family, and one or more livelihood activities engaged by family members" (Ellis & Freeman, 2005, p. 22). There are many other definitions depending on the context in which the concept is used (Kainth, 2010; Kothari, 2002), for instance, in terms of space and time of migration (Bell & Ward, 2000; Oucho, 2002).

In the lens of space, the defining unit of migration can be a country, region, town or village (Willekens, 2008). In this regard, a difference can be made between international and internal migration. It is also possible to differentiate between migrant's place of origin and destination

(IOM, 2003). In the context of internal migration, the place of origin and destination of migrants can assume rural-rural, rural-urban, urban-rural, and urban-urban migration.

According to different time horizon, migration can be classified into temporary and permanent migration (IOM, 2003). Permanent migration occurs when a migrant leaves his/her place of origin and continues to reside in his/her place of destination with no intention to return (Bell & Ward, 2000). Temporary migration, on the other hand, is widely defined as the migration of people away from their place of origin with the intention to return (Bell & Ward, 2000; Keshri & Bhagat, 2011). From livelihood point of view, Lucas (as cited in Badiani & Safir, 2008) defines temporary migration as a temporary change of usual residence for work purposes before returning to initial location. Thus, temporary migration usually involves some sorts of links between migrants and their households at the place of origin. Mostly, the purpose of this migration is to support livelihoods at the place of origin (de Haas, 2007). It is a widely practiced type of migration in many parts of the world (Mcdowell & de Haan, 1997; Schmidt-Kallert, 2012).

There are different strands of temporary migration. The major categories include seasonal migration, circular migration and commuting (Mendola, 2006). Seasonal migration is mainly associated with seasonal agricultural calendar, while circular migration mostly refers to moving back and forth between the place of origin and destination (Wickramasekara, 2011). Commuting is widely understood as a movement of people in a daily basis between cities and nearby pre-urban areas and rural villages for work purpose. It commonly emerges and develops with the expansion of better communication infrastructures and services (IOM, 2005). These features of temporary migration contribute to the lack of universally accepted understanding and definition.

Researchers define temporary migration in a way that best fits their purposes (Démurger, Fournier & Yang, 2010; Srivastava & Sasikumar, 2003). For instance, one month is an often used threshold duration where individuals are expected to be absent from their place of origin within a year (e.g. Atsede & Penker, 2016; Keshri & Bhagat, 2011; Wouterse & Taylor, 2008). However, researchers widely vary in terms of the maximum duration that migrants are expected to be away from their place of origin. It includes six months (e.g. Mberu, 2006; Pham & Hill, 2008; Srivastava & Sasikumar, 2003), two months (e.g. VanWay, 2003), twelve months (e.g.

Atsede & Penker, 2016) and the like. It looks that the nature of migration or the study matters the temporal demarcation between temporary and permanent migration.

In the context of the study area of this research, there is no official data on temporary labor migration. Personal experience of the researcher show that temporary migration largely involves staying away from origin between one and twelve months. From spatial point of view, the lowest administrative unit considered in this study is a district as used by the Central Statistical Agency (CSA) of Ethiopia, where district is migration defining spatial unit for rural areas. Temporally, on the other hand, CSA fails to consider temporary migration (see CSA, 2014a). For the purpose of this research, a temorary rural-rural labor migrant as such refers to a household member who migrates to other rural district for temporary employment that lasts at least for one month but not more than 12 months preceding the survey period. Temporary migrant sending households, therefore, include those households with at least one temporary migrant member. Such time bounded understanding of temporary migration may miss some temporary migrant households, but allows the exclusion of majority of migrants that leave their place of origin permanently (VanWay, 2003).

The study takes pattern of migration to refer to the characteristics of migrants related to demographic and socio-economic characteristics, and their tendency to migrate pertaining to where, when and why they move (Ayalew, 2005). It also assumes that temporary rural-rural labor migration is a livelihood diversification strategy of households. In the literature of livelihood diversification, there are different kinds of classifying livelihood activities (see Barrett & Reardon, 2000; Reardon et al, 2006). Commonly they are classified into farm, off-farm and non-farm activities. Crop production and raising livestock are categorized under farm activities. Wage labour on other farms and always within the agricultural sector is referred to as off-farm activity. Thus, the term off-farm has location indicator (within agriculture, but out of one's own farm). Non-farm activities, on the other hand, refer to non-agricultural activities. These include non-farm self-employment, non-farm wage labour or other types including subsidies, leasing land and property, remittance, pensions, and the like (Ellis, 1998). In this study, because of the nature of the study, migration is taken to hold its own separate classification or livelihood activity. Finally, the study uses the term forms/types of migration to refer to the types of

occupation (livelihood activity) at the place of destination for which households send temporary migrants.

2.1.2. Vulnerability, Shock, Risk and Exposure

Like migration, vulnerability is a multi-dimensional and multifaceted concept. It is used differently in different contexts (Cutter, 1996; Casale et al., 2010; Downing et al., 2005; Paul, 2014)[1]. Its conceptualization is useful in shaping its actual understanding and how to conduct analysis including the lines of focus (food security, income, health, etc.), scale of use (i.e. individual, households, social group or national) and the nature of measures considered (subjective or objective) (Cutter, 1996; Hart, 2009; Paul, 2014). Conceptual development on the subject of vulnerability has much to do more with Wisner, Blaikie, Cannon, and Davis (2004), Chambers (1989) and Sen (1981).

The oldest and extensively used definition of vulnerability and adopted for this study is the one submitted by Chambers (1989, p.33) who defines vulnerability as "exposure to contingencies and stress and means for coping with them. Vulnerability, thus, has two sides: an external side of risks, shocks and stress to which an individual or household is subject; and an internal side, which is defenselessness, meaning the lack of means to cope without the damaging loss''. Here, the effects of phenomena like globalization, climate change, health shock and conflict are external side of vulnerability, while peoples' responses to these shocks, the resources they have to overcome the shocks and associated livelihood outcomes indicate internal vulnerability. However, there is strong relationship between internal and external sources of vulnerability (Adger & Kelly, 1999; Castell et al., 2015; World Bank, 2001). Thus, the above definition of vulnerability contains three important components: 1) exposure to shock; 2) the capacity to cope with shock; and 3) undesirable livelihood outcomes of poor recovery from shocks. This points to the fact that vulnerability not only results from exposure to risks and shocks, which can be affected by peoples' assets to manage, but it is also the outcomes of managing risks and shocks (Alwang, Siegel & Jorgensen, 2001; Casale et al., 2010; Prowse, 2003; Winkels, 2004).

[1] *See Adger (2006), Cutter (1996), Eakin and Luers (2006) and Paul (2014) for review of different definitions of vulnerability and/ or approaches to vulnerability research*

Therefore, the negative livelihood outcomes of exposure to shocks such as food insecurity and asset decumulation are considered in this study as particular forms of vulnerability.

Risk, shock and exposure are key concepts associated with the issue of vulnerability. In this study, a shock is defined as an adverse event (e.g. crop failure or market shock) that causes a loss of individual/household income, consumption, and productive asset as well as causing a serious concern about individual/household welfare (Dercon, Hoddinott, Krishnan & Woldehanna, 2008). Risk is understood as potential adverse event or in short, a potential shock (Modena, 2008). Risks or shocks can be divided into idiosyncratic and covariate. Idiosyncratic shocks are specific to individuals/households (health shock, employment shock, crime related shock), while covariate shocks are shared or common to the whole community or larger section of individuals/households (e.g. crop failure and market price shocks). However, most shocks tend to belong to both classes of shocks (Dercon, 2006; Siegel & Alwang, 1999). In addition, covariate shocks may result in idiosyncratic shocks and vice versa (Modena, 2008).

The term exposure is used to refer to the state of being prone to some effects (drought, high temperature, exposure to external market, etc.) that are related to certain contextual factors (Downing, Watts, & Bohle, 1996; Leichenko & O'Brien, 2008). The term contextual factors are used in this study to refer to a set of institutional, social, economic and environmental variables and changes that manifest themselves as shocks at the household and individual level (Bunce, Brown & Rosendo, 2010; O'Brien, Leichenko & Ziervogel, 2009). Depending upon context, individuals/households may be exposed to one or more shocks and shocks may reinforce each other (Downing et al., 2005; Sabates-Wheeler & Macauslan, 2007)

This study provides working definitions for shocks related to crop failure, market, employment, health and crime. Crop failure is understood as a decline in quantity and quality of crop output due to erratic rainfall and/or poor farming practices. Market shock denotes the volatility/decline of market price of sesame crop. Health shock is used to refer to sickness and death of migrants. The term employment shock is used to refer to lack of job or unable to work while seeking to work or work with a minimal wage. Crime shock is understood as an action that is committed or

omitted against violation of public laws (Black's Law Dictionary, 2009) and/or oral/written agreements. Specifically, it refers to theft, breaching agreements and conflicts.

Individuals/households may employ different kind of risk management strategies which can assume a form of ex-ante and ex-post actions. Ex-ante actions are usually taken before risk event occurs to reduce risk, minimize exposure to risk, or ex-ante risk mitigation. Ex-post actions are taken after the event happens to deal with losses experienced (i.e. to cope with shock) (Alwang et al., 2001; Siegel & Alwang, 1999).

2.2. Theoretical Literature

2.2.1. Theories of Migration

Although migration is not a recent phenomenon, theories about migration are relatively new (Hagen-Zanker, 2008). However, there is no integrated theory that explains multiple realities associated with migration. Instead, there are a number of one-sided theories that have been devised mostly in line with disciplinary viewpoints (Bijak, 2006). The diverse nature of migration theories is largely related to the complex nature of migration (EC, 2000; King, 2012).

Ravenstein's Law of Migration, which was published in 1885, is considered to be the first in the history of migration studies that attempts to generalize and predict the relation between the volume and distance of migration. Ravenstein law draws the attention of subsequent theorists in focusing on the explanation of migration in terms of economic differential of migrant sending and receiving areas as the main driving force of population movement. Among others, this notion was adapted by Lee push- pull theory.

Lee (1966) argues that migration occurs between a definite place of origin and destination with the assumption that factors causing migration are positive and negative in nature and both of these factors are prevalent both at place of origin and destination. Factors that force people to leave their place of origin are considered as push factors (e.g. land scarcity and degradation, droughts) while factors that attract people to the place of destination are labeled as pull factors (easy access to farm land, higher income). One of the basic limitations of push-pull theory is its failure to show why some people move and other not (EC, 2000).

In 1971, Zelinsky presented the hypothesis of mobility transition which tends to systematically portray the relationship between the dynamics of modernization and mobility in five consecutive phases (Zelinsky, 1971). Lewis seminal work of dual economy model is another subsequent theory of migration. The basic precept of Lewis theory is that an economy is made up of two sectors: the capitalist/modern/urban sector and subsistence/traditional/rural sector and labor moves from labor surplus sector (rural area) to labor deficit urban sector without any loss of labor in agriculture (Lewis, 1954).

Ranis and Fei (1961) came up with a modification of Lewis model and hence equated as pioneers for the emergence of neoclassical two-sector models (Taylor & Martin, 2001). They assume that inter-sectorial (rural-urban) wage differentials should be the primary factors driving rural out-migration.

The micro-neoclassical theory of migration emerges in the works of Sjaastad (1962) and Todaro (1969). The theory of Sjaastad (1962) is known as Human Capital Migration Model. It argues that migration is an investment decision that needs resources and entails costs and benefits. The costs may include, for instance, those related to physiological cost of separating from family or relatives and possible wages to be scarified while looking for job, etc. Sjaasted assumes that migration is a response to wage differential between migrant sending and receiving areas. Todaro (1969) modified the neo-classical migration model. He establishes the argument that rural-urban migration depends on the goal of an expected-income maximization rather than real wage differential between the two sectors. Migrants are perceived as rational income maximizes and make a calculation on the difference between the expected income and the present income generated in the rural sector. Migrants are assumed to have full information about the market. The market is also assumed to be working perfectively.

The above neoclassical theories associate migration with decision of individuals based on rational cost benefit analysis (de Haas, 2010). They give little attention to the effects of migration on migrant sending areas and households (Greiner & Sakdapolrak, 2013a). New Economics of Labor Migration (NELM) theory was developed as a critical response to the perspective of individual cost-benefit calculation in migration decision (Massey et al., 1993).

This theory brings household perspective to the analysis of migration. NELM theory argues that migration decision is a household strategy to rise the expected income and to generate money to invest in new activities and prevent households from involving in production and income risks that arise from different sorts of market failures which include crop insurance markets, unemployment insurance and imperfect capital markets (Massey et al., 1993; Rabby, Azam, Yesamin, & Hoque, 2010; Taylor & Martin, 2001). By diversifying the allocation of its resources (i.e. family labor), the household works to minimize risks to its economic welfare. However, this theory by itself has been criticized on its failure to isolate the influence of the context of place of origin from other potentially casual factors for migration like better job opportunities and income at the place of destination (Morawska, 2007).

The above neo-classical theories have also been criticized due to their tendency to focus only on the positive aspects of migration (de Haan, 2000; de Haas, 2008). Besides, these theories developed based on permanent migration in full-grown labor market of early industrializing nations and thus cannot fully explain the attributes of rural-rural-migration and temporary migration. In the context of complex and uncertain livelihood context, the explaining power of traditional migration theories is limited (Shah, 2005). Therefore, conclusion drawn from neoclassical assumptions does not adequately explain the livelihood constrained households of developing countries (Bhatta & Arethun, 2013).

One of the criticisms against neoclassical perspectives came from migration pessimists (historical structuralists) that include neo-marxist, dependency and world systems theories. They argue that individuals do not articulate their migration decision based on their free will, because they are essentially constrained by structural forces. Contrary to neo-classical explanations, migration pessimists consider migration as a phenomenon that exacerbate problems of underdevelopment and increases spatial disparities in levels of development by further impoverishing of societies in migrant sending areas. However, migration pessimists face strong criticism because of their little attention to individual agency. They take individuals as the victims to macro-forces (de Haas, 2008).

Another theory of migration which has increasingly received a growing attention in migration study is network theory. Massey et al. (1993) describe network as sets of relationships that connect migrants, former migrants, and non-migrants in origin and destination areas through bonds of kinship, friendship, and shared community origin. Migration networks usually considered as social capital, affect migration decision in various ways. Migrant networks tend to have a multiplier effect and maintain the process of migration. Once migration occurs in any place of destination, network of migration would facilitate all steps of migratory process (Bijak, 2006; Dolfin & Genicot, 2006; Massey et al., 1993).

Network theory is strongly associated with migration systems theory. The underlying premise of migration systems theory is that migration not only influences and is influenced by migrants' social network but also alters a set of cultural, institutional, economic and social situation both at the place of origin and destination (de Haas, 2008). However, these theories are criticized due to their inability to explain other key factors in migration processes (Polemique, 2012).

Generally, most of the above theories seldom consider temporary labor migration of the developing countries as a dynamic aspect of rural livelihoods. Temporary labor migration is a dominantly practiced livelihood diversification strategy through not only from rural to urban areas but also between rural areas. This reflects the fact that migration does not necessarily imply the abandonment of rural livelihoods. Instead, it is a reflection of how rural livelihoods are not only rooted in their immediate vicinity, but are also linked to economic activities in other areas (David, 1995).

Both neoclassical theories and migration pessimists have also been criticized for being deterministic in their nature as they do not leave any room for heterogeneity of localized migration impacts. Towards the end of the 1980s, the scholarly debate became more moderate by taking a middle ground position- "pluralist view". The most crucial innovation to pluralist view came with the emergence of sustainable livelihood approach and transnationalism (de Haas, 2010).

2.2.2. Sustainable Livelihoods Approach (SLA), Migration and Vulnerability

A number of approaches in livelihood studies exist (Adato & Meinzen-Dick, 2002; de Haan, 2012; de Haan & Zoomers, 2005; Scoones, 2009). Though, SLA is the most widely used analytical approach. Drawing heavily on literature of food security, particularly the Amarta Sen's ideas of endowment and entitlements (Sen,1981), SLA places a lot of emphasis on the capabilities and assets of the poor, on the strength instead of the basic needs of people aiming at building on their intrinsic potential. It considers the different ways by which people construct their livelihoods (de Haan, 2012; DFID, 1999; Farrington et al., 1999).

One of the achievements of SLA is its presentation of holistic understanding of livelihoods. The holistic view of the approach is visible in the definition of the term 'livelihoods.' Drawing from Chambers and Conway (1991), DFID (1999, p.1) defines livelihoods as "capabilities, assets (including both material and social resources) and activities required for a means of living. It is sustainable when it can cope with and recover from stress and shocks, and maintain or enhance its capabilities and assets both now and in the future, while not undermining the natural resource base." SLA shows how households and individuals livelihood outcomes to be achieved are attributed to the vulnerability and institutional context in which people live, the asset at their disposal, and the strategies they employ (DFID, 1999; Scoones, 1998) (see Figure 2.1 for schematic representation of SLA).

Assets as the key building blocks of livelihoods comprise five components. They include natural capital (e.g., land, forest, soil, water, etc.), human capital (e.g. health, education, labor, skill of household members, etc.), financial capital (e.g. savings, credit, etc.), physical capital (e.g. farm equipment, transport facilities, buildings, livestock ownership, etc.), and social capital (e.g. social network and connectedness). Assets determine the type of livelihood strategies households manage to pursue (DFID, 1999; Drimie & Casale, 2009; Scoones, 1998). For instance, they determine migration decision of households. They also influence the type of activities a migrant manages to participate at the place of destination (Tanle, 2015)

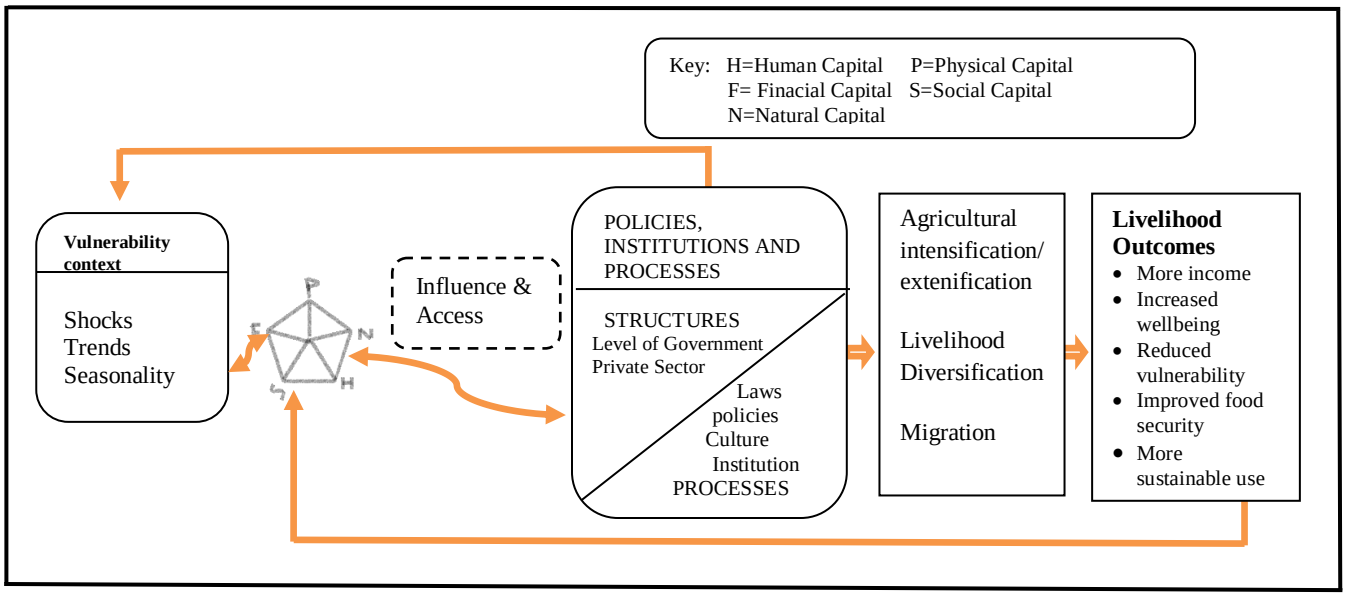

Figure 2.2: Sustainable Livelihoods Framework

Source: DFID (1999) and Scoones (1998)

An important issue related to asset is access (de Haan, 2012). It is a critical element in understanding individuals' livelihood alternatives and their vulnerability (Bebbington, 1999). Transforming structures and processes such as institutions, organization, structures, culture and policies are key determining factors for access. They can allow or deter access to different opportunities and resources whereby they can determine the vulnerability of the poor (Adger & Kelly, 1999; Ali, 2008; Bebbington, 1999; Degefa, 2005; de Haan & Zommers, 2003; de Haan & Zommers, 2005; DFID, 1999; Scoones, 1998).

SLA assumes that the poor live in the context of vulnerability (Bohle, 2007; Shahbaz, 2008). The context of vulnerability is a function of trends, shocks, and seasonality and is shaped by transforming structure and processes. It focuses on people's agency in looking for opportunities and coping with risks and shocks (de Haan, 2012; DFID, 1999; Farrington et al., 1999). This implies that SLA emphasizes on "an agency-based approach to social vulnerability" (Bohle, 2007, p. 12). Basically, SLA of vulnerability analysis emerge partly as a response to 'macro-level development policies and strategies' (Miller, 2014, p.311) and, thus, a response to vulnerability research that was dominated by 'structural and political economic reading' that

failed to consider the particular contexts in which people live and experience vulnerability (Etzold & Sakdapolark, 2016, p. 236).

In SLA, migration, agricultural intensification (extensification) and livelihood diversification are livelihood strategies that rural households often use to meet their livelihood objectives. They are commonly utilized in combination, either simultaneously or sequentially (DFID, 1999; Scoones, 1998) (Figure 2.1). Sometimes, however, migration is subsumed under livelihood diversification strategy (e.g. Ellis, 2003; Hussein & Nelson, 1998). Particularly with an increasing emphasis on labor migration in a temporary basis, migration is seen as part of livelihood diversification strategy of households (de Haan, 1999; Ellis, 2003) to reduce their vulnerability (de Haan, 2002; Ellis & Freeman, 2005; Greiner, 2011; Waddington, 2003).

However, some studies argue that although there are possibilities where migration may be taken as a way to respond to exposure to shocks, migration can also increase vulnerability by exposing migrants and their households to different kinds of shocks (Adato & Meinzen-Dick, 2002; Ali, 2008; Kothari, 2002; Waddington, 2003; Winkels, 2004). This suggests that in order to better understand migration related vulnerability and its outcomes, it is important to consider vulnerability research concepts (Tesfaye, 2007).

Yet, it appears that SLA is inadequate to handle the complex and interactive relations between migration and livelihood vulnerability. By focusing on local based livelihoods, SLA fails to adequately consider spatial (translocal) dimension of livelihood vulnerability (King, 2011; Lohnert & Steinbrink, 2005; Miller, 2014; Sakdapolark, 2014; Schöfberger, 2017). For instance, SLA fails to catch livelihood vulnerabilities that involve place relations (e.g. migrants' place of origin and destination relations) mediated by migration. Furthermore, it is argued that SLA misses the issue of globalization, climate change, power and politics (Scoones, 2009). It tends to give emphasis to the capacity of actors oriented livelihoods approach. Recently, there is increasing argument that even if actors may actively search for opportunities, macro-level forces such as globalization and macro level policies shape the capability of actors by constraining or enabling livelihood opportunities (L.J. de Haan, 2000). As known, in globalization, it becomes less common to depend on local resource alone and thus, translocal relation becomes a key

instrument for livelihood [vulnerability] formation (L.J. de Haan, 2000; de Haan & Zoomers, 2003; Zoomers et al., 2011). The next two sections review translocal approach and double exposure framework of vulnerability that will be later used as important building blocks of the conceptual framework of the study.

2.2.3. Translocal **Approach,** Migration and Vulnerability

Nowadays, migration is no more understood as one way movement of individuals or households between the places of origin and destination and as solely a movement of people (Gilles, 2015; Lohnert & Steinbrink, 2005). Moreover, migration and remittance are not exogenous processes that impact livelihoods. Rather, they must be interpreted as integral parts of production and reproduction of livelihoods systems across space (King, 2011; McSweeeney, 2004). Presently, these characteristics of migration have been studied under 'translocal livelihoods' approach (Islam & Herbeck, 2013; Lohnert & Steinbrink, 2005). Some prefer to use the term multi-local livelihoods (L.J. de Haan, 2000; Thiem, 2008). Translocal approach recognizes the multifaceted nature of present-day migration and gives new insights into socio-economic and other forms of links between different places as key elements of livelihoods in developing countries (Greiner, 2010; Islam & Herbeck, 2013; Lohnert & Steinbrink, 2005).

However, the word translocal is a general term with no single agreed definition (Greiner & Sakdapolrak, 2013b; Peth, 2014). It generally attempts to encapsulate the interrelations and processes that occur in and between different places, institutions, and actors (Peth, 2014). From livelihood perspective, the word translocal generally refers to the "spatial dimension of livelihood creation: transgresses the limits of purely local forms of exchange and livelihood creation" (Greiner, 2009, p.10). It is the result of migration, and other individual and collective practices of people/actors/institutions that transcend different places and scales (Etzold, 2017; Peth, 2014).

The concept of translocal draws on transnationalism. Transnationalism is defined as " the processes by which immigrants build social fields that link together their country of origin and their country of settlement" (Schiller, Basch & Blanc-Szanton, 1992, p.1). By extending the ideas from transnationalism, researchers use the translocal approach (Brickell & Datta, 2011;

Greiner, 2009, 2010; Islam & Herbeck, 2013; Lohnert & Steinbrink, 2005) to refer the socio-spatial link created by internal migration. Translocal approach addresses some of the drawbacks of transnationalism by extending the focus beyond the national borders and consider other 'border transgression' and question placelessness or deterritorization of social spaces argument of transnationalism.

Lohnert and Steinbrink (2005) develops the translocal approach in the study of vulnerability and use the term translocal vulnerability. They argue that previous vulnerability studies ignore the vulnerability formation beyond local context. In this regard, the concept of place, scale and network are important elements (Etzold & Sakadapolak, 2016). Place is at the heart of translocal approach (Brickel & Datta, 2011; Etzold, 2017; Gilles, 2015). Translocal approach dissolves the notions of locally limited, static understanding of places and at the same time emphasizes the importance of places as nodes where flows that transgress spatial scales converges (Brickel & Datta, 2011; Greiner, 2011; Greiner & Sakdapolrak, 2013b).

It is argued that, in the present globalized system, places must be considered by examining the disconnection and connection between places, the flow of goods, people, idea and capital 'within translocal networks', and the place formation of people through their collective and individual practices (Etzold, 2017). However, in translocal understanding, place must not be conceptualized as something 'enclosed and bounded' (Gilles, 2015; Oakes & Schein, 2006). Instead, it is a dynamic relational construct in terms of economic, political and social practices and come out of relation to the outside which by itself part of what comprises the place. Thus, the concept of translocal vanishes place boundeddeness of vulnerability researches (Lohnert & Steinbrink, 2005). However, although not relevant for the sake of providing universally accepted conceptualization of a place, setting boundaries of a place may be required for a purpose of specific study (D.B. Massey, 1994).

As far as translocal oriented vulnerability analysis is concerned, place-based vulnerability assessment is one of the dominant vulnerability assessment approaches since 1990s. Turner et al. (2003) and Cutter (1996) are prominent scholars who promote this approach. Turner et al. (2003) argue that 'place' sensitive analysis is a key way to conceptualize the various ways by which

vulnerability causing processes working at the various spatial and temporal 'scale' are 'connected' to the human and environmental system of a place under consideration. Thus, vulnerability of certain place is the result of interrelations that are specific to the place and interrelations that connect one place to others (Schöfberger, 2017). This indicates that vulnerability is produced not only by places but also by processes that converge at a certain place (King, 2011; Leichenko & O'Brien, 2008; Turner et al., 2003). In line with this, Eriksen et al. (2005) assume that vulnerability may manifest itself differently at the different places because processes may converge differently at different points in space and time. This gives rise to different levels of vulnerability to be transferred and reproduced in translocal space.

The issue of scale is another important dimension of translocal vulnerability, but it has no uniform understanding even within the same discipline. It may refer to levels, hierarchies and extent, among others (Gibson et al., 2000). Scale helps to put into picture the processes of 'scale making' and the effect of hierarchical re (formation) among different interrelated socio-spatial organizations (Collinge, 1999 cited in Jessop et al., 2008). An important issue in scale making is how processes of scale formation is governed by power relationships. Scale unravels the practical production of hierarchical boundary and categories associated with differential scope of economic and political power (Etzold & Sakadapolak, 2016).

Globalization is assumed to be a key instrument in scale formation. In this regard, it has two important effects in strategizing livelihoods or the formation of translocal vulnerability. First, as market structure and social relation assumes global nature, livelihood/vulnerability emerges to be translocal (L.J. de Haan, 2000)**.** Second, in the age of globalization, nations are forced to transfer power to the market and global scale of governance, reflecting the translocal attributes of development [vulnerability] (L.J. de Haan, 2000; Zoomers et al., 2011). Murphy and collogues argue that "in a globalized world, virtually all social, ecological, economic, or cultural systems have external drivers at different scales. Thus, it is critical to understand the multi-scalar dimensions driving vulnerability and adaptive capacity" (Murphy, Wyborn, Yung, & Williams, 2015, p. 4). This suggests that the vulnerability of individuals and places are determined by their position in hierarchical processes and associated multiple linkage of power constructions and consequences (Watts & Bohle, 1993).

The third key dimension in understanding translocal vulnerability is a network. Translocal approach assumes a dynamic relational perspective of a place (Gilles, 2015). This 'relational space' is produced by networks (Etzold & Sakadapolak, 2016; Schmidt-Kallert, 2012). Networks are formed by migration, resource flow, trade, information flow and communication via modern technology and participating in decision making (Islam & Herbeck, 2013). Translocal networks pave the way for considering migration beyond the movement of labor and taking into account 'translocal connections' of people, places, practices and flows of people, finance, ideas, goods, etc. (Sterly et al., 2016).

Thus, the importance of migration for vulnerability creation is related to constructing networks that links the vulnerability of places and people over wide range of distances (Islam & Herbeck, 2013; Lohnert & Steinbrink, 2005). For instance, over dependence on income from migration can lift up the vulnerability of migrant sending households when migrants are exposed to income shock at the place of destination (Etzold, 2017). "Translocal social ties" may also drive the vulnerability of migrant sending households by sharing the risks faced by migrants at the place of destination (Etzold, 2017; Winkels, 2004).

Globalization is also a key factor that increases interconnectedness between and within socio-economic phenomena (Amin, 2002; Etzold & Sakadapolark, 2016). It elevates the nature and amount of networks or linkage between individual elements in a system while reducing the distance between places via improved communication technology. It leads a decision or action made in one place may have fast and direct impacts at other places globally. For example, stock market movement and global oil market fluctuation (Young et al., 2006). Thus, networks provide a room to understand the degree to which vulnerability in a given place is embedded within global phenomena (McSweeney, 2004) and other places.

The above review generally indicates that vulnerabilities of individuals and households in a given location need to be analyzed based on both its situatdness and their networked interrelationship (connectedness) across place and scale. This makes the drivers of vulnerability and outcomes are intricately linked to socio-economic, environmental and institutional processes at different scales and places, where the conventional livelihood approaches fail to consider.

These all suggest that although vulnerability can be reduced through translocality (Benz, 2014; Etzold, 2017; Zoomers et al., 2011), the returns from translocality may not be positive. Through translocal relations between places and people, vulnerabilities can be "transmitted across translocal space" (Schöfberger, 2017, p. 154). The translocal approach, thus, permits to explore livelihood and vulnerability in more open and less direct way and captures the "different and conflicting effects of interconnectedness between places, institutions and actors" (Greiner & Sakdapolrak, 2013b, p. 375). The following sub-section considers another translocal oriented construct for vulnerability analysis, double exposure framework. It provides an important additional platform in analysing the formation of translocal vulnerability.

2.2.4. Double Exposure Framework of Vulnerability

"Vulnerability to what?" is the first question raised by most vulnerability analyses and interventions. Commonly, this question gears towards pinpointing the outcome of a particular kind of shock (O'Brien et al., 2009). But, practically shocks do not work in isolation (Bunce et al., 2010; Mubaya, Njuki, Mutsvangwa, Mugabe, & Nanja, 2012; O'Brien et al., 2009; Reid & Vogel, 2006). For instance, environmental change may not occur independently from disease outbreak or other shocks (Leichenko & O'Brien, 2002). Accordingly, multiple shocks can come together and severely endanger the livelihood security of households (O'Brien et al., 2009; World Bank, 2001). Single shock-focused analysis may lend a hand to give 'measurable results'. However, it has little significance to show the dynamic and complex contexts in which shocks take place (O'Brien et al., 2009). In addition, policy interventions that do not consider the different factors of vulnerability may emerge by themselves as factors in the production of vulnerability (Bunce et al., 2010; O'Brien et al., 2009). Thus, finding out how and where different shocks interact with each other and derive livelihood outcomes need to be the point of departure of understanding vulnerability (de Waal, 2006).

Nowadays, a number of scholars use double exposure framework for the purpose of vulnerability analysis from multiple shocks perspective (see Bunce et al., 2010; Mubaya et al., 2012; O'Brien et al., 2009). It is coined by Leichenko & O'Brien (2008). Although the different approaches of vulnerability analysis (e.g. Cutter, 1996; Turner et al., 2003) recognize the importance of multi-shocks, there is a problem in conceptualizing how exactly multi-shocks interact with each other

(O'Brien et al., 2009). Against this problem, Leichenko & O'Brien (2008) develop the double exposure framework based on two global processes: globalization and global environmental changes. They contend that the academia treats the two global processes as separate events affecting human wellbeing. They portray how individuals, households, communities, countries, etc. are subjected to undesirable livelihood outcomes resulting from some mix of shocks that are associated with changes in both global processes. The framework considers the synergies, linkages and feedbacks of change in the two global processes.

Double exposure framework lies on the premise of networked space where global climate change and globalization processes link places over wide range of scale. It also recognizes that global processes converge at places (Leichenko & O'Brien, 2008). Thus, it has much to do with translocal vulnerability, but it come up with different dimensions by which vulnerability can be built and rebuilt. Figure 2.2 shows the components and interactions among components in the framework. The interactions between global processes (shown as overlapping triangle) that manifest themselves as shocks affect a given exposure unit (country, community, households and individuals) that bring certain outcomes. Outcomes describe observable or quantifiable impact of change in global processes which may be considered from different angles

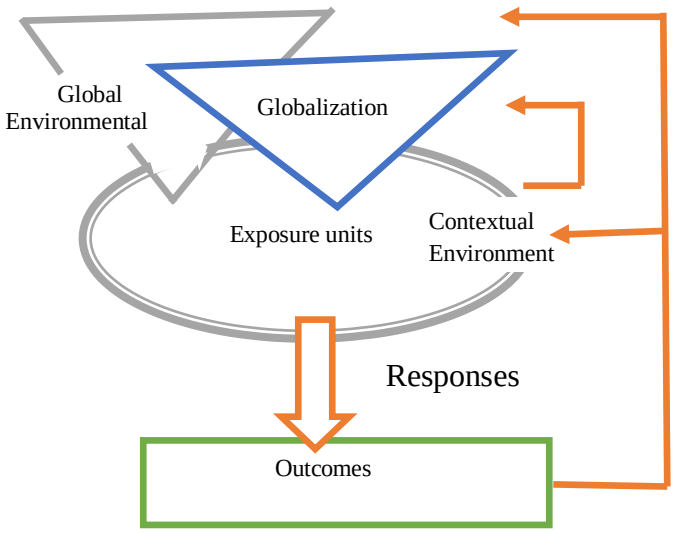

Figure 2.3: Double Exposure Framework
Source: Leichenko and O'Brien (2008)

and a wide range of 'spatial scale'. Outcomes are the result of exposure to these processes and responses of the 'exposure unit.' A response is understood as ex-ante (anticipation of exposure) or ex-post actions (following exposure) taken by exposure unit. The ability to respond to change (response capacity) relies on both the contextual factors and the specific attributes of the exposure units. Wealth, educational level, social capital, and political power are among the many individual characteristics that affect responses (Leichenko & O'Brien, 2008; O'Brien et al., 2009).

Exposure to change in global processes is a function of the nature of changes (rate, magnitude, geographical extent etc.) and contextual environment. The term context is defined by Leichenko & O'Brien (2008) as interconnected range of conditions that determine the intensity of exposure and individuals' or households' responses to change in global processes. The kinds of contextual factors that may shape responses and exposures are environmental, economic, institutional, technological, cultural, social and political. In combination, these contextual factors shape most important aspects where global changes take place. Leichenko and O'Brien also emphasis the importance of identifying exposure frame where different shock inducing factors converge. As such, the objective of identifying exposure frame is to set the boundary for analysis, just like sampling frame defines the 'bounds for the statistical analysis of a larger population' (Leichenko & O'Brien, 2008, p.35).

Generally, double exposure framework provides a means to assess how processes, contexts, responses and outcomes interrelate and affect human wellbeing. It helps to deal with where and how different shocks interacting in shaping vulnerability in translocal approach and thus, provides a better opportunity to find a long-term solution than targeting at intervention based on a single shock.

2.3. Empirical Literature

2.3.1. Determinants of Migration

Migration is a complex human phenomena happening in response to a wide range of economic and non-economic reasons within multifaceted temporal and spatial contexts (Waddington &

Sabates-Wheeler, 2003). This makes migration by no means a predictable or homogeneous form of action (Kothari, 2002). Despite its complexity, researchers try to handle the drivers of migration within a certain specific approaches. The review below provides more focus on the household and community level determinants of migration decision on the ground that development interventions mostly tend to focus on these levels (Katz, 2000) and that migration particularly temporary labor migration is a typical reflection of migration as a livelihood diversification strategy of households (VanWey, 2003). Understanding the determinants of migration is important for a number of reasons including its significance in shaping success of migrants at the place of destination and the impact of migration on migrant sending households (Mahinchai, 2010; Mora & Tylor, 2006). Accordingly, it provides relevant information for effective rural development interventions.

There is a well-developed research, both theoretical and empirical, on the determinant of internal migration in developed countries and on international migration from developing countries to developed countries. Perhaps there is mushrooming investigation on the determinants of internal migration in developing countries, even though the volume of the literature is not as rich as the two above types of migration. This is partly associated with the cost and problem of getting adequate and reliable data (Herrera & Sahn, 2013; Mahinchai, 2010) and internal migration is much less of a political concern (Herrera & Sahn, 2013). Even within the growing internal migration research in developing countries, the focus is on rural-urban migration. The determinants of rural-rural migration have not been the center of inquiry. Some argue that the drivers of rural-rural migration are similar to the general determinants of rural-urban migration (Carr, 2009).

As a critical livelihood asset and measure of rural wealth status in Ethiopia and other agriculture based livelihoods, land is a key variable used in migration literature. There are divergent findings about the effect of land ownership on migration decision of households. For instance, Mora and Tylor (2006) in Mexico, Hossain (2001) in Bangladesh, Ikramullah and Rehman (2011) in Pakistan, Shah (2005) in India and Gray (2008) in Ecuador report a positive relationship between the size of landholding and the likelihood of migration. Conversely, Kuhn (2005) and Mandola (2008) in Bangladesh, Farooq et al. (2005) in Pakistan and Sosina and Holden (2014) in Ethiopia

show a negative relationship. VanWay (2005) study on temporary internal migration in Northern Thailand demonstrates a decreasing propensity of migration with the size of landholding for larger proportion of households, but migration propensity increases when the landholding size gets larger.

Others like Atsede & Penker (2016) in Ethiopia indicate insignificant relationship between land holding size and migration decision. Some other studies demonstrate variations on the extent to which land affects different forms of migration. Mora and Tylor (2006) reveal that while land has positive effect on overall migration decision, it has insignificant effect on migration for farm jobs. In line with this, Shah (2005) shows that the propensity of short term migration is lower within asset poor (landless) and asset rich households compared to households with medium asset endowment in Gujarat, India. Asset rich households have higher propensity of migration to long term migration than asset medium and asset poor households. Asset poor households have lower propensity of long term migration than medium level asset endowed households. The mixed findings reflect the fact that the relationship between land size and migration decision is uncertain (Shahriar, Zeba, Parves & Parveen, 2006).

Livestock ownership also has different effects on migration decision depending on context. Evidences from Northern Burkinafaso (Hampshire, 2002) and Ecuador (Gray, 2008), for instance, indicate significant positive relationship between the propensity of migration and livestock ownership of households. Conversely, Deshinkgar and Star (2003) in India and Sosina and Holden (2014) in Ethiopia report significant negative relationships between migration and livestock ownership, respectively. While Mora and Tylor (2006) in Mexico and Atsede and Penker (2016) in Ethiopia indicate insignificant relationship, Shah (2005) shows a variation on the effects of livestock ownership on different forms of migration where he indicates positive, negative and insignificant effects of livestock on short-term, long-term and overall migration decision, respectively.

Some studies also show association between family size and households' migration decision. Ehirim et al. (2012) indicate that household size has a significant positive effect on internal migration. However, Hussain **(**2001) argues that family size per se may not have significant

effect on migration decision. In his analysis, family size has no significant effect rather the number of adult household members have significant positive effect on the propensity to migrate. Similar findings are reported by Deshinkgar and Star (2003) in India, VanWey (2003) in Thailand and Ikramullah and Rehman (2011) in north western Pakistan. Shah (2005), on the other hand, shows insignificant relationship between size of labor force and migration decisions. However, his finding reveals a negative influence of main able bodies in agriculture and male labor force in the household on long term migration. He further indicates that the size of male labor force has positive effect on short term migration. In Ethiopia, the size of male adults is a positive predictor of migration (World Bank, 2015). On the other hand, Khandker et al. (2012) in Bangladesh show higher propensity of seasonal migration among households with higher level of dependency.

The findings of Shah (2005) indicate that while level of land degradation at the household level has insignificant effect, access to irrigation water has negative effect on overall migration, short-term migration and long term migration decisions. Among the community variables, Shah (2005) also reveals that land degradation at village level has no effect on overall migration and long–term migration, but it has positive effect on short-term migration decision.

Moreover, an increased risk of out-migration from rural households has been observed with increased level of education (Hossain, 2001; Ikramullah & Rehman, 2011). However, some argue that schooling determine migration if the return from education is higher at the place of destination or the cost of migration is lower for the educated one (Mahinchai, 2010). For example, Mora and Tylor (2006) and Markos and Gebre-Egziabher (2001) indicate a negative relation between the level of education of households head and migration. Similarly, Shah (2005) reveals that the highest level of education attained in the household produces significant negative influence on the probability of rural migration. On the other hand, Herrera and Sahn (2013) in Senegal indicate that the education of household head is a significant positive predictor of the likelihood of migration of daughters' to other rural areas.

Most studies on the relationship between social capital and migration indicate that households with higher social capital are more likely to send migrant workers (Dorosh et al., 2011; Prayitno,

Matsushima, Jeong & Kobayashi, 2014; Shah, 2005). On the other hand, Syafitri (2012) indicates a significant negative influence of social capital on international migration decision. His finding, however, shows insignificant impact of social capital on rural-urban migration decision.

Concerning age, while Mora and Tylor (2006) present insignificant effect of age (experience) on migration to farm jobs, Babatunde et al. (2013) in Nigeria and Syafitri (2012) in East Java reveal higher and lower propensity of rural-urban migration with the age of household head, respectively. It is also assumed that the very poor often do not have access to credit and thus not able to migrate (IDC, 2004). Nevertheless, Syafitri (2012) demonstrates that access to credit has significant negative influence on rural-urban migration decision.

Generally, migration literature show complex relationship between migration and household livelihood assets (Li et al., 2012; Mahinchai, 2010). Thus, the determinates of migration can vary from country to country, from place to place within a country, between types of migration; rural-rural or rural-urban, etc. This passes a message that determinants of migration need to be considered within specific context in which it takes place.

2.3.2. Translocal Vulnerability of Migrants and Their Households

2.3.2.1. Migrants' Exposure to Shocks at the Place of Destination and Contextual Factors of Exposure

Studies show the fact that migration can expose migrants to shocks at the place of destination (Etzold, 2017; Gänsbauer, Bilegsaikhan, Trupp & Sakdapolrak, 2017; Winkels, 2004). These include living and working in unhealthy and hazardous areas (Santha et al., 2016), exposure to harmful substances and injury (Deshingkar, 2010; Mosse et al., 2002; Roglay et al., 2002), illness (Deshingkar, 2010; Mosse et al., 2002; Nunan, 2010; Roglay et al., 2002; Tamanna & Hasan, 2015), exploitation (Hagen-Zanker et al., 2014;Woldie et al., 2010), violence and insecurity (Ali, 2008; Gill, 2003; Tesfaye, 2007), hunger and malnutrition (Roglay et al., 2002), weather vagaries (Gänsbauer et al., 2017; Santha et al., 2016) and market shocks (Adger, Eakin & Winkels, 2009; Winkels, 2004; 2008).

Migrants tend to be exposed to multiple and interrelated shocks. As illuminated by Santha and colleagues, migrants in Indian cites are compelled to reside in risky habitat often affected by climate change such as flooding, heavy rain, water logging and high temperature. These climatic vagaries in turn expose migrants to other multiple shocks such as unemployment, homelessness, diseases and injuries. Migrants' exposure to health shocks, in turn, introduce employment shocks because the diseases prevent them from undertaking laborious jobs (Santha et al., 2016). Similarly, Underhill and Rimmer (2015) indicate the vulnerability of international temporary labor migrants in horticulture sector in Austrialia to multiple shocks in the form of deportation, exploitation, lower pay and isolation. Islam and Herbeck (2013) also show the vulnerability of migrant fishers at the place of destination in Bangladish to injury, death, and under and late payment of their wage. Similarly, migrants in southern cities in Ghana are exposed to health shocks, harassment and crimes (Kwankye, Anarfi, Tagoe, & Castaldo, 2007)

It is argued that migration does not create vulnerability by itself, but the contexts it occurs shape the outcomes associated with it (Deshingkar, 2004). Instead of merely identifying migrants' exposure to shocks, some studies try to consider the contexts behind migrants' exposure to these shocks. Santha et al. (2016) contend that the vulnerability of migrants in Indian cities is the result of the fact that the living place of migrants is unhygienic, congested with poor water supply and sanitation that expose them to malaria, meningitis, diarrhea, measles, tuberculosis and acute respiratory infection. They further argue that the underlying factors of migrants' exposure to climate related shocks are not bad climate situations, but are class relation, exploitations, discrimination and unequal footing on bargaining power. Specifically, their findings reveal that vulnerability of migrants to shocks in cities is associated with factors like being sidelined by government institutions that manifest themselves in the form of unequal access to social services, poor asset endowment, lack of power or role in decision making structure in the city and cast system driven discrimination that translate into multifaceted vulnerability of migrants. Islam and Herbeck (2013) associate the vulnerability of migrant fishers to accidents and exploitation with lack of power to decide on fishing practices. In addition, migrants do not have social capital to call up on in the time of crises. Gänsbauer et al. (2017) indicate that the exposure of migrants to severe flood shock in 2011 in Thailand is partly associated with lack of proper management of water and failed coordination in the management of the shock.

The noted vulnerability of migrants is apparent among African and Asian migrant domestic workers in Gulf States (Gulf Cooperation Council (GCC)). These migrants face multiple forms of abuse (physical, physiological and sexual), diseases, withholding payment, work related injury, mental illness, anxiety and death (Abu-Habib, 1998; UN Women, 2016). The vulnerability of these migrants is associated with their migration status, gender related discrimination, ethnicity, religion, non-national status, illegal migration status and other forms of 'otherness' (Abu-Habib, 1998; Sabban, 2002) and low level of education (Abu-Habib, 1998) that intersect each other in exposing them to a multitude of shocks. Researchers take *kafala* system articulated by GCC countries as the prime causes of migrants' double exposure to shocks (Bajracharya & Sijapati, 2012; Buckley, 2012).

In these destination countries, migrant workers are not given legal protection by the domestic laws. Everything is treated in the boundaries of the *kafala* system. In *kafala* system, migrants' visa, legal status, right to work and live, and their right of mobility is fully under the control of their employer (sponsor) that restrict migrants to one employer, unable to search for alternative job opportunities and subjected to abuse by their employers. This system and absence of institutional support for the right of migrants give an opportunity for employers to exercise power over migrant works in terms of infringing their rights (Bajracharya & Sijapati, 2012). Generally, Gulf States are considered as vulnerable places for migrants coming from different Asian and African countries because of powerlessness and voicelessness of migrants in these countries where there are discriminatory or nonexistence or non-compliance of policies, laws and regulation that protect the rights of migrants.

Things become even worse in case of illegal migration. Underhill and Rimmer (2015) explain the variation in vulnerability among the different migrant groups in horticulture sector in Austrialia related to migrants characteristics. Undocumented migrants are the most vulnerable types of migrants in the workforce because of legal status and subsequent absence of legal right to work, seclusion, lower payment and no formal written agreement of employment. This suggests that the characteristics of migrants by themselves can emerge as key factors to determine the nature of their vulnerability.

Some researchers try to extend the domain of their analysis of migrants' vulnerability by including the issue of globalization as exemplified by Pollock and Lin Aung (2010) study on the condition of Burma women migrants in Thailand during financial crises in 2009. They present the exposure of migrants to multiple shock in terms of dismissal from job, abuse and extortion by Thai police and immigration staff. They point out that migrants' double exposure to shocks is associated with the sector of their employment, their skill level, gender, migration status and nationality along with the economic crises in Thailand which of course has its own root beyond Thailand. The problems of migrants become more severe in crises situation as they are first losers of jobs during crisis-induced reduction of employment opportunities (ADB, 2013; McKenzie, Theoharides, & Yang, 2014; Weerasinghe et al., 2015). This reflects that although the sources of migrants' vulnerability appear to be place specific, they actually span multiple sources in a wide range of scales.

Some studies further expand their scope and attempt to grasp how the vulnerability of migrants is constructed by interconnected factors both at the place of origin, country of destination and global scale governance. Buckley (2012) examines the vulnerability of construction work migrants from Karala state in India who lost their job during economic crises in Dubai in 2009. He associates the vulnerability of construction migrants with six interrelated factors: 1) characteristics of migrants (e.g. skill; migration experience, type of contract, information access, level of indebtedness; characteristic of employers they are employed); 2) the prevailing huge migration debt incurred to sponsor unlawful high recruitment fee at the place of origin; 3) federal government laisser-faire approach towards migration; 4) United Arab Emirates (UAE) government immigration and foreign workers law which provides short term working visa where right of migrants to work and to live in Dubai are attached to employers (*kafala* system); 5) casual based precarious labor market in the construction sector in Dubai that are unsecured, exploitative, restrictive labor movement; breaching agreements; wage theft and illegal fees, and 6) loss of job due to collapse of real estate market in Dubai which is induced by global financial crises.

Buckley (2012) clearly shows how construction work migrants vulnerability is translocalized where the global financial crises is reproduced and transformed to sever level of vulnerability

among migrants as the result of networked factors at both migrant sending and receiving countries. This reveals the fact that the vulnerability of migrants is place based yet scaled and networked. His finding also reflects interdependent vulnerability where the vulnerability of employers associated with global crises is transferred to their employees.

Similarly, Cai and Chan (2009) indicate employment shock exposure of Chinese rural-urban migrants that emanated from global financial crises in 2008. They disclose how *hauku* system (which excludes rural migrants from housing registration in cities) of China government contribute to amplify the vulnerability of migrants. As the result of *hauku* system, migrants were excluded from social security system during financial crises. Their study extends the analysis of the vulnerability space of migrants as a kind of migrant origin and destination continuum: there is no social security support system for those who stay behind in the city as well as there is no employment opportunities for those who return to their place of origin, suggesting the translocal nature of vulnerability dynamics.

Winkels (2004) and Adger et al. (2009) relate migrants' vulnerability at the place of destination with global market price shock by taking the case of Vietnamese rural-rural coffee migrant farmers. They argue that all price shocks faced by migrants are the result of powerlessness: coffee migrant farmers are put in the status of mere price takers in the network of commodity market of coffee. Winkels (2004) contends that the largest share of revenue of coffee is taken by other players in the market chain (network), but the risks incurred is transferred to coffee farmers (migrant farmers) where they have no means to safeguard themselves from coffee price volatility. This reflects how market globalization extends the spatial domain of migrants' vulnerability to global scale.

Adger et al. (2009) also reveal that global market volatility is exacerbated by exposure of coffee migrant farmers to climate vagaries. These situations together significantly influence the feasibility of coffee farming for the livelihoods of migrant farmers. They also indicate that these vulnerability contexts of migrants may be further worsened by factors related to domestic policy and institutional changes, demonstrating the fact that the vulnerability of migrants is a function of the wide range of factors that span from global market globalization and climate change to national level intuitional factors.

It is also argued that the vulnerability of migrants need to be considered from their risk management strategies because these may enhance vulnerability (Winkels, 2008). In this regard, Santha et al. (2016) show that because of limited capability (internal side of migrant vulnerability) to cover expenses for health services and absence of social support system, migrants are usually forced to go to money lenders to get cash to sponsor medication. This commonly results in indebtedness. Santha and his colleagues also call attention to the different causes for the poor health seeking behavior of migrants that increase their vulnerability. For instance, high cost of medication force them to take risky coping strategies such as delay to get treatment, 'self-treatment', going to unlicensed health service providers, borrowing money which in turn increase indebtedness; going back to place of origin without being treated, cease health treatments halfway because of high cost of health service that can enhance their vulnerability severe health shocks (Santha et al., 2016). Research on migrants in southern cities in Ghana also indicates that migrants lack of accommodation in urban centers force them to spend the night in open spaces in the street and market as coping strategies. This risk management strategy exposes them to harassment and crime (Kwankye et al., 2007). These findings are typical examples of migrants' exposure to multiple shocks which is a function of the feedback effects of their risk management strategies.

Generally, the reviewed empirical literature shows the sheer fact of migrants' exposure to multiple shocks as a result of intertwined economic, social, institutional and environmental factors that extend from specific local context to extra-local factors, and migrants characteristics and responses. The following section reviews the outcomes of migrants' exposure to shocks at the place of destination on the negative livelihood outcomes of migrant sending households.

2.3.2.2 Vulnerability of Migrant Sending Households

Migration is widely considered as source of opportunities which are not possible to get at the place of origin. However, it is also argued that when migrants are exposed to shocks at the place of destination, they can transfer their vulnerability to their households at the place of origin in different ways. The idea of translocality suggests the 'travelling realities' of livelihood vulnerability; through integration of environmental, economic and social relations of different places such as migrants' origin and destination (de Haan, Brock & Coulibaly, 2002; Lohnert &

Steinbrink, 2005; Rigg & Salamanca, 2009; Zoomers et al., 2011). For example, in her study on rural-rural migration in Vietnam, Winkels (2004) attests that when migrants lost their investment in coffee farming at the place of destination as the result of global coffee market shock, migrants were forced to pool resources from their rural origin households whereby rural origin households become more vulnerable. This is an indication that with the integration of the households to the wider system of production and marketing in distant places through migration, the source of risk to livelihoods becomes scaled up and spatially integrated to different places (Rigg, 2007).

Study results by Thieme and Wyss (2005) in Nepal, Mosse et al. (2002) in Western India and Islam and Herbeck (2013) in Bangladesh show the effects of migrants' exposure to shock at the place of destination in perpetuating indebtedness of migrant sending households. This occurs first by taking loans to sponsor migration, and then unable to remit causes households to take loan to smooth consumption. Similarly, Hagen-Zanker et al. (2014) indicate that in time of migrants' exposure to shocks at the destination of Middle East countries, migrant sending households in Pakistan and Nepal encounter the problem of paying back the loans taken to sponsor migration that ultimately lead to exorbitant indebtedness of the households. This in turn leads households to sell their asset to clear debt. As a whole, these findings clearly show how the nature of livelihood vulnerability at the place of origin and destination is networked and reinforced each other.

In somewhat different ways, some studies consider the effects of migrants' return to rural areas in terms of transmitting diseases and putting pressure on the scarce resources of sending households. For example, Rigg and Salamanca show that the 1997-1998 financial crises in Asia led millions of Thai migrants to be out of work that, in turn, resulted in the reduction of remittance to households in rural origin. Besides, because of the crises, many migrants returned to their rural origin village, putting additional pressure to rural livelihoods. Consequently, poverty in rural areas was projected to rise (Rigg & Salamanca, 2009). Some other studies show that the exposure of migrants to disease at the place of destination endangers migrant sending areas and households through transmitting some diseases upon their return to the origin. For instance, Santha et al. (2016) draw attention to migrants in Indian cities where some migrants tendency of going back to the place of origin without getting treatment (due to prohibitive high

cost of health care services). This suggests that migrants' origin and destination may share each other's space of health risks via migration.

A study by Dungumaro (2013) in Dar es Salaam, Tanzania indicates that migrant sending households do not show improvement in their financial asset because of their daughter migration due to absence of terms of service attached to the recruitment and low salary payment of migrants. He indicates that besides not receiving remittances, migration negatively affects migrant sending households in terms of caring for HIV/AIDS victims of returnee migrants and orphan children.

Nunan (2010) identifies the vulnerabilities of migrant fishers who migrate to different landing sites on Lake victoria, East Africa in response to intermitent fish availability and price where he attempts to show the relationship between the vulnerability at the place of origin and destination. He reveales that although migration enables to address vulnerability to limited catches and lower income of households at the place of origin, these vulnerability are reduced by substituting vulnerability to unsafe sexual behaviour, theft of asset and increasing fishing pressure at their destination. In situation where fish catch at the place of destination decreases, remittance to households declines which, in turn, increases the vulnerability of leftbehind household members. The health shocks migrants face at the destination and the implications on migrant sending households is an indication of translocal vulnerability or how migration changes the geography of vulnerability.

Studies also indicate the varied impact of interconnectedness between the place of origin and destination depending on the characteristics of migrants or the type of migrant households. For example, a study in Tanzania shows that the amount of remittance from urban migrants varies depends on the urban labor market in which migrants manage to participate. Those households who reside in the Kilimanjaro mountain village receive higher amount of remittance than those households living in Northern plain settlement and Southern Tanzania. The difference in amount of remittance is attributed to the fact that migrants from mountain population work in professional and managerial sector as the result of households' investment on educating children that ultimately enabled them to receive large amount of remittance). On the other hand, migrants

from households in Northern Plain are less educated that make them unable to provide a significant financial support to their households. The situation is found sever in the case of migrants from Southern Tanzania where migrants' level of education is low. These migrants are employed in informal sector in Dar es Salaam as itinerant seller under big traders where the level of income has dramatically decline because of high competition (Tacoli, 2002).

2.3.3. Rural Livelihoods, Migration and Vulnerability in Ethiopia

2.3.3.1. Economy and Rural Livelihoods

Ethiopia is a land locked country with a tropical monsoon climate characterized by wide topographic-induced variations (Von Braun & Olofinbiyi, 2007). Its projected population of 2017 was 94.4 million (urban: 19.1million and rural: 75.3 million) (CSA, 2013). It is the second populous country in Africa next to Nigeria (AfDB, OECD & UNDP, 2016). Agriculture is the backbone of Ethiopian economy. Despite a declining contribution to GDP over the past decades, agriculture is still the source of 70% of export earnings and the livelihoods base of 80% of the population in 2013/14 (AfDB, OECD & UNDP, 2015).

National average land holding size is 1.06 hectares that support an average household size of 5.14 persons (CSA, 2016). Although most of its people live in rural area, it generates extremely low income from the sector due to high dependence of the population on low-input, low-output (and shock-prone) agriculture (Sharp et al., 2003). The average dependency ratio at country level is 88%, but it reaches 100% in rural areas (CSA, NBE & WB, 2017).

Ethiopia in recent decades has been quoted with chronic poverty and long standing political, economic and environmental shocks (Gray & Mueller, 2012). Illness of members, drought, price increase of food items and the raise in input price are key shocks experienced by Ethiopian households. This leads households to use different copping strategies that lead the depletion of their assets. The most important coping strategies to address these shocks are 'use one's own saving', take on spiritual activity and livestock selling, accordingly (CSA, NBE & WB, 2017). Rural people lead vulnerable livelihoods partly because of limited asset endowment (Abera & Zeller, 2012). There is also limited non-farm livelihood opportunities in the country because of limited availability of infrastructure, skill, capital and market (CSA et al., 2017; Zemen, 2014).

The main export items of the country are coffee followed by sesame. Sesame production is believed to be a small scale agricultural practices despite the increasing involvement of private investors engaged in mechanized agriculture following the growth and transformation plan of the country (Kostka & Scharrer, 2011; Zerihun, 2012). Sesame production expands from already known areas of Humera, North Gondar and Wollega to Benishangul Gumuz, Illubabor and several new places (Ermias, Endrias, & Belayneh, 2015)[2]. The private peasant crop land area covered by sesame increased from 5893.15 hectares in 2007/2008 (CSA, 2008) to 299,724.41 hectares in 2013/2014 (CSA, 2014b). Sesame accounts for one-third of the total oil-seeds production of the country with huge contribution to the economy of the country. As opposed to other sesame producing countries, sesame production in Ethiopia is largely for export, accounting about 75% of products is exported (GAIN, 2016). Sesame export has increased its supply significantly from 124, 291 tones in 2007/2008 to 400,00 tones in 2015/16, more than threfold increase (Ethio Export Platform, 2016). China is the major destination of Ethiopian sesame. At the global level, Ethiopia is the 4th largest producer of sesame after, India, China and Sudan and the 2nd largest exporter next to India (GAIN, 2016). Ethiopia sesame preferred for its high oil content and rich flavor. Humera-Gondar and Wollega types are the two important sesame varities famous in the global market (Wijnands, Biersteker & Van Loo, 2009).

2.3.3.2. Patterns of Migration

Analysis on the patterns of migration in Ethiopia is problematic due to lack of reliable data (Markos, 2003). Rural-rural migration is the most dominant form of internal migration (CSA, 2000, 2006; Dorosh et al., 2011; Markos, 2001; World Bank, 2007), reflecting the fact that migration in Ethiopia does not lead significant urbanization (Dorosh et al., 2011). This makes the country the least urbanized state with urbanization that stands at 19%, which is considerably lower than the average of Sub-Saharan African Countries, 37% (AfDB et al., 2016). The low level of urbanization may be related to the following five reasons. First, reducing rural-urban migration is the Ethiopian government policy supported endeavor (see TGE, 1993). Second,

[2]*Sesame is a crop produced in a rainfed agriculture in semi-arid agro-ecology of Ethiopia. It contains better agronomic significance because its ability to survive in harsh environment, where other crops unable to adapt (Kidane, Alemeneh & Malo, 2010).*

farmers in Ethiopia have the right to use and transfer the land, but they do not have the right to sell and the land right demand the continuous residence and use of the land (Deveroux, 2000; Dorosh & Schmidt, 2010; World Bank, 2015). Third, there is a limited job opportunity in urban areas which may be the result of less investment on job creation by government, and local and foreign investors (Deveroux, 2000). Fourth, the cost incurred for migration and looking for employment opportunities at urban areas may constrain migration (Dorosh et al., 2011; World Bank, 2015). Lastly, migrants may lack information about the type of employment opportunities available at their potential destination (World Bank, 2015). Presently, Ethiopia hosts a huge youth population and youth unemployment is among the critical development challenges facing the country (Guarcello & Rosati, 2007; MoLSA, 2009; Terefe, 2014) but urban centers have limited capacity to create employment opportunities to these employment seeking population (Deveroux, 2000). In this context, rural labor migration to other rural areas appears to work as an important safety net to provide temporary employment opportunities.

The causes of migration in the country are complex and multiple (Markos, 2001). Studies identifyi push of droughts induced by erratic rain fall and landlessness or land scarcity as reasons for rural migration (Markos, 2001; Tesfaye, 2009). Unavailability of alternative livelihood strategies, indebtedness (Feleke et al., 2006; Woldie et al., 2010), social and economic crisis, uncertainties in crop production and prices, family breakdown, personal conflicts and clashes (Tesfaye, 2009; Tefere, 2013) also force migrants to leave temporally or permanently their place of origin. Migration to other areas is also driven by availability of land (in case of rural-rural migration), social network and availability of better employment opportunities (World Bank, 2007; Tesfaye, 2009).

More recently, Ethiopia has promoted export-orient cash crop production such as sesame in the lowland areas that creates temporary employment opportunities for a large number of rural migrants coming from highland areas. There are two waves of seasonal wage labor migration to sesame growing areas of the country. The first one occurs for weeding seasons, while the second waves of migration happens mainly in harvesting season (Woldie et al., 2010; Schicker et al., 2015). This form of migration supports the livelihoods of migrant sending households in terms of reducing the vulnerability of poor rural households to seasonal food insecurity and high risk of

food shortage, and reduce the number of people to feed (Feleke, et al., 2006), flow of material support such as better cloth, shoes, radios and helps to pay annual tax and buy farm implements, etc. (Feleke, et al., 2006; Tefere, 2013; Woldie et al., 2010). However, some studies show that these opportunities come at the expense of migrants' exposure to different form of shocks at the place of destination (Tsegaye, 2016; Woldie et al., 2010)

2.3.3.3. Vulnerability of migrants at the Place of Destination

As noted above migration in Ethiopia helps in reducing the vulnerability of poor rural households. However, some large scale studies in the country show that internal migrants remit less to households at the place of origin (Adamnesh et al., 2014; de Brauw et al., 2013; World Bank, 2010). It is argued that the only way they benefit migrant household is reducing short term demand of household resources (Adamnesh et al., 2014). Low remittances might be related to the fact that most migrants move to rural destination where migrant livelihood context is not much different from those of sending households (de Brauw et al., 2013). This may also be related to low wage and high cost of living in urban areas, strategic decision of migrants to improve long term wellbeing, and save money to start business, cover costs related to education and sponsor migration which bring better earning (Adamnesh et al., 2014).

On the other side, studies on both internal and international migration show a wide range of shocks that migrants face at the place of destination. In Southern Ethiopia, for instance, migrants face multiple shocks at the urban destinations in the form of exploitation and harassment (Adamnesh et al., 2014; Feleke et al., 2006; Regassa & Yusufe, 2009), joblessness, crime and health shocks (Regassa & Yusufe, 2009; Zemen, 2014), work place confiscation and eviction, low income and food insecurity (Sosina & Holden, 2014). In Addis Ababa, some migrants are vulnerable to bad living and working conditionandexploitation (World Bank, 2010), expulsion, low income and food insecurity (Sosina & Holden, 2014). In the context of rural-rural migration, out-migrants in Amhara region are exposed to health shocks (Tsegaye, 2016; Woldie et al., 2010), employment shocks (Woldie et al., 2010), exploitation (Woldie et al., 2010) and conflicts (Tesfaye, 2007; Tsegaye, 2016). Similarly, international labor migrants who migrate to the Middle East face a number of shocks at the place of destination such as working for long hours,

crime, rape, physical violence and salary withholding (Mesfin & Guday, 2017; Selamawit, 2013; Sintayehu, 2016).

The causes for migrants' exposure to multiple shocks are associated with different factors. It is partly attributed to low level of education and level of skill of migrants (Regassa & Yusufe, 2009) and lack of social network that serve as a safety net in time of crises (Sosina & Holden, 2014). Also, the poor institutional establishments related to migration both at the place of origin and destination are worth mentioning factors for vulnerability of migrants. There is no initiated policy, strategy and program towards supporting self-intiative rural-rural migration or any other form of internal migration in Ethiopia (Markos, 2003). In addition, a large amount of labor force in Ethiopia including temporary labor migrants end up with being employed in informal sector, which is characterized by unemployment, low income and low institutional protection (World Bank, 2007; MoLSA, 2009). These show multiple and interrelated factors at scales govern the vulnerability of migrants. However, it appears that existing migration literature in Ethiopia cannot go further to see the negative repercussion of migrants' vulnerability at the place of destination on the vulnerability of migrant sending households.

Generally, the reviewed literature in this chapter indicates the embeddedness of migrants and their households to the complex and interacting socio-economic, institutional and environmental contexts at different places and scales. The characteristic of migrants, the nature of migrant sending and receiving areas, and the national and global conditions within which migration occurs, among others, play important roles in shaping the vulnerability of migrants at place of destination and their households at the place of origin (Rigg, 2007). However, the present study argues that there are a number of limitations in the previous studies that merit further scientific investigations, which include:

1) Although there are emerging studies that show the translocal vulnerability of migrants in the context of international and rural-urban migration, little is known about translocal vulnerability in the context of temporary rural-rural migration.
2) Most studies do not provide the full account of the contextual factors of migrants' vulnerability at the place of destination. Some relate factors specific to the place of destination

or globalization or national level factors or a combination of two or more of these factors and hence appear to be one sided investigation of the vulnerability of migrants.

3) Most analyses of the vulnerability of migrants tend to focus on one form of migrants. However, migrants may not be homogeneous in terms of the nature of their employment at the place of destination. Accordingly, there is limited comparison of vulnerability of migrants across the nature of their employment at the place of destination and associated outcomes on migrant sending households.
4) Although some available studies give a hint that the livelihoods of migrant sending households are constrained by the vulnerabilities of migrants at the place of destination, they do not systematically take into account the extent to which vulnerability of migrants bring the vulnerability of migrant sending households in terms of certain negative livelihood outcomes (e.g. food insecurity).
5) There is also limited systematic research based on theoretical underpinning that help to understand the integrated and complex factors at different scales that expose migrants to multiple shocks, their responses and associated outcomes on migrant sending households.

2.4. Conceptual Framework of the Study

The study draws on ideas from sustainable livelihoods approach, translocal vulnerability approach and double exposure framework. Sustainable livelihoods approach is mainly used to assess the determinants of migration. Translocal vulnerability approach complemented by double exposure framework is utilized to examine the translocal vulnerability of migrants and their households.

Based on sustainable livelihood framework, the study argues that migration decision or the type of migration that households prefer to participate at the place of destination (i.e. migration for crop farming or casual wage labor or full-time wage labor) is influenced by both household level asset and community level factors (Mora & Tylor, 2006). As it is generally assumed that rural-rural migration is the choices of the poor (Carr, 2009), it is predicted here that households use temporary rural-rural labor migration if they are poorly endowed with natural, financial and physical assets (Ellis, 2003), but better in their social and human (labor) capitals (Moser, 1998). However, as migration for crop farming is a resource demanding type of migration, it is assumed

that households with better endowment in natural, financial, social and physical capitals migrate more for crop farming than other forms of migration.

The study approaches translocal vulnerability in terms of the exposure and responses to shocks, contextual factors of shocks and the outcomes of the shocks as stipulated by double exposure framework. In terms of contexts, it is assumed that exposure of migrants to multiple and interrelated shocks at the place of destination in the form of market, crop failure, health, employment and crime shocks is a result of the multiple and interacting socio-economic, institutional, environmental factors at different scales that converge at the place of destination (Figure 2.3).

From the perspective of socio-economic factors, migrants become vulnerable when the economic activity of migrants and their destination are vulnerable to unfair global trade relationships or neglected from public investment on basic services that can minimize vulnerability (Hinchliffe, 2000; Wisner, et al., 2004). Under the processes of globalization, many countries including Ethiopia are engulfed into global economic structure which requires change in a range of institutional system where some sort of sovereignty is transferred to "supra- and subnational institutions' (Sassen, 2000) at the expenses of the vulnerability of many developing countries. This is a typical context by which translocal vulnerability space is constructed where integration to the wider scale economic system produce economic marginalization or vulnerable people/migrants in many developing countries (O'Brien & Leichenko, 2000; Schöfberger, 2017).

The institutional factors can contribute for the (re) production of vulnerability in the form of policies and politics that allocate more power to 'some than others' (Findly, 2005; Heikkila, 2005; Wisner et al., 2004), ill-informed intervention (Bunce et al., 2010), lack of interest or political will by the government to protect the rights of people in general and migrants in particular (Etzold & Sadakapolark, 2016; Sabates-Wheeler &Waite, 2003; Wisner et al., 2004). These institutional factors of vulnerability become apparent in the form of lack of access to social services, livelihood opportunities, and legal system, injustice in resource distribution and exploitation due to discriminatory legislation or lack of legal status (Abu-Habib, 1998; Sabates-Wheeler & Waite, 2003). Environmental factors of vulnerability are associated with the tendency

to live and work in vulnerable places such as drought prone areas (Adger et al., 2009; Cutter, 1996; Downing et al., 1996, 2005; Santha et al., 2016; Wisner et al., 2004) or engage in climate vulnerable economic sector.

This study contends that the different contextual factors intersect in a complex and multiple ways in shaping the vulnerability of places (migrants' destination) and individuals (migrants). It is claimed that the factors that build vulnerability may manifest themselves at different scales but 'the state of vulnerability' relies on the feature of exposure unit (Adger & Kelly, 1999). Thus, vulnerability variation among the different groups of migrants can emerge depending on whether and to what extent each group of migrants are integrated to various contextual factors at different scales that drive their exposure to shocks and affect their responses (risk management strategies) (Eriksen et al., 2005). The responses of migrants to different shocks are intrinsically connected not only to contexts, but also to their exposure to multiple shocks. It is widely noted that risk management strategies may be 'erosive and inappropriate' (Drimie & Casale, 2009; Siegel & Alwang, 1999; Winkels, 2004) to expose migrants to severe or various forms of shocks (Figure 2.3).

The present study also argues that the place of origin and destination of migrants are an integrated environmental, institutional and socio-economic vulnerability space mediated by migration. Specifically, the vulnerability of different groups of migrant households at the place of origin to food insecurity and asset decumulation (as the outcomes of migrants' vulnerability) is directly or indirectly affected by contextual factors that determine migrants' exposure and responses to shocks at the place of destination. For instance, when migrants are not successful because of health shocks, crop failure, etc., they can impoverish migrant sending households via non remittance, further investment for migrants' medication, sell of asset to pay debt, etc. In addition, migrant households' vulnerability is assumed to be the function of asset endowments (internal vulnerability) of households (Adger & Kelly, 1999; World Bank, 2001). Limited access to livelihood assets decreases the capacity to cope with shocks to which households are exposed (Ager & Kelly, 1999; Shahbaz, 2008).

To assess the translocal dimensions of vulnerability, the study follows 'a place sensitive' conceptualization of vulnerability (Griener, 2009). Place of destination is taken as the exposure frame where different contextual factors for vulnerability converge, while migrants at the place of destination or migrant households at the place of origin are taken as exposure unit (see O'Brien & Liechenko, 2008). It is logical to assume that a vulnerable place is by implication a location where vulnerable people live (Downing et al., 1996). The place of destination is not defined primarily based on political administration, but the working place of migrants (households) (see Oakes & Schein, 2006).

Generally, the conceptual framework shows what household and community level factors determine migration decisions of the households, what, why and how different contextual factors at scales are integrated and converge at the place of destination to expose migrants to multiple and interacting shocks. It also shows the outcomes of migrants' exposure to shock on food insecurity and asset decumulation of migrant sending households. This makes vulnerability analyses of this study to transgress place (destination and origin), scale (local, national and global), shocks (market shock, health shocks, etc.), and outcomes (food insecurity and asset decumulation).

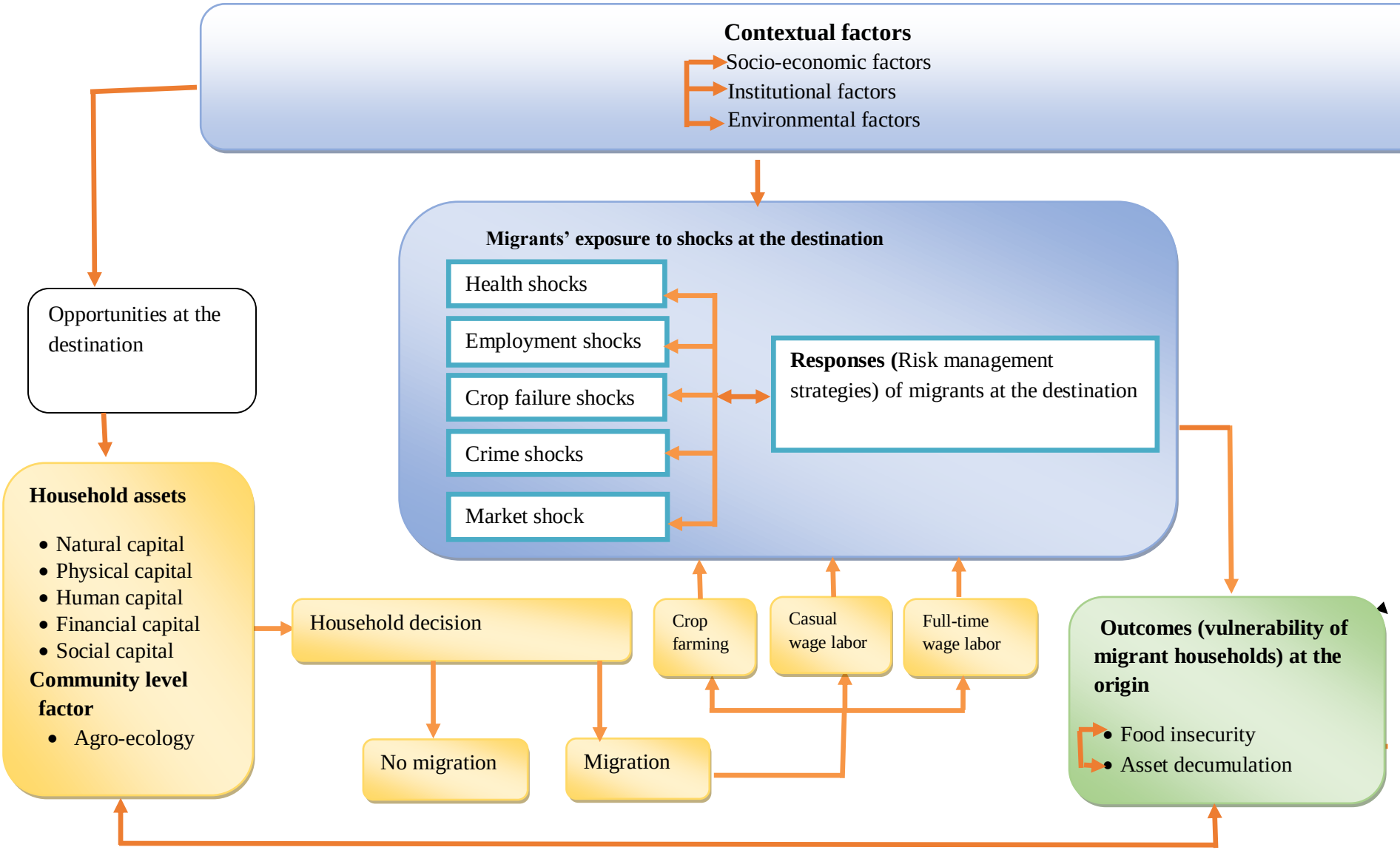

Figure 2.4: Conceptual Framework of the Study

Source: Author

CHAPTER THREE
DESCRIPTION OF THE STUDY AREA AND METHODOLOGY

3.1. Description of the Study Area

3.1.1. Physical and Demographic Features

Quarit district has a total area of 60, 285 hectares. It is one of the 15 districts in West Gojam Zone of Amhara Region. It is bordered by Jabi Tehnan district in the southwest, Sekela in the west, Yilmana Densa and Gonji Kolela in the north, Degadamot district in the southeast and the north-east (Figure 3.1). It is located at 410 kilometers from the capital city, Addis Ababa. It has 30 *kebeles*[3]of which two are urban (Gebezemariam and Genet Abo) (QDAdO, 2015). Its population in 2017 was estimated to be 135,400 (Male: 66,761 and females: 68, 639). The rural and urban populations account for 127,103 and 8,297, respectively (CSA, 2013). The major town and administrative center of the district is Gebezemariam.

The district is located in the Northern Highlands within altitudes between 1861and 3519 m.a.s.l. It is part of Chocke Mountains. The highest point is the Adama Mountain. It has two main agro-ecological zones: *dega* and *woina dega*[4]. The *dega* and *woina dega* areas cover about 51.7% and 46% of the district, respectively. The *wurich* agro-ecological zone constitutes only 2.3% of the district. The district is the source of Birr River which joins the Blue Nile River. Its average annual temperature ranges between 16^0 and 25^0 with an annual average rainfall of above 1000 mm (QDAdO, 2015).

[3] *Kebele is the lowest administrative unit in Ethiopia. Kebeles constitute district*

[4] *Dega is an area that lies between 2300-3200 m.a.s.l, while woina dega, kola and wurich areas are found between 1500-2300, 500-1500 and 3200-3700 m.a.s.l, respectively (Hurni, 1998).*

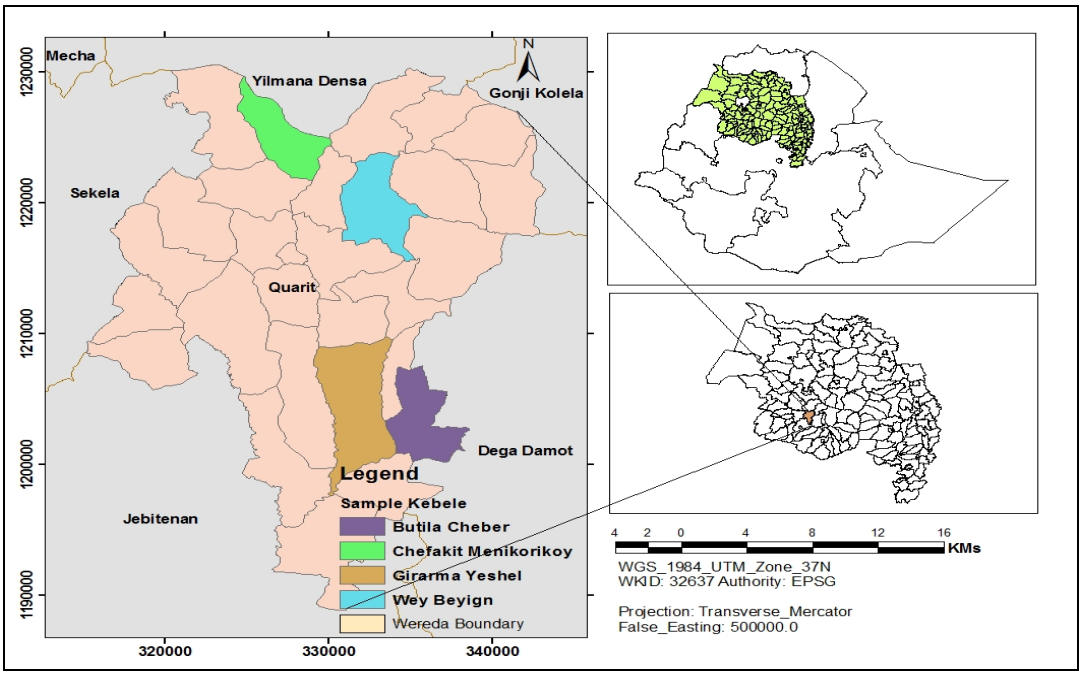

Figure 3.5: Map of the study district and *kebeles*

3.1.2. Farming System

i) Crop Production

The district has a total of 29339 hectares of cultivated land. Farmers engage in mixed small scale subsistence farming. The main crops grown in terms of area coverage include maize, *teff (Eraqrostis tef)*, wheat, barley, potato, horse beans and check peas, respectively. Barely, wheat, potato, horse beans and chick pens are major crops in *dega* area in order of importance. Important crops in *woyina dega* (midland) agro-ecology include maize, *teff*, barely, horse beans and check peas, respectively. These crops are largely grown by rain feed agriculture (QDAgO, 2014).

Irrigated land comprised about 7566 hectares of cultivated land mainly for the production of onion, potato, tomato, carrot (QDAgO, 2014). In the places where the researcher observed, there are a number of springs which can be utilized for irrigation. However, farmers could not fully utilize them partly because of rugged topography (Figure 3.2).

Figure 3.6: Irrigable water is transported across a gorge via carved wood pole in Butila *kebele*

Source: Own Field Photo, 2015

Interviews with agricultural experts indicate that because of population pressure and poor land management practices, the grazing and crop lands are increasingly degraded (Figure 3.3). Land scarcity and degradation appear to be more severe in *dega* areas (ALZR, 2007). To address soil erosion, soil and water conservations are practiced in the district (Figure 3.4). Experts, however, explain that such practices have their own drawbacks in a number of ways.

Figure 3.7: Gully formed in between agricultural lands (left) and in sloppy deforested land (right)

Source: Own Field Photo, 2015

First, it focuses only on physical conservation with little support with biological conservation. Second, constructed physical structures are not protected and they are gradually changed to agricultural land. Experts further complain that each year farmers are asked to construct terraces, but already constructed terraces could not be maintained.

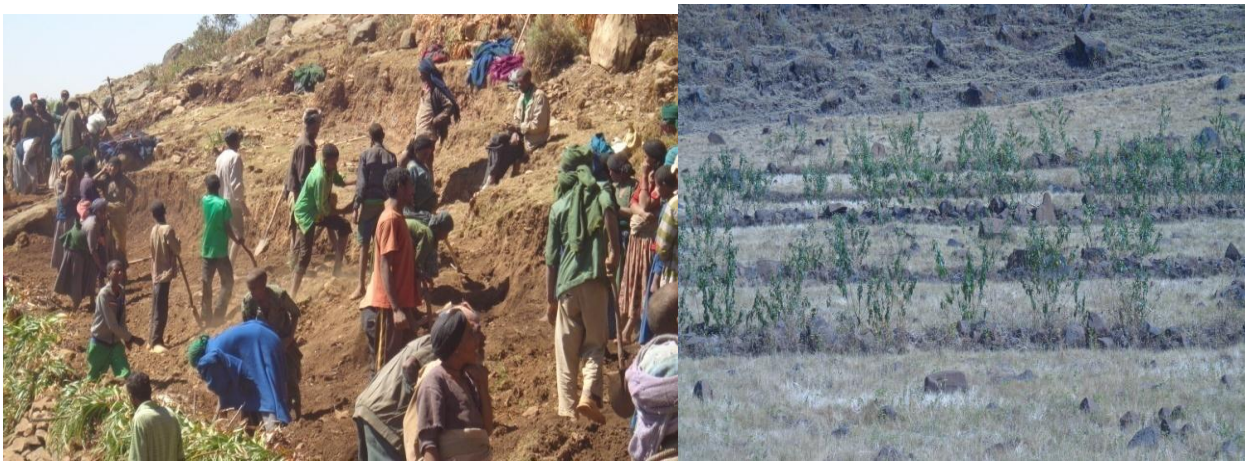

Figure 3.8: People constructing terraces in Chefakit *kebele* (left) and a rare case of successful model terraces with planted trees along the terrace in Butila *kebele* (right)

Source: Source: Own Field Photo, 2015

The district is part of resource poor Northern Highlands of Ethiopia. Studies show that Quarit district is one of food insecure districts of Amhara region (ALZR, 2007; Teshome, 2010) although is it is not designated as food insecure district by Amhara Regional Government as pointed out by agricultural experts. A study made by Teshome (2010) indicates that of all nine districts included in the study, all included samples from Quarit district are unable to cover their food consumption needs. It further notes that the food insecurity situation of sample households from Quarit district are more severe than households included from other sample districts. Agricultural expert from Agricultural office in Quarit district indicates that about 18 *kebeles* out of 28 *kebeles* were included under safety net program in 2008 and 2009 but later this scheme was abandoned with unknown reasons. It is further noted that the current government had resettled about 654 individuals (only those who owned land at their origin) to other rural areas of Amhara Region mainly to Mirab Armacheho and Jabi Tehinan (Birsheleko) districts between 2003/4 and 2009/10. However, as noted, a number of resettlers come back to their home by abandoning the

resettlement site and some others seasonally move back and forth between resettlement site and their place of origin because of different reasons.

ii) Livestock Production

Livestock production is another key source of livelihoods in the district. Cattle, horses, mules, sheep and hen are the main livestock reared by farmers (QWAgO, 2014). A key informant from agricultural office in Quarit district indicate that animal production is based on traditional form of animal rearing. Compared to crop farming sector, animal production is also considered as a sector with limited institutional support. Animal disease, lack of animal feed and poor institutional support are key reported obstacles for animal production.

The expert further explains that the available communal grazing land has declined due to the use of the land for crop farming and establishment of public services. Because of increasing grazing land scarcity, the government has put increasing pressure on farmers to employ controlled grazing and cut and carry systems (Figure 3.5). It is indicated that controlled grazing system damages the livelihoods of landless and land poor farmers as they have no means to establish their own private grazing land.

Figure 3.9: Cut and carry (left) and controlled grazing (right) systems in Chefakit *kebele*
Source: Own Field Photo, 2015

3.1.3. Public Services and Infrastructure

Education: The district has 23 first cycle primary schools, 48 primary and second cycle primary schools, two secondary schools, one preparatory school and one ongoing technical and

vocational training center. There are no private schools. There are no colleges or university. Overall education enrollment coverage is 85.4%. Primary school enrollment coverage is 87.6%, while secondary and preparatory school enrollment coverage is about 65.6% and 87.13%, respectively (QDAdO, 2015).

Health Services: There are 31 health posts, five health centers and nine clinics provided by the government. There are nine private clinics in the district and no hospitals (QDAdO, 2015). The researcher observed that although there are some solar energy sources in some rural areas, health centers have no supply of electricity which creates a problem of stocking refrigerated medicines.

Road/Transportation: There are about 91 kms all-weather gravel roads and 6.9 kms dry weather road and ongoing 12.2 kms dry weather roads (QDAdO, 2015). The area is characterized by poor infrastructure (ALZR, 2007). Among 28 rural *kebeles*, only nine of them have all weather roads. Most of these nine *kebeles* (seven of them) had access to road because they are crossed by the main road connecting Quarit district to neighboring districts (QDAdO, 2015). This suggests that most part of the district have no road at all. The researcher observed that those *kebeles* reported to have had an access to roads mainly those not crossed by the main roads are poorly constructed and ruined during heavy rainfall season. They are also impassable during the rainy season due to lack of bridges across Birr River, a major river in the district that feeds Abay River. It appears that this poor road network may contribute rural *kebeles* to have poor access to market. Out of four study sample *kebeles*, three *kebeles* have no road that link the *kebeles* to the main roads or feeder roads. Even the one which has access to road, the shortest road which links to the district center has been out of service because of gullies formed during the rainy seasons. Besides, except the road that links Jabitehinan to Quarit district, there is no regular transport service in a daily basis.

Electric supply, Telecommunications and Water Supply: No rural *kebele* has electric supply. Field observation of the researcher reveals that rural households in Quarit district, like most rural households in Ethiopia, depend on fuel food as a source of energy. However, there is a growing trend of using battery and solar powered light bulbs as a source of lighting. It is indicated that 23 out of 28 rural *kebeles* have mobile networks (QDAdO, 2015). However, field observation witnessed that these *kebeles* actually have network access only in specific places of the *kebeles*.

In the time of data collection, two out of the four study *kebeles* have no mobile network. Farmers have to go somewhere they could get mobile network. In addition, because all *kebeles* have no access to electric supply, rural people have limited access to charge their mobile battery that negatively affect their communication. It seems that agricultural product processing, small-scale business development and rural employment may be constrained due to lack of electricity.

Regarding the water supply schemes, there is no piped water supply in rural *kebeles*. Currently there are one motorized deep wells and 363 hand pump wells (QDAdO, 2015). During field observation, it is apparent that a number of hand pump dung wells are non-functional.

3.2. Research Methodology

3.2.1. Research Design

The study relied on a mixed method research as any one of the quantitative and qualitative methods was not adequate enough to provide full answers to the research questions (Creswell, 2012). It is believed that studies based on mixed method approaches are more persuasive than using either of the two independently (Ashley & Hussein, 2000; Creswell, 2014; Degefa, 2006; Hulme, 2007; Johnson, et al., 2007). Further, the complexity of the migration issues necessitates employing mixed method research (McKendrick, 1999; Qin, 2010).

There are different types of mixed method research design (Creswell, 2012). The present study employed sequential embedded mixed method which uses one type of data to provide a supportive function in a research which is primarily based on other type of data. For instance, a researcher can embed qualitative data set within the main, quantitative data based study (Creswell, 2012; Creswell & Plano Clark, 2011). In sequential embedded mixed method, the supportive data set can be gathered before and after data gathering and analysis of the primary data type of a certain study. Commonly, the supportive data set (e.g. qualitative data) is first used to understand the research context and participants, and develop survey instruments. Then, they are used to follow up and explain quantitative findings. This design contends that one type of data is not adequate because of the different research questions to be addressed and each type of research question demands different kinds of data set (Creswell & Plano Clark, 2011; Zhang, 2011).

This dissertation relied primarily on quantitative data with a supportive role of qualitative data. The quantitative data were based on a 'single-round cross-sectional surveys' with some retrospective questioning (EC, 2000; Wagstaff & Lindelow, 2014). Before conducting household survey, qualitative data were collected as part of initial investigation of the issue at hand and developing data collection instruments. To that end, the researcher collected qualitative data from elders, agricultural experts, community representatives and migrants of different types. This stage of data collection was based on visiting eight *kebeles* of the district with more general questions related to patterns of migration, the role of migration to livelihoods, shocks to which migrants are exposed at the place of destination and the outcomes of these shocks on migrant sending households. This led the way for the development of more specific questions that were required for the main data collection.

After developing data collection instruments, piloting of instruments was carried out to check whether the questions are understandable and supportive of answering the research questions. At the place of origin, piloting of survey instruments was undertaken based on 55 households. For FGDs and KIIs, interview guides were also piloted by focus groups and key informants selected for this purpose. At the place of destination, pilot testing of KII guides was conducted with experts in Health, Police, ECX, and LaSA Offices in North Gonder Zone administration as it is the main destination of different forms of migrants and its proximity to the working place of the researcher. Informants were recruited based on their potential of providing the required information.

During the pilot study, the researcher took notes of the time each instrument took and the question that looked vague to the respondents that ultimately supported in improving the interview guides in terms of sequencing and wording of questions. Data collected through piloted survey instrument were also used to test entry and analyze using SPSS and STATA. Qualitative data were also coded for analytical purpose that latter provides the basis for the main qualitative data analysis.

The final household survey data collection took place between December 2014 and February 2015 which was followed by the collection of qualitative data in the four study *kebeles*. This stage of qualitative data collection was necessitated by the fact that the data obtained through

household survey could not grasp the multiple and networked environmental, institutional and socio-economic factors that expose migrants to different shocks (see Massmann & Wehrhahn, 2014). These data were collected through FGDs and KIIs. Qualitative data were also collected through KIIs from experts selected mainly from different district level government offices at migrants' destinations.

Thus, the study used a multi-sited research approach: data were collected from both at the place of origin and destination to examine migrants' origin-destination vulnerability linkage. There is a growing challenging question as to the predominance of single-sited research design (Lohnert & Steinbrink; 2005; Peth & Birtel, 2014), whereas translocal views of vulnerability suggest that such research has to be framed in translocal context (L.J. de Haan, 2000; Lohnert & Steinbrink, 2005).

Finally, vulnerability analysis needs to find out the scale and unit of analysis. There may be global, national, regional, local, household and individual 'scales of concern', but a household is the widely used and critical unit of analysis (Downing & Feinstein, 1990). This is because household is the level at which most decisions about production and consumption take place (Rashid et al., 2006). Especially in the context of temporary labor migration where there is frequent interaction between migrants and their household, household level analysis is more acceptable than individual level analysis (Rwelamira & Kirsten, 2003). Accordingly, the major unit of analysis for the present study is the household. However, it considered other scale of analysis to understand the occurrence of multiple factors at different scales that are responsible for vulnerability of households. In line with this, Murray (2001) indicates that besides household level investigation, it is quite important to include a part of investigation at the regional, national, and international scales to understand the 'political economy of change' that shape many of the opportunities and constraints of livelihoods.

To analyze the vulnerability of migrant sending households, the study assume two crucial points based on practical and analytical reasons. First, as noted in the previous chapter, migrants' place of destination is considered as the exposure frame where different shock inducing factors converge. The objective of identifying exposure frame is to set the boundary for analysis, just like sampling frame defines the limits of statistical investigation for a larger population (see

Leichenko & O'Brien, 2008). Under the place of destination as the exposure frame, migrants are taken as exposure units. Second, individual migrants' exposure to shock at the place of destination is taken and aggregated into households level shock exposure (see Massmann & Wehrhahn, 2014). This is because the type of labor migration considered in this study is assumed to be a livelihood diversification strategy of households and migrants at the place of destination represent migration based livelihood activity of their households at the place of origin.

3.2.2. Sampling Techniques and Procedures

The study employed both probabilistic and non-probabilistic sampling techniques. For the household survey, four stages of sampling that involved both purposive and random sampling techniques were used. In the first stage, migrant sending district was selected purposely based on information gathered from key informants in West Gojam Zone Administration. The selected district is considered to have large size of temporary rural-rural labour out-migration among districts in the Zone. This sampling procedure was employed due to lack of officially registered data on temporary labour rural-rural migration both at national and any lower administrative levels. Similar procedure is used by other researchers (e.g. Adamnesh et al., 2014; Katz, 2000; Regassa & Yusufe, 2009).

In the second stage, four *kebeles* with large amount and long standing temporary rural-rural labour out-migration were purposely selected based on informants from Quarit district offices of agriculture and administration. Based on existing major agro-ecologies, two *kebeles* (Chefakit and Woyibeyign) from *dega* agro-ecology and two *kebeles* (Girarima and Butila) from *woyina dega* agro-ecology were selected (Figure 3.1 and Table 3.1). Similarly, the third stage of sampling involved purposive sampling of the villages with high intensity of temporary rural-rural labour migration with the help of knowledgeable local people (elders, *kebele* leaders and local agricultural experts). Purposive sampling of *kebeles* and villages was done in order to get adequate number of migrant households from each type of migration as most research questions were designed to be addressed based on data generated from migrants and their households.

In the fourth stage, proportional stratified random sampling was employed after developing sampling frame in line with migration status of households (households with non-migrant, crop

farming migrant, casual wage labour migrant and full-time wage labour migrant). Identification of migration status of households involved the participation of elders, *kebele* leaders and local agricultural experts (e.g. Gray, 2009; Qin, 2010). Totally, 410 proportional to size sample households were selected (Table 3.1).

Table 3.3: The distributions of sample households from each type of household across *kebeles*.

Sample *kebeles*	Total HH size	No of villages	Sampled villages	Sample Households				Total	Agro-ecology
				Non-migrant	Crop farming	Casual wage	Full-time wage		
Girarima	1023	12	6	52 (216)	36 (151)	13(53)	11(45)	112(465)	Midland
Butila	582	10	5	29(118)	19 (78)	6(26)	7 (31)	61 (253)	Midland
Chefakit	822	13	7	22 (89)	8 (35)	40(163)	9 (39)	79 (326)	Highland
Woybeyign	1152	14	7	52(215)	41(170)	39(161)	26 (108)	158 (654)	Highland
Total	3579	49	25	155 (633)	104(439)	98(396)	53(230)	410(1698)	

N.B.numbers in the bracket are the size of sampling frame

After data collection, it was discovered that 13 households were engaged in two or more types of migration in the last 12 months prior to the survey date. For analytical reasons, these households were grouped in one of the three types of migration by giving first priority to migration for cash crop farming, followed by migration for full-time wage labor and casual wage labor. This was based on their decreasing order of livelihood (welfare) gain, as identified during preliminary field assessment. Similar approach was used by others (e.g. Berhe, 2011; Mendola, 2008; Shah, 2005). Because of response failure, the final completed questionnaires were 398 (148 non-migrant, 101 crop farming, 96 casual wage labor and 53 full-time wage labor migrant households).

For qualitative data, respondents were purposely selected from both origin and destination areas of migrants. At the place of origin, interviews were organized with six focus groups (two focus group from each of the three types of migrants). For full-time wage labor migrant focus groups, one group was arranged from female migrants as they were dominantly participating in this form of migration (see Table 4.8). Each focus group across all form of migrants was organized to contain between 6-10 participants.

The question as to which focus group from which *kebele* was decided based on the type of migration which is dominantly practiced in each *kebele* by observing the lists used for the classification of households into different migration status. Accordingly, casual wage labor

migrant focus groups were selected from Chefakit and Woyibeyign *kebeles*. Crop farming migrant focus groups were selected from Girarima and Butila *kebeles*. Full-time wage labor migrant focus groups were organized from Woibeyign and Girarima *kebeles*.

Participants in each focus group were purposely selected by considering their exposure to shocks, spatial patterns of migration (destinations within and outside Amhara Region) and years of migration experience. Specifically, those migrants who faced as many shocks with long standing experience of migration in their respective type of migration were given priority as participants in the focus groups to get relevant, diverse and thick data that help answer the research question adequately. Accordingly, from crop farming and full-time wage labor migrants, more attention was given to those migrants who faced as many of the five types of shocks as possible with longer years of migration experience. In the case of casual wage labour migrants, priority was given to migrants who were exposed to as many of the three types of shocks (employment, health and crime shocks). To that end, the researcher selected these migrants by assessing returned questionnaires and consulting local agricultural experts and *kebele* leaders. These focus groups are organized to give information not only about migrants' vulnerability at the place of destination, but also the outcomes of migrants' vulnerability at the place of destination on migrant sending households.

The qualitative data at the place of origin were also generated from 15 key informants: district level agricultural experts (3), local level agricultural experts (2), elders (4) and migrants (6) based on their potential of of providing the required information. One elder was slected from each *kebele.* Migrants consisted of two migrants from each type of migration. *They comprised* full-time wage labor migrants from Girarima and Woybeyign, crop farming migrants from Girarima and Butila and casual wage labor migrants from Woybeyign and Chefakit *kebeles.* A migrant was actually selected based on long standing migration experience in respective types of migration.

Key informants were also selected from relevant offices at the district center of major destinations and at the various levels of administration. A total of 15 key informants were selected from concerned offices at the district, zonal, regional and federal levels. These include three informants from offices of LaSA (one each from Mirab Armachiho district, North Gondar

Zone, and Amhara region) to gather data related to employment shock. To obtain data related to the factors for market shock three informant was selected from ECX office at federal level (1) and Gondar center (1), and SBN office in Gondar (1). Three key informants were selected from police offices (one each from Mirab Armachiho district, Jawi district and North Gonder Zone) to generate data related to migrants' exposure to crime shocks. Three health experts (one each from Jawi district, Mirab Armachiho district and North Gonder zone) were interviewed from health offices to acquire data related to exposure of migrants to health shocks. Finally, three agricultural experts were selected from agricultural offices (one each from North Gondar Zone, Jawi district and Mirab Armachiho districts) for the sake of generating data concerning migrants exposure to crop failure.

3.2.3. Data Sources and Methods of Data Collection

The study utilized both primary and secondary data sources. The primary data collection methods comprised survey questionnaire as a source of quantitative data and interview guide or checklists for focus group discussions (FGDs), key informant interviews (KIIs), and observation as the sources of qualitative data. KIIs and informal conversational interviews (ICIs) were used first to support the development of some survey instruments. Then, together with FGDs , observation and secondary sources, they were used to follow up the results of quantitative reults to obtain specific and detailed information (Creswell, 2012). Specifically, they are used to unravel the casual dynamics by which each shock occurs at the place of destination, the risk management strategies that migrants employ to address these shocks, who (which sub-group of migrants) and why more vulnerable to each type of shock, and the outcomes of these shocks on migrant sending households. The following section considers the major sources of data along with how and why they were used.

i). Survey Questionnaire

Survey questionnaire was the main instrument to collect quantitative data. As mentioned above, interview questions for the survey were developed after key informant interviews, informal conversational interviews and literature review were made. The survey questionnaire has four parts. The first part was meant to generate background information from both migrant and non-

migrant households. The second part dealt only with migrants with regard to the characteristics of each migrant within the migrant sending households that include socio-economic and demographic characteristics, temporal patterns of migration, spatial patterns of migration, occupational pattern of migration, source of finance for migration, reasons for migration and type of shocks migrants were exposed at the place of destination during their involvement in temporary rural-rural labor migration. The shock module includes crop failure, market, health, employment and crime shocks. Respondent household were encouraged to consider retrospectively the shock exposures of migrants during their employment at the place of destination.

The third part of the survey questionnaire was administered to sample households from both migrant and non-migrant households. Issues covered in this part include households' livelihood asset endowments, livelihood activities, food insecurity status, income and its sources, and agro-ecology where households are located.

The fourth part was designed for migrant households alone. It contained issues like earning from migration and areas of investment, and future plan of migration. It also contained questions related to the overall outcomes of shocks at the place of destination on migrant sending households' vulnerability in terms of food insecurity and asset decumulation. These livelihood outcomes are key livelihood variables of concern that can be hampered by migration as identified during preliminary field visit. The food insecurity and asset decumulation outcomes of migration were measured by a number of questions. Food insecurity assessment was based on five indicators, while asset decumulation measurement was based on four indicators.

As well known, food (in) security is a complex phenomenon containing many dimensions such as access, availability, utilization and stability which tend to be measured with different indicators (Maxwell & Caldwell, 2008; Dornan, Portela, & Pells, 2014). In this study, food insecurity is crudely defined as the condition in which households do not manage to get adequate and nutritious food without fear that they would face food shortage (Devereux, 2000, p. 1). The food insecurity measuring items for this study were adopted from food insecurity scale developed by other researchers (e.g. Maxwell et al., 1999; Hadley, Lindstrom, Tessema, &

Belachew, 2008). These include: 1) worried about having enough food; 2) unable to eat the preferred food; 3) not taking enough food; 4) ask (money and/or food) outside the home for food; and 5) go without eating. In the context of this study, each indicator was established and asked in four point scale (4-high, 3-moderate, 2- low and 1-no effect) to identify the extent to which exposure to shocks of any kind at the place of destination have ever been causing the household to suffer from food insecurity as measured by each indicator. The idea is a shock (as a negative incidence) triggering a situation where households felt uncertain about food supply or used different coping strategies in response to food insecurity experiences.

These food insecurity indicators are believed to contain several dimensions of food insecurity (Hadley et al., 2008). Various studies attest them as a valid indicator of food insecurity (Frongillo & Nanama, 2006; Melgar-Quinonez et al., 2006; Webb et al., 2006). They are also found less time consuming, less burdensome to the respondent and less costly to collect data as compared to other alternative measurements of food intake. Still, they are taken as important tools for impact evaluation (Hadley et al., 2008). Such measures of food insecurity are utilized by a number of researchers in Ethiopia (e.g. Dornan, et al., 2014; Hadley et al., 2008).

In the context of the present study, the level of vulnerability to food insecurity was measured from two different time dimensions. The first assessment was made to see the condition of households' level of food insecurity in the last 12 months preceding the survey date. This was administered for both migrant and non-migrant households. The second food insecurity assessment focused on migrant households alone. It was not based on the context of food insecurity with reference to the last 12 months or last month or any shorter period of measurement as commonly used by different literature in food insecurity assessment. Rather, it was based on reports of migrant households' vulnerability of food insecurity at any point of time or recurrently because of shocks to which migrant household members were exposed at the place of destination, During household survey, shock exposed households were encouraged to remember the incidence of migration induced food insecurity as measured by above mentioned indicators.

Just like the measurement of food insecurity, those households who were exposed to shocks were asked questions about the extent to which exposure to shocks functioned as an agent for asset decumulation of the households in a four point scale. To that end, four indicators were selected based on specific asset vulnerability context in the study area and literature review. Since theince the prevailing factors that lead a certain livelihood outcomes are highly contextual, it is critical to consider context specific methods of investigation to identify the level of vulnerability (Stephen & Downing, 2001).

Indicators were specifically associated with financial, physical and human assets of migrant sending households. The following forms of shock induced asset decumulation were identified in the preliminary field visit as the key concerns of migrant sending households and finally used in the household survey: 1) *Depletion of cash saving*: It was a decumulation of financial capital of households associated with the loss of cash saving previously deposited in the banks and/or somewhere else; 2) *Indebtedness*: Indebtedness was considered as another source of losing households' financial assets that occurred when households borrowed money, but shocks put them in a position to fail to clear debt or enter into another debt; 3) *Degradation of livestock holdings*: This was a physical capital decumulation that occurred when households sell livestock to fund migration, but shock curtailed households to replace sold livestock and/or forced them to sell livestock to get cash needed to purchase food and non-food items, and paying debts; and 4) *Reduction of labor productivity and availability*: This was a measure of temporary or permanent human capital decumulation which reveals a negative change of labor potential of households as a result of direct or indirect outcomes of migrants' exposure to health and non-health shocks.

With the aim of obtaining accurate information, household survey involved as many household members as possible including household heads and migrants as respondents because of two reasons. First, if household head is not a migrant, s/he may not have adequate information about the condition of migrants' exposure to shocks at the place of destination. Similarly, if a migrant is not a household head, s/he may not have adequate knowledge about the outcomes of shocks at the place of destination on the vulnerability of households. Second, group interview creates a room to discuss on some important questions like self-judgment of the outcomes of exposure to shocks at the place of destination on the vulnerability of migrant sending households. Similar

approaches were employed by other studies in Ethiopia (Sharp et al., 2003) and elsewhere (King, 2011). Information generated from such discussion could answer the questions and make the findings more dependable (Sharp et al., 2003).

Before the actual data collection started, data collectors were given training on how to approach respondents and collect the required data. Detailed training for 22 data collectors from four study *kebeles* was provided for five days while at the outset data collectors were selected based on their knowledge of local people and area with priority given to university graduates. The objective of the research was briefed to the respondents through data collectors.

It is important to note that the food insecurity and asset decumulation measures in this study were mainly based upon the views and understanding of migrant sending households which is mostly ignored in the conventional migration and development debate (Geest, 2010). As assessing the vulnerability of households is more of subjective and contains unobservable characteristics, it requires focusing on people experiences (Kelly & Adger, 2000). In addition, understanding the perception of exposure to shocks and their outcomes was done on the ground that perception of shocks shape the responses to shocks and subsequent policy measures needed to deal with them (Bennett, Dearden & Peredo, 2015; Mubaya et al., 2012; Tuler, Agyeman, da Silva, LoRusso & Kay, 2008).

ii) Focus Group Discussions (FGDs)

FGDs are important to gather diverse views on a given issue within a shorter time compared to individual interviews (Law et al, 1998). They are important to have a detailed understanding of the issue, compare and communicate experiences, and discover 'issues of shared importance' (Breen, 2006, p.465). This study utilized FGDs either as a complement to other methods of data collection (i.e., for triangulation) or as a method standing on its own to collect data which were not feasible to get by other data collection methods.

To increase the trustworthiness of the data, two focus groups were arranged for each type of migrants. Interview guides for FGDs were composed of semi structured questions containing issues related to the contribution of migration to livelihoods, factors for migrants' exposure to

shocks, their risk management strategies and the outcomes of migrants' exposure to shocks on migrant sending households.

The questions presented to each type of migrant focus groups had some similarity and difference as the type and sources of shocks migrants were exposed had some sort of similarity and difference. Based on the definition adopted in the study, the definition of each type of shock is provided to the focus group. During FGDs, the interviewer gave the chance to respondents to speak freely, but 'probing questions' were used to keep the interviewees on track of particular aspects of the responses needed, for clarification, to get detailed information and to encourage migrants to raise relevant issues pertinent to the research questions. To capture the verbal expressions of discussants, data were collected in two ways: taking notes and using digital audio-recorder. Interview sessions were recorded after informed consent of the participants.

iii) Key Informant Interviews (KIIs)

KIIs at the place of origin were conducted with migrants, elders and agricultural experts, which in fact were used to complement and supplement data collected by other methods. The type of data collected from migrants and elders was mainly related to patterns of migration. From migrants, data related to migrants' exposure to shocks were also collected. Data on agricultural activities were generated from agricultural experts. KIIs were also conducted with informants from different offices at district level of migrants' destination and other level of administration to get data related to shocks that migrants are exposed at the place of destination.

During interviews, besides taking notes, digital recorder was utilized. Most of these interviews were semi-structured and carried out in pre-arranged schedule. Second round KIIs were also conducted both by phone and in person to see the changing exposure of migrants to shocks, to 'follow up' a certain issue and to verify issues that need clarification (Rigg, Nguyen & Luong, 2014).

iv) Informal Conversational Interviews (ICIs)

These data sources were used while the investigator accidentally met those individuals who were assumed to provide relevant information on issue at hand. These were conducted mainly with migrants and individuals that belong to migrant households. Here, there was no already assigned list of questions or guiding questions. The researcher later jotted down important ideas after the interviews. The issues covered in informal conversation were those collected using other methods for triangulation and/ or explanation.

v) Observation

Based on non-participatory observation, the study used this method to explore more detail information that can support the data collected through other methods. Basically, observation guidewas used to address topics of interest during a particular observation. The kind of data collected through observation at the place of origin of migrants comprised agro-climatic conditions, soil and water conservation practices, available public services, land use and cover, documents, etc. Depending on contexts, daily observation was recorded either in notepad or digital photo camera.

Because of inaccessibility of migrants at the place of destination especially in the context of migrant farmers and full-time wage labor migrants, it was impossible to see the living and working condition of this group of migrants. But it was possible to observe the actual living and working conditions of some casual wage labor migrants at the place of destinations. The district selected for field observation was Mirab Armachiho because it is an area where large scale employment opportunities for casual wage laborers were available (SBN, 2015). The type of data gathered includes agro-climatic conditions, living and working conditions of migrants, land use and cover, and available public services. It is important to note that this observation was carried out to see the overall living and working environment of migrants at the place of destination in general and thus, not based on observation of those migrants tracked from their place of origin.

vi) Secondary Data Sources

Secondary data sources of the study included photographs, books, journal articles, policy papers, legislations, technical papers in workshop proceedings, NGO reports and other records from the relevant stakeholders. The different secondary data sources were used mainly to verify and complement information collected through primary data sources and also to understand macro (national and international) and micro (local) level contexts that expose migrants to shocks.

3.2.4. Methods of Data Analyses

I) Quantitative Data Analyses

The quantitative methods of data analyses in this study included descriptive and inferential statistics. The former were used to summarize basic quantitative data. The latter which includes binary and multinomial logistic regressions were used to see the determinants of households' migration decision. Binary logistic regression was used to see households overall migration decision. On the other hand, multinomial logit regression was used to analyse households' choice of participating in the different types of migration with respect to the non-migrating households as the base outcome. Similar approach is used in other migration studies in Ethiopia (e.g. Atsede & Penker, 2016). Statistical Package for Social Sciences (SPSS) version 20 and STATA version 13 were used to analyse the quantitative data.

The first regression (binary regressions) has a dependent variable with two categories: non-migrant household and migrant household. The binary regression prediction of the probability of migration has the following equation:

$$Li = ln\left(\frac{p(y_i = 1)}{p(y_i = 0)}\right) = \beta_0 + \beta_i\, x_i + \varepsilon_i$$

Li is the probability of migration, where it assumed 1 if a household decided to send a migrant and 0 otherwise.

$\beta_{0=}$ the intercept

βi= coffiecents, showing the change in Li for a unit change of independent variables(X_i) in case of continuous variables and a descrit change in the case of non-continuous variables.

X_i represents household and community level variables that determine migration decision of households.

ε_i= the error terms

The multinomial regression was used to predict the probability of migration either for casual wage labor or full-time wage labor or cash crop farming. This model is appropriate if the response variable contains more than two categories (Gujarati, 2004). It takes the following equation:

$$Li = ln\left(\frac{p(y_i = 1\ or\ 2\ or\ 3)}{p(y_i = 0)}\right) = \beta_0 + \beta_i x_i + \varepsilon_i$$

Li represents the mutually exclusive households' choices of the type of migration in which they engaged in the last 12 months preceding the survey date. It took the value of 0, 1, 2 and 3 if the househehold was without any temporary labor migrant, crop farming, casual wage labor and full-time wage labor migrants, respectively. It is important to note that these values have no any quantitative significance beyond categorizing households into different migration status.

Table 3.4: Hypothesized variables that determine the decision to migrate

Variables	Description and measurement	Type of variable	Expected sign
SEXHH	1 if household head is male, 0 otherwise	Dummy	+
AGEHH	Age of the household head	Continuous	-
EDUHH	1 if household head is literate, 0 otherwise	Dummy	-
HHSIZ	Household Size	continuous	-/+
NDEP	Size of dependents	continuous	-
NMADU	Size of male adults	continuous	+
NFADU	Size of female adults	continuous	+
SLAO	Size of land	continuous	-
FLAND	1 if land is fertile and 0 otherwise	Dummy	-
ACIRW	1 if the household has access to irrigable water, 0 otherwise	Dummy	-
SLIVO	Size of livestock (TLU)	continuous	-
ACTR	1 if the household has access to transfer, 0 otherwise	Dummy	-
ACCR	1 if the household has access to credit, 0 otherwise	Dummy	-
NSOHP	Number of social organizations in which the household participates	continuous	+
ACMNE	1 if the household belongs in migration network, 0 otherwise	Dummy	+
AGROE	1if the household is located in the highland agro-ecology,0 otherwise	Dummy	+

The same explanatory variables were used for both binary and multinomial logit regressions. Based on empirical and theoretical literature on the determinants of migration, 15 variables from household level factors and one variable (agro-ecology) from village level factors were included (see Table 3.2). Multicolleniarity test was carried out to assess whether there were problem of

strong correlation among independent variables. The following table shows the description of these variables and expected signs.

As marginal effects are more meaningful and simple to interpret (Dercon, 2006; Dercon et al., 2008; Herrera & Sahn, 2013), they were used in regression analyses. In continuous variables, the coefficients are interpreted as the marginal change of the probability of migration and discrete change in the likelihood of migration in the case of dummy variables (Ackah & Medvedev, 2012). The level of significance was set at $P < 0.05$

The analysis of food insecurity and asset decumulation outcomes of exposure to shocks at the place of destination were based on indexing their respective indicators. First, the five food insecurity measuring questions were given different weight in terms of their severity of food insecurity challenges as identified in the FGDs. Indicators 1 (worried about having enough food) and 2 (unable to eat the preferred food) were weighed as 1, indicators 3 (not taking enough food) and 4 (ask money and/or food) outside the home for food were weighed as 2 and indicator 5 (go without eating) was weighed as 3. Unlike food insecurity questions, equal weight was assigned for each asset decumulation measuring item as it was difficult to provide different weight like what was done in food insecurity scale where items are more hierarchical.

Then, households' responses of the items were subjected to summation with the consideration of the perceived severity and weight given for each indicator. Finally, households' level of food insecurity and asset decumulation was categorized into terciles (three equal levels) based on a score of each household (Hadley et al., 2008) as least vulnerable, moderately vulnerable and highly vulnerable. Chi-Square test was used to measure whether there is a significant difference in asset decumulation and food insecurity level among the three types of migrant sending households.

ii) Qualitative Data Analysis

Qualitative data analysis was mainly utilized to understand the contextual factors of migrants' exposure to multiple shocks at the place of destination, their risk management strategies, and subsequent outcomes on migrant sending households. The analysis was based on 'tape-based

analyses' where the researcher took short transcript after repeated listening into tape records of the focus groups and tape recorded of individual interviews. This form of analysis helps the researcher to focus on the research questions and transcribe those parts that help to better understand the issue at hand (Onwuegbuzie, Dickinson, & Zoran, 2009; Seidman, 2006). The researcher also used notes taken during focus group discussions. Then, the Amharic script was translated to English.

Following summarization and grouping of data in conformity with research questions, analysis was made by triangulating different sources of qualitative data. Analyses of data from different focus groups and key informants were made independently. This helped to analyze and identify similarities and difference in vulnerability (comparative analysis) across three types of migrants and households.

CHAPTER FOUR
PATTERNS AND DETERMINANTS OF MIGRATION

This chapter has two sections. The first section presents patterns of migration which attempts to spell out migrants' characteristics in terms of, among others, demographic, socio-economic, occupational, temporal and spatial attributes, and the reasons for their migration. It is mainly based on the data collected from a survey of 388 migrants (obtained from 250 migrant sending households), FGDs, and KIIs. It serves as the basis for analyses in the subsequent sections of the dissertation. The second section unravels the determinants of migration. It is based on the data generated from the survey of 398 households (250 migrant and 148 non-migrant households). It has descriptive and inferential statistics sub-sections. The descriptive sub-section considers the basic characteristics of households by focusing on their livelihood assets. The descriptive analysis aims at laying the foundation for the subsequent econometric analyses. The purpose of econometric analyses is twofold: analyzing the determinants of households' decision to embark on migration in general and the type of migration in which they decide to participate in particular.

4.1. **Patterns of Migration**

4.1.1. Demographic and Socio-economic Profiles of Migrants

4. 1.1.1. Sex and Age Structure

The survey result shows that the majority of migrants (74%) are male (Table 4.1), suggesting a gender role to participate in temporary rural-rural labor migration. The lower proportion of female migrants might be related to: 1) the responsibility of women at the place of origin to manage domestic activities including child care; and 2) the risky and laborious nature of the job at the place of destination might be seen as a male activity.

Table 4.6: Distribution of migrants by sex

Sex	f	**%**
Male	288	74.2
Female	100	25.8
Total	**388**	**100**

Source: Own Household Survey, 2015

The finding corroborates available evidences in Ethiopia (DTRC & PSTC, 2000; Sharp et al., 2003; Woldie et al., 2010). On the other hand, it contradicts female dominated rural-rural labor migration in Thailand (Herrera & Sahn, 2013) and India (Korra, 2010). This difference may be related to a variation in culturally set role of women. For instance, Korra (2010) reveals that it is a social norm where women are required to involve more in internal labor migration for weeding, sowing and harvesting.

Concerning age profiles of migrants, generally internal migration is primarily practiced by young adults (Deshingkar & Grimm, 2004). Evidence from present study corroborates this general pattern. The average age of migrants is 25 years (not documented here). The majority of migrants belong to the age bracket between 20-24 years old (36%) followed by those within age group 15-19 (24%) and 25- 29 (17%). The age range of 40 and above account for less than 10% of the migrants, while the age category of less than 15 years old contribute less than 1% of the total migrants (Table 4.2).

Generally, below 30 years of age cohort contribute 78% of all age groups of migrants, showing that migrants are energetic to cope up the hurdles of environmental and socio-economic situations at the place of destination. This is consistent with other studies in Ethiopia (CSA, 2000; Gray & Muller, 2012; Sosina & Holden, 2014a; 2014b; Woldie et al., 2010; World Bank, 2007; Zemen, 2014).

Table 4. 7: Distribution of migrants by age group

Age Category	***f***	**%**
below15	3	0.8
15-19	93	24
20-24	139	35.8
25-29	67	17.3
30-34	26	6.7
35-39	29	7.5
40-44	8	2.1
45-49	11	2.8
50-54	9	2.3
>54	3	.8
Total	**388**	**100**

Source: Own Household Survey, 2015

4.1.1.2. Migrants' Relation to Household Heads

It is apparent in Table 4.3 that migrants are more likely to be sons and daughters (73%) than household heads (22%) and other members of the households (4%). This might be because: 1) there may be a number of households with more than one son and/or daughter adult members. Undoubtedly, under such context, there is high possibility that sons and daughters outnumber their parents/heads in terms of participating in migration; 2) household heads could have family responsibilities at the place of origin that deter them to participate in migration as actively as their sons and daughters; and 3) adult daughters and sons might be in a better position to withstand the laborious and risk taking job at the place of destination.

Table 4.8: Migrants' relation to household heads

Migrants' Relation to the Household Head	***f***	**%**
Household Heads	87	22.4
Sons and Daughters	284	73.2
Others	17	4.4
Total	**388**	**100**

Source: Own Household Survey, 2015

4.1.1.3. Marital Status of Migrants

The majority of migrants are either married (46%) or single (44%), showing the two groups have almost equal share (Table 4.4). This is in contrast with other temporary migration studies in Ethiopia (e.g. DTRC & PSTC, 2000; Gete et al., 2008; Woldie et al., 2010) which report the dominance of single young men in temporary rural-rural labor migration.

This contrast may be attributed to one basic reason as reflected by elders and migrants during KIIs that there are a number of migrants especially among migrant farmers who get married during or after their first year of migration. This form of marriage arrangement, among others, is practiced to reduce the challenges and costs of agricultural production at the place of destination. The couples move to the place of destination together when the planting season approaches and back home again after the harvesting season. When they come back home, they stay either with the husbands' family or their respective family they migrated from. This is a new trend where youngsters tend to embark on marriage institution in temporary migration pattern without

establishing a permanent residence either at the place of origin or destination at least for a short term.

Table 4.9: Distribution of migrants by marital status

Marital Status	*f*	%
Married	177	45.6
Not Married	172	44.3
Divorced/separated	35	9
Widowed	4	1
Total	**388**	**100**

Source: Own Household Survey, 2015

4.1.1.4. Educational Background of Migrants

Table 4.5 illustrates that the largest share of migrants (48%) have primary education followed by those who are illiterate (29%). In aggregate terms, primary and above educational levels constitute for about 60% of the migrants. This evidence is in line with Woldie et al. (2010), but contrary to the finding of 1998 migration and health survey (DTRC & PSTC, 2000) and 1999 NLFS (CSA, 2000) which document higher proportion of illiterate migrants. The larger proportion of literates in the present study may be the result of the present government efforts to expand primary education enrollment in the country. However, as mentioned below (Table 4.6), students constitute for only 5% of the migrants. This may suggest that there is high level of school dropout and thus, most migrants are more likely those individuals who dropped out of their education either before their migration or after their migration. However, it is important to note that rural-rural migration for agricultural employment does not necessarily require potential migrants to attain a higher level of education.

Table 4.10: Distribution of migrants by their educational background

Educational background	***f***	**%**
Illiterate	114	29.4
Read and Write	34	8.8
Primary Education	188	48.4
Secondary Education	47	12.1
Above Secondary	5	1.3
Total	**388**	**100**

Source: Own Household Survey, 2015

4.1.1.5. Primary Occupations of Migrants at the Place of Origin

At the place of origin, the overwhelming majority of migrants (90%) are farmers (Table 4.6). This reflects the characteristics of rural areas in Ethiopia where the majority of the population depend on agriculture with limited non-farm employment opportunities (Zemen, 2014). Students constitute for 5% of migrants. KIIs with migrants and elders show that students embark on migration to exploit casual wage labor employment opportunities when the annual educational calendar comes to an end. This confirms the observation of Woldie et al. (2010) and Gete et al. (2008) in Amhara Region, Ethiopia.

Table 4.6: Occupations of migrants at the place of origin

Type of occupation	***f***	**%**
Farming (own /family)	348	89.7
Attending schools/students	21	5.4
Job Seeking	12	3.1
Others	7	1.8
Total	388	100.0

Source: Own Household Survey, 2015

4.1.1.6. Occupations of Migrants at the Place of Destination

The occupations of migrants at the place of destination assume three major employment categories: crop farming, casual wage labor and full-time wage labor (Table 4.7). This is consistent with the finding of Arhin (1988) in Ghana.

Table 4.7: Occupations of migrants at the place of destination

Types of occupation	***f***	**%**
Crop farming	178	45.9
Casual wage labor	119	30.7
Full-time wage labor	91	23.5
Total	**388**	**100.0**

Source: Own Household Survey, 2015

The majority of migrants (46%) engage in crop farming, while full-time wage labor constitutes for the lowest percentage (23%) of survey migrants. In aggregate terms, slightly more than half of migrants (54%) work for wages (either as casual or full-time wage laborer). The following section attempts to characterize these three types of migrants' occupations.

i) Crop Farming Migrants (Migrant Farmers)

As the name indicates, the primary occupation of this group of migrants is crop farming. Migrant farmer focus groups illuminate that except some partial engagement in the production of pepper, sorghum, groundnuts and soya bean depending on the agro-ecology of the place of destination, migrant farmers primarily engage in the production of sesame (*Sesamun indicum L.*) (locally named as *selit*) (Figure 4.1), as sesame has come out to be an important high-value global cash crop. Presently, it is a leading export agricultural product in Ethiopia next to coffee (FAO, 2015; UNDP, 2015).

Figure 4.1: Sesame seed (left) and a field of sesame plantation (right)
Source: Own Field Photo, 2015

As confirmed by FGDs with migrant farmers, the sources of land for temporary migrant farmers comprise locals, settlers, investors, migrants and free access by clearing forests. Natives are taken as the main sources. Informants note that they commonly try to access land in two basic terms of agreements with land owners: renting and sharecropping. Land renting involves paying agreed amount of money in cash for a specified land size for a defined period of time usually for one growing season. This modality of land access is reported as the most common in Mirab Armachiho district of Amhara Region which is one of the major destinations of migrants (see Table 4.9). It is also partly practiced in some areas of Benishangul Gumuz Region and Jawi district of Amhara region.

It is further indicated that the cost of renting land varies across time and space. The cost of land renting during 2014/2015 cropping season was between Birr 1,000 and 4,000 per hectare. Lower cost was evident in Benishangul Gumuz Region where the competition for land was minimal, while higher cost was observed in Mirab Armachiho district of Amhara Region where there is high competition for land. The actual land size migrants agreed to cultivate is determined based on either simple estimation or measurement by foot step or rope, which are rough instruments.

With regard to sharecropping, data from the same informants show that such contract enables migrant farmers to access land with an arrangement that requires them in-kind payment (crop products) to land owner. Migrants call such terms of agreement as *kibdet*. There are two basic kinds of *kibdet* (sharecropping). The first one involves proportional in-kind payment where land owners take a certain proportion of agricultural products depending on the size of land that migrants agree to cultivate in one growing season. Here, the share given to land owner ranges from 1-2 quintals/hectare, a type of arrangement common in Benishangul Gumuz Region and Jawi district of Amhara Region.

The second type of sharecropping arrangement allows land owners to take a certain proportional amount of agricultural products from migrants depending on the amount of agricultural output obtained from a given sharecropped land, not by the size of land. It is indicated that in good weather condition and agricultural practices sesame farmers can on average harvest an estimated amount of between six and seven quintals/hectare. The reported range of proportional share between migrants and land owner in terms of quintals is between 4:1 and 6:1. This means for every four, five or six quintals of sesame taken by migrants, the land owner takes one quintal as his proportional share. The specific shares of each party are based on the agreement made in the specific local context. This modality of accessing land is widely practiced in Jawi district of Amhara Region and Benishangul Gumuz Region.

Migrant farmers attest during FGDs that some migrant farmers settle their terms of agreement in accessing land before they return home while others arrange it through friends or relatives and still some try after migrating. Getting access to suitable land for the intended sesame production remains critical, and thus, migrants make fast moves to avoid the use of less suitable land. The

suitability of the land and its accessibility to water points are the two important driving factors migrants consider in selecting the land and in this former case, they rely on their wealth of experiences. The actual size of land migrants manage to cultivate is also commonly determined by their ability to cover the required cost of production.

Needless to say, migrant farmers cover all costs of production. The costs incurred include land renting (if any), food, draught animal, seeds, and payment for casual or full-time wage laborers (if any) including their food. Migrant farmer focus groups explain that ox or donkey or tractor are the main sources of draught power. Donkeys are the common draught animal in Benishangul Gumuz Region and Jawi district of Amhara Region. They are either transported from the place of origin or bought from local market at the place of destination. Some migrants who move to nearby destination such as Metekel Zone of Benishangl Gumuz Region and Jawi district prefer to take donkey from home because of high cost of draught animals at the place of destination and relative ease of transporting them from home. After finishing planting crops, some migrants sell them at the place of destination market and others bring them back home. Still some migrant farmers use them to transport water from distant water points to provisional houses built in agricultural field. Oxen and tractors are common sources of draught power in North Gondar Zone though mostly rented from others.

Migrant farmer focus groups also reflect that they have two sources of labor: own (this includes accompanying family members) and hired labor. Hired labor may include full-time wage labor and/or casual-wage labor. The following two sub-sections consider the characteristics of migrants who engage in these types of occupations.

ii) Full-Time Wage Labor Migrants (*Kenja*)

The term k*enja* refers to working as wage laborer where migrants are hired on a contractual basis to perform specified agricultural and/or non-agricultural activities for certain months or one growing season with a certain amount of in-kind or in-cash payment. FGDs with full-time wage labor migrants indicate that the name *kenja* comes from migrants' place of origin where poor farmers were employed as *kenja* under rich farmers some decades ago. But, this opportunity came to an end when the farm size of what was called rich farmers had come to the level where it

could not go beyond employing household members. It seems that when such opportunities become impractical at the place of origin, individuals turn their attention to livelihood opportunities in other rural areas.

Full-time wage labor migrants point out during FGDs that the potential employers of full-time wage labor migrants are migrant farmers, natives, settlers and investors. Migrant farmers are taken as the major employers. They are largely employed for one cropping seasons usually starting from land clearing to threshing period. Informants indicates that the forms and amounts of payment for *kenjas* are different across destinations, time and sex. In Jawi and some areas of Benishangul Gumuz Region, in-kind payment allows *kenjas* to take proportional in-kind payment that range between 1:1 and 1:6 where *kenjas* take one quintal of sesame for every one or more (up to six) quintals of sesame taken by their employers. In some other instances, mode of employment occur with fixed amount of in-kind or in-cash payment regardless of the amount of agricultural produces that the employer managed to obtain. This term of employment is common in Mirab Armachiho district, Amhara Region.

Variation is also observed between males and females in terms of the nature of work for which they are employed and forms of payment for their labor. Males are hired primarily for agricultural activities: land preparation, weeding, harvesting and threshing. On the other hand, females are hired mainly for domestic work as housemaids. But, full-time wage labor migrants are also expected to collect woods for cooking, fetch water, and prepare food as part of their responsibilities although these might vary depending on specific context such as labor availability and sex composition of full-time wage laborers employed under the same employer.

As evidenced by full-time wage labor migrant focus groups, modalities of payment of male and female laborers occur both in cash and in-kind. But, males are mainly employed for in-kind payment while females are largely employed for in-cash payment. During 2014/2015 cropping season, the payment in cash ranged between Birr 6,000-8,000 for males and Birr 4000-7000 for females for one cropping season. Fixed in-kind payment ranged between 2-4 quintals for females and 3-6 quintals for males. It is also apparent from FGDs that the foods of these types of migrants are covered by their employers.

iii) Casual Wage Labor (*Shekil*) Migrants

This group of migrants embarks on migration to get temporary casual wage labor employment in land preparation, cleaning, weeding and harvesting seasons mainly in sesame, sorghum and cotton growing areas although there are some employment opportunities in *teffe (Eraqrostis tef)*, maize and coffee growing areas. Focus groups from casual wage labor migrants and key informants from LaSAOs indicate that weeding and harvesting of sesame are the key areas of employment opportunities. The potential reported employers of casual wage labor migrants include natives, settlers, migrant farmers, investors and those who farm crops by renting land from investors. Investors are the major reported large scale employers. Migrant casual laborers are hired by potential employers in nearby urban areas where wage laborers gather. Migrants also directly go to their potential employers' labor camp with or without prior information exchange. Laborers are mostly provided with food and lodging by their employer in the course of engagement period. They receive flour of sorghum with utensils for making bread and porridge.

An expert from Amhara Region LaSAO tells that North Gondar, Mirab Gojam, Misrak Gojam and Awi zones are administrative zones where there are employment opportunities for temporary migrant wage laborers. However, North Gondar Zone is taken as the most important destination of large number of temporary migrant wage laborers as it emerges as key center of attraction of investors for sesame production (Musba, 2017).

Even among districts in North Gondar Zone, Mirab Armachiho hosts the largest number of investors (SBN, 2015). An expert from North Gondar Zone LaSAO estimates that annually about 371,000 casual wage laborers migrate to commercial farms in the Zone. Of these, about 214,000 laborers (60%) migrate to Mirab Armachiho District alone. It is estimated that about 71 % of cultivated land in Mirab Armachiho district is covered by sesame (SBN, 2015).

Casual wage labor migrant focus groups and experts from LaSAOs attest that casual wage labor migrants are hired either on a contractual or in a daily basis. In the former case, a laborer or a group of laborers agree to carry out a specified piece of work (e.g. to weed a certain size of crop land, *quart*) with agreed cash payment. In the latter case, casual wage laborers are hired for a day work based on the existing wage rate. Daily wage for labor ranged from Birr 50 to 150

depending mainly on labor supply and demand in the labor market. When there is over supply of labor, the wage rate goes down, and if there are high demand of labor compared to supply, wage rate increases.

It is also revealed by the same informants that casual wage labor migrants payment in weeding season is based largely on *quart* in which a migrant or a group of migrants sub-contracted a given tract of crop land (*quart*) to weed for a certain amount of payment in return. The payment for a given size of crop land varies across place and time depending on labor supply in the labor market. In harvesting time, the mode of payment is mostly in *hilla*, which is equal to 400 handful bundles of sesame (Geremew et al., 2012) (Figure 4.2). The payment varies between Birr 30- 60 per *hilla* depending on labor supply in the market. It is also stated that as sesame has only a very short harvesting period, casual wage labor migrants tend to engage in harvesting even during the night time by hanging light bulbs on their head.

Figure 4.2: A hilla (left) which is latter subjected to threshing (right)
Source: Own Field Photo, 2015

Before finalizing this sub-section, it is worth looking at the gender distribution of migrants in the above three areas of employment. The survey result shows that females dominate males in full-time wage labor employment, while males dominate females in crop farming and casual wage

Table 4.8: Occupation of migrants at the place of destination by sex

Occupation of migrants	**Sex**		**Total**	**X^2**
	Male	**Female**		
Crop farming	137(77)	41(23)	178(100)	0.00
Casual wage labor	108(90.8)	11(9.2)	119(100)	
Full-time wage labor	43(47.3)	48(52.7)	91(100)	
Total	**288(74.2)**	**100(25.8)**	**388(100)**	

Source: Own Household Survey, 2015; Figures in parenthesis refer to the percentages

labor migration. Slightly more than half (53%) of full-time wage labor migrants are female, while the contribution of females in cash crop farming and casual wage labor is only 23% and 9%, respectively (Table 4.8). The higher proportion of females in full-time employment may be related to the growing demand of females as housemaid by migrant farmers. This indicates that the type of temporary rural-rural labor migration is gender selective.

4. 1.2. Spatial Patterns of Migration

Figure 4.4 and Table 4.9 show the place of destinations of migrants by region, zone and district. Destinations are so diverse since they span over more than 20 districts in six regional states among the nine regions of Ethiopia (excluding Afar, Somali and Harari Regions). Although the place of destinations are so varied, spatial pattern of migration is significantly intra-regional (within Amhara region), accounting for 66% of migrants' destination. From inter-regional destinations, Benishangul Gumuz Region takes the highest share (21%) followed by Oromia Region (10%). Other inter-regional destinations comprise Gambela, SNNP and Tigray Regions, each having only 1% of the total migrants. The dominance of intra-regional migration in the study area accords with the findings of other studies (DTRC & PSTC, 2000; Schicker et al., 2015). Not surprisingly, the noted migrant destination regions are the leading sesame producing areas of the country. Amhara, Benishangul Gumuz, Oromia and Tigray are the key sesame producers (FAO, 2015).

There are five possible explanations for the dominance of intra-regional migration. The first explanation is the lack of information about the available opportunities in other regions (Pankhrust et al., 2013). The second reason could have much to do with ethnic based system of administration of the present government (Markos, 2001; Samuel, 2006) that possibly result in sporadic inter-ethnic conflict between Amhara migrants and other ethnic groups in Benishangul Gumuz, SNNP, and Oromia Regions at different times. This situation might be considered as a lesson for other potential migrants to avoid inter-regional migration. The third reason could be migrants' linguistic and cultural differences with people in other regions that contribute to a lower level of inter-regional migration.

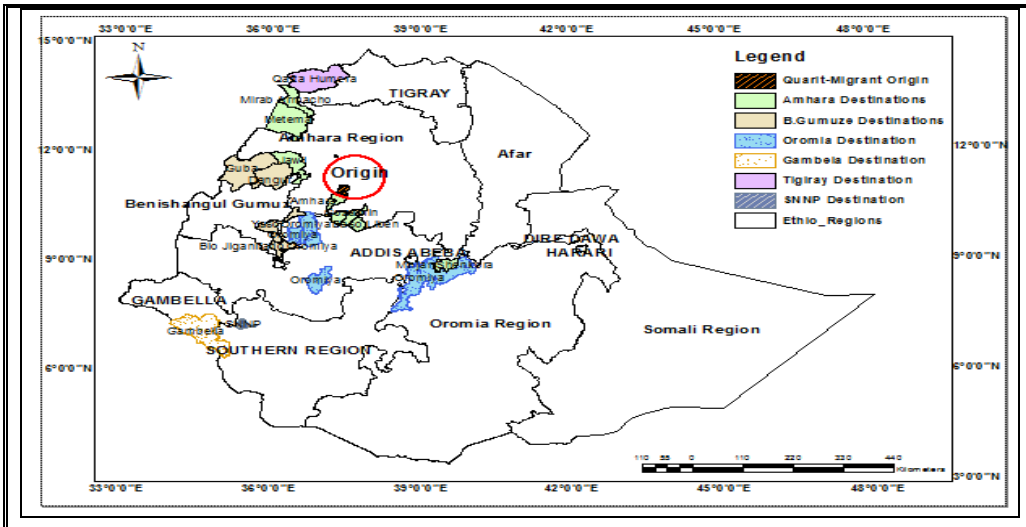

Figure 4.3: Regional level destination of migrants

Table 4.9: Regional, zonal and district level destinations of migrants

Region	Zone	District/*Woreda*	*f*	%
Amhara	Awi	Jawi	124	32.0
	North Gondar	Mirab Armachiho	97	25
		Metema	10	2.6
		Others[5]	10	2.6
	West Gojam	Jabi Tehinan	5	1.3
	East Gojam	Baso-liben	2	0.5
		Gozamin	2	0.5
		Debre Ellias	4	1.0
	North Shewa	Minjar	3	0.8
Total			**257**	**66.2**
Benishangul Gumuz	Metekel Zone	Dangur	36	9.3
		Guba	19	4.9
	Kamash Zone	Belewji Ganfo	15	3.9
		Yaso	11	2.8
Total			**81**	**20.9**
Oromia	East Wollega	Abe Dengoro	17	4.4
		Gida kiremu	7	1.8
		Limu	6	1.6
		Others[6]	4	1
	Jima Zone	Limu seka	1	0.3
	East Shewa	Others[6]	2	0.5
Total			**37**	**9.5**
SNNP	Sheka zone	Yeki	5	1.3
Gambella	Agnuak zone	Dimma	4	1.0
Tigray	Western Tigray	Qafta Humera	4	1.0
Grand Total			**388**	**100**

Source: Own Household Survey, 2015

Note: There were some cases where migrants moved to different destination within a year. What is presented here referred to the more recent place of destination

[5] *Respondents did not exactly know to which district they migrated. For instance, migrants to North Gondar zone tended to report their specific district level destination as Armachiho. The term Armachiho in Northern Gondar zone, however, may refer to three distinct districts, namely Mirab Armachiho, Tach Armachiho and Lay Armachiho. Similarly, some migrants who moved to different districts of East Wollega tended to report simply Wollega without indicating the specific district to which they migrated.*

The fourth explanation is associated with the fact that under FDRE government, resettlement program occurs within the same region. In one way or another, resettlement areas work as a magnet to attract individual migrants from original places of settlers (Pankhrust et al., 2013). The last reason is related to the cost of migration which might be higher in inter-regional migration than intra-regional migration.

Just like regional level variations, migrants' destinations also reveal a sharp difference among zones and districts. Awi Zone is found the major destination (32%) followed by North Gondar Zone (30%), Metekel Zone (14%), East Wollega Zone (9%) and Kamash Zone (7%). Other Zones together constitute only 8% of the total migrants.

The major districts in intra-regional migration destinations consist of Jawi district in Awi Zone and Mirab Armachiho district in Northern Gondar Zone. These two districts alone absorb about 57% of all migrants. One of the major possible explanations for higher concentration of migrants in these districts is related to the fact that these districts are the main destination sites for resettlement programs of Amhara Region. As mentioned above, the resettlement scheme of the government paves the way for self-initiated migrants to move to these areas. In the case of Mirab Armachiho district, it may also be associated with the fact that it is a destination where relatively larger investors engaged in sesame farming that could employ large number of casual wage labor migrants (SBN, 2015).

A huge migration to Jawi district could also be related to its geographical proximity which reduces the cost of transportation and the hurdle of moving draught animals and food items from home to this destination. Data from KIIs with migrants and elders show that Jawi district is a main destination for those migrants who look for full-time wage labor and crop farming. KIIs with an expert from Amhara Region LaSAO reveals that Jawi district is not a major destination for casual wage labor migrants because it hosts only limited number of investors that could employ casual wage labor migrants. On the other hand, as noted in KIIs with migrants and elders, Mirab Armachiho is a major place of destination for all forms of migrants.

As noted above, Metekel Zone of Benishangul Gumuz Region is the most important inter-regional migrants' destination followed by East Wollega Zone[6] and Kamash Zone. The concentration of large number of migrant in Metekel Zone might be associated with its geographical proximity and the ease of accessing cheap virgin land for sesame production. The major destination districts of Metekel Zone are Guba and Dangur districts as are Abe Dengoro and Gida Kiramo districts in East Wollega, and Yaso and Belewjiganfo districts in Kamash Zone of Benishangul Gumuz Region (Table 4.9).

However, it is important to note the dynamic nature of migrants' place of destination. Interviews with elders and migrants illuminate that there is a constant change of destinations depending on the existing opportunities and risks of a particular place of destination. It is indicated that rural-rural migration as an important livelihood strategy began after the current government came to power. Initially, the spatial pattern of migration was mainly to East Wollega of Oromia Region. Then with the introduction of intraregional resettlement program along with the emergence of large scale sesame production in these resettlement areas, migrants from original place of resettlers followed the footsteps of these same resettlers to exploit the existing opportunities mainly to Mirab Armacheho and Jawi districts of Amhara Region. Key informants further indicate that with the increasing competition and decreasing productivity of land in the customary destination of Jawi and Mirab Armachiho districts, now migrants turn their faces to districts in Metekel and Kamashi zones of Benishangul Gumuz Region where they could get cheap, suitable and virgin land for sesame production.

4.1.3. Temporal Patterns of Migration

This section considers the temporal patterns of migration in terms of migrants' years of migration experience and seasonal patterns of migration. The distribution by years of migration experience shows that most migrants (66%) had more than two years of migration experience. Comparison among different types of migrants shows that more of casual wage labor migrants

[6] *The first Amhara migrants moved to East Wollega may go back to the late 1940s in the imperial period. In 1980s, as part of government resettlement program, farmers from high land areas of Amhara region were resettled in the area (Tesfaye, 2009).*

(78%) have three or more years of migration experience than both migrant farmers (65%) and full-time wage labor migrants (53%) (Table 4.10). Evidence obtained from KIIs with elders and migrants indicate that the volume of migration across different types of migration has increased in recent days, but migration for crop farming and full-time wage labor employment has shown a dramatic increment in the last two or three years mainly triggered by a boom in the price of sesame in the market.

Table 4.10: Years of migration experience across types of migrants

years of migration experience	Types of migrants			Total
	Migrant farmers	**Casual wage laborers**	**Full-time wage laborers**	
1-2 years	62(35)	26 (21.8)	43(47.3)	131(33.9)
3-4 years	91(51.4)	72(60.5)	36(39.6)	199(51.4)
5 & above years	24(13.6)	21 (17.6)	12(13.2)	57(14.7)
Total	177(100)	119(100)	92(100)	387(100)

Source: Own Household Survey, 2015

The seasonal dimension of migration is presented in Table 4.11. Migrants stay away from home on average for 7.5 months (not listed in the Table). Most (45%) stay away between 7-9 months. Disaggregated data by types of migrants, however, reveal important variation. Most migrant farmers (65%) stay away for 7-9 months followed by those who stay for 4-6 months (27%). Similarly, majority of full-time wage labor migrants (56%) stay away for 7-9 months and 4-6 months (28%). Thus, full-time wage labor and migrant farmers stay away from home almost for the

Table 4.11: Months of stay away from the place of origin across types of migrants

Types of migrants	**Months of stay away from origin**				**Total**
	1-3	**4-6**	**7-9**	**10-12**	
Migrant farmers	3 (1.7)	48(27)	116 (65.2)	11(6.2)	178 (100)
Casual wage laborer	84(70.6)	23(19.3)	9 (7.6)	3 (2.5)	119 (100)
Full-time wage laborer	6(6.6)	25(27.5)	51(56)	9 (9.9)	91 (100)
Total	**93(24)**	**96(24.7)**	**176 (45.4)**	**23 (5.9)**	**388 (100)**

Source: Own Household Survey, 2015

same number of months. On the other hand, the overwhelming majority of casual wage labor migrants (71%) stay at the place of destination only for 1-3 months.

The schedule of migration also varies across types of migrants and even within the same type of migrants especially among crop farming migrants. Key informants from migrant farmers and elders reflect that the time of migration of this type of migration is largely dependent upon different factors such as the proximity of the place of destination to the place of origin and whether migrants have already managed to secure land.

Some migrant farmers leave for place of destination as early as April to get land and mostly stay at the place of destination until the harvesting season. Some others leave for the place of destination early and secure land, clear it and return home to plant some crops and then go back to the place of destination again when the planting time approaches. As mentioned earlier, there are also migrant farmers who manage to secure land during their previous presence at the place of destination or through their friends or relatives who already migrated. This helps them to stay a bit longer at home and carry out farming activities until planting time at the place of destination approaches. It is also indicated that some migrants, especially those who move to relatively nearby destinations such as Metekel Zone of Benishangul Gumuz Region and East Gojjam of Amhara Region move back and forth between places of origin and destination to do agricultural activities at both locations.

With regard to casual wage labor migrants, key informants from LaSAOs and casual wage labor migrants note that employment opportunities are available starting from land preparation all the way through weeding and harvesting (including threshing) seasons of sesame. But, as mentioned above, employment opportunities for large number of casual wage laborers are available during weeding and harvesting seasons. The weeding season of sesame starts on June and may continue to September. The harvesting season of sesame, on the other hand, takes place largely between September and October. Weeding time and frequency of weeding may vary depending on specific contexts such as type of sesame varieties, soil type, weed prevalence pattern and planting time (Geremew, Adugna, Muez and Hagos, 2012) that, in turn, determine the time of wage labor employment opportunities.

Informants further report that casual wage labor migrants start migrating at June and some come back home at the end of August when the Ethiopian New Year approaches. Others may leave for the place of destination again starting from mid of September to participate in harvesting time.

There are also some migrants who participate both in weeding and harvesting seasons without return visit to the place of origin. Students largely participate in weeding season when the annual school calendar is closed. In general, there is some sort of temporal variation in migrants' time of departure, time of return and length of stay away from home.

4.1.4. Sources of Finance for Migration

The survey finding demonstrates that migration finance does not depend on one source. Borrowing from private money lenders and saving institutions/churches are the major sources (43%) of finance followed by household savings (41%), selling asset (29%) and borrowing from relatives/friends (17%) (Table 4.12).

Table 4.12: Source of finance for migration across types of migrants

Source of finance for migration	**Types of migrants**				
	Migrant farmer (n=178)	**Casual wage laborer (n=119)**	**Full-time wage laborer (n=91)**	**Total**	**Sig**
Private money lenders/ credit and saving institutions/churches (% of yes)	85(47.8)	51 (42.9)	32(35.2)	168(43.3)	0.14
Household cash saving (% of yes)	99(55.6)	37 (31.1)	22(24.2)	158(40.7)	0.00
Selling asset (% of yes)	64(36)	25(21)	23(25.3)	112(28.9)	0.01
Borrowed from relatives/friends (% of yes)	28(15.7)	22 (18.5)	17 (18.7)	67(17.3)	0.76

Source: Own Household Survey, 2015

Type of migrants disaggregated data shows that crop farming migrants significantly dominate others in using household saving ($P < 0.01$) and selling household assets ($P < 0.05$) which might be related to the capital intensive nature of crop farming that pushes migrant farmers to depend more on these sources of finance as compared to other forms of migrants.

4.1.5. Decision Making and Reasons for Migration

According to respondents view regarding the most recent migration decision, about 76% of decision involve other household members (Table 4.13). This confirms the argument of New Economics of Labor Migration theory which assumes that household is a decision unit regarding the migration decision of household members (Stark & Bloom, 1985). It is also in line with the

argument that temporary migration is a livelihood diversification strategy of households (VanWey, 2003)

Table 4.13: Distribution of migrants by decision maker of their migration

Decision maker of migration	***f***	**%**
Migrant himself	91	23.6%
With the consultation of household members	292	75.6%
With the consultation of friend/ relatives/neighbors	3	.8%
Total	**386**	**100%**

Source: Own Household Survey, 2015

As far as the reasons for migration are concerned, it is generally argued that people often have multiple reasons and there are no predetermined factors that define migration (de Haas, 2007; Geest, 2011; Kothari, 2002). Among the different reported reasons for migration, land shortage/landlessness appears to be the most frequently mentioned (89%) reason followed by lack of employment opportunities (70%), inability to meet basic needs (69%), and environmental change (67%) (Table 4.14) These evidences support other studies in Ethiopia (Abeje, 2012; Adamnesh *et al*., 2014; Feleke *et al.,* 2006; Tesfaye, 2007; Zelalem, 2009; World Bank, 2007; Zemen, 2014). All these reasons of migration in the present study could be related to the fact that land is the primary means of livelihoods in agrarian country like Ethiopia, but this appears to be impossible with the increasing scarcity and degradation of land (Ezra, 2000) with limited non-farm rural employment opportunities (Zemen, 2009) that could force individuals to search for employment opportunities elsewhere. In this regard, an elder, 79, in Chefakit *kebele* describes overall challenges which trigger migration as:

> Some decades ago the area we live now on had been known to provide sufficient and fertile land with conducive environment for crops to grow. Nowadays, however, the climate is changing and because of increasing number of human population the land becomes scarce, fragmented and degraded. Previously, our area was known for producing a number of important crops such as check peas, horse beans, and onion to mention some. Presently, however, the soil does not support these crops to grow. In those days, when the worst things came, the poor farmers had the opportunity to be employed under the rich farmers. But, today most farmers are so poor that no one can create employment opportunities for others. Given such hurdles of life, except the old and child, everybody in this area migrates for employment to survive.

Table 4.14: Reasons for migration across types of migrants

Reasons for migration	Types of migrants				Sig
	Migrant farmer (n=175)	Casual wage laborer (n=117)	Full-time wage laborer (n=91)	Total (n=383)	
Land shortage/landlessness (% of yes)	152(86.9)	105 (89.7)	83 (91.2)	340(88.8)	0.50
Lack of job opportunities (% of yes)	113 (64.6)	91 (77.8)	64(70.3)	268 (70)	0.05
Unable to meet basic needs (% of yes)	111 (63.4)	91 (77.8)	62 (68.1)	264 (68.9)	0.04
Environmental change (% of yes)	113(64.6)	85 (72.6)	57(62.6)	255 (66.6)	0.22
Unable to pay debt (% of yes)	71 (40.6)	80 (68.4)	46(50.5)	197 (51.4)	0.00
Availability of better job opportunities at the destination (% of yes)	133 (76)	48 (41)	62 (68.1)	243 (63.4)	0.00
To build asset (% of yes)	109(62.3)	53 (45.3)	48(52.7)	210 (54.8)	0.09
Advices/supports/influences of peer/kin/neighbor (% of yes)	67 (38.3)	25 (21.3)	32 (35.2)	124 (32.4)	0.01

Source: Own Household Survey, 2015; numbers in parenthesis are percentages; * multiple responses

The survey data also reveal that 63% and 55% of migrants mentioning the availability of better employment opportunities at the place of destination and the intent of building asset in their lists of reasons for migration, respectively (Table 4.14). Along this line, key informants from elders question the fate of households in their villages if there are no employment opportunities in the lowland areas of the country. They take these opportunities as a means for both food security and asset accumulation of households. In this regard, employment opportunities as the reason for migration are given credence as:

> Compared to the place of origin, destination areas have better opportunity to access land that could allow to collect significant sum of money by investing on sesame farming. Especially if the market and climate conditions favor sesame production, migration for sesame farming can give a good opportunity to earn an income which is impossible, if not unthinkable from home agriculture (Migrant farmer, 46, Butila *kebele*)

Table 4.14 also illustrates the difference in the reasons of migration across types of migrants. Almost 90% of each type of migrants report land scarcity/landlessness as a good reasons for migration. On the other hand, lack of sufficient means to meet basic needs and indebtedness appear to be more reported reasons among casual wage labor migrants than other groups of migrants. The dominance of casual wage labor migrants may be related to the fact that most of these migrants live in the households that are less endowed with land (see Table 4.15), rendering

its members to migrate more because of livelihood constraints. During FGDs, for instance, the issue of food insecurity is more repeatedly raised among focus groups from casual wage labor migrants than other groups. Crop farming migrants excel other groups of migrants in spelling out reasons such as the availability of better job opportunities at the place of destination (Table 4.14). This could be the availability of land at the place of destination that engage them in rewarding cash crop farming.

If the presence of employment opporunities at the place of destination are taken as important reasons for migration, there are underlying factors for these opportunities which are largely a function of policy, market and agro-ecological contexts. Firstly, low land areas have relatively larger amount of untapped land with condusive agro-ecology for the production of cash crops such as sesame. Secondly, the increasing demand of sesame in global market contributes to increasing size of land to be allocated for sesame farming to exploit market opportunities, showing that globalization is an important impetus that determine the expansion of opportunities at the place of destination (L.J. de Haan, 2000; de Haan & Zoomers, 2003; Deshingkar & Grimm, 2005). In line with this, the promotion of investment by the Ethiopian government in commercial agriculture particularly on sesame production and export suggest that out-migration in the study area is fueled by this macro level national development issue (Pankhrust et al, 2013; Woldie et al., 2010). This is the key sign that migration has rapidly become a significant feature of investment and production (Sanderson, 2008) and influenced by state policies (de Haan & Rogaly, 2002) although it is not incorporated in these policies.

Furthermore, resettlement program of governments at different times directly or indirectly contribute to increasing migration of individual to resettlement site. As noted above, resettlement sites are presently sites of destination of migrants from settlers' place of origin due to the accessibility of information about what opportunities might have been available at the place of destination (Pankhrust et al., 2013; Pankhrust & Piguet, 2004). Elders note that settlers and independent migrants at the place of destination are the key ground levelers for temporary migrants to come to work or visit and to see the opportunities. This suggests that livelihoods at the place of origin cannot be explained without the flow of information and social interaction between the two geographical spaces (de Haan & Zoomers, 2003).

Similarly, the expansion of transport and communication industry also play an important role in facilitating migration (IOM, 2005; de Haan & Zoomers, 2003; Tesfaye, 2007; Willis, 2010). Sosina and Holden (2014) state that expansion of road and communication technology by the Ethiopian government has intensified the search for employment opportunities at different destinations. All the above mentioned contributing factors for migration indicate that migration cannot be divorced from the wider policy and other macro level contexts (IDC, 2004).

Generally, the study shows the multiple reasons for migration. However, it is argued that despite its quality of providing easy to understand explanation, migrants based explanation of the reasons for migration can only partly inform the selectivity of migration. As migration is dominantly governed by households' characteristics, it is important to see household level attributes to understand better the selectivity of migration (Hossain, 2001; Stark & Bloom, 1985). The following section attempts to empirically test to what extent livelihood asset ownership of households determines households to participate in migration in general and to prefer one form of migration to the other in particular.

4.2. Determinants of Migration

4.2.1 Descriptive Statistics

4.2.1.1. Household and Community Level Variables

This section presents the results of univariate analyses of continuous (Table 4.15 and Table 4.16) and non-continuous variables (Table 4.17 and Table 4.18). They serve as the basis for econometric analyses by focusing on 15 household level livelihood asset variables and one community level variable.

i) Human Assets

*Sex of Household Heads (SEXHH)***:** The overwhelming majority of survey households (88%) are headed by men (Table 4.17), a feature of typical Ethiopian rural households, a patriarchal social system. No significant difference is observed across migration status (Table 4.17) and types of households (Table 4.18) ($P > 0.05$).

Age of Household Heads (AGEHH): The average age of household heads is 47 years. There is no significant mean age difference between migrant and non-migrant households (Table 4.15). However, one way-ANOVA result shows that there is a significant mean age difference among different types of households ($P < 0.01$) (Table 4.16) and migrant households (Appendix 3, Table 3). Among the four types of households, crop farming migrant household heads are the oldest (52 years of age) while casual wage labor migrant household heads are the youngest (43 years of age) (Table 4.16), suggesting that casual wage labor migrant households are more likely from recently formed households.

Table 4.15: Descriptive statistics of continuous variables used in the regression analyses across migrant and non-migrant households

Variables	Migration status of households				Total		Sig
	Non-migrant HHs		Migrant MHHs				
	Mean	SD	Mean	SD	Mean	SD	
AGEHH	46.67	14.94	47.73	13.03	47.34	13.76	.46
HHSIZ	5.42	1.92	6.11	1.89	5.86	1.93	.00
NDEP	2.85	1.47	2.18	1.30	2.43	1.41	.00
NMADU	1.14	.709	2.13	1.12	1.77	1.09	.00
NFADU	1.41	.82	1.81	.96	1.66	.92	.00
SLAO	.94	.46	0.87	.46	.89	.46	.00
SLIVO	3.02	1.69	2.96	1.98	2.98	1.88	.77
NSOHP	3.59	.88	3.55	.84	3.57	.85	.63

Source: Own Household Survey, 2015

Table 4.16: Descriptive statistics of continuous variables used in the regression analyses across types of households

Variables	Type of households								Total		Sig
	Non-migrant HHs		Crop farming MHHs		Casual wage labor MHHs		Full-time wage labor MHHs				
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	
AGEHH	46.67	14.94	51.48	12.55	42.53	12.72	50.02	11.49	47.34	13.76	0.00
HHSIZ	5.42	1.92	6.25	1.88	5.84	1.94	6.34	1.83	5.86	1.94	0.02
NDEP	2.85	1.47	2.0	1.33	2.39	1.25	2.15	1.31	2.43	1.4	0.00
NMADU	1.14	.709	2.43	1.08	1.81	1.02	2.17	1.24	1.77	1.09	0.00
NFADU	1.41	.82	1.88	.96	1.64	.88	1.98	1.01	1.66	.92	0.00
SLAO	.94	.46	1.05	.41	.66	.44	.88	.42	.89	.459	0.00
SLIVO	3.02	1.69	3.54	2.09	2.37	1.59	2.93	2.13	2.98	1.88	0.00
NSOHP	3.59	.88	3.71	.81	3.36	.70	3.58	1.03	3.57	.85	0.04

Source: Own Household Survey, 2015

Educational Background of Household Heads (EDUHH): The survey household heads have lower educational status. Those who cannot read and write alone account for 51% of the total survey

households. No significant difference is observed across migrant and non-migrant households (Table 4.17) and types of households (Table 4.18) ($P > 0.05$). Generally, this reflects the lower educational attainment of rural society in Ethiopia.

Table 4.17: Descriptive statistics of non-continuous variables used in the regression analyses across migration status of households

Variables	Migration status of households		Total	Sig
	Non-migrant HHs	Migrant MHHs		
SEXHH (% of male)	85.8%	88.8%	87.7	.24
EDUHH (% of literate)	51.4%	48%	49.2	.29
AGROE (% of midland)	49.3 %	38.4%	42.5	.02
ACCR (% of yes)	33.1%	40.8%	37.9	.08
ACTR (% of yes)	14.9%	6.8%	9.8	.01
ACMNE (% of yes)	71.6%	82.0%	78.1	.01
FLAND (% of infertile)	29.7%	39.3%	35.6	.04
ACIRW (% of yes)	43.2%	29.6.7%	34.7	.01

Source: Own Household Survey, 2015

Table 4.18: Descriptive statistics of non-continuous variables used in the regression analyses across types of households

Variables	Types of households				Total	Sig
	Non-migrant HHs	Crop farming MHHs	Casual wage labor MHHs	Full-time wage labor MHHs		
SEXHH (% of male)	85.8%	91.1%	89.6%	83.0%	87.7%	0.44
ACMNE (% of yes)	71.6%	89.1%	72.9%	84.9%	78.1%	0.00
EDUHH (% of literate)	51.4%	41.6%	54.2%	49.1%	49.2%	0.31
AGROE (% of midland)	49.3 %	56.4%	20.8%	35.8%	42.5%	0.00
ACCR (% of yes)	33.1%	34.7%	46.9%	41.5%	37.9%	0.14
FLAND (% of infertile)	29.7%	32.7%	46.2%	41.7%	35.6	0.07
ACIRW (% of yes)	43.2%	34.7%	22.9%	32.1%	34.7%	0.01
ACTR (% of yes)	14.9%	6.9%	6.2%	7.5%	9.8%	0.08

Source: Own Household Survey, 2015

*Household Siz*e (HHSIZ): The average household size of surveyed households is 5.9 persons. This finding is similar to that of Teshome (2010) in Quarit district. However, it is beyond the national (5.14 persons) and regional average (4.62 persons) (CSA, 2016). *Migrant households have larger family size (6.11) than non-migrant households (5.42) (Table 4.15) ($P < 0.01$).* A comparison based on type of households reveals that households with full-time wage labor migrant (6.34 persons) and crop farming migrants (6.25 persons) have almost the same and relatively larger average family size than casual wage labor migrant (5.84 persons) and non-migrant (5.39 persons) households. This difference is statistically significant at 5%. However, comparison among migrant households alone reveals that there is no significant difference

(Appendix 3, Table 3). The smallest household size of non-migrant households implies that they are constrained by lack of able household members who could participate in migration. Household size by itself, however, does not fully show the labor endowment of households because it can work either as an asset or a burden to households (Sharp *et al.*, 2003). Thus, it is critical to see the contribution of dependents and adults to migration decision.

Size of dependents (NDEP): The survey households have an average size of 2.43 dependents where non-migrant households have significantly larger size (2.85) of dependents than migrant households (2.43) (Table 4.15). Breaking down the data shows that crop farming migrant households have lower average size of dependents (2 persons) as compared to full-time wage labor migrant households (2.15), casual wage labor migrant households (2.39) and non-migrant households (2.85). The difference is statistically significant ($P < 0.01$) (Table 4.17). This indicates that having large number of dependents among non-migrant households constrain out-migration. Within migrant households, however, there is no significant difference in size of dependents (Appendix 3, Table 3).

Size of male (NMADU) and female (NFADU) adults: Households have an average size of 1.77 males and 1.66 female adults. Non-migrant households have significantly lower size of adult (male: 1.14 and female: 1.41) than migrant households (male: 1.17 and female: 1.66) in both adult groups ($P < 0.01$) (Table 4. 15). Similarly, non-migrant households have smaller size of both male and female adult (male: 1.14 and female: 1.41) than households with crop farming migrant (male: 2.43 and female: 1.88), full-time wage labor migrant (male: 2.17 and female: 1.98) and casual wage labor migrant (male: 1.81 and female: 1.64). In both adult groups, the difference among the different types of households is statistically significant ($P < 0.01$) (Table 4.16). Within migrant households, significant difference is observed only in male adult size (Appendix 3, Table 3).

As mentioned earlier, most full time wage labor and crop farming migrants stay outside their home for longer period time and thus, are less likely to participate in some key peak seasons in home agriculture. This suggests that they have surplus adult labor to allocate for both home

agriculture and temporary labor migration. In contrast, non-migrant households are less likely to have sufficient labor to allocate for labor migration.

ii) Natural Capital

Size of farm land (SLAO): In agricultural based livelihoods, land is the life blood of households. The level of endowment of this resource largely determines the poverty status of household in Ethiopia (Sharp et al., 2003) since land functions as a source of getting other livelihood assets, for example, to secure financial asset (Cotula, Toulmin, & Quan 2006; Hoddinott, 2006; VanWay, 2003).

The average land holding size of all survey households is 0.89 hectare which supports an average household size of 5.9 members. This finding is almost consistent with Teshome (2010) in Quarit district (0.83 hectares). However, it is lower than the national (1.06 hectares) and regional (1.16 hectares) average (CSA, 2016). This is a clear evidence of serious land scarcity in the study district although significant variation observed both between migrant and non-migrant (Table 4.15), types of households (Table 4.16) and type of migrant households (Appendix 3, Table 3) ($P < 0.01$). Table 4.16 depicts that crop farming migrant households possess larger size of land (1.05 hectares) than other group of households. Casual wage labor, full-time wage labor and non-migrant households have an average land holding size of 0.66, 0.88 and 0.94 hectare, respectively. These results show that the land holding size of casual wage labor migrant households is below the average, suggesting that households with limited land size were more likely to migrate for casual wage labor employment.

As indicated in the age profiles of household heads, crop farming migrant households are more likely from the older generation, implying that they have higher chance of getting land through land redistribution or gift/inheritance from their parents. The lowest average age of casual wage labor migrant households implies that households in this group are more likely not eligible to get land during 1997 land redistribution as they might not able to meet the minimum age criterion.

The land holding size of households can be further and better exemplified by Table 4.19 and Table 4.20. Landless households are higher among migrant than non-migrant households. In the

larger land holding category, about 30% of both non-migrant and migrant households have ≥1 hectares of land. But, this difference is not significant (P > 0.05) (Table 4.19).

Table 4.19: Average land holding size across migration status of household

Size of land owned	Migration status of households			X^2
	Non-migrant HH	Migrant households MHH	**Total**	
Landless	8 (5.4)	29(11.6)	37(9.3)	0.94
0.1-0.5	23(15.5)	37(14.8)	60(15.1)	
0.5-0.75	24(16.2)	32(12.8)	56(14.1)	
0.75-1	49(33.1)	75 (30)	124(31.2)	
1-1.5	34(23)	70(28)	104(26.1)	
≥1.5	10 (6.8)	7(2.8)	17(4.3)	
Total	**148**(**100**)	**101**(**100**)	**398**(**100**)	

Source: Own Household Survey, 2015; numbers in parenthesis are percentages

Table 4.20: Average land holding size across types of household

Size of land owned	Types of households				Total	X^2
	Non-migrant HH	Crop farming MHH	Casual wage labor MHH	Full-time wage labor MHH		
Landless	8 (5.4)	4(4.0)	19(19.8)	6(11.3)	37(9.3)	0.00
0.1-0.5	23(15.5)	9(8.9)	23(24.0)	5(9.4)	60(15.1)	
0.5-0.75	24(16.2)	13(12.9)	13(13.5)	6(11.3)	56(14.1)	
0.75-1	49(33.1)	25(24.8)	28(29.2)	22(41.5)	124(31.2)	
1-1.5	34(23)	44(43.6)	13(13.5)	13(24.5)	104(26.1)	
≥1.5	10 (6.8)	6(5.9)	-	1(1.9)	17(4.3)	
Total	**148**(**100**)	**101**(**100**)	**96**(**100**)	**53**(**100**)	**398**(**100**)	

Source: Own Household Survey, 2015; numbers in parenthesis are percentages

Comparison based on the four group of households show that landless households are larger among casual wage labor migrant households (20%) as compared to households with full-time wage labor migrant (11%), non- migrant (5%) and crop farming migrant (4%). Below 0.5 hectare of land alone constitute nearly 44 % of the casual wage labor migrant households, while this land holding range comprises only 21% non-migrant household, 21% of full time wage labor migrant households and 13% of crop farming migrant households. When we consider larger landholding categories, about 50% of crop farming migrant households possess one or more hectares of land, while these landholding categories comprise only 14% of casual wage labor migrant households, 25% of full-time migrant households and 30% of non-migrants households. The difference is statistically significant both across types of households (Table 4.20) and type of migrant

households (Appendix 3, Table 5). ($P < 0.01$). Generally, crop farming and casual wage labor migrant households own the largest and the smallest landholding size, respectively.

Self-assessed soil fertility status (FLAND): Declining productivity of agriculture is largely attributed to decline in soil fertility which is in turn associated with environmental degradation. More migrant households (39.3%) than non-migrant households (29.7%) report the fertility of their land as infertile where there is no statistically significant difference (Table 4.17). As depicted in Table 4.18, more of households with casual wage labor migrant (46%) than full-time wage labor migrant (42%), crop farming migrant (33%) and non-migrant (30%) indicate the overall soil fertility of their agricultural land as infertile. This difference is not statistically significant at 5%.

Access to irrigable water (ACIRW): More non-migrant households (43.2%) than migrant households (29.7) have access to irrigable water ($P < 0.05$). This denotes that access to irrigable water tends to reduce the possibility of migration. Still a larger proportion of households with non-migrant (43%) than crop farming migrant (35%), full-time wage labor migrant (32%) and casual wage labor migrant (23%) have access to irrigable water with statistically significant difference ($P < 0.05$). However, the difference among migrant households is not statistically significant (Appendix 3, Table 4).

iii) Physical Capital

Size of livestock (*SLIVO*)*:* Livestock constitute a key asset of rural households in Ethiopia (Sharp et al., 2003). Survey households have an average livestock holding size of 2.98 TLU. This is lower than the national (3.61) and regional (3.64) average (CSA, 2016; 2017). Non-migrant households have slightly larger size of livestock (3.02) than migrant households ($P > 0.05$) (Table 4.15). However, disaggregating data in line with the type of households brings different figures. Just like other key livelihood assets of households, casual wage labor migrant households are endowed with lower livestock holding with an average livestock holding of 2.37 TLU, while cash crop migrant households have the highest average livestock size (3.54 TLU), respectively with statistically significant difference among types of households at 1% (Table 4.17). The difference among migrant households is also statistically significant (Appendix 3, Table 3). In general, casual wage labor migrant households are worse off and crop farming

migrant households are better off regarding all measures of key household livelihood assets (land and livestock).

iv) **Financial Capital**

Access to credit (*ACCR*): Within 12 months preceding the survey, almost 38% of the survey households had access to credit from either formal or informal sources. Table 5.17 indicates that more non-migrants have less access to credit than migrant households although this is not statistically significant at 5%. Disaggregated data also show that less of non- migrant households (33%) have access to credit as compared to crop farming (35%), full-time wage labor migrant (42%) and casual wage labor migrant (47%) households. This difference is found out to be statistically insignificant (P > 0.05) (Table 5.18), but significant difference is not observed within migrant households (Appendix 3, Table 4).

Access to transfer (ACTR): This variable refers to remittance and direct cash support received from government, NGO and individuals. The survey data show that 10% of households have access to transfer. More non-migrant households (15%) have access to transfer as compared to non-migrant households in general (Table 4.17) and crop farming (7%), casual wage labor migrant (6%) and full-time migrant (8%) households in particular (Table 4.18) with statistically significant difference between migrant and non-migrant household (P > 0.05) (Table 4.17), but insignificant difference among different categories of households (Table 4.18) and migrant households (Appendix 3, Table 4).

v**) Social Capital**

Number of social organizations in which households' participate (NSOHP): Households participate in an average of 3.57 local organizations where there is no significant difference between migrant and non-migrant households (P > 0.05) (Table 4.15). However, there is a significant difference among types of households (P < 0.05) where casual wage labor migrant household participate in a relatively few social organizations (3.36) followed by full-time wage labor migrant (3.57), non-migrant (3.59) and crop farming migrant (3.71) households (Table 4.17). The difference between migrant households is also significant (Appendix 3, Table 3)

Access to migration network (ACMNE): It is found out that 78% of households have migrant networks. There is a significant difference among both migrant and non-migrant households ($P < 0.05$) (Table 4.17), types of households ($P < 0.01$) (Table 4.17) and types of migrant households ($P < 0.05$) (Appendix 3, Table 4). Lower proportion of non-migrant households (72%) have migrant network as compared to households with migrant households in general (82%) ($P < 0.05$) (Table 5.17), casual wage labor migrant (73%), full-time wage labor migrant (85%) and crop-farming migrant (89%), suggesting that access to migrant network serves as an impetus for labor migration (Table 5.18).

v) **Community level variable:** *Agro-ecology (AGROE)*

Diversification of livelihoods depends not only on household level variables, but also on community level endowments (Sosina & Holden, 2014). About 43% of households live in midland agro-ecology where there are more non-migrant (49.3%) than migrant (39%) households with statistically significant difference at 5 % (Table 5.17). While almost equal proportion of highland and midland areas (about 50% each) constitute non-migrant households, a larger proportion of crop farming migrant households (56%) are from midland agro-ecology. On the other hand, both casual and full-time wage labor migrant households dominate in the highland agro-ecology, constitute for 79% and 64%, respectively where there is significant difference ($P < 0.01$) (Table 4.18). The difference among migrant households is also significant (Appendix 3, Table 4)

Table 4.21: Average landholding of households by agro-ecology

Agro-ecology	***f***	**Mean**	**Std.**	**Sig**
Midland	169	.975	.456	0.00
Highland	229	.836	.453	
Total	**398**	**.895**	**.459**	

Source: Own Household Survey, 2015

Specifically in relation to the study area, land in *dega* areas is generally more scarce, fragmented and degraded and thus, lower in fertility status than that of the *woina dega* agro-ecology (ARLZR, 2007). It is also reflected in the present study that households in the midland area have larger average land holding (0.98 hectare) than households in highland area (0.84 hectare) ($P < 0.01$) (Table 4.21).

4.2.1.2. Livelihood Activities of Households

Table 4.22 and Table 4.23 illustrates the livelihood strategies based on migration status and types of household, respectively, with a recall period of 12 months before the survey date. As it is common in other highland areas of Ethiopia, the overwhelming majority of survey households rely on mixed farming: crop (99%) and livestock (94%) production. This implies that despite holding small size of farm lands, rural livelihoods highly depend on the agricultural sector. Among non-farm activities across migration status (Table 4.22) and types of households (Table 4.23), there is no activity which emerges to assume a significant proportion of survey households, indicating the limited nature of alternative livelihood activities. This may be related to the fact that, as revealed in field observation, *kebeles* are poorly connected to urban centers, characteristic of rural areas in Ethiopia (Zemen, 2014).

Table 4.22: Livelihood activities across migration status of households

Types of livelihood activities	**Migration status of households**		
	Non-migrant HHs (n=148)	**Migrant MHHs (n=101)**	**Total (n=398)**
Crop production	147(99.3)	248(99.2)	395(99.2)
Livestock production	136(91.9)	237 (94.8)	373(93.7)
Temporary rural-rural Mig.	-	250(100)	250(62.8)
Poultry production/egg sell	92(62.2)	140 (56)	232(58.3)
Bee keeping/honey sell	27(18.2)	40(16)	67(16.8)
Transfer	22(14.9)	17(6.8)	39(9.8)
Safety net	8(5.4)	30(12)	38(9.5)
Petty trade	14(9.5)	18(7.2)	32(8)
Sell of wood/grass/charcoal	14(10.1)	13(5.2)	27(7)
Local agricultural labor	10 (6.8)	16 (6.4)	26(6.5)
Rent out different assets	6(4.1)	11(4.4)	17 (4.3)
Local non-agricultural labor	1(0.7)	14(5.6)	15 (3.8)
Artesian	4(2.7)	8(3.2)	12(3)
Distilling/Selling Areki/Tella	3(2)	5(2)	8(2)
Others	2(1.4)	12(4.8)	14(3.8)

Source: Own Household Survey, 2015; numbers in parenthesis are percentages

Table 4.23: Livelihood activities across type of households

Types of livelihood activities	Type of households				
	Non-migrant HHs (n=148)	Crop farming MHHs (n=101)	Casual wage Labor MHHs (n=96)	Full-time wage Labor MHHs (n=53)	Total (n=398)
Crop production	147(99.3)	101(100)	95(99)	52(98.1)	395(99.2)
Livestock production	136(91.9)	100(99)	90(93.8)	47(88.7)	373(93.7)
Temporary rural-rural Mig.	-	101(100)	96(100)	53(100)	250(62.8)
Poultry production/egg sell	92(62.2)	77(76.2)	40(41.7)	23(43.4)	232(58.3)
Bee keeping/honey sell	27(18.2)	17(16.8)	13(13.5)	10(18.9)	67(16.8)
Transfer	22(14.9)	7(6.9)	6(6.2)	4(7.5)	39(9.8)
Safety net	8(5.4)	5(5)	21(21.9)	4(7.5)	38(9.5)
Petty trade	14(9.5)	9(8.9)	7(7.3)	2(3.8)	32(8)
Sell of wood/grass/charcoal	14(10.1)	2(2)	9(9.4)	2(3.8)	27(7)
Local agricultural labor	10 (6.8)	3(3)	11(11.5)	2(3.8)	26(6.5)
Rent out different assets	6(4.1)	3(3)	4(4.2)	4(7.5)	17 (4.3)
Local non-agricultural labor	1(0.7)	4(4)	6(6.2)	4(7.5)	15 (3.8)
Artesian	4(2.7)	2(2)	4(4.2)	2(3.8)	12(3)
Distilling/Selling *Areki*/*Tella*	3(2)	2(2)	2(2.1)	1(1.9)	8(2)
Others	2(1.4)	5(5)	6(6.2)	1(1.9)	14(3.8)

Source: Own Household Survey, 2015; numbers in parenthesis are percentages

Tables 4.24 and 4.25 show incomes of households from different sources during the last 12 months preceding the survey period. For the sake of convenience, sources of households income are summarized into four groups: 1) crop sell; 2) livestock and livestock products sell (including behaves and honey sell); 3) non-farm activities (agricultural and non-agricultural wage employment, petty trade, sell of wood/grass/charcoal, artesian, transfer, and renting out different assets); and 4) income from temporary rural-rural labor migration.

Table 4.24: Sources and amount of annual income across migration status of households

Source of income	Migration status	f	Mean	Std. Dev.	Sig
crop sell	non-migrants	146	3499.63	2989.19	.000
	Migrants	248	2219.12	1944.44	
	Total	**394**	**2693.62**	**2460.97**	
Livestock and livestock products sell	non-migrants	148	1551.96	2558.06	.255
	Migrant	250	1275.25	2115.10	
	Total	**398**	**1378.15**	**2290.59**	
Non-farm activities	non-migrants	148	795.59	1870.674	.431
	Migrant	250	656.20	1598.72	
	Total	**398**	**708.04**	**1703.96**	

Source: Own Household Survey, 2015

Table 4.24 indicates that non-migrant households get higher amount of income in all of the three broad classes of income sources although the difference is significant only in the case of income

source from crop sell (P < 0.01) where non-migrant households manage to earn Birr 3500, but migrant households earn only Birr 2220. This may be related to the limited land holding size but large family size of migrant households (Table 4.15) may limit this group of house to sell crops.

Disaggregated data show that crop sell appears to be a key source of income across all types of households, but non-migrant households dominate others. While non-migrant household generate Birr 3,500 from crop sell, crop farming, full-time wage labor and casual wage labor migrant household earn Birr 2703, 2311 and 1653, respectively. This difference is statistically significant (P < 0.01) (Table 4.25). Relatively, income generated from non-farm activity is limited for all household groups with statistically insignificant difference (P > 0.05), demonstrating the limited engagement of households in non-farm activities and/or limited return from the existing ones.

Table 4.25: Sources and amount of annual income across type of households

Source of income	Type of households	*f*	Mean	Std. Dev.	Sig
crop sell	non-migrants	146	3499.63	2989.19	.000
	crop farming	101	2703.95	2130.50	
	casual wage labor	95	1653.08	1756.78	
	full-time wage labor	52	2311.48	1628.35	
	Total	**394**	**2693.62**	**2460.97**	
Livestock and livestock products sell	non-migrants	148	1551.98	2558.26	.452
	crop farming	101	1335.28	2143.19	
	casual wage labor	96	1083.79	2052.83	
	full-time wage labor	53	1507.62	2194.74	
	Total	**398**	**1378.15**	**2292.29**	
Non-farm activities	non-migrants	148	795.59	1870.68	.737
	crop farming	101	645.25	1578.49	
	casual wage labor	96	746.75	1553.38	
	full-time wage labor	53	513.08	1732.85	
	Total	**398**	**708.04**	**1703.94**	
Temporary rural-rural labor migration	crop farming	101	6033.66	11028.42	
	casual wage labor	96	2580.83	1909.82	
	full-time wage labor	53	3733.02	5187.94	0.01
	Total	**250**	**4220.04**	**7634.05**	

Source: Own Household Survey, 2015

Income obtained from temporary rural-rural migration dominates other sources of income of the migrant households where it is the largest among crop farming households (Birr 6034) followed by full-time wage labor migrant households (Birr 3733) and casual wage labor migrant

households (Birr 2581) ($P < 0.05$). This generally portrays that income from migration has a significant contribution to the income of migrant sending households.

4.2.1.3. Food Insecurity Status of the Households

Table 4.26 and 4.27 shows households' sources of food during the last 12 months prior to survey time across migration status and type of households, respectively. Most households (69%) satisfy their food demand from their own production. Table 4.26 illustrates that less of migrant households (74%) than non-migrant households (65%) satisfy their food demand from own production. As noted above, this may be associated with the fact that non-migrant households are better endowed with land that enables them to satisfy their source of food from own production.

Table 4.26: Sources of food across migration status of households

	Migration status of HHs		Total	x^2
Source of food	Non-migrant HH	Migrant MHHs		
own production	110 (74.3)	162 (65.1)	272(68.5)	
own production and purchase	31 (20.9)	84(33.7)	115(29)	
Others	7(4.7)	3(1.2)	10(2.5)	0.00
Total	148(100)	100(100)	397 (100)	

Source: Own Household Survey, 2015

Disaggregated data show that more of households with casual wage labor migrant (51%) than full-time wage labor migrant (32%), non-migrant (26%) and crop farming migrant (21%) could not satisfy their own food demand from own production alone (Table 4.27). This shows that

Table 4.27: Sources of food across type of households

Source of food	**Type of households**				Total	X^2
	Non-migrant HH	Crop farming MHHs	Casual wage labor MHHs	Full-time wage labor MHH		
own production	110(74.3)	79(79)	47(49)	36(67.9)	272(68.5)	
own production and purchase	31 (20.9)	21(21)	46(47.9)	17(32.1)	115(29)	0.00
Others	7(4.7)	-	3(3.1)	-	10(2.5)	
Total	148(100)	100(100)	96(100)	53(100)	397 (100)	

Source: Own Household Survey, 2015

households with casual wage labor are the least food self-sufficient from own production which also underlines that their higher dependence on food purchase exposes them to market shock (ALZR, 2007).

Households' self-assessed food insecurity status shows that 69% of households are the least food insecure during the last 12 months preceding the survey date. It appears that more of migrant households are food insecure (moderately vulnerable: 23% and highly vulnerable: 14%) than non- migrant households (moderately vulnerable: 14% and highly vulnerable: 7%) ($P < 0.01$) (Table 4.28). This reflects that non-migrant households are relatively in a better livelihood condition as compared to migrant households which might be associated with their better endowment of land that translate into better food security status.

Table 4.28: Level of food insecurity across migration status of households

Level of food insecurity status	Migration status of HHs		Total	X^2
	Non-migrant HHs	Migrant MHHs		
Least food insecure	117 (79.1)	157(62.8)	274 (68.8)	0.00
Moderately food insecure	21(14.2)	58(23.2)	79 (19.8)	
Severely food insecure	10(6.8)	35(14)	45 (11.3)	
Total	148(100)	250(100)	398 (100)	

Source: Own Household Survey, 2015

There is remarkable difference among different groups of households ($P < 0.01$) in which fewer casual wage labor migrant households (41%) are less food insure than households with non-migrant (79%), crop farming migrant (80%) and full-time wage labor migrant (70%) (Table 4.29). This indicates that casual wage labor migrant households are more food insecure than other groups of households. This may be associated with their relative lower asset endowment (e.g. land) (see Table 4.16) that translate into more food insecure status.

Table 4.29: Level of food insecurity across types of households

Level of food insecurity status	Type of households				Total	X^2
	Non-migrant HHs	Crop farming MHHs	Casual wage labor MHHs	Full-time wage labor MHHs		
Least food insecure	117 (79.1)	81(80.2)	39(40.6)	37(69.8)	274(68.8)	0.00
Moderately food insecure	21(14.2)	12(11.9)	35(36.5)	11(20.8)	45(11.3)	
Severely food insecure	10(6.8)	8(7.9)	22(22.9)	5(9.4)	79(19.8)	
Total	148(100)	101(100)	96(100)	53(100)	398(100)	

Source: Own Household Survey, 2015

4.2.2. Econometric Results and Discussions

Table 4.30 and 4.31 present the results of binary and multinomial logit regression analyses, respectively. Binary logit is applied to assess factors behind overall migration decision of households. Multinomial logit, on the other hand, is used to uncover the determinants of the type of migration in which households decided to participate. Before running regression analysis, multicolleniarity among independent variables is checked. It is found that household size variable has higher VIF value (see Table 1 and Table 2 in appendix 3). Accordingly, it is excluded from regression analyses.

i) Binary Logit Regression Results

The empirical result portrays that the number of dependents have a significant negative influence on migration decision of households ($P < 0.01$) (Table 4.30).The addition of one dependent member to the household decreases the likelihood of migration by 7% that could be be related to the fact that adult household members would be busy with providing care to the increasing size of dependents. This is in line with the hypothesis and Giesbert (2007).

Both the number of female and male adults in the households have a significant positive effect on migration decision ($P < 0.01$). This implies that the availability of extra labor in the household provides the opportunity to use migration as a livelihood diversification strategy. That is, the opportunity cost of labor departure would be high for non-migrant households due to the scarcity of labor in the households. This finding is in line with Deshinkgar and Star (2003), VanWey (2003) and Ikramullaz and Rehman (2011).

However, the degree of effects of female and male adult labor endowments is not uniform as shown in the marginal effects. A unit increase in male adult in the household increases the probability migration by 32%, while the presence of one more female in the household increases the likelihood of migration only by 15 %. The dominance of male over female may be associated with the laborious agricultural activities at the place of destination which might be taken as a less attractive employment area for females. Another possible explanation is related to the traditional

practices in rural Ethiopia that encourage women to stick to domestic works and discourage them from seeking employment away from the village.

The result shows that the size of land has a significant negative effect on households' decision to send a migrant. With an increase in the size of land by one unit, the propensity of migration declines by 26% ($P < 0.01$). This implies that being poor in land ownership increases the economic incentive for migration. This finding is consistent with other internal migration studies in Ethiopia (Dorosh et al., 2011; Sosina & Holden, 2014) and other countries (Carr, 2009; Khandker & Mahmud, 2012; VanWey, 2005; Syafitri, 2012). However, it is contrary to the finding of Mora and Tylor (2006) and Gray (2008). This is the indication of inconsistent relationship between land ownership and migration decision of households (Shahriar et al., 2006).

Interviews with elders indicate that size of land holding is getting smaller with the redistribution of land to successive generations. As land redistribution is increasingly pushing households towards a lower level of livelihood situation, households nowadays have reached a position where they are unable to further re-distribute lands. This is because sustaining one's livelihoods would become more difficult with the ever shrinking land size. It is further indicated that nowadays youngsters have been forced to establish their independent household without obtaining farm land either from their family or the government. In this context, as posited by Samuel (2006) and Sosina and Holden (2014), instead of farm plot re-division, landless and land scarce households tend to adopt labor expansion (migration) as one of their livelihood diversification strategy.

Similarly, the livestock ownership of households has a significant negative effect on the households' decision to migrate ($P < 0.05$). One unit increase in livestock size results in the decline of migration propensity by 5%. This is consistent with Sosina and Holden (2014) and Deshinkgar and Star (2004), but it is on the contrary to Hampshire (2002) and Gray (2008). Access to irrigable water ($P<0.01$) and access to transfer ($P < 0.01$) are also negative strong predictors of migration. The former is consistent with Shah (2005), and Parida and Madheswaran (2011), while the latter is in line with Deshinkgar and Star (2003).

Table 4.30: Binary logit regression results of the determinants of households' migration decision

Variable	Coef.	Std.err	P-value	Marginal effect (dy/dx)
SEXHH	-.488475	.4973284	0.33	-.0959926
AGEHH	.0077211	.0120351	0.52	.0015173
EDUHH	-.385031	.2977781	0.19	-.0756811
NDEP	-.3444665	.1167736	0.00**	-.0676928
NMADU	1.622043	.2118047	0.00**	.3187555
NFADU	.764285	.1814674	0.00**	.1501934
SLAO	-1.310192	.4268834	0.00**	-.2574723
FLAND	.0018484	.0058275	0.74	.0003632
ACIRW	-1.226067	.3414116	0.00**	-.2564429
SLIVO	-.2382662	.1021143	0.02*	-.0468228
ACTR	-1.484867	.4880497	0.00**	-.3426606
ACCR	.5140603	.3323679	0.12	.0979336
NSOHP	-.2292222	.1739885	0.22	-.0450456
ACMNE	1.053471	.3521351	0.00**	.2297019
AGROE	.4398236	.3214459	0.28	.0876087
_cons	.0596287	1.202163	0.81	
* Significant at 5% and **Significant at 1%		Prob > chi2 = 0.0000		Number of obs.= 398
LR chi2(14) = 191.18;		Pseudo R2 = 0.364		
Log likelihood = -167.064		Reference Category: Non-migrant households		

Source: Own Household Survey, 2015

As expected, a social capital variable of access to migrant network produce a significant positive effect on the probability of households decision on migration ($P < 0.01$). This is in line with Shah (2005) and Prayitno *et al*. (2014). Other variables such as the number of social organizations in which households participate, sex, age and educational level of household head, access to credit and agro-ecology appear to have insignificant effect on the probability of overall households' decision to send a migrant (Table 4.30). Generally, as land and livestock are the key asset and wealth indicators in rural Ethiopia (Sharp *et al*., 2003), it can be argued in the context of the present study that poor livelihood situation of households is the driving force for temporary rural-rural labor migration.

ii) Multinomial Logit Regression Results

The results of multinomial logit regression analysis show that the number of dependents in the households have a significant negative effect on the likelihood of migration for crop farming ($P < 0.01$), but have insignificant effect on both full-time and casual wage labor migration ($P > 0.05$). This may be related to the fact that as crop farming migration is relatively a higher adult

labor demanding activity, an increase in the number of dependents in the households may reduce the participation of households in this forms of migration.

The multinomial regression model also reveals that the number of male and female adults in the households have significant and positive effects on all forms of migration decisions ($P < 0.01$). A unit increase in the size of male adult in the household results in the propensity of migration to rise by 16%, 10%, and 9% for crop farming, casual wage and full-time wage labor, respectively. Likewise, a unit increase in the size of female adult increases the propensity of migration for crop farming, casual wage and full-time wage labor by 6%, 4% and 7%, respectively (Table 4.31). The size of land holding brings a significant negative effect on households' decision to send a migrant for casual wage labor ($P < 0.01$) and full-time wage labor ($P < 0.05$) migration. However, it has insignificant effect on migration for crop farming ($P > 0.05$). This indicates that households having smaller land holding are more likely to send family members for wage labor employments. In other words, it appears that migration for wage labor employments is not an attractive decision for households that have larger land holdings.

Access to irrigable water is a negative strong predictor of all forms of migration. It reduces the likelihood of migration for crop farming, casual wage labor and full-time wage labor by 12%, 11% and 4%, respectively, lending support to Shah (2005). Like the effect of land, the size of livestock and access to transfer have statistically significant negative effects only on decision to migrate for casual wage and full-time wage labor. A unit increase in livestock size decreases migration decision of households for casual wage and full migration by 2%. Receiving transfer reduces households' possibility of participating in migration for casual wage labor ($P < 0.05$) and full- time wage labor ($P < 0.05$) migration by 16% and 10%, respectively (Table 4.31).

Table 4.31: Multinomial logit regression results of the type of migration households' decided to participate

	Types of migration decision of households											
	Crop-farming				Casual wage labor				Full-time wage labor			
	Coef.	Std.er	P-value	dy/dx	Coef.	St.er	P-value	dy/dx	Coef.	Std.er	P-value	dy/dx
SEXHH	-.80879	.6035656	0.18	-.1276441	-.54057	.6099844	0.38	-.053212	.136569	.63308	0.83	.0764238
AGEHH	.019431	.0149161	0.19	.0036623	-.015393	.0153736	0.32	-.005360	.027152	.01739	0.12	.0035033
EDUHH	-.65393	.3616425	0.07	-.1011408	-.231168	.352166	0.51	.0106753	-.24654	.41647	0.55	.0043786
NDEP	-.43873	.1455252	0.00**	-.0576954	-.239096	.1359473	0.08	-.004149	-.27441	.16036	0.09	-.008445
NMADU	1.6814	.2299798	0.00**	.1572208	1.488433	.2340928	0.00**	.1004033	1.62666	.24684	0.00**	.0872513
NFADU	.72720	.2112601	0.00**	.0555397	.6669897	.2165584	0.00**	.0374931	.952610	.22947	0.00**	.0708331
SLAO	-.80848	.4968885	0.10	.0344026	-1.89156	.5637786	0.00**	-.242247	-1.4750	.63414	0.02*	-.087916
FLAND	-.00387	.0088196	0.69	-.0008135	-.002548	.0066781	0.70	-.000435	.005198	.00844	0.54	.000986
ACIRW	-1.2687	.4010589	0.00**	-.1218552	-1.22629	.4094653	0.00**	-.106602	-1.0178	.44795	0.02*	-.038757
SLIVO	-.20328	.1142788	0.08	-.0109287	-.250460	.1217064	0.04*	-.022361	-.27216	.13379	0.04*	-.017948
ACTR	-1.1056	.5924694	0.06	-.0777063	-1.62933	.614284	0.01*	-.156226	-1.5760	.69424	0.02*	-.096079
ACCR	.239933	.3935044	0.53	-.0312668	.8321043	.3825656	0.03*	.1264826	.438846	.42887	0.31	.0128469
NSOHP	.074779	.2161286	0.38	.0566509	-.540549	.2137803	0.01**	-.102366	-.12267	.23835	0.61	.0023907
ACMNE	1.37209	.472315	0.00**	.1525917	.7638379	.4007321	0.06	.022308	1.24402	.51448	0.02*	.0785863
AGROE	-.24203	.378389	0.46	-.1427578	1.18673	.3965834	0.00**	.2133095	.401187	.43185	0.35	.0182151
_cons	-2.3430	1.548512	0.17		1.458168	1.454735	0.32		-4.1050	1.7635	0.02	

* Significant at 5% and **Significant at 1%

Prob > chi2 = 0.0000 Number of obs = 398

LR chi2(48) = 283.46 Pseudo R2 = 0.2683;

Log likelihood = -386.562 Reference Category: Non-migrant households

Source: Own Household Survey, 2015

On the other hand, access to credit has insignificant positive effect on all types of migration except for casual wage labor migration ($P < 0.05$), demonstrating the likelihood that poor households with casual wage labor migrants might take loan from different sources more so to smooth consumption than to invest on non-farm activities. Under such circumstance, migration might be taken as a compulsory measure to clear the debt.

Access to migrant network is a significant positive predictor only for crop farming and full-time wage labor migration although with different levels. Having access to migrant network increases the possibility of migration by 15% for crop farming ($P < 0.01$), and by 8% for full-time wage labor migration ($P < 0.05$) (Table 4.30)

Quite interestingly, agro-ecology variable has insignificant effect on all but casual wage labor migration. It is found out that casual wage labor migration is a more-preferred type of migration among households located in highland/*dega* areas. Being in *dega* agro-ecology increases the probability of migration for casual wage labor by 21% ($P < 0.05$). Arguably, this could largely be attributed to the low soil fertility level (ALZR, 2007) and small size of per household land holding in highland areas (see Table 4.18) negatively affect the likelihood of households in this agro-ecology to participate in asset demanding type of migration like migration for crop farming.

Unlike binary logit, the multinomial model result shows a negative significant effect of the number of social organizations to which households belong on the likelihood of migration for casual wage labor. This may be the result of the role of social organizations to reduce the burden that drive households to participate in this type of migration. Like the result of binary logit regression, self-assessed status of soil fertility of agricultural land, sex, age and educational background of household head have no remarkable relationships with the tendency of households to take up any forms of migration (Table 4.30).

As a whole, it has become obvious that similarities and differences exist in the sign of independent variables in the two regression analyses. For instance, access to credit and agro-ecology are insignificant variables in the case of binary logit result, but both variables have significant positive relationships with casual wage labor migration. On the other hand, the number of social organization in which households' participate has insignificant effect on the

overall migration decision, but has significant negative effects on migration for casual wage labor. Unlike binary logit result, which portrays a significant negative effect of land and livestock on the likelihood of migration, these two variables have significant negative effect only on casual and full-time wage labor migration. These results imply that households have different livelihood capabilities that lead them to different forms of migration which, in turn, gives a message that temporary rural-rural migration is not a uniform activity taken by the poorest of the poor.

CHAPTER FIVE

VULNERABILITY OF MIGRANTS AND THE OUTCOMES ON MIGRANT HOUSEHOLDS

This chapter comprises two broad sections. Section one is devoted to the exploration of migrants' exposure to shocks at the place of destination. It deals with the type and distribution of shocks across different types of migrants based on 388 migrants that are identified from 250 survey migrant households. More emphasis is given to the investigation of the driving forces behind shock exposure across different sub-groups of migrants, and their risk management strategies. The second section aims at looking into the extent to which vulnerabilities of migrants at the place of destination shape the vulnerability of migrant sending households in terms of food insecurity and asset decumulation based on the survey data gathered from 250 migrant sending households.

5.1 Vulnerability of Migrants at the Place of Destination: Exposure and Responses to Shocks and the Contextual Factors behind Shocks

5.1.1. Exposure to Shocks

Survey result indicates that about 93% of migrants are exposed to one or more shocks at the place of destination during their engagement in temporary rural-rural labor migration. Comparison based on type of migrants shows that exposure to shocks are more prevalent among migrant farmers (100%) than casual wage labor migrants (87%) and full-time wage labor migrants (87%). The difference is statistically significant ($P < 0.01$) (Table 5.1).

Types of shocks exposure across types of migrants demonstrate that crop failure and market shocks are significantly more prevalent among migrant farmers (82% and 100%) than full-time wage labor migrants (28.9% and 51%, respectively) ($P < 0.01$). The percentage figure variation between market and crop failure shocks shows that larger proportion of migrants are exposed to market shock than crop failure shock. This suggests that market shocks are more covariate than crop failure shocks, which may be related to the fact that the factors for crop failure shocks vary between destinations and migrants, while the factors for market shock are dictated mainly by

international market forces that tend to uniformly shape migrants' exposure to market shock (see the details below).

Table 5.1: Distribution of types of shocks across types of migrants

Types of shocks	Types of Migrants			Total (388)	x^2
	Migrant farmers (n=178)	Casual wage laborers (n=119)	Full-time wage laborers (n=91)		
Overall shock exposure	178(100)	104(87.4)	79(86.8)	361(93)	0.00
Crop failure shocks	147 (82.6)	------	26(28.9)	173(44.6)	0.00
Market shocks	178 (100)	------	46 (50.5)	224(57.7)	0.00
Health shocks	124 (69.7)	89(74.8)	56 (61.5)	269(69.3)	0.12
Employment shocks	31 (17.4)	52(43.7)	15 (16.5)	98(25.3)	0.00
Crime shocks	40 (22.5)	43 (36.1)	22 (24.2)	105(27.1)	0.03

Source: Own Household Survey, 2015; numbers in parenthesis are percentages

Exposure to health shocks accounts for about 69% of migrants with no significant difference between types of migrants ($P > 0.05$). Small size of migrants (25%) include employment shocks in their lists of exposure to shocks where casual wage labor migrants (44%) are more dominant as compared to full-time wage labor migrants (17%) and crop farming migrants (17%) ($P < 0.01$). Similarly, casual wage labor migrants (36%) significantly dominate full-time wage labor (24%) and crop farming migrants (23%) in exposure to crime shocks. ($P < 0.05$) (Table 5.1).

As shown in Table 5.1, migrants are exposed to multiple shocks at the place of destination during years of their participation in migration. Crop farming migrants are more vulnerable to crop failure and market shocks, while casual wage labor migrants are more vulnerable to employment and crime shocks as compared to other types of migrants. Based on qualitative information generated through FGDs and KIIs along with secondary sources, the following section explores why and how different groups of migrants are exposed to shocks differently or similarly along with their risk management strategies.

5.1.2. Contextual Factors for and Responses to Shocks

5.1.2.1. Crop Failure Shock

As noted above, because of its higher market value, migrant farmers focus mainly on the production of sesame, a highly vulnerable crop to crop failure. Data obtained from different

primary and secondary sources reveal that three interrelated factors play roles in exposing migrants to crop failure at the place of destination, viz: excess rainfall, shortage of rainfall and poor agricultural practices.

I. **Excess rainfall**

Sesame is a highly weather sensitive and delicate crop to be adversely affected by weather vagaries. It is tolerant of drought, but intolerant of heavy rain, water logging and frost situations. Such weather events mostly expose sesame to diseases which ultimately bring a substantial loss in production (Geremew *et al*., 2012; Kostka & Scharrer, 2011). Migrant farmer focus groups and agricultural experts at the place of destination note the various level of exposure of those who engage in sesame farming to excess rainfall induced crop failure at different times, but they widely mention the more recent crop failure event (2014/15 cropping season) as a typical example. Migrant farmer focus groups indicate high investment they made in sesame farming, but untimely heavy rain damaged the crop that forced them to come back home at a lose. They describe the event as:

> In some years, when nature becomes in our side, we manage to get significant returns from our investment. Conversely, when it turns its face away, we suffer a lot. During 2014/15 cropping season, untimely heavy rain significantly damaged our sesame crop. Expecting that things would be rewarding, we invested a lot by taking loans with high interest rate, selling our livestock and using saved money from previous rewarding years of migration. However, crop failure made everything an illusion. We returned home empty handed.

During that particular cropping season, severe heavy rain induced sesame crop failure shock brought adverse effects in major sesame growing areas of Ethiopia (ECX, 2015). The data gathered from agricultural experts and migrant farmer focus groups also indicate the fact that if sesame crops are exposed to heavy rain during ripening stage, sesame pods shatter and result in a loss of yield. In Ethiopia, shattering is a leading factor of yield loss in sesame farming because sesame varities of the country by their nature have capsule that shatters upon their maturity. They have indeterminate flowering characteristics if there is nutrient and rainfall availability that cause early emerging capsule to dry up, open and release its seeds. If this is accompanied by heavy rainfall, it can lead to a significant loss of yield (Daniel, 2017). Focus groups acknowledge shattering as an important source of their

exposure to crop failure, an issue that corroborates the observation of other studies on sesame farming in Ethiopia (GAIN, 2016; Kostka & Scharrer, 2011), and Mali and Burkinafaso (Gildemacher *et al.*, 2015). It also corroborates studies on exposure of migrants to environmental change that manifest itself at the place of destination in different ways (Gänsbauer et al., 2017; Santa *et al*., 2016)

As part of their risk management strategies of crop failure shocks, migrant farmer focus groups indicate partly diversifying the type of crops they grow which is a common practice among farmers in sesame growing areas of Ethiopia (see Kostka & Scharrer, 2011). Other indicated strategies used by some migrants include avoiding any form of migration altogether at least for some time and switching to other forms of migration such as casual wage labor and full-time wage labor migration due mainly to desperation and/or lack of investment capital to engage in sesame farming.

II. **Shortage of Rainfall**

Although sesame is a drought resistant crop by its nature, it needs adequate moisture at its early growth stage (Geremew *et al.*, 2012). When the rain is inadequate at this stage, it becomes susceptible to diseases which, in turn, cause the seed to dry up (Kostka & Scharrer, 2011). Migrant farmer focus groups take this source of shock as less frequent, but containing adverse effects when it occurs. For instance, key informants from migrant farmers and agricultural experts at the place of destination attest the more recent drought year of Ethiopia (2015/16) that exposed migrants to rainfall scarcity induced crop failure. This substantiates observations made by GAIN (2016).

As a risk coping strategy for rainfall deficit induced crop failure, the same informants report planting new sesame varieties which can mature early as compared to the crop that is initially tried but failed. This measure has its own economic burden in terms of additional cost for labor, draught power and buying new varieties of sesame. As an ex-ante risk reduction strategy,

migrants push planting time until they can get adequate rain comes during which they plant sesame varieties that can mature within shorter growing period.[7]

As a whole, like other parts of Ethiopia, rainfall is a key climate variable causing sesame crop failure at the place of destination. However, it is important to note here that meteorological drought is the major agent for crop loss in most part of Ethiopia (Hess, Wiseman & Robertson, 2006). On the other hand, the major agent of crop failure in sesame farming, as explained by migrant farmer focus groups and agricultural experts, appears to be the prevalence of excess rain. The above points generally pass a message that natural factors make sesame farming a risky agricultural business as outputs are largely dependent on the conditions beyond farmers' control, making returns from sesame farming a matter of chance.

III. **Poor Farming Practices**

In order to ensure better output from sesame farming, one has to be careful in carring out timely activities particularly during weeding and harvesting seasons. A small deviation from appropriate agricultural practices in sesame farming may cause a significant loss in output (Negash, 2015). Migrant farmer focus groups acknowledge their exposure to different level of sesame yield loss because of poor farming practices. In explaining crop failure, interviewed agricultural experts at the place of destination and migrant farmer focus groups indicate a number of poor farming practices such as poor land preparation, failure to sow, weed and harvest on time and properly, use appropriate seeds, select appropriate land for sesame production and practice crop rotation, and using the same seed several times. Agricultural experts note that such poor practices relate much with lack of appropriate knowledge in sesame farming and adequate institutional support in the sesame sector including lack of migrant targeted counseling regarding sesame farming practices at the place of destination.

Important loss of sesame occurs during the harvesting time. Sesame must be harvested within two to four days window otherwise the capsule shatters and disperses the seeds to the ground. This makes harvesting of sesame a labor intensive activity. The required labor input for

[7]*Growing period is a time-span required for a given crop to grow and mature. Growing season is the available number of successive months of a year with suitable moisture and temperature situation for healthy plant growth (Gill, 2003).*

harvesting is about 30-40 person-days/hectare (Wijnands *et al.,* 2009). Migrant farmer focus groups explain that there are signs in the leaf of the sesame plant that show the right time to harvest. Sometimes, some inexperienced migrants know nothing about these signs and sesame pods shatter and disperse seeds to the ground that ends up with a significant yield loss.

Agricultural experts also indicate a combination of poor agricultural activities and natural factors in terms of exposing sesame to diseases, insects and pests that drives sesame crop failure. Agricultural experts further explain that poor farming induced crop failure of sesame crop is reinforced by the very nature of sesame varieties in Ethiopia. As noted above, sesame varieties in Ethiopia by nature are shattering type and the capsules do not ripen uniformly. Those capsules in lower part of sesame plant ripen earlier than those in the upper part that causes the lower part to disperse before the upper part ripens fully.

Migrant farmer focus groups point out ex-ante risk reduction strategy of labor shortage induced crop failure by calling their household members from their origin and/or employing full-time wage laborers or casual wage laborers. Another risk management strategy includes initially limiting the size of land one can manage within his reach of financial and labor resources. Working day and night to harvest sesame on time (before it disperses) is also a key ex-ante risk reduction strategy. It is further noted that one needs to learn from experienced migrants or any well versed individuals within their range of social networks to avoid risky farming practices as sesame farming needs adequate knowledge of what type of sesame variety is suitable to what type of soil and what agricultural activities at what time. In line with this, Winkels and Adger (2002) indicate the role of social networks in Vietnam in shaping access to agro-ecological knowledge of the destination area that helps migrants to overcome impeding risks.

Both agricultural experts and migrant farmer focus groups agree with the fact that the risky nature of sesame production is not uniform even among the same types of migrants. First, the impact of bad weather may be more severe in some areas than others. The intensity and the distribution of rainfall, the number of rainy days, and duration of sunshine, wind speed and radiation intensity influence yield of sesame (Ibrahim, 2015). Second, poor agricultural practices induced crop failure may significantly vary from migrant to migrant. Focus groups stress that different migrant farmers having adjacent sesame farm land may produce different amount of

sesame because of differences in farming practices. Thus, it is important to note that crop failure can be idiosyncratic (e.g. poor farming practices induced crop failure) or covariate (e.g. bad weather condition induced crop failure) or both. Lastly, although much of the above discussions focus on migrant farmers, full-time wage labor migrants can be directly affected by crop failure depending on the nature of their terms of employment. Those full-time wage labor migrants who are employed in proportional in kind wage are directly affected by crop failure shocks as their wage is the function of the amount of agricultural products their employers manage to get. This reflects the fact that the terms of employment shape the exposure of full-time wage labor migrants to crop failure. Generally, the factors for vulnerability of migrants to crop failure are related to a complex web of interaction between excess rainfall, shortage of rainfall, the very nature of sesame variety in Ethiopia and poor agricultural practices.

5.1.2.2. Market Shock

As mentioned earlier, sesame is the most important export item in Ethiopia next to coffee. About 75% of sesame production is exported (GAIN, 2016), and the quantity exported increased by more than threefold from 124, 291 in 2007/2008 to 400,000 tones in 2015/16, (Ethio Export Platform, 2016). However, it is highly affected by international volatile market environment (UNDP, 2015) that make migrant farmers vulnerable to price shock. In this regard, migrant farmer focus groups point out the more recent (2014/15 crop season) extreme decline in the market price of sesame where there was ever declining of the market price following harvest. To make things worse, they kept sesame with the expectation of price rise that left them even more severe shock due to ever declining price. This shows the ways by which the risk management strategies of migrants turn out to be the driving force for higher level of shocks. The following is an excerpt from migrant farmer focus groups about price shock:

> To push things from bad to worse, extreme decline in market price of sesame in 2014/15 croping season added troubles to the already existing suffer from crop failure. Market price of sesame was unpredictable. It had declined every day while we were waiting for high price. When we completed threshing sesame, the price was around Birr 3200/quintal. Expecting price rise, we preferred to wait for some days. Surprisingly, the more we waited, the more price decline. For fearing of further price decline, we decided to sell at the existing price. Now (at the time of interview) the price even went down to Birr 2300.

Data from migrant farmer focus groups indicate that such a higher level of price decline significantly reduced the returns expected from labor migration. The same focus groups also reveal the influence of market volatility in increasing the cost of production during 2014/15 growing season because of increased competition for wage laborers and land. This competition came about as a result of increased migration towards sesame growing areas following exceptional high price of sesame during the previous cropping season (2013/14). For instance, the cost of female full-time wage labor during 2013/14 cropping season was between Birr 4000-5000. However, during 2014/15 cropping season, the cost raised to Birr 6000-7000. Similarly, the cost of land rent during 2013/14 cropping season was around Birr 1000/hectare and increased to as high as Birr 4000/hectare during 2014/15 cropping season mainly at major destinations like Mirab Armachiho district.

Information gathered from an interview with an expert from ECX office at the federal level appears to corroborate the data obtained from migrant farmer focus groups. It is indicated that regrdlesss of higher level of investment on sesame farming during 2014/15 cropping season, the market price of even highly valued sesame variety of Humera-Gondar type became very lowest because of oversupply of sesame to the global market and the loss of quality of Ethiopian sesame. As noted, the market price of sesame dramatically declined from Birr 4300/quintal during 2013/14 cropping season to as low as 1500/quintal during 2015/2016 cropping season. This indicates about a 65% price decline between 2013/14 and 2015/16 cropping seasons, a trend that reflects the secondary data obtained from ECX (see Figure 5.1).

Moreover, interviews with migrant farmer focus groups and experts from both agricultural and ECX offices reveal the limits bad weather imposes not only to the amount of production, but also to the quality of sesame. The decline in quality of sesame, in turn, contributes to market shock, suggesting the interdependence between bad weather-induced crop failure and market shocks. This reflects double exposure of migrants to the effects of both rainfall variability and market globalization. This lends support to the argument made by O'Brien and Leichenko (2000) that those individuals who are vulnerable to the effects of climate change/variability may also be exposed to the effects of global economic change.

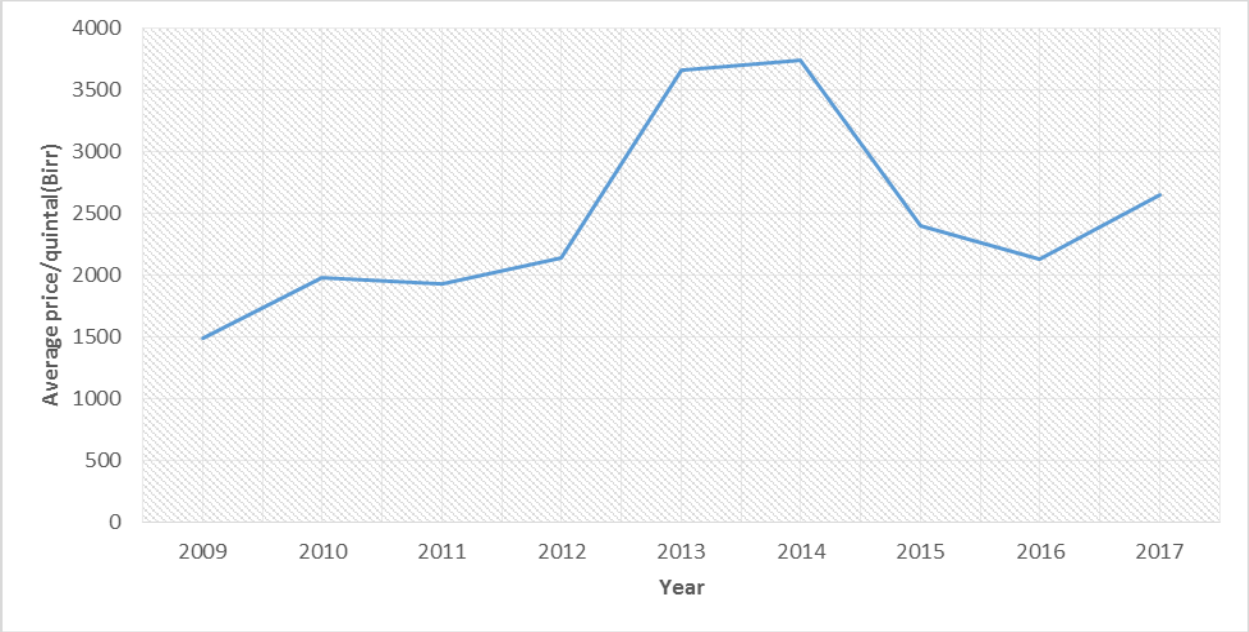

Figure 5.1: Average national level price of sesame across years

Source: ECX, 2018

Speaking about risks related to sesame farming, the same informants describe the benefit from sesame farming as matter of chance. It is argued that when nature favors sesame production and creates better opportunity, low market price (human forces) becomes an obstacle and negates the opportunity. When things get worse, crop failure and market shocks come together and put producers into severe loss. They exemplify this by taking the contexts of three consecutive years. During 2013/2014 cropping season, there was high production and high market price of sesame. During 2014/15 cropping season, however, everything was changed where bad weather condition adversely affected sesame production that was accompanied by low market price to make migrants ending up with unbearable loss in just one cropping season. On the other hand, 2015/16 cropping season was a time of bumper production that was, however, annulled by low market price.

The key factor that drives market shock appears to be related to the fact that sesame price is dictated by international market where the Ethiopian government in general and migrants in particular have no power to control. Migrants are put in a position where they transfer price shock to neither any third party in the market chain nor any social security system as noted

elsewhere (Terefe, 2016). This context of migrants' vulnerability reflects powerlessness. In the context of international political economy, workers (migrants in this case) are taken as the objects of international economic globalization process through dictating the outcomes of labor (Koroma, 2007; Mosley & Singer, 2015). Especially, workers in disadvantageous sectors (e.g. agriculture) are the main losers (Mosley & Singer, 2015).

There is an argument that in those days of less globalized world, the causes and consequences of market and other forms of shocks were more localized. With globalization or the integration of countries into the wider systems of production and marketing, the sources and impacts of shocks at a given location are scaled up (Rigg & Salamanca, 2009), reflecting the translocal nature of the factors behind vulnerability. In line with this, there is a contention that if crops are less integrated into international market, the decline in production because of climate variability tends to bring price raise that compensates the decline in production. On the contrary, for crops that are highly globalized (e.g. sesame), a decline in local production has little 'compensatory price effect' to the producers because production gaps can be filled by other competitors (Antonaci et al., 2015).

Another contributing factor for the exposure of migrant (farmers) to market shock is associated with the fact that exports of Ethiopian sesame are confined to limited and low value export markets. Main importers of Ethiopia's sesame are China, Israel, Turkey and some other countries of Europe and Middle East. Ethiopia does not export to high value markets of the US and Europe (GAIN, 2016; MoARD, 2015; Van der Mheen-Sluijer, 2010). This is because Ethiopia's sesame does not meet the requirements of high value markets (Van der Mheen-Sluijer, 2010).

China, the leading importer, is the destination of about 65.5% of Ethiopian sesame export. In 2015, China reduced its import of sesame from Ethiopia as a result of satisfying its demand from India and local production. As a result, the Ethiopian sesame export notably dropped. Overdependence on Chinese market or narrow market outlet appears to make the country in general and migrant farmers in particular more vulnerable to market price volatility (Tesfaye, 2015). This shows that, as prices are dictated by the global market, price shocks are easily transferred from one place (e.g. China market) to another place (e.g. migrants' place of

destinations). This reflects the translocal nature of migrants' vulnerability. In this case, it can also be argued that migrants' vulnerability at place of destination is associated with the national institutional set up (market liberalization) that works for the benefits of actors above national scale (Mullings, 2004). This suggests that exploitative relationship (network) in market globalization transforms migrants' destination to the place of exploitation and exclusion. Similar contexts of vulnerability is also observed among migrant coffee growers in Vietnam (Winkels, 2004) and coffee farmers in Ethiopia (Tatek, 2007) as the result of global coffee market volatility, a situation often linked to the advent of structural adjustment program in many African countries where poor farmers became the victims of the risks created by global market (Koroma, 2007).

As noted by migrant farmer focus groups, low price of sesame is partly influenced by ECX determined standardization of sesame as Humera-Gondar and Wollega types. In this regard, the HumeraGondar type receives higher market price. Informants argue that this standardization of sesame price does not entirely based on sesame types but rather on the region where sesame is produced. They argue that part of sesame produced in Jawi district is similar to the Humera-Gondar type, but it is labeled as Wollega type.

Generally, the price shock particularly higher level of price decline of 2014/15 cropping season was mainly the result of: (1) excess supply of sesame to the global market; (2) crop hoarding by (migrant) farmers in expectation of higher price; (3) poor quality of sesame resulting from bad weather; and (4) limited export destination (Tesfaye, 2015). The lesson is that macro context such as globalized market and liberalized economy, the vagaries of weather and individual migrants' risk management strategies interact with each other in driving and enhancinge the vulnerability of migrants to low market price. This reflects translocal vulnerability where multiple factors at different scales and risk management strategies intertwined each other in shaping the vulnerability of migrants to market shock at the place of destination.

5.1.2.3. Health Shock

Health shock is idiosyncratic in nature. It is a commonly reported shock across all focus groups. It is noted that the opportunities at the place of destination come at a cost of exposure to health

shocks. Health experts report malaria, diarrhea, typhoid, typhus and anemia as the common sources of health shocks. Other mentioned sources include tuberculosis, visceral leishmaniasis (*Kala-azar*), bite by venomous snake and scorpion, and sexually transmitted diseases including HIV/AIDS. Malaria is the most frequently reported source of health shock. The data obtained from focus groups and health experts indicate that health shocks at the place of destination are largely related to poor working and living conditions as discussed in the following sections.

i) Poor Housing, Nutrition and Water Supply

Health experts indicate that the vulnerability of migrants to malaria, as the main agent of illness and death, is attributed mainly to the fact that migrants commonly live and work in open spaces or partly open shelters with limited access to the required facilities (Figures 5.2 and 5.3). These shelters could not fully protect them from erratic rainfall and biting from scorpion, mosquito and snake. Health experts further state that as migrants work in the night, especially during the harvesting time, there is a high level of exposure to mosquito biting, which is also relected by other studies in Ethiopia (Schicker et al., 2015; SBN, 2015; Woldie, et al., 2010) and India (Rogaly et al., 2002).

Figure 5.2: An open space where casual wage labor migrants take rest and even spend the night during dry season
Source: Own Field Photo (2015)

Figure 5.3: Provisional house where temporary casual wage labor migrants (left and middle) and a crop farming migrant (right) live

Source: Own Field Photo (2015) (left), SBN (2015) (middle), and Key informants from North Gondar Zone health office (2015) (right)

In addition, as noted by health experts, temporary casual wage laborers especially those who are employed by investors sometimes live in overcrowded group housing that exposes them to various kinds of communicable diseases such as tuberculosis. Similar evidence is traced in India (Rogaly et al., 2002).

The problems of the people in dry land Ethiopia that includes the destinations of migrants are also characterized by poor health condition associated with poor diets and polluted water along with poor infrastructure (Georgis et al., 2010). Data from focus groups show that migrants usually eat food they are not familiar with at the place of origin like *enjera* made from *teff*. The common foods they eat at the place of destination are *genfo* (porridge) and *kita* (bread) made of sorghum (Figure 5.4). Focus groups and health experts have the feeling that these foods are less nutritious compared to the required energy for intensive labor work that are claimed to increase migrants' vulnerability to health shocks.

Figure 5.4: Flour of sorghum (left) and a casual wage laborer preparing *genfo* (porridge) made of sorghum (right)
Source: Own Field Photo, 2015

Female full-time wage labor migrant focus group, for instance, reveal their context where they are required to work day (agricultural activities) and night (preparing food) in hot climate with less nutritious food that exposes them to diseases. It is stated by health experts that some investors provide wage laborers with food items (flour of sorghum) which are already expired. They also express that, due to hot climate, the food prepared by laborers get easily spoiled within a shorter period of time. Such dietary contexts expose migrants to different kinds of diseases like typhoid in similar ways observed among migrants in southern cities of Ghana (Kwankye *et al*., 2007)

As a response to food associated health risks, casual wage labor migrant focus groups explain the measure of some migrants in terms of changing the destinations to areas where there is food they are familiar with at the place of origin. As sorghum is source of staple food at sesame producing destinations, some casual wage labor migrants prefer to migrate to *teff* growing destination where *teff enjera*[8], a staple food at the place of origin, is available. Migrant farmers who move to nearby destinations such as Jawi district of Amhara Region and Metekel zone of Benishangul Gumuz Region prefer to carry food items right from their place of origin to destination.

[8] a flatbread prepared from fermented *teff* flour

As far as poor water supply induced health shocks is concerned, it is claimed by focus groups and informants from LaSA and Health Offices that migrants work in a hot climate with poor access to clean water for drinking and sanitary purposes. The major sources of water for most migrants are water collected from rivers and ponds (Figure 5.5) which are reported as unsafe for drinking. The findings from all focus groups reveal that sometimes they share water sources with animals. Health experts indicate diarrhea, typhoid and other water borne diseases to which migrants are exposed. Focus group discussants note exposure to illness at least once over the years of their employment at the place of destination and sometimes to repeated illness in a single cropping season.

Figure 5.5: Water used by casual wage laborers for drinking and cooking
Source: Own Field Photo, 2015 (left) and SBN, 2015 (right)

iii) Agro-Ecology, Poor Access to Health Facilities and Harmful Health Risk Management Strategies

The place of origin of the migrants is a highland area with an elevation ranging between 1920 and 3533 m.a.s.l, while their place of destination is a lowland area with an elevation below 1500 m.a.s.l. Lowland areas as the key place of destination of migrants have hot climate which is considered by all focus groups as uncomfortable for working and living. These areas are also known for high risk of malaria infestation making them unsuitable for settlement (Pankhurst & Piguet, 2004). A study made by Kassahun, Alemayehu, Yemane and Abera (2014) shows that those individuals from highland areas of Ethiopia have limited or no immunity to malaria infection as compared to those from lowland areas. It demonstrates that those individuals who

migrate from highland to lowland areas (mallareous areas) for employment purpose suffer more from malaria infection than those who move to other areas. As noted by health experts, although the agro-ecological conditions of migrant destinations are favorable for the prevalence of some disease causing agents such as mosquito, these areas are not adequately served by government or private health service providers partly because of the scattered settlements.

Health risk management strategies of migrants are also noted as important sources of health shocks. Health experts and focus groups identify a number of harmful health risk management strategies of migrants. These include: 1) tending to refrain by some migrants from taking medicine with the expectation that health condition will improve without taking medicine; 2) reducing the cost of medication and not to losing the opportunity cost of being out of one's work, some migrants continue to work unless the illness becomes acute, indicating employment risk management strategies triggers their exposure to health shocks; 3) starting taking medicine but stop taking it just after they partly recover from illness. This, in turn, causes the development of drug resistant diseases; and 4) waiting to get treatment until returning to the place of origin. Focus groups report cases where sometimes they come back home sick or become sick just after their arrival. This accords with the finding of Santha et al. (2016) in Indian cities. Health experts indicate that some health risk coping strategies of migrants may result in the disease to develop into a higher stage which, in turn, may become a life threatening health problem. Besides, untreated or asymptomatic infections of the migrants at the place of destination may be responsible to transporting the parasites to the place of origin of migrants (Schicker et al., 2015; Ward et al., 2013).

As evidenced by casual and full-time wage labor migrant focus groups, migrants exposure to to health shocks has much to do with their tendency to give first priority to the amount of money they can generate than the improved facilities provided by their employers. Similarly, interviews conducted with migrant farmer focus groups reveal that they give more priority to get more suitable and cheaper land for farming, instead of looking for lands which are located around better infrastructure and health services. These suggest that good living and working condition are the second criteria after good returns out of one's employment, a situation confirmed by other studies on casual wage laborers in Nothwestern Ethiopia (SBN, 2015).

Full-time wage labor migrant and migrant farmer focus groups disclose that they work at places where sometimes it requires them to travel more than five hours on foot to arrive at a nearby health center. Inaccessibility of health services and subsequent health shocks reach highest level during rainy season. All focus groups indicate health risk management strategies by traveling in groups so that they can support each other in time of health shocks. They also disclose that they sometimes buy medicine from pharmacies and ordinary shops without prescription before they move to their place of work since they could not easily access health services at their destination. In this regard, focus groups describe the health shocks and related risk management strategies at the place of destination as follows:

> At our places of destinations, we are exposed to a number of diseases especially malaria. Taking a patient to health centers needs four to six individuals. Sometimes, it needs to travel for five to seven hours on foot to get to the nearby health centers. As a way out, we usually buy medicine and mosquito bed net before we move to agricultural field. When our preventive measures fail, we try to bring a patient to health centers with the help of fellow migrants. (Migrant farmer focus groups).

From the above result, it is observed that migrants use some important health risk reduction strategy such as use of mosquito bed net (Figure.5.6) and migrating in groups to assist each other in times of health shocks. However, some health risk reduction and coping strategies of migrants such as buying and taking medicines without medical examination may lead to unexpected severe health problems.

Figure 5.6: Mosquito bed net used by temporary crop farming migrants in a provisional house
Source: Key informants from North Gondar Zone health office, 2015

In case of casual wage labor migrants, discussants point out the possibility of buying medicine from their employers (investors) in time of illness. They tell that they buy medicine from investors with higher price as compared to its price in pharmacies. There is an attempt by Amhara Region Health Office to provide temporary health services in areas where large size of temporary casual wage labor migrants are employed. Experts from health and LaSA offices of North Gondar Zone indicate that medicines (mainly for malaria) are distributed to investors to make it available to migrants free of charges. However, as noted by experts, some investors take payment from migrants usually from their wages.

Similarly, experts further disclose that although investors are required to provide a number of necessary health related facilities to casual wage labor migrants, there is little enforcement of these requirements by concerned government bodies. This suggests that due to limited enforcement system of protecting migrants' right, employers' tendency of violating such rights contribute to increasing exposure of migrants to health shocks. In addition, although there are some attempts made to create awareness at bus station and places of migrant gatherings in urban centers, health experts report that health problems of migrants are reinforced by poor migrant targeted counseling, education and preventive measures.

Lastly, focus groups indicate that health shocks are responsible for unemployment, poor crop managment, inadequate saving and spending money for medication at times beyond the amount of money one earned. As stated by an expert from Amhara Region LaSA office, poor access to transportation and health services are some of the main obstacles to migrants' employment and earnings. This indicates the interdependence between employment and health shocks.

5.1.2.4. Employment Shock

Employment shock is an idiosyncratic shock. As noted in Table 5.1, it is more dominant among casual wage labor migrants than other forms of migrants. This might be associated with lack of pre-arranged job at their place of destinations. Unlike casual wage labor migrants (13%), the overwhelming majority of crop farming migrants (97%) and full-time wage labor migrants (90%) have prearranged job made usually before their last migration ($P < 0.01$) (Table 5.2). This

indicates that most casual wage labor migrants leave for their place of destination without guarantee for employment as also observed elsewhere (Woldie *et al.,* 2010).

Table 5. 2: Availability of pre-arranged job before last migration across type of migrants

Availability of pre-arranged job	**Types of migrants**			**Total**	**X^2**
	Migrant farmers	**Casual wage laborers**	**Full-time wage laborers**		
Yes	172 (96.6)	16(13.4)	82(90.1)	270(69.6)	0.00
No	6(3.4)	103(86.6)	9(9.9)	118(30.4)	
Total	**178(100)**	**119(100)**	**91(100)**	**388(100)**	

Source: Own Household Survey, 2015

According to the key informants from LaSAOs, employment shocks among casual wage labor migrants largely result from lack of access to adequate labor information. Casual wage labor migrant focus groups tell that sometimes they arrive at the place of destinations after available job opportunities are saturated. Being unemployed and struggling to get alternative job opportunities are shared experiences of these groups of migrants. In this regard, casual wage labor migrant focus groups uncover the range of vulnerability as follows:

> Sometimes, we fail to get jobs when we arrive at the place of destinations. Especially when wage laborers become plenty in the labor market, we remain unemployed for days, employed with a minimal wage, or stay idle after the end of a certain employment. Occasionally, we also take up jobs simply for the sake of keeping ourselves fed since employers provide us with food during engagement period. At times, we return home in desperate condition without making money that could not even cover cost of transportation.

This script suggests that being unemployed at the place of destination has much to do with absence of labor information. It also appears that exploitation of casual wage laborers with minimal wage rate is related to lack of minimum wage for labor. These findings are generally consistent with other studies on seasonal wage labor migration in Amhara Region, Ethiopia (Woldie et al., 2010), youth migration to urban centers in Ethiopia (Adamnesh et al., 2014), temporary migration for agricultural work in India (Rogaly & Coppard, 2003) and international casual wage labor migration for horticulture harvesting in Australia (Underhill & Rimmer, 2015).

Key informants from LaSAOs note that oversupply of wage laborers in the market that ultimately leads to unemployment has some relation with the fact that investors announce exaggerated demand for temporary wage laborers via government electronic media. They explain that investors' exaggerated call is associated with their interest to get adequate labor supply and to set wage rate to the lowest possible level. This paves the way for exploitation of wage laborers.

It is also possible to argue here that exposure of migrant to employment shocks is the result of the fact that large size of labor forces including temporary labor migrants in Ethiopia are employed in the informal sector which is characterized by unemployment, low income and low institutional protection. Market institutions have pivotal roles in managing employment contracts, and labor information and protection. In Ethiopia, however, these services are so poor that they contribute to increasing job insecurity among individuals in the informal sector (MoLSA, 2009; World Bank, 2007).

Casual wage labor migrant focus groups and key informants from LaSAOs also correlate employment shock with the crop failure experiences of potential employers. When investors, the main employers of casual wage laborers, become victims of crop failure shock, they are compelled to reduce their demand for temporary wage laborers that causes wage rates to come down, and the termination and violation of contract as equally noted by Kostka and Scharrer (2011) in Benishangul Gumuz Region, Ethiopia. It is also noted that bad weather events tend to lead to poor, short and highly dispersed sesame stand in the agricultural field. Under this context, casual wage laborers are required to bend much down ward and take more time to make a *hilla* (400 punches of sesame) that compromise the returns from employment. It is also stated by the same informants that poor stands of sesame in the field force casual wage laborers to move from one place to another to look for better employment opportunities where there is a possibility that they could not secure rewarding employment. Informants stress that such erratic rainfall related employment shock is related to those migrants who have no up-to-date information about employment opportunities at a certain place of destination.

KIIs with casual wage labor migrants and experts from LaSAOs also associate climate variability especially the late onset of rainfall with employment shock especially when migrants have little access to information about the changing rainfall pattern. Sometimes, a delay in the onset of normal rainfall patterns propels a shift in planting and weeding times of crops. In this case, those migrants who follow their previous time of migration are exposed to unemployment upon their arrival at the place of destination. By taking a more recent example (during 2015/16 cropping season), informants explain that less informed casual wage laborers migrated to major sesame growing areas by expecting that the demand for wage laborers for weeding would be similar to the previous year. When they arrived at those destinations, however, there were no employment opportunities because the late onset of rain at this period postponed the weeding time of sesame. Similar case is evidenced by Rogaly (1998) and Rogaly and Coppard (2003) in West Bengal, India where the incidence of employment shocks among seasonal migrants for agricultural work is associated with, among others, between years variation of climate.

As mentioned in the previous section, exposure to health shock can also lead to employment shocks. When migrants suffer from health shocks, they become idle and sometimes forced to return home without making money. The above qualitative findings are quite informative from three important dimensions. First, employment shock exposure of wage laborers due to a combined effect of rainfall variability and lack of job information or the effect of health shock on employment shocks demonstrate that factors of and exposure to shocks are multiple and interacting with each other. Second, although crop failure shocks are not reported among casual wage labor migrants in the household survey, the qualitative findings reveal how these shocks may have spillover effects on casual wage labor migrants in terms of exposing them to employment shocks. This shows the ways by which the different sub-groups of migrants are integrated to rainfall variability and associated shocks. Finally, they suggest that exposure to covariate shocks (e.g. rainfall variability induced crop failure) can introduce exposure to idiosyncratic shock (e.g. employment shock).

The data drawn from casual wage labor migrant focus groups indicate that well-informed migrants manage to arrange where to migrate through telephone, asking individuals they know about existing employment opportunities and risks of potential destinations. To that end, they

exchange phone numbers with other migrants and potential employers. This shows how social network or information is important in reducing vulnerability.

Giving more emphasis to casual wage laborers as the major victims of employment shock does not mean that other sub-groups of migrants are immune from such shocks. For instance, it is stated by migrant farmer focus groups that there are migrant farmers who move to a certain destination without making prior arrangement to find accessible and suitable lands for sesame farming. This situation, in turn, forces them to migrate to remote areas where there is less competition for land. Sometimes, as a coping strategy of lack of accessible and suitable land, they tempt to make land deal with the land owner who has already reached an agreement with another migrant. This leads to the emergence of conflict between migrants and land owners or between migrants themselves. This shows how the coping strategies meant to overcome employment shock could create other kind of shock such as conflict. It is also stated by full-time wage labor migrant focus groups that there are instances where some migrants who try to search for employment opportunities late after the available jobs have already been occupied and this forces them to take up jobs with low payment.

Generally, employment shock is common among casual wage labor migrants. However, as stated by focus groups and key informants from LaSAOs, the vulnerability of casual wage laborers to employment shock varies depending upon prevailing conditions across the place of destinations and time period, and characteristics of migrants such as access to information.

5.1.2.5. Crime Shocks

This section considers three broad but interrelated manifestations of crime shocks: theft, breaching agreement and conflict. It disentangles the contextual factors behind these shocks and risk management strategies of migrants.

l) Theft

Exposure to theft is a common shock among different sub-group of migrants although it is widely discussed by focus groups organized from casual wage labor migrants. Interviews with casual wage labor migrant focus groups and police officers reveal that migrants' exposure to

theft is partly associated with higher tendency to move from one place to another in search of jobs and their tendency to carry money because of inadequate banking services in some places of destinations and limited experiences of migrants in using banks. Police officers also associate the exposure of migrants to theft with migrants' tendency to migrate to remote areas where legal protection is low. Theft is taken as more serious at the destinations in North Gondar Zone of Amhara Region in the same way to the case of seasonal labor migrants in India (Roglay *et al*., 2002).

As a risk reduction strategy, it is noted by all focus groups that they move in groups to to support each other in case of insecure situation while casual wage labor migrants move to employers with less vulnerability to theft and other forms of shocks. Police officers make some efforts to create migrants awareness in places of gathering about the existing crime risks and possible measures to take. Another reported measure taken by the government is to require investors to pay the wage of migrant laborers in urban areas to avoid or minimize the risk of theft if payment is made in rural working places.

ll. Breaching Agreements and Conflicts

These forms of crime are the commonly mentioned shocks across all focus groups although their manifestations are different across types of migrants. Interviews with focus groups and police officers indicate breaching agreements and/or conflicts between wage laborers, between wage laborers and their employers, and between migrant farmers and land owners. For instance, investors sometimes violate contracts that manifest themselves in the form of delayed payments or under payment or avoiding payment at all. Casual wage labor migrant focus groups describe this situation as:

> Sometimes, we migrate to work in harvesting time alone and immediately return home to engage in agricultural activities. However, some employers try to force us to stay longer and work on threshing sesame. When we say no, they either reduce or refuse to pay our wages that sometimes leads us to conflicts.

Informants from LaSA and Police Offices express that the key factor behind violation of contracts is lack of written agreement between wage laborers and employers. Data obtained from

focus groups show that full-time wage labor and crop farming migrants commonly have written contract with employers and land owners, respectively. However, for casual wage labor employments, mostly there is no written contract and the terms of payments are set orally. This suggests that there is little room for legal enforcement in case of contract violation as are the cases of seasonal wage labor migrants in India (Rogaly & Rafique, 2003) and Australia (Underhill & Rimmer, 2015).

Informants from the same offices state that breaching contracts and conflicts sometimes occur when potential employers are exposed to crop failure and market shocks. Investors commonly take loans to support their investment from different sources including loans from private money lenders with high interest rate to finance their crop production, but sometimes, crop failure curtail their capacity to collect sufficient money to pay wage laborers. This paves the way for some investors to underpay or refuse to pay wage laborers. That, in turn, gives rise to conflicts between wage laborers and employers. Orally set contracts give a good room for investors to breach agreements. According to an informant from North Gondar Zone LaSAO, his office in collaboration with other government offices manage to get casual wage laborers paid about five million Birr per annum at zonal level mainly from investors who fail to pay them. This indicates the degree of breaching agreement that may be accompanied by conflict and loss of wages.

Full-time wage labor migrant focus groups also reveal that employers' exposure to shocks are directly or indirectly transferred to them leading to underpay or no pay. This, in turn, levels the ground for conflict with employers. As noted earlier, migrant farmers are key employers of full-time wage laborers. Most of the time, wage laborers receive wages after the end of the work they are employed which puts them in high risk of contract violation if employers could not manage to collect enough money to pay full-time wage laborers. This indicates the linkage between different shocks across different forms of migrants. This context accords with Underhill and Rimmer's (2015) finding that the different forms of growing pressure on horticulture industry in Australia causes employers to transmit this pressure to their hired migrant workers. The spillover effect of employers' vulnerability on wage laborers demonstrates interdependent or networked vulnerability.

Breaching agreement and/or conflict also occur between migrant farmers themselves and between migrant farmers and land owners. Information from migrant farmer focus groups indicate that those who migrate mainly to Benishangul Gumuz Region are sometimes asked an additional payment from land owners or totally denied to take their share against what is stipulated in the written agreement. Focus groups data also show that sometimes land owners wittingly or unwittingly enter into another agreement where they sharecrop or rent out the same plot of land for another migrant. Mostly, the second agreement occurs in favor of land owner. This results in competition between two migrants for the same plot of land and sometimes, this leads to conflict between these migrants.

Data from migrant farmer and full-time wage labor migrant focus groups and police officers reflect that migrants use different strategies to manage their vulnerability to crime shocks. As ex-post risk coping strategies of agreement violations, they try to get their payment by reporting the case to police officers at the place of destinations, although such endeavors are time taking and sometimes less effective. Mostly, migrant farmers and full-time wage labor migrants use already reached written agreements in their attempt to settle contract violation.

Migrant farmer focus groups note that they are regarded by natives and government officials at the place of destination as 'illegal settlers', source of conflict and threat to local resource. There is a fear among migrants particularly those who migrate to Benishangul Gumuz Region that conflict could arise at any time and force them to leave the place before harvesting their crops. It is indicated that conflict between a single migrant and a local (a Gumuz) can cause a group of migrants to be victims of eviction or indiscriminate attack by local people. Because of such type of retaliation against innocent migrants, migrant farmers tend to live in a 'climate of fear'. Such understanding generally gives a hint on how migrants' vulnerability is partly shaped by the administrative region where they migrate to. It also shows that idiosyncratic shock of conflict between a migrant and a local may be transformed to a kind of ethnic-based conflict which can cause eviction, death and loss of property. Discussants raised an example of such event that occurred in Yaso district of Benishangul Gumuz Region in 2012/2013. Similar inter-ethnic conflicts occurred in Gida Kiramo district of Oromia Region, between Amhara migrants and locals (Tesfaye, 2007) and in Vietnam as well (World Bank, 2009).

Because of such risks, avoiding interregional migration is one option used by migrants. As mentioned elsewhere, migrating and settling in groups are other risk management strategies to increase security. Another reported risk management strategies among migrant farmers is strengthening social network with local people by establishing a godfather from local people especially in Benishangul Gumuz Region. Godfather (a local), as claimed by migrant farmer focus groups, provides his godson (a migrant) with secret information about the possible conflict/attacks waged against migrants. Godfather based strengthening relationship between Amhara migrants and local people is also reported in East Wollega Zone of Oromia Region, Ethiopia (Tesfaye, 2007).

The data gathered from the various focus groups and police officers show that migrants are also exposed to attacks by a group of casual laborers known as *saluges*. This risk is common in North Gondar Zone of Amhara Region. *Saluges* are early migrants who have been accustomed to the hot climate and way of life of lowland areas and take the lowlands as their home (Tsegaye, 2016). They are alleged to have little contact with their families at the place of origin. There are groups of *saluges* organized based on their common place of origin such as *saluges* of Dembia, Belesa, and Gojjam. Individuals in each group commonly work and move together.

Casual wage labor migrant focus groups and police officers from North Gondar Zone administration note that s*aluges* attack temporary migrant casual wage laborers (*gofers)*[9] partly because *gofers* are assumed to be taking available employment opportunities and causes the labor cost to come down. In addition, if *saluges* meet an individual or a group of individual migrants in their way especially in rural areas, they loot them and sometimes group conflict emerges that tend to lead the loss of human life. Especially, if the person(s) they meet is from a place where they label as a place origin of their 'enemy', they attack them to death. Informants also report that conflict between *saluges* in investors' labor camps sometimes perpetuate into group conflict that ultimately causes casual wage labor migrants to be the victims. Fear of such risks, some casual wage labor migrants try to seek employment from small scale farmers or investors who employ wage laborers from a particular area.

[9] *It is used to refer to newcomer wage laborers at the place of destination*

It is possible to argue here that crime shocks and other shocks to which migrants are exposed at the places of destinations are partly attributed to the fact that temporary rural-rural labor migration occurs in an institutional vacuum and perhaps in the context of explicit and implicit unwelcome attitudes of the government towards migration. There exists explicit policy orientation of the government that discourages rural-urban migration as enshrined in 1993 population policy (TGE, 1993). The Ethiopian government also implicitly discourages rural out-migration in general by means of its land policy. The land tenure system requires landholders to settle permanently in rural areas and use the land properly otherwise he/she faces the risk of losing it upon migration to somewhere else (FDRE, 2005) which reflects a pessimistic view towards migration.

There are constitutional rights of migrants that appear to be less practical. For instance, the Ethiopian constitution provides 'the right of the security of the person' (article 16) (FDRE, 1995, p. 82), 'right of citizens to freedom of movement' (Article 32) (FDRE, 1995, p. 91), 'the right to access land without payment' (article 40) (FDRE, 1995, p. 98), 'the right to engage freely in economic activity and pursue a livelihoods of his choice anywhere within the national territory' (article 41) (FDRE, 1995, p. 99). However, these rights are not practically protected specifically related to rural-rural labor migrants.

In principle, landless and land scarce migrants have a constitutional right to get land from the government. However, this right are sidelined by either the federal or respective regional governments of migrants' destination. For instance, the study highlights that migrant farmers in Benishangul Gumuz region are taken as a threat to the natural environment and they are subjected to lose their investment on the land when the local (land holders) violet the land contracts or migrants are forced to leave the area due to the emergence of conflict. As indicated elsewhere, migrants are exposed to multiple shocks partly because there is little institutional support to the type of economic activity (including crop farming) that migrants engage in at the place of destination. Thus, although migrants have the constitutional right to engage in economic activity anywhere within national border through migration, being secured and even the right to access land, these rights of migrants are less respected that tend to expose them to different forms of shocks.

In addition, the various constitutional rights of migrants appear to contradict with some policy orientation of the government. For instance, as noted above, population policy of the government targets at reducing rural-urban migration (see TGE, 1996). Likewise, the land policy of the country indirectly restrict the movement of rural people to other areas (see FDRE, 2005) that contradicts the right of citizens to freedom of movement. This is a reflection of the mismatch between the constitutional rights of citizens and some policy objectives of the government

The development plans of the current government such as PASDEP (FDRE, 2006), GTPI (FDRE, 2010) and GTPII (FRDE, 2015) also distance themselves from addressing the internal migration issues of the country. In this regard, Deshingkar argues that unenthusiastic view of migration has its own implication on influencing political will to protect the right of migrants for decent work and reduce migration related risks. Governments' negative orientation about migration and thus, indifferent institutional arrangements is responsible for the avoidable shocks that migrants facing at the place of destination (Deshingkar, 2004, 2006b). The post-2015 UN development agenda clearly puts the need for recognizing the dynamics of migration, looking for better management of rural migration, considering migration in development policies, strategies and program, avoiding distress migration and enhancing gainful migration (UN, 2015). But policy intervention lags behind the existing dynamics and realities of migration in Ethiopia, contributing to the vulnerability of migrants.

Although it does not specifically designed to address labor migration, there are regulations set at national level to manage the procurement of temporary wage laborers by investors (MoLSA, 2014). As acknowledged by an expert from North Gondar Zone and Amhara Region LaSAOs, this regulation is not properly respected and implemented. As a result, investors informally employ wage laborers which increases the vulnerability of casual wage laborers.

Generally, the findings on the vulnerability of migrants across the five types of shocks considered above show that there are multiple and complex web of relationships between shocks. Exposure to these shocks have association with the risk management strategies of migrants and the prevailing interrelated environmental, socio-economic and institutional factors at different scales that converge at the place of destination. In actual essence, this reflect the translocal vulnerability of migrants where there is complex, multiple and interwoven contextual factors,

exposures and responses to shocks. It is critical to note here that vulnerability to different set of shocks are experienced and manifested in various ways across different group of migrants and even within the same group of migrants. Finally, the following section considers the extent to which vulnerability of temporary labor migrants imposes repercussions on migrant sending households.

5.3. Outcomes of Migrants' Vulnerability on Migrant Sending Households

The previous section considers a range of contexts within which migrants are vulnerable to multiple and interacting shocks at the place of destination. Based on 250 migrant households, this section focuses mainly on assessing the outcomes of migrants' exposures to shocks at the place of destination on the vulnerability of migrant sending households. Before looking into these issues, it highlights earning obtained from migration and its utilization.

5.3.1. Earning from Migration and Areas of Investment

Table 5.3 shows the amount of net income that households managed to get from migration in the last 12 months before the survey date. Most migrant households (53%) earn up to Birr 5000 followed by those who earn nothing (24%). A comparison by type of migrant households shows that the proportion of households who fail to bring income home appears to be more apparent among households with crop farming migrant (44%) than casual wage labor migrant (12%) and full-time wage labor migrant (9%). As noted by migrant farmer focus groups, higher proportion of no income is related to double exposure of migrant household members to severe crop failure and market shocks of sesame during 2014/15 cropping season at the place of destination, just prior to the date of the present study.

Table 5.3: Earnings from migration across types of migrant households

Income range	**Types of migrant households**			**Total**	X^2
	Crop farming MHHs	**Casual wage labor MHHs**	**Full-time wage labor MHHs**		
no income	44 (43.6)	11(11.5)	5 (9.4)	60 (24)	
Up to 5000	31(30.7)	75(78.1)	28 (52.8)	134 (53.6)	
5000-10000	8(7.9)	10(10.4)	10 (18.9)	28(11.2)	0.00
Above 10000	18(17.8)	-	10 (18.9)	28(11.2)	
Total	**101 (100)**	**96 (100)**	**53 (100)**	**250 (100)**	

Source: Own Household Survey, 2015

When we take the income category where most households concentrate (up to 5000), the proportion of casual wage labor migrant households is higher (78%) than full-time wage labor migrant households (53%) and crop farming migrant households (31%). In the highest income range (above 10,000), there were no casual wage labor migrant households. But almost equal size of crop farming migrant (18%) and full-time wage labor migrant (19%) households manage to earn within this income range, implying that the amount of migration earnings of most casual wage labor migrant households tends to be smaller. It might be due to the shorter period of stay for employment at the place of destination that makes their migration earning limited.

With regard to the utilization of migration income, Table 5.4 portrays that the majority of migrant households use/intended to use it to cover the costs of clothing (68%), paying debt (54%), and buying food items (50%), suggesting the primary use of migration income is for basic household needs and to pay back loans. Another important area of investment is to buy house equipment, to buy fertilizer/selected seeds and investment for education, accounting for 43%, 37%, and 35% of migrant households, respectively. Utilization of migration earnings for such purposes is also evident in other studies in Ethiopia (Feleke *et al.*, 2006; Tefere, 2013; Woldie *et al.*, 2010) and in other countries (Geest, 2010).

The interesting finding from Table 5.4 is that only 5% of migrant households use/decided to use migration earnings to start or expand non-farm activities that might be related to two reasons. First, earnings from migration might be insufficient to invest in non-farming activities at the place of origin. Second, there might be limited opportunities of investment in non-farm employment opportunities at the place of origin. This is at odds with other research findings (e.g. Woldie et al., 2010) which argue that migration earning has multiplier effects in terms of contributing to employment in rural non-farm activities such as trade, transportation, etc. It is argued that if opportunities for investment of migration earnings are limited, households' decisions to invest earnings on alternative livelihood activities tend to be limited and thus households more likely stick to agriculture (Hagen-Zanker, 2015). There is also an argument that the attributes of migrant households, and socio-economic and agro-ecological conditions at the place of origin come to play important roles in investment decision of migration earnings

(IFAD, 2007). This depicts that accumulated money at the place of destination does not necessarily mean that it is used for non-farm activities in migrant sending areas.

Table 5.4: Areas of utilization (planned investment) of earnings from migration across types of migrant households

Areas of Investment	**Types of migrant households**				X^2
	Crop farming MHHs (N=57)	**Casual wage labor MHHs (N=85)**	**Full-time wage labor MHHs (N=48)**	**Total (N=190)**	
Clothing and shoes (% of Yes)	36(63.2)	65 (76.5)	29(55.3)	130(68.4)	0.09
Paying debt (% of Yes)	31(54.4)	57(67.1)	15(28.9)	103 (54.2)	0.00
Buying food items (% of Yes)	21 (36.8)	54 (63.5)	20 (41.7)	95 (50)	0.00
House equipment/mobile etc. (% of Yes)	29(50.9)	34 (40)	19 (39.6)	82(43.2)	0.37
To buy fertilizer/seeds (% of Yes)	25(43.9)	28(32.9)	18(37.5)	71(37.4)	0.42
For educational expenses (% of Yes)	19(33.3)	36(42.4)	12(25)	67 (35.3)	0.12
Saved (% of Yes)	19 (33.3)	16(18.8)	21(44.7)	56(29.6)	0.01
To construct/renovate house (% of Yes)	9 (15.8)	15(17.6)	12(25)	36 (18.9)	0.46
For health expenses (% of Yes)	11(19 .3)	12(14.1)	8 (16.7)	31(16.3)	0.72
To buy livestock (% of Yes)	9(15.8)	9(10.6)	5(10.4)	23(12.1)	0.61
For festival expenses (% of Yes)	7(12.3)	11(12.9)	5(10.4)	23(12.1)	0.91
To start/expand non-farm Activity (% of Yes)	4(6.9)	2(2.4)	4(8.3%)	10(5.3)	0.24

Source: Own Household Survey, 2015; figures in parenthesis refer to percentages

Disaggregating the data based on types of migrant households shows a variation in some areas of investment. For instance, there is significant variation in investment on food items. While 65% of casual wage labor migrant households invest or planned to invest earnings on food items, only 37% of crop farming and 42% of full-time wage labor migrant households invest it to that end ($P< 0.05$). The dominance of casual wage labor migrant households might be related to the fact that these households are, in relative terms, less endowed with key livelihood asset with lower level of food security (see the previous chapter). Although various types of migrant focus groups indicate migration as a key source of livelihoods for their households, it appears that the role of migration for food security appears more critical among casual wage labor migrant households. Casual wage labor migrant focus groups disclose that without migration, they would be starved to death, indicating that earning from migration is a crucial means of achieving food security for households who engage in casual wage labor migration.

Similarly using the earnings to pay debt is significantly more dominant among casual wage labor migrant households (67%) than full-time wage labor migrant households (29%) and crop farming migrant households (54%) ($P<0.01$). The dominance of casual wage laborers may be associated with the higher level food insecurity status that push them to take loans to purchase food and thus use earning from migration as a means to pay back these loans.

Data from various focus groups indicate the various ways by which migration contributes for the livelihoods of migrant households. First, migration provides income opportunity they cannot manage to access at the place of origin to purchase food and non-food items. Second, it supports livelihoods of households in terms of decreasing the number of mouths households are expected to feed. For instance, full-time migrant focus groups indicate that "without migration, it would have been impossible to get a space where household members can stand up, let alone able to get a viable land size to lead decent livelihoods." In line with this, a female household head I met informally in Chefakit *kebele* also indicates that "I usually tolerate my son to stay home for some time and then I show him some uncomfortable facial expression to let him migrate for casual wage labor so that the burden on food can be reduced."

Thirdly, it is found that migration supports asset accumulation in the form of providing a means of saving money, buying livestock, and building and renovating houses. Casual wage labor migration is considered to be important in terms of building and renovating houses, and buying livestock. These advantages are also noted by other focus groups. Full-time wage labor migration is also taken as a key way to save money for future investment in sesame farming. Migrant farmer focus groups disclose that migration for crop farming is a remunerative type of migration especially in time of conducive weather condition and paying market price of sesame. Finally, it is noted by all focus groups that migration indirectly support households food security and asset accumulation by influencing the production side of crop farming by providing opportunity to generate income to buy artificial fertilizer and farm oxen.

Generally, temporary rural-rural labor migration provides opportunities for the households to diverisify their sources of livelihoods. It provides means of taking available opportunities at the place of destination, while maintaining households' livelihood activities at the place of origin. It enables households to attain food security, build asset and diversify income sources in the

context of limited non-farm livelihood opportunities at the place of origin and thus, can reduce vulnerability.

5.3.2. Vulnerability of Migrant Sending Households

As highlighted in the previous section, migrants are exposed to multiple and interrelated shocks at the place of destination, indicating that opportunities at the place of destination are subjected to shocks. When individual migrants' exposure to shocks are aggregated at household level shock exposures, 92% of migrant households are exposed to one or more shocks over the years they have been engaged in temporary rural-rural labor migration regardless of the severity, frequency and nature of shocks (Table 5.5). Based on self-assessment of migrant sending households, the following sections present the extent to which shocks at the place of destination shape the livelihood vulnerability of migrant households in terms of food insecurity and asset decumulation across the three types of migrant households.

Table 5.5: Exposure to shocks across types of migrant households

Exposure to Shock	**Types of migrant households**[10]			Total
	Crop farming MHHs	**Casual wage labour MHHs**	**Full-time wage labour MHHs**	
Exposed	101(100)	83(86.5)	45(84.9)	229(91.6)
Not Exposed	-	13(13.5)	8(15.1)	21(8.4)
Total	**101(100)**	**96(100)**	**53(100)**	**250 (100)**

Source: Own Household Survey, 2015

5.2.2.1. Vulnerability to Food Insecurity

For decades achieving food security has been unsettled goal of the government and people of Ethiopia. However, meeting household food requirements from own production becomes increasingly difficult because of declining farm size and other risks involved in the dominantly subsistence farming. These contexts force households to use migration as one of the alternative livelihood strategies (Degefa, 2005; Markos, 2001; Tesfaye, 2009). However, it is also argued that this strategy can expose migrant households to severe livelihood insecurity, for instance,

[10] *The respective percentage proportion of different groups of migrant households' exposure to shocks shall not be taken the experience of migrant households at all time. It was based on migrant households' exposure to any shock during their engagement in temporary migration. It is also important to note that the time before the survey date was atypical characterized by widespread crop failure and market shock in sesame producing areas that makes all migrant households to be exposed to shocks.*

perpetuating the food insecurity situations of households (Ellis, 2003). In many developing countries, exposure to shock is mostly translated to negative change in livelihoods (Dercon & Hoddinott, 2003). Although shock induced food security has been a growing focus of the academics, there is little concern on food (in)security emanating from translocal relations via migration (Adger et al., 2009; Crush, 2012).

Migrant households' subjective evaluation of food insecurity outcomes driven by shocks at the place of destination indicates that most households (75%) are least vulnerable to food insecurity (Table 5.6). This indicates that a mere exposure to shocks at the place of destination does not necessarily produce food insecurity on migrant sending households. This may be because of less frequent and/or less severe shocks encountered by households or their capacity to manage the effects of shocks.

Table 5.6: Perceived level of vulnerability to shock driven food insecurity across types of migrant households

Levels of vulnerability to food insecurity	**Types of migrant households**			Total	Sig
	Crop farming MHHs	**Casual wage labour MHHs**	**Full-time wage labour MHHs**		
Least vulnerable	85(84.2)	51(61.4)	36(80)	172(75.1)	0.00
Moderately vulnerable	10(9.9)	21 (25.3)	6(13.3)	37(16.2)	
Highly vulnerable	6(5.9)	11(13.3)	3(6.7)	20(8.7)	
Total	**101(100)**	**83(100)**	**45(100)**	**229(100)**	

Source: Own Household Survey, 2015

However, there is a significant difference in the level of vulnerability between the three types of migrant households ($P < 0.01$). Crop farming (84%) and full-time wage labor (80%) migrant households are over represented in the least vulnerable category as compared to casual wage labor migrant households (61%). The lower level of food insecurity among crop farming and full-time migrant households might be associated with the following three reasons. First, the frequency, nature and severity of their exposure to shocks may be different. For instance, if shocks are less intense, they may not drive the food insecurity of households. Second, a significant number of migrants in these types of households (especially crop farming migrant households) were exposed to major crop failure and market shocks just before the survey period.

Accordingly, the outcomes of these shocks on food insecurity of households might not be immediately visible.

Third, the relative better position of crop farming and full-time wage labor migrant households in the ownership of key livelihood assets (see Table 4.15) may limit the outcomes of the shocks on food insecurity. Thus, the disadvantageous position of casual wage labor migrant households in the lower vulnerability category might be related to their poor endowment of key livelihood assets that may translate a minor shock exposure to food insecurity. Studies show that the food insecurity outcomes of shocks may not depend on just a mere exposure to shocks (negative external condition) alone, but also on the asset endowment of households that bounce back the outcomes of prevailing shocks (Adger & Kelly, 1999; Castell et al., 2015; World Bank, 2001). In Ethiopia, for instance, the vulnerability of rural people is associated with their limited asset endowment (Abera & Zeller, 2012; Hadley et al., 2011). Hadley et al. (2011) indicate that food crises in the country in 2008 had brought differential outcomes on food insecurity of households where wealthier households were in a better position to cope up with the the negative outcomes of increasing food price. However, the lower level of shock induced vulnerability to food insecurity among crop farming and full-time wage labor migrant households alludes that these households may degrade assets before confronted with food insecurity situation (Ribot, 1995; Yilma et al., 2014).

Data from various focus groups reveal that there are diverse ways by which shocks can contribute to food insecurity in that shocks: 1) incapacitate households to get income to purchase food and non-food items; 2) reduce households ability to pay back loans taken for different purpose, leading to further indebtedness and compromising food consumption; 4) sell food reserve to get cash for different purposes; and 5) limit the investment of input (labor, cash, and land) for food production. Casual wage labor migrant focus groups describe their experience as follows:

> We cannot survive without migration. But, the income from it is not reliable. Sometimes, we return with serious illness and/or little money. What we have earned in cash is invested back on health expenses. At times, let alone making money that can support food purchase, we go to money lender and/or forced to sell our asset and food reserve to cover health expenses.

The above script suggests that even in time of good agricultural season of home agriculture, households might become food insecure because their exposure to shock at the place of destination could divert money meant for food purchase or input for agriculture to health expenses or force households to sell crops for cash needs for different purposes as equally noted by Sutherland (1999). In line with this, non-translocal based livelihood studies, for instance, recognize the negative outcomes of health shocks on food security of households through caring for diseased household members and loss of cash when household member do not work (Casale *et al.*, 2010; Hallegatte *et al.*, 2015; Wagstaff & Lindelow, 2014), and using asset of the household unproductively (Degefa, 2005).

It is also reflected in FGDs that sometimes migration can emerge with a double-blend sward to undermine food security of households. First, it leads labor scarce households to be exposed to labor shortage during critical period of agricultural activities that contributes to a decline in food production. Second, exposure to shocks at the place of destination disables migrants in bringing money to close production gap created due to the migration of household members. This context reflects how the intersection between migration-induced vulnerability both at the place of origin and destination in unison can elevate household food insecurity status.

Overall, although the data reveal that only a smaller section of migrant households are vulnerable to migration induced food insecurity, it has a message that vulnerability ranging from working in vulnerable place at the place of destination to poor asset endowment can drive household food insecurity situations in the long run. Therefore, it is possible to maintain the argument that food insecurity can be influenced by factors beyond local context or geographic domain of food production (Eakin et al., 2009).

5.2.2.2. Vulnerability to Asset Decumulation

Self-reported asset decumulation score results indicate that more than half of the households (54%) are exposed to moderate (32%) and severe (22%) levels of asset decumulation as the result of shocks at the place of destination (Table 5.7). Striking difference is observed across types of migrant households. Significantly higher proportion of crop farming migrant households are subjected to a loss of assets (moderately vulnerable: 42% and severely vulnerable: 38%) than

casual wage labor migrant (moderately vulnerable: 28% and highly vulnerable: 11%) and full-time wage labor migrant (moderately vulnerable: 16% and highly vulnerable: 9%) ($P < 0.01$) households. To put it differently, full-time wage labor migrant households are the least vulnerable while crop farming migrant households are the most vulnerable in decumulating asset.

Table 5.7: Percieved level of vulnerability to shock driven asset decumulation across types of migrant households

Levels of Vulnerability to asset decumulation	**Types of migrant households**			**Total**	**Sig**
	Crop farming MHHs	**Casual wage labor MHHs**	**Full-time wage labor MHHs**		
Least vulnerable	21(20.8)	50(61)	34(75.6)	105(46.1)	0.00
Moderately vulnerable	42(41.6)	23(28)	7 (15.6)	72(31.6)	
Highly vulnerable	38(37.6)	9(11)	4(8.9)	51(22.4)	
Total	**101(100)**	**82(100)**	**45(100)**	**228(100)**	

Source: Own Household Survey, 2015

A better position of full-time wage labor migrant households may be associated with fewer years of migration experience (see Table 4.8) that limit the frequency of exposure to shocks. It may also be related to limited financial capital investment on migration as most of their financial costs of migration including food during period of engagement at the place destination are covered by employers.

On the other hand, higher level of vulnerability among crop farming migrant households might be associated with the fact that crop farming migration is the most expensive and also the most vulnerable type of migration. Crop farming involves high startup capital which is financed by households' savings (if any), selling livestock and borrowing money from different sources (see Table 4. 12). But, exposure to covariate shocks of crop failure and market shocks put them at a higher risk of losing their investment or employing asset degrading coping strategies in the aftermath of shock exposures.

> We face a challenge of replacing the asset we sold and paying back the money we borrowed to cover the cost of investment in sesame farming. The available means we have to clear debt is looking for other money lenders. For instance, if we initially borrow from Amhara Credit and Saving Institution (ACSI), we try to clear this debt with its backbreaking interest by borrowing from private money lenders or a church. When the time of paying back the loans from private money lenders approaches, we again go to ACSI. It goes like that until we manage to free ourselves from indebtedness (Crop farming migrant focus groups).

This finding shows how shocks at the place of destination can put migrant households in a vicious circle of indebtedness and erode their assets by paying the interest rate alone. It also reflects the fact that shocks at the destination areas (such as crop failure and market shocks) are exacerbated by lack of well-established financial systems at the place of origin which is characterized by high interest rate (Antonaci et al., 2015). Such a finding lucidly corroborates Islam and Herbeck's (2013) work on fisher migrants in Bangladesh. They illustrate that sometimes migration perpetuates the indebtedness of migrant sending households, firstly by taking loans to cover the cost of migration, secondly through migrants' failure to send remittance force households to borrow money to smooth consumption. This, in turn, puts a pressure on households to sell their asset to clear debt. They argue that, in such context, the nature of vulnerability at the place of origin and destination reinforces each other, reflecting the translocal vulnerability of migrant sending households in the same way as outcomes of migration elsewhere (Hagen-Zanke et al., 2014; Nunan, 2010; Thieme & Wyss, 2005).

Although migration for crop farming is assumed to be remunerative in time of safe agricultural and market price conditions, it has a devastating outcomes when rainfall patterns and market price go wrong. Market shocks and crop failure are largely out of the control of migrants and their households. National economic policies that open doors for international market forces coupled with environmental conditions that prevail at the the place of destination cause crop farming migrant households face income and other household asset losses. This is an indication that the insertion of migrant households into the global economic structure and environmental condition of other geographical areas can form and enhance their vulnerability.

Market liberalization and globalization are believed to be necessary for developing economies. However, economic integration among nations also introduces shocks as witnessed in the present research and elsewhere (Tatek, 2007; Winkels, 2004). In an effort to move out of poverty, market integration or the integration of households to vulnerability context at the place of destination can increase the level of vulnerability (Hulme et al., 2001; Tatek, 2007; Winkels, 2004). In line with this, a study in Ethiopia indicates that the likelihood of staying poor or entering into sever poverty increases with the changing price of cash crop like coffee and chat (Adugna, 2012).

However, it is important to note that exposure to shocks at the place of destination may be reinforced by exposure to shocks at the place of origin due to migration induced labor shortages. For instance, to use household labor for better opportunities at the place of destination some households send more migrants by leaving home agricultural activities for females, the old and children or rent out or sharecrop land to others. During FGDs, some crop farming migrants argue that they could build asset better or at least maintain what they had if they properly managed and invested on home agriculture.

The something is reflected during informal conversation with a migrant farmer household head while he was visiting a local animal clinic with his two diseased sheep just after his return from migration. He notes that he lost almost all of his household's sheep because his left behind household members failed to take them to the clinic on time when they were caught diseases. He tells that this would not happen if he were not migrating and described the fate of his household as *kehulet yata gomen*-being at the disadvantageous position both at the place of origin and destination.

Generally, the findings in this chapter show that shocks have relatively higher level of asset decumulation outcome on crop farming migrant households, but higher degree of food insecurity outcome on casual wage labor migrant households. As pointed out earlier, it is important to note that the disparities in outcomes of shocks on food insecurity among different migrant households may be partly associated with the asset endowment (internal vulnerability) of households. The

fact is that external and internal sources of vulnerability do reinforce each other in pushing households to the state of severe vulnerability.

Although the findings of the study do not show that most households are subjected to shock driven vulnerability to food insecurity, it is important to note that higher level of asset decumulation has repercussion on food security status of households. This is because food insecurity and asset decumulation are intrinsically related (Casale et al., 2010; Freeman, Kaitibie, Moyo and Perry, 2008; Hoddinott, 2006; Sutherland et al., 1999). When households suffer from food insecurity, they may be forced to sell their livestock to purchase food or they may go to money lenders to smooth consumption. For instance, a study in Ethiopia shows that health shocks erode livestock asset and reduce saving, and increase borrowing to smooth consumption (Yilma et al., 2014). For a short while, such enforced asset decumulation to smooth consumption may not lead to food insecurity, but it may have long term food insecurity feedback effects (Drimie & Casale, 2009). This indicates the importance of viewing the two negative livelihood outcomes in an integrated way.

Asset decumulation and food insecurity as the outcomes of vulnerability to shocks can also expose households to external shocks, creating a 'vicious cycle of compounding cause and effect' relationship in enhancing the vulnerability of households (Casale et al., 2010, p.5). It is also true that temporary shocks can have lasting outcomes on the vulnerability of households. Empirical evidence in Ethiopia attests that an increase in the consumption of households was remarkably lower for households who experienced considerable suffering from 1984-85 famine period as compared to other households included in the survey. Such evidence is a typical reflection of how severe but temporary shocks drag households into lasting vulnerability (Dercon, 2004).

Notably, part of the vulnerability of migrants and their households is that there is no formal social protection related to migration induced shock. Focus groups tell that little attention is given or there is no support system from concerned government bodies to help victims of migration related shocks. It appears that the main coping strategies of households are self- and informal insurance mechanism which tend to be livelihood degrading coping strategies. It is

argued that the vulnerability of households depends not only on asset endowment or the severity and frequency of the shocks, but also on insurance mechanisms (Akampumuza & Matsuda, 2016; Casale et al., 2010; World Bank, 2001). In fact, depletion of household asset and decreased consumption due to lack of insurance in time of severe shock can elevate the vulnerability of households (Dercon, 2006).

Thus, the dependence of migrant households on vulnerable livelihood activity at the place of destination, limited asset endowment and lack of social security system together can transform shocks at the place of destination into sever negative livelihood outcomes on migrant sending households. Noteworthy here is that the vulnerability of migrant households has much to do with the shift of households' livelihood strategy from local to translocal which is climate sensitive, less institutionally protected and more integrated to the global market,. Thus, as strong as migrant destinations function in attracting households towards them for better employment opportunities, they can also form and aggravate households' vulnerability **(**IOM, n.d). The study clearly shows that vulnerability of migrant sending households is propelled by the integration of households into complex and networked socio-economic, environmental and institutional factors located at different scales that converge at the place of destination. In this understanding, the place of destination of migrants is part of the vulnerability contexts of migrant households at the place of origin, signifying the 'travelling realities' or the translocal nature of vulnerability (de Haan Et al., 2002; Eakin et al., 2009; Lohnert & Steinbrink, 2005; Rigg & Salamanca, 2009; Zoomers et al., 2011).

5.3. Future Plan of Migrant Sending Households to Engage in Migration

For the sake of understanding the migration decision of households in the context of risks prevailing at the place of destination, households were asked as to whether they would migrate for employment in the days to come. It is found out that 83% of the migrant households have already planned/decided to send a migrant. In this regard, more of the casual wage labor migrant households (90%) seem to have decided to send a migrant than both crop farming (75%) and full-time wage labor migrant (85%) households ($P < 0.05$) (Table 5.8).

Table 5.8: Future plan of migration across types of migrant households

Planned to migrate?	Types of migrant households				x^2
	Crop farming MHH	Casual wage labor MHH	Full-time wage labor MHH	Total	
Yes	76 (75.2)	86(89.6)	45 (84.9)	207(82.8)	
No	16(15.8)	4 (4.2)	3 (5.7)	23(9.2)	0.04
Undecided yet	9 (8.9)	6 (6.2)	5 (9.4)	20(8)	
Total	101(100)	96(100)	53(100)	250(100)	

Source: Own Household Survey, 2015

This indicates that migration does not diminish as the result of risks and shocks encountered at the place of destination. When asked the reason to continue migrating in the context of risks and shocks at the place of destination, focus groups note that migration would lessen the livelihood constraints of their households, and further say that:

> No one would migrate and put own life at risk at the place of destination if opportunities at the place of origin were enough to support decent livelihoods. Instead of suffering from livelihood constraints here (origin), we preferred to migrate and face whatever comes to us there (destination) (Casual wage labor migrant focus groups).

This finding shows how migrant households are sandwiched between the vulnerability context at the place of origin and destination and migration is used as a kind of exchanging one source of vulnerability over the other. However, it also becomes obvious from focus groups, particularly from crop farming and full-time wage labor migrants ones that there is an ambition to building asset as a reason to continue migrating. For example, crop farming migrant focus groups explain:

> With its constraints, outcomes of farming in *berha* (lowland) are better than home agriculture. In *berha,* if we manage to escape the risk of being caught with market shock and bad weather events, we have a higher chance of being changed within few cropping seasons. You can't bring resonable changes from home agriculture as our long engagements testify.

This account suggests that ambition of asset building is also an important factor for households to keep on migration. However, it looks that migrant households are 'playing the game' of obtaining good market and weather conditions for achieving the objective of asset accumulation. Generally, the findings suggest that despite the visible risks and shocks migrants could face at

the place of destination, migration seems to be less likely to decline in the years to come as far as the situations at the place of origin force them to migrate and opportunities exist at the place of destination.

5.4. A Reflection on the Vulnerability of Migrant Sending Households to Environmental Change (Erratic Rainfall) at the Place of Destination

The life of people relies on the environment in which they are embedded (Adger et al., 2009). Ethiopian agriculture is vulnerable to climate change making rural households vulnerable to famine (Gray & Mueller, 2012). Land degradation is another risk surrounding the agriculture sector of the country. It is true that in areas like Ethiopia where people largely depend on natural resources, cumulative processes of environmental change and thereby declining productivity of local natural resource base severely hampers livelihood options (Bilsborrow 2002; Ellis, 2003).

There is a common argument that households which face environmental changes diversify their livelihood by sending some household members in search for employment opportunities elsewhere (Bilsborrow, 2002; Ellis, 2003). Similarly, migration studies note the effects of exposure to environmental changes on migration decision of individuals and households (Greiner & Sakdapolrak, 2013a). Such understandings commonly come from the angle of households' subsistence sedentary life via shocks that occur in a localized environmental context. However, there is limited discussion on the vulnerability of migrants to environmental changes at the place of destination (Gänsbauer et al., 2017) and the feedback effects of migrants' vulnerability on people in other places (e.g. migrants' place of origin). It is argued that in the age of globalization and climate change, there is a need to go further from localized environmental shocks to extra-local environmental shocks (Greiner, Peth & Sakdapolrak, 2015; Rigg & Salamanca, 2009).

Lowland areas where migrants of the present study are heading to get employment are subjected to unreliable rainfall patterns (Pankhurst & Piguet, 2004). The study reveals that temporary labor migrants directly or indirectly get large scale employment opportunities in the sesame farming sector. However, sesame is a highly weather sensitive crop that exposes migrant farmers to rainfall variability induced crop failure. This exposure, in turn, can form the vulnerability of migrant sending households in the form of asset decumulation, indicating that vulnerability to

environmental changes is translocalized. In other words, migrant households are now embedded to environmental changes of distant places via migration. This corroborates the research finding of Adger et al (20009) that the vulnerability to environmental change in one place is connected to others places through human action and risk management strategies.

However, the results point out the fact that not all types of migrants and their households are exposed to erratic rainfall driven vulnerability in the same way because they are integrated to the environmental change of migrants' place of destination in different ways. First, erratic rainfall negatively affects migrant farmers and part of full-time wage labor migrants due to their direct dependence on weather sensitive crop along with rainfall variability by itself, suggesting the interdependence of physical and biological factors to push vulnerability of these migrants. Second, environmental change induced crop failure, in turn, contributes to other type of shock, market shock, showing the double exposure of those engage in sesame farming for both crop failure and market shock. Third, less informed casual wage labor migrants are exposed to employment shocks due to erratic rainfall induced change in the time of employment opportunities and poor sesame stand in the field which causes the reduction in demand of wage laborers and taking more time of casual wage laborers to make a *hilla* (400 punches of sesame).

The findings generally reflect the fact that erratic rainfall induced crop failure shock cannot come in isolation. There are complex and multidimensional interrelationship between rainfall variability driven crop failure shock and other forms of shocks, and the context by which they occur. An important point here is the role of migration for exposing migrant sending households to environmental change at the place of destination through the network it constructs where it links the vulnerability of places and people over wide range of distances (origin and destination) (see Islam & Herbeck, 2013; Lohnert & Steinbrink, 2005). Thus, via migration there is 'travelling realities' of vulnerability to environmental change (de Haan, Brock & Coulibaly, 2002; Lohnert & Steinbrink, 2005; Rigg & Salamanca, 2009; Zoomers et al., 2011). One can thus easily establish links between translocal vulnerability to environmental change and local migration dynamics. This understanding extends the single-cited (place bounded) perspective of vulnerability to environmental change with policy implication for other distant places (Adger et al., 2009; Leichenko & O'Brien, 2008). Accordingly, it it less likely to be a fruitful approach to

conceive vulnerability to environmental change by confining to a local ways of getting things done (Zoomers et al., 2011).

CHAPTER SIX
SUMMARY, CONCLUSION AND RECOMMENDATIONS

This chapter has four sections. The first section provides summary and conclusion based on the key empirical findings. The second section takes a look at the theoretical implications of the study. The last two sections present prolonged recommendations related to policy intervention and further study.

6.1. Summary and Conclusion

This study primarily attempts to assess temporary rural-rural migration, its determinants, what, why and how shocks occur and interact with each other at the place of destination in shaping the vulnerability of migrants and migrant sending households. It considers vulnerability in terms of migrants' exposure and responses to shocks at the place of destination, the contextual factors of their exposure and the outcomes of these shocks on migrant sending households. To that end, the study deploys translocal vulnerability approach complemented by double exposure framework as a key basis to work out conceptual framework. In this regard, the study transcends the hitherto widely held researches on livelihoods, rural-urban migration and vulnerability analysis in many developing countries.

It employed mixed and multi-sited research approaches. The different objectives of the study were based on varying sample groups. To assess the determinants of migration, 398 households were selected by means of a combination of purposive and random sampling. For vulnerability analysis, 250 migrant households and 388 migrants from these households were considered. FGDs and KIIs were key primary sources of qualitative data. Secondary sources were also key components of the data. Chi-square test, one-way ANOVA, and binary and multinomial logistic regressions were used for quantitative data analyses.

The findings depict that through migration the livelihoods of migrant sending households are translocalized or integrated to environmental, institutional and socio-economic contexts far away from the location of the households, where the conventional livelihood approaches fail to consider. Access to key household assets determines the overall migration decision and the type

of migration in which migrant households participate. Those households rich in key assets such as land, livestock and access to irrigable water are less likely engage in migration, suggesting poor livelihood conditions of households are the driving forces for temporary rural-rural labor migration. However, disaggregated data based on type of migration indicate that land and livestock ownership tend to play significant negative effects on migration for casual wage and full-time wage labors than crop farming. This implies that temporary rural-rural labor migration is not a homogeneous activity taken by the poorest of the poor.

It appears, arguably, that migration is potentially a solution for and driver of migrant households' vulnerability. It creates opportunities which are not possible to get at the place of origin by providing income to purchase food and non-food items, and accumulate asset. Despite these opportunities, migration exposes migrants to multiple and interacting shocks prevailing at the place of destination such as health, crop failure, market, employment and crime shocks.

Ill-equipped living and working conditions characterized by lack of health facilities, poor transportation facilities and poor diet coupled with unhealthy coping strategies of migrants are critical sources of health shock. Crop failure is largely a result of rainfall variability enforced by the very nature of Ethiopian sesame. Market shock is a result of economic globalization and Ethiopia's market liberalization that expose the price of sesame to external forces where (migrant) farmers are put in a position of mere price takers. This is partly reinforced by rainfall variability induced decline in the quality of sesame and migrants' response to market shock. Employment shock is related to informal nature of employment opportunities where there are limited institutional supports. Crime shocks are associated with the tendency of migrants moving to areas where legal protections are low and lack of institutional supports for the existing employment opportunities.

The different types of shocks and their factors are constitutively intertwined in shaping the vulnerability of migrants**.** Migrants' exposure to shocks is largely constructed by networked institutional, socio-economic and environmental factors at different scales that converge at the place of destination. Exposure to different shocks are manifested themselves in various ways across different group of migrants or even within the same type of migrants. However, migrants are not totally passive towards in the event of exposure to shocks. Depending on existing

contexts they work in, migrants adopt different ex-ante and ex-post responses (risk management strategies) to manage different covariate and idiosyncratic shocks. Some responses are important to manage risks, while others are so unhealthy that they introduce more severe shocks. Some shocks can be managed by migrants, while others are beyond their capacity.

The vulnerability of migrants tends to be highly complicated by the type of migration, the interdependence between shocks, the overall and specific contextual factors for different shocks and the responses of migrants. This implies how it becomes complex 'where risks originate, how they are transmitted, how they are experienced and how they are managed' (Rigg & Salamanca, 2009, p. 6; see also Adger et al., 2009).

The vulnerability of migrants at the place of destination has negative outcomes on migrant sending households. This implies that the livelihood vulnerability of migrant sending households is embedded in a vulnerability context of the place of destination mediated by migration. This is a reflection of translocal vulnerability which gives the idea on how vulnerability is shaped by not only local factors, which is the focus of conventional development intervention, but also by the networked relationships with multi-place and multi-scale factors. These all show how migration changes the geography of vulnerability.

The outcomes of migrants' vulnerability appear to be different across the three types of migrant households. In relative terms, casual wage labor migrant households are more vulnerable to food insecurity as a result of exposure to shocks. This may not be solely a result of their exposure to shocks, but also related to their internal vulnerability. Crop farming migrants are disproportionately negatively affected by impact on their asset base because of the risky and expensive nature of their investment they make in sesame farming that can be significantly damaged during crop failure and market shocks. Here, it is important to note that food insecurity and asset decumulation need to be understood in an integrated form as one can affect the other. Thus, although one form of shock and subsequent outcomes on migrant sending households may appear different depending on the type of migration, the findings convey a message that it is important to assume integrated views of exposure to different forms of shocks, the contextual factors for exposure to shocks, responses to shocks and outcomes of shocks.

Although the study does not provide evidences on the persistence of migration-induced vulnerability, short term effects of shock may persist and negatively change the livelihoods of households permanently. Thus, it is argued that households' vulnerability ranging from poor endowment with key livelihood assets to working in multifaceted contextual factors for vulnerability at the place of destination can trap households in a permanent vulnerable situation or neutralize the livelihood improvement gained from migration-led livelihood strategy.

The message is, although there are opportunities by which temporary rural-rural labor migration help to reduce the vulnerability of migrant households (e.g. reducing households' food insecurity), this vulnerability is reduced by exchanging for a vulnerable livelihood activity at the place of destination. Thus, it is argued here that migration is not a strategy that provides sustainable improvement in livelihoods because livelihood activities at the place of destination tend to be informal, less protected, globalized and risk prone that cause uncertainties of the outcomes from migration. These are enforced by limited or no means for households effectively prevent shocks from happening and no formal established social security system to address shocks. However, it is important to note that migration-induced translocal vulnerabilities are diverse, complex, context specific and dynamic and hence need to be understood accordingly.

It appears that regardless of appalling circumstances at the place of destination and the negative repercussion on migrant sending households, migration seems to be less likely to decrease as far as households have limited alternative means of livelihoods at the place of origin and there are livelihood opportunities at the place of destination. However, policy intervention and migration literature in Ethiopia lag behind these realities of migration. Based on the key findings, the following sub-section, therefore, forwards the implications of the study in terms of theory, policy, and further study.

6.2. Theoretical Implications

This study has significant inputs to the theory on migration, livelihoods, vulnerability and the linkages among these three issues. Specifically, the theoretical contributions of this study can be considered from the following angles.

i. The finding that the vulnerability of migrant sending households is linked to networked socio-economic, environmental and institutional factors that transgress scales and places shows that the analysis of the drivers of livelihood/vulnerability creation has to consider contexts that are beyond and far away from the spot of livelihood activities. To put differently, the conceptual understanding of households' livelihoods security and vulnerability cannot be captured in a localized livelihood perspective alone. However, SLF as the most widely used framework for livelihood study tends to be local and actor oriented often fails to grasp the translocal dimension of livelihood vulnerability. Based on our empirical evidences and current criticism on sustainable livelihood framework, thus, it is argued that livelihood security and vulnerability analysis need to take translocal approach as a central lens of analysis.

ii. Development intervention and associated theoretical underpinnings widely by-pass the multidimensional and complex nature of vulnerability. The finding generated regarding the interaction between internal migration and vulnerability to multiple shocks convey a message that theoretical orientation based on a single shock (e.g. climate change induced crop failure shock) does not well inform policy makers to address the existing realities characterized by exposure to multiple shocks that emanates from multiple contextual factors. Thus, understanding vulnerability needs to be placed in the context of interconnection between various shocks and the context within which these conditions prevail. In line with this, the present findings also convey a message that the analytical basis of vulnerability study must go beyond the identification of particular shocks and move towards considering the 'casual linkages' of these particular shocks that in essence leads to the production 'uneven distribution' of vulnerability across different groups of society and actors.

iii. The study also questions the widely held migration theory of New Economics of Labor Migration which assumes that migration is a risk aversion strategy of households, and instead endeavors to shows that migration can also work as risk aggravating strategy. Accordingly, raises an important question on the widely accepted assumption that migration is a key climate change/variability adaptation/coping strategy (e.g. Barnett and Webber, 2010; Gray and Muller, 2012; ILO, 2011). It shows that migration can lead households to end up with being employed in climate vulnerable livelihood activity at the place of destination (i.e. agriculture), indicating that migration can contribute to translocalizing environmental changes.

Therefore, it is critical to focus on translocal based climate change vulnerability and adaptation/coping analysis. In this regard, Turhan argues that "while there is an increasing attention of migration within the climate change debate, vulnerability of already moving population are most often ignored" (Turhan, 2013, p. 2; see also Greiner et al., 2015; Gänsbauer et al., 2017). Similarly, Dilling and his colleagues argue that "decision makers faced with adopting to climate change must consider the dynamic of vulnerability in a connected system - how choices made in one part of the system might impact other valued outcomes or even create new vulnerabilities" (Dilling *et al.*, 2015, p. 1).

iv. The study highlights the importance of translocal vulnerability approach in terms of contextual factors (factors that influence exposure and responses), exposure to shocks (e.g. crop failure and market shocks), response (ex-ante and ex-post responses) and outcomes (food insecurity and asset decumulation) as integrated components of vulnerability. These dimensions in the conceptualization of vulnerability are important to understand the interconnection and intersection of various components of vulnerability across places and scales in the (re)formation of vulnerability. They are also helpful in the analysis of the internal and external dimensions of vulnerability and their linkage.

6.3. Policy Recommendations

i). Mainstreaming migration within national and lower level development policies and strategies

Based on the empirical findings of the study, it is argued that exposure of migrants to shocks at the place of destination has much to do with the fact that the issue is still poorly understood and given inadequate attention within the public policy domains. At the very start, finding solution to migration related vulnerability requires recognizing the problem and there is a political will to address the problem. The findings indicate that regardless of associated risks at the place of destination, households tend to keep on using migration as a livelihood diversification strategy because of existing livelihood constraints at the place of origin and available opportunities elsewhere. Therefore, searching for appropriate means to deal with migration related risks and opportunities makes more sense and developmental in nature. Informed delibrate policy actions

are important for effective reduction and prevention of migration related shocks and maxmize the benefits. However, it is important to note that one-size-fits-all kind of approaches do not work towards all types of migration and destinations as sources and outcomes of shocks are not uniform across migrants, households and places of the destinations. As recommended by FAO (2014), migration related policies need to be comprehensive by considering the outcomes of migration on different population groups (migrants, migrant sending households and host community) and environment. Policy makers also need to consider the restrictive rural-urban migration policy orientation of the country (see TGE, 1993) to create alternative livelihood opportunities for rural-rural migration which appears to be unsustainable livelihood option.

ii) Spatially integrated national development policies and strategies

The integration of the two different rural agricultural spaces (origin and destination) in livelihood vulnerability signifies that improving the situation in the two spatial domains is inevitable to address vulnerability. This implies that spatial oriented development endeavor shall deserve attention instead of the traditional boundary based development policy formulation and implementation alone. This underpins the importance of policy intervention both at the place of origin and destination.

Addressing migration related vulnerability demands effective intervention through intra-regional and inter-regional cooperation in management of temporary labor migration for the advantage of migrants and their households. This includes promoting the exchange of information between the administrative bodies of migrants' place of origin and destination, establishing duties and responsibilities among them, and supporting and coordinating NGOs and civil societies to work together on the issues of labor market information, risk management, etc.

In addition to spatial perspective, multiple and multifaceted aspects of shocks reveal that a single intervention cannot solve vulnerability in its entirety and hence comprehensive and well-informed intervention involving a wide range of government institutions are required (Drimie & Casale, 2009). Intervention based on one shock may amplify the context of exposure and response to shocks (O'Brien et al., 2009). Vulnerability reduction measures generally need to consider both reducing exposure to shocks and increasing the asset endowment of households.

These interventions may be addressed in the short-term, medium-term or long-term basis depending on the nature and outcomes of the problem, and the available resources.

Intervention may be ex-ante and ex-post actions to address the context, exposure to and outcomes of shocks. However, ex-ante responses are more preferable than ex-post actions. It is also important to consider the spillover effect of different development policies on migration simply because migration is associated with food security, health, education and infrastructural development. Policies designed to affect these pehenomena would also affects migration and vice versa (IDC, 2004).

By taking the contexts of the place of origin and destination, the following more specific recommendations are forwarded that may support policy makers and practitioners in their efforts and contribute to the management of migrants' exposure to shocks and associated outcomes on migrant sending households.

a) Creating awareness about the rights, responsibilities and existing risks: The concerned bodies need to create awareness among migrants, potential employers of migrants and land owners about the rights and responsibilities to reduce migrants' exposure to various forms of shocks. Creating awarness among migrants about the alternative risk management strategies is also part of the solution to exposure to shocks. This may, in turn, require establishing and improving supportive institutional system.

b) Establishing and strengthening social protection system: What is clear from the finding is that some households cannot survive without migration, and hence, attempting to halt migration may aggravate the vulnerability of those households rather than solving them without creating alternative opportunities. Sometimes, it may be compulsory to reduce the cost of migration rather than migration itself (de Haan, 2000).

The present study argues that there is a need for social protection policy to support households' preparedness for and responses to shocks in better ways. In other words, social protection needs to encompass both ex-ante risk reduction and ex-post risk management activities. Ex-ante measures include assisting individuals and households to be resilient to shocks which in turn

include investing and creating an enabling environment for agricultural development and alternative livelihood opportunities at the place of origin. As agriculture is the livelihood base of households, it is important to provide the required support to increase agricultural production and productivity. The empirical finding shows that there are limited available non-farm employment opportunities in the study area, implicating the need for their expansion. Providing alternative non-farm employment opportunities may reduce distress households' migration decision or reduce possible dependence on rural-rural migration. Therefore, mutually supporting long term and short-term measures are essential option for employment promotion. Also critical are the improvement of the supply of infrastructure such as rural road to connect rural *kebeles* with urban areas to facilitate rural-urban linkage, creating employment opportunities and getting access to market.

The finding reveals that shocks at the place of destination are exacerbated by lack of well-established financial systems at the place of origin in which case the existing ones are characterized by high interest rate. Thus, the concerned bodies need to work on the existing credit system to reduce indebtedness. Such measure is essential building blocks in enhancing the capacity of households in protecting their asset or better copping with shocks.

Ex-post responses to manage vulnerability in the main include the provision of assistance to affected households and planning measures in time of shocks through policy intervention. If individuals and households do not manage shocks by themselves, public intervention becomes an apparent option.

c) Strengthening social networks: The importance of informal social network in managing exposure to shocks at the place of destination necessitates the intervention of government and NGOs in strengthening social networks among migrants, and between migrants and other actors as substitute for formal security system, which does not exist to reduce exposure to shocks and/or neutralize the outcomes of shocks.

d) Reducing vulnerability to crop failure: Government measures are required to minimize vulnerability arising from crop failure by providing early warning system to migrants concerning the possible weather related crop failure and measures to be taken to avoid the looming effects.

As well known, poor farming practices are one of the causes of crop failure and, therefore, the concerned bodies need to create and facilitate the means by which migrants can get adequate farming knowledge. Ecouraging migrant farmers to engage in less weather sensative crops by improving the market opportunities of those alternative crops along with searching for less weather sensitive sesame crops is also helpful.

e) Managing the sources of market shock: Supporting potential migrants to diversify crop production by including other crops that are less sensitive to international market price shocks through providing market for such alternative crops is a necessary measure from government and NGOs. It is also vital to work on factors that contribute to market price shocks such as crop failure besides exploring other means for better pricing of agricultural products. This may include government actions towards diversifying the destination of Ethiopian sesame as over dependence on one country (e.g China) increases market price vunerability with changing demand.

f) Providing health facilities and creating awarness: Migrants' exposure to health shocks at at the place of destination nececiates a search for ways to improve migrants access to halth services through regional or national government efforts in terms of expanding and strengthening temporary health provisions. It is also required to monitor the living and working conditions of migrants especially those employed by large scale investors in suprervising the quality and coverage of health services. Noteworthy is also the creation of awareness to potential migrants regarding the kind and causes of health shocks, measures they need to take and available health facilities in time of health shocks. Awareness creation also needs to focus on harmful health risk management strategies of migrants.

f) Providing labor information and establishing supportive institutions: The empirical findings show that because of lack of labor information, migrants are subjected to employment shocks. Accordingly, it is critical to provide information about the available job opportunities and risks via supportive formal/informal institutions. This may include information exchange among migrants, migrants and employers, and migrants and concerned government institutions which can helps match the demand and supply of casual wage laborers. Measures can also

consider establishing and enforcing the minimum standardized payment regulation for casual wage laborers to avoid exploitation.

g) Managing source of crimes: The study indicates that lack of formal written agreement is one of the factors to breaching agreement that, in turn, contributes to conflict. This demands the government properly regulating the disorganized informal employment contract to protect the right of migrants. Requiring written employment contracts, supervising employers provision of necessary facilities to wage laborers, and regulating recurement procedures of migrant workers are some of the importants ways of addressing exposure of migrants to shocks as equally recommended by ILO (2011).

Integrating macro and micro level interventions for conflict prevention and awareness creation are also useful measure to address crime related shocks. Terms and conditions of access to land need to have insitutional support to avoid possible breaching agreement and conflicts.

Developing cooperation between government institutions located at the place of origin and destination with regard to labor information, decent work, working condition, risk management, and the like may also support efforts directed at reducing the contexts of and exposure to crime shocks. Establishing an institution or aligning the existing institutional setup at national, regional and district levels in terms of searching and disseminating job opportunities, arranging legal employment and working environment standard, and payment enforcement, etc. need to be considered.

h) Supporting the capacity of potential employers of wage laborers: The findings show evidences of the feedback effects of migrant employers' exposure to shocks on their employees. Therefore, strengthening the capacity of major potential employers of wage laborers in the form of providing crop insurance may reduce the spillover effects of their exposure to crop failure on wage laborers.

iii) Improving migration data

Searching for better policy intervention requires adequate and pertinent data gathering and analysis. Inadequate responses to shocks partly emerges due to the fact that the problem is not made visible to policy makers in terms of scale and severity so that they might be convinced to allocate resource (McCord & Vandemoortele, 2009). The fact is migration data in developing countries are inadequate and not dependable, demanding emphasis to be given to the reliability and temporal comparability of the data, as these are important to come up with informed policy intervention (IDC, 2004). Particularly, incorporating temporary migration in a census is crucial to make this type of migration better understood for policy intervention or to capture the evolving policy issues associated with it.

iv) Forging a means to reduce the effects of market globalization

The debilitating effects of global market integration on migrants at the place of destination show that action at the national and lower level of administration are not enough to address the adverse effects of shocks. This implies effective cooperation among stakeholders at different scale is quite significant (FAO, 2014). It is important to ensure that the opportunities of global market integration improve the livelihoods of poor local farmers in developing countries. The latter shall try their best to make their voices heard in the global forum (World Bank, 2001). Establishing and maintaining dialogue and cooperation among nations is important to work together to address the constraints associated with market globalization.

National measures may include maintaining the quality of agricultural products that meet the requirement of high value export market. As part of the solution, developed countries can assist (which can be technical or financial) the farmers of developing countries to improve the quality of agricultural products in order to meet the quality demand of high value markets. It is also instrumental to consider collaborative efforts within developing countries to establish and strengthen internationally recognized quality issuing institutions for their agricultural outputs (Bardhan, 2006).

It is stated that country specific institutional set up can work as an important instrument in shaping the impact of globalization on the livelihoods of local people. The pivotal position of national policies and economic structure has been observed in a significant variation in the outcomes of globalization among countries in Africa, Latin America and Asia (Bardhan, 2006). For instance, Ethiopia imports 80% of its oil from outside, but most of its sesame production is exported (GAIN, 2016). Thus, establishing oil refineries can significantly reduce the impact of potential global market shocks related to this crop.

6.4. Directions for Further Study

i. **More research on temporary rural-rural labor migration and associated vulnerability**

As noted earlier, temporary rural-rural labor migration is a widely practiced livelihood diversification strategy in many developing countries, but often missed in the theoretical, empirical and policy domains, implying pervasive need for future migration studies to consider the dynamics of this form of migration and related vulnerability. It is hard to assume that the findings of this study are replicable in other areas because migration dynamics are highly context specific. The context which drives or impedes migration and its outcomes may vary, for example, across socio-economic, institutional and environmental variables. Particularly, our understanding of the extent to which opportunities and risks at migrants' destination determine the livelihood outcomes of the migrant households at the place of origin is limited. It is the limitation that amplifies the need for context specific further study for the purpose of understanding the dynamics of temporary rural-rural labor migration before recommending concrete new policy measures towards this form of migration. In line with this, another interesting point for further research is to know the reason for households' preference of temporary migration as compared to permanent migration.

In addition, although migrants are vulnerable at the different stages of migration, this study focuses mainly on their vulnerability at the place of destination. Thus, analyzing vulnerability of migrants at the different stages of migration is another relevant issue awaiting further investigation. Equally, the gender dimension of translocal livelihood vulnerability of migrants

and its outcomes on households in migrant sending areas are another potential area for future research.

This research mainly focuses on the outcomes of migrants' exposure to shocks at the place of destination on the vulnerability of migrant sending households in terms of food insecurity and asset decumulation. Further researches are needed in other livelihood outcomes such as education and agriculture. The study also does not provide a detailed analysis of the outcomes of migration induced labor shortage on the vulnerability of migrant sending households. Different forms of migration, from spatial and temporal perspective, may have different 'labor lost affect' on migrant sending households. Accordingly, researches are required on the opportunity cost of labor migration, households risk management strategies and associated outcomes.

ii. **Migration induced environmental degradation**

Temporary rural-rural labor migration may negatively affect the natural environment at the place of origin and destination and hence, further research needs to be carried out on these dimensions of migration. Similarly, the extent to which globalization is shaping the process of resource degradation at the local level, both at the place of origin and destination, appeals for new inquiry. Issues of migrant farmers ways of accessing land, their uitilization and implication for the environment of the place of destinations are also interesting fertile ground for future research.

iii. **Vulnerability to multiple contexts that exposes migrants and their households to multiple shocks**

The present study shows the multiple contexts and shocks to which migrants/households are vulnerable. Further study is needed to validate vulnerability to multiple factors that exposes individuals/migrants and their household to multiple shocks in the context of similar or other types of migration.

iv. **Translocal livelihood security and vulnerability analyses based on detailed and panel data**

The field work for this study took place in the aftermath of great market and crop failure shocks. As a result, there may be 'recency effect' (Devereux, 2006). This may limit the accuracy of the

effects of shocks on livelihood insecurity of migrant sending households. Establishing firm conclusion needs further studies with improved methodology, sample size and panel data.

This study is also partly based on retrospective data. Panel data based rigorous analysis that considers important variables both at the place of origin and destination may provide a better picture on the factors that shape the outcomes of shocks on different livelihood outcomes of migrant sending households. Besides, migration related vulnerability of households may not be attributed to mere exposure to shocks alone. Migrant households may be exposed to different kinds, frequency and intensity of shocks that might significantly shape the variation in outcomes of exposure to shocks. This demands panel data for better understanding the dynamics of migration induced shocks and their outcomes across time. For instance, panel data allow identifying whether food insecurity is one-off phenomena or recurrent event, comparing earlier data with recent data, and identifying the outcomes of earlier shocks on current food insecurity of households (Dornan *et al.,* 2014). Such data better inform the decision makers.

Finally, this study focuses on migrant households' self-reported outcomes of shocks at the place of destination on livelihood vulnerability. Based on panel data from both migrant and non-migrant households, a detailed research is required to supplement and complement the subjective assessment of migrant sending households.

v. **Resilience of migrant households**

The study focuses on the vulnerability of migrant households related to shocks at the place of destination. This study needs to be supported by further detail studies that looks into the extent to which the resilience of households shape the outcomes of shocks on migrant sending households. Besides, future study is required related to the vulnerability and resilience of households before and after migration of household members.

vi. **Vulnerability of migrants to climate change at the place of destination**

The study highlights the vulnerability of migrants to erratic rainfall induced crop failure. It is suggested hear that further study is needed concerning the vulnerability of migrants to climate change, and their adaptation and coping strategies at the place of destination. It is also important

to conduct detail study on the link between the vulnerability of migrants to climate change at the place of destination with the vulnerability of migrant sending households.

vii. **Exposure to psychological shock**

It is expected that migrants would be exposed to psychological shock at the place of destination. Accordingly, this dimension of shock requires the attention of future study to inform policy makers to work towards addressing this form of shock. It is also important to consider the relations of psychological shocks with other forms of shock to which migrants are exposed.

v. Gender dimension of migrants' vulnerability

As the nature of work to which male and female migrants are employed at the destination vary in some ways, future studies can take up this issue to understand the nature of exposure to shocks and the contextual factors for their exposure from gender perspective.

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Appendix 1

Questionnaire

Household Survey Questionnaire prepared for a PhD thesis entitled "The Outcomes of Rural-rural Migrants' Vulnerability at the Destination on Migrant Households: Evidence from Temporary Labor Migrant Sending Households in Quarit District, Northwestern Ethiopia"

Sampling information

- Household ID code:_____
- Study *Kebele*:_____Village: _____
- Name of household head:_____
- Name of the respondents:_____
- Name of interviewers: _____
- Date of interview:_____
- The time the interview starts:_____
- The time the interview ends:_____
- Total time the interview has taken:_____

1. BACKGROUND INFORMATION

1.1 How many people live in your household as members? Total:…….. Male:…… Female:……

1.2 Please specify the characteristics of each household member based on questions in the table below

Name 1.2.1	Sex 1-male 2 female 1.2.2	Age (in years) 1.2.3	1.2.4 **Educational status** 1. Illiterate, 2. Read and write, 3. Grades 1-8, 4. Grades 9-12, 5. Above grade 12					1.2.5 **His/her relation to head** 1. Head 2. Spouse 3. Child 4.brother/sister 5.other relative 6. Other non-relative						1.2.6 **Marital status (for those 10 years & above)** 1. Married 2. Single 3. Divorced 4. Widowed				1.2.7 **Main occupation in the household** 1. Farmer (own/family) 2. Wage laborer 3. Non-farm activities (Artisan, petty trader etc.) 4. No occupation (looking for employment) 5. student 6. others specify					
1.			1	2	3	4	5	1	2	3	4	5	6	1	2	3	4	1	2	3	4	5	6
2			1	2	3	4	5	1	2	3	4	5	6	1	2	3	4	1	2	3	4	5	6
3.			1	2	3	4	5	1	2	3	4	5	6	1	2	3	4	1	2	3	4	5	6
4.			1	2	3	4	5	1	2	3	4	5	6	1	2	3	4	1	2	3	4	5	6
5.			1	2	3	4	5	1	2	3	4	5	6	1	2	3	4	1	2	3	4	5	6
6.			1	2	3	4	5	1	2	3	4	5	6	1	2	3	4	1	2	3	4	5	6
7.			1	2	3	4	5	1	2	3	4	5	6	1	2	3	4	1	2	3	4	5	6

1.3 In the last 12 months, do you have household member/s who have migrated in temporary bases for employment as crop farmer or casual wage labor or full-time wage laborer to other rural districts of Ethiopia? 1. Yes 2. No → if your answer is No go to Question No 3.1

1.4 If your answer for Question No 1.3 is yes, how many are they? Total:_____ Male :_____ female:_____

1.5 If your answer for question No 1.3 is yes, please specify the characteristics of migrants in the table below.

2. PATTER OF MIGRATION (to be administered for migrant households only)

2.1 Name of the migrant/s	2.2 Sex:1.male 2. female	2.3 Age	2.4 Marital status **(code 1)**	2.5 Educational status **(code 2)**	2.6 Relation to household head **(code 3)**	2.7 Main occupation at origin**(code 4)**	2.8 Main occupation at destination during last migration **(code 5)**	2.9 Destination of last migration		2.10 Years of migration experience	2.11 Months of stay away from home during last out-migration?	2.12 Decision maker of last migration **(code 7)**	2.13 Sources of information about place of destination in the last migration?**(code 8)**	2.14 Do you have pre-arranged job at the destination before your last migration? 1. yes 2. No	2.15 What are the reasons for last migration?**(code 9)**	2.16 What are the sources of money for last migration **(code 10)**	2.17 What kind s of shocks have you ever exposed at the destination**? (code 11)**
								2.9.1 Region **(code 6)**	2.9.2 District & zone (specify)								
1.																	
2.																	
3.																	
4.																	

Code 1: Marital Status
1. Married 3. Divorced
2. Single 4. Widowed

Code 2: Educational status
1. Illiterate 4. Grades 9-12,
2. Read and write 5. Above grade 12
3. Grades 1-8

Code 3: Relation to household Head
1. Head 4. brother/sister
2. Spouse 5. Relative
3. Child 6. other non-relative

Code 4: Main occupation at origin
1. Farmer (own/family)
2. Wage laborer
3. Non-farm activities (Artisan, Petty, trader etc.)
4. No occupation/ looking for employment
5. Student 6. Others specify

Code 5: Main occupation at destination
1. Crop farming
2. Casual wage labor
3. Full-time wage labor

Code 6: Region
1. Amhara 6. Tigray
2. Ben.Gumuz. 7. Others specify
3. SNNP
4. Gambela
5. Oromia

Code 7: Migration decision maker
1. Self
2. Joint decision with family members
3. Others specify

Code 8: Source of job information
1. Prior knowledge about the place
2. Relatives/ friends
3. Employers
4. Mass media
5. Others specify

Code 9: Reasons for migration
1. Land shortage/landlessness
2. Lack of job opportunities
3. Unable to meet basic needs
4. Environmental change (decline of soil fertility, flooding, drought)
5. Unable to pay debt
6. Better job opportunities at the destination
7. To build asset
8. Advices/supports/influence of peer/kin/neighbor
9. Others specify

Code 10: Source of finance for migration: 1. household saving, 2. Selling asset 3. Borrowed from relatives/friends 4. Borrowed from money lenders/ government credit and saving institutions/ churches 5. Others specify

Code 11: Types of shocks exposed: 1. No shocks 2. Crop failure 3. Market shocks 4. Health shocks 5. Crime 6. Employment shocks

3. ACCESS TO ASSETS, LIVELIHOODS ACTIVITIES AND FOOD INSECURITY (to be administered for both migrant and non-migrant households)

i). Land ownership and crop production

3.1 Does your household own land? 1. yes 2. No ⟶ If your answer is NO go to Question No 3.7

3.2 If your answer for question No 3.1 is YES, how many *timads* do you own? …….(*timads*)

3.3 If your answer for Question No 3.1 is yes,			
3.3.1 For what purpose do you use the land in the last cropping season? (more than one answer is possible)	3.3.2 How many *timads*?	3.3.3 What is/are the source/s of the land? (more than one answer is possible) 1. Inheritance 2. Gift from family 3. Land redistribution or gift from *kebele* administration 4. Using common grazing land (illegally) 5. Others specify	3.3.4 How do you rate the average soil fertility of your land (only one answer is possible) 1. high 2. medium 3. low
1. Grazing			
2. Planting trees			
3. Crop production			

3.4 How many *timads* of your land have an access to water for irrigation? (**if no, write 0**)……..(*timads)*

3.5 In the last cropping season, has your household rented or sharecropped out land for anyone?

1. Yes 2. No ⟶ If your answers is NO, go to Question No 3.7

3.6 If your answer for Question No 3.5 is YES :		
3.6.1 what is the form of agreement you transferred land to others? (more than one answer is possible)	3.6.2 How many *timads?*	3.6.3 What are the reasons your household rent out or sharecropped out land? (more than one answer is possible) 1. lack of money to buy fertilizer/ selected seeds 2. Lack of drought animal 3. Labor scarcity 4. Remoteness of the plot from home 5. Others specify
1. Renting		
2. Sharecropping		
3. Others specify		

3. 7 Did your household participate in crop production in the last cropping season?

1. Yes 2. No ⟶ If your answer is NO go to Question No 3.11

3.8 If your answer for Question No 3.7 is YES, how many *timad*'s of your land did you cultivate? .....

3.9 If your answer for Question No 3.7 is YES,		
3.9.1 Who is the owner of the land you used for crop production? (more than one answer is possible)	3.9.2 How many *timad* ?	3.9.3 If you have land you rented in or sharecropped in , what was the reason you access land in this/these agreement/s? (more than one answer is possible) 1. The household has no land 2. Insufficient land holding size of the household 3. The presence of extra draught animals 4. The presence of extra labor 5. Others specify
1. Own land		
2. rented in		
3. share cropped in		

3.10 If your answer for Question No 3.7 is YES,			
3.10.1 What types of crops have you produced?(code 1)	3.10.2 How many *quintals or kg* of crops produced?	3.10.3 For what purpose the crop is used? 1. For home consumption 2. For market (more than one answer is possible)	3.10.4 If there is/are crops sold,, how much was obtained from crop sell? (in Birr)
		1 2	
		1 2	
		1 2	
		1 2	
		1 2	
		1 2	

Code 1: 01. Maize 02. *Teffe* 03. Horse bean 04. Wheat 05. Barely 06. Vetch 07. Chick pea 08. Cow peas 09. Potato 10. Millet 11. Linseed 12. Oat. 13. Onion. 14. Pepper. 15. Others specify.

ii). Livestock ownership and Production

3.11 Do your household own livestock? (including those livestock you owned but exist in other households and excluding livestock owned by other households but exist in your household)

1. Yes 2. No ⟶ If your answer is NO go to Question No 3.14

3.12 If your answers for Question No 3.11 is YES,			
3.12.1 What are the types of livestock you own (code 1)		3.12.2 Livestock Size	3.12.3 The amount of money obtained from sell of livestock/s(in Birr) in the last 12 months
Code 1 : 01. Ox 02. Cow 03. Heifer 04. Bull 05. Mule 06. Horse 07. Calf 08. Goat 09. Sheep 10. Beehive 11. Hen 12. Donkey 13. Others specify			

3.13 In the last 12 months, has your households managed to get livestock products ?

1. Yes 2. No ⟶ If your answer is NO go to Question No 3.14

3.14 If your answer for Question No 3.13 is YES,		
3.14.1 What types of animal products have you got?(code 1)	3.14.2 What for has the product been used? (more than one answer is possible) 1. For home consumption 2. For market	3.14.3 What amount of money has been generated from sell?
	1 2	
	1 2	
	1 2	
	1 2	
	1 2	
Code 1: 01. Honey 02. Milk 03. Butter 04. Skin and hide 05. Eggs 06. Others specify		

iii). Access to credit

3.15 Have you taken loans from any source in the last twelve months?

1. Yes 2. No ⟶ If your answer is NO go to Question No 3.17

3.16. If your answer for Question No 3.14 is YES,	
3.16.1 What is the source of credit? (more than one answer is possible)	3.16.2 How will /did you pay back the loan? (more than one answer is possible)
1. friends/relatives/neighbor (without interest)	1. Income obtained from profit making business
2. From money lenders/Amhara credit and saving institution	2. Sellig household assets suchcow, ox, shaeep etc
	3. Taking loans from others
4. Others Specify	4. Others specify

iv) Social Capital

3.17 In the last 12 months, have you participated in the following social organization? (more than one answer is possible)						
1. Edir	2. Ekub	3.Mahiber/senbete	4. Wonfel	5. Debo/wobera	6. 1 to 5 organization	7. Others specify

3.18. Does your household have rural-rural migrant relatives/friends/neighbor?

1. Yes 2. No

v) Livelihood activities of Households and the amount of earnings.

3.19 In the last 12 months, specify the type of livelihood activities your household has engaged among the following livelihood activities (more than one answer is possible)	3.20 Income obtained(in Birr)
1. Crop production	
2. Livestock production	
3. Poultry production/egg sell	
4. Bee keeping/honey sell	
5. Local agricultural labor	
6. Local non-agricultural labor	
7. Petty trade	
8. sell of Wood/grass/charcoal	
9. Artesian	
10. Rent out different assets	
11. Sefty net	
12. Temporary migration	
13. Remittance	
14. Assistance from relatives/NGOs/others	
15. Others specify	

vi) Food insecurity

3.21 In the last 12 months, how do you fulfill the food grain demand of your household? (more than one answer is possible)	1.Own production	2. purchase	3. grain loans	4. others specify

3.22 In the last 12 months, for how many months have your household faced food deficit? (Write the number of months. If there is no months of of food scarcity write 0) ……

3.23 In the last 12 months , was there a time when your household have ever been																			
1.Worried that your household would not have enough food				2.Eating less food than you think it should be				3.Hungry but failed to eat				4.Unable to eat the preferred food				5.Asking outside the home (money or food) for food			
1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Code: 1. Not at all 2. Low 3. Medium 3. High																			

4) MIGRATION EARNINGS, MIGRATION INDUCED VULNERABILITY AND FUTURE PLAN OF MIGRATION (to be filled by migrant households Only)

4.1 In the last 12 months, have any temporary migrant members brought money/material as part of net earning from migration?

1. Yes 2. No ⟶ If your answer for Question No 4.1 is NO go to Question No 4.3

4.2 If your answer for Question No 4.1 is yes,	
4.2.1 What has been brought home? (more than one answer is possible	4.2.2 Money or estimated money value of the material brought home?
1.money	
2. material (cloth, shoes, mobile , tape etc)	
3.Others specify	

4.2.3 If money is brought home, where has been invested or expected to be invested? (more than one answer is possible)

1.Food consumption/Food grains	6. Buy livestock	11.Festival(*mahber,senbete and sereg* expenses)
2.House construction/improvement	7. Start or expand business	
3.Buy house equipment/radio/mobile	8.Education	12. Saved
4.Clothing and shoes	9. Health expenses	13. Others specify
5.Paying debt and tax	10. Buying Fertilizer/ selected seeds	

4.4 Have your household migrant members been exposed to one or more of the following shocks at the destination for one or more times over the years you have engaged in temporary rural-rural labor migration (including exposure of those household members not listed in question 2.17) ? (more than one answer is possible)

1.Crop failure	2.Market shocks	3.Health shocks	4.Employment shocks	5.Crime shocks	6. No exposure to shocks

4.5 If your answers for Question No 4.4 is one or more of those listed from 1 to 5, what was the extent to which the shock/s negatively affect your household in terms of: (**if there are different level of vulnerability at different times, take the case of the most severe experience**)

1. Worry that there would not have enough food?				2. Eat less food than you think it should be?				3. Hungry but failed to eat?				4. Unable to eat the preferred food?				5. Ask outside the home (money or food) for food?			
1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4

4.6 If your answers for Question No 4.4 is one or more of those listed from 1 to 5, what was the extent to which the shock/s negatively affect your household in terms of: (**if there are different level of vulnerability at different times, take the case of the most severe experience**)

1.Erod cash saving				2.Degrade livestock holdings				3. indebted			4.Incapacite household labor				
1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4

Code: 1. no impact 2. Low 3. medium 3. high

4.7 Has your household planned to migrate in the coming cropping season at the destination in search of employment opportunities?

1. Yes 2. No 3.Undecided yet

Appendix 2

Guides for Focus Group Discussions, Key Informant Interviews and Field Observation

1. Focus Group Discussion Guides

- Place of FGDs……
- Date of FGDs ……...
- Time of FGDs …….
- Name and Household level positions (in relation to household head) of the interviewees …….. ……..
- Type of migrants (focus group)……

1.1. Patterns of migration

1.1.1 Nature of occupation at the destination **(for migrant farmer focus groups only)**

- What type of crops do you farm at the place of destination? Which one do you prefer? What drives you to select one crop from the other?
- Who are the sources of land for farming at the place of destination?
- How do you access land? How much do you pay in cash or kind?
- When do you settle your access to land?
- What characteristics of the land do you consider to select it for farming?
- What are the inputs required for farming and their sources?
- What kinds of draught power do you use for farming? How do you access them?

1.1.2. Nature of occupation at the destination **(for full-time and casual wage labor migrant focus groups only)**

- What is *kenja*? Where does the name come from? **(for full-time wage labor migrants focus groups only)**
- Who are your employers?
- What are the activities on which you are employed? When are they available?
- What are the terms of employment?
- How is the variation in amount of payment across sex, time and place?
- What are the facilities provided by your employers?

1.2. The contribution of migration for livelihoods (for all focus groups)

- How do you describe the role of migration for the livelihoods of migrant households?
- How do you explain the role of migration for food security of your households?
- How do you see the role of migration for asset accumulation of your households?

1.3. Migrants' Exposure to shocks at the place of destination

1.3.1.**Crop failure (for migrant farmer focus groups only)**

- What are the shocks you are exposed at the destination (including other migrants you know that face similar vulnerability)?
- How do you explain crop failure shocks that you are exposed at the destination?
- What are the factors for exposure to crop failure shocks?
- Are there variation of crop failure shock among migrants? If so how?
- What measures do you take to manage the risks associated with crop failure?

1.3.2. **Market shocks (for migrant farmer focus groups only)**

- How do you explain the situation of market shocks you have been exposed so far?
- What do you think are the reasons for your exposure to market shocks?
- What measure do you take to manage market shocks?
- How do you see the effectiveness of risk management strategies?

1.3.3. **A) Employment shocks (for migrant farmer focus groups only)**

- How do you explain availability of pre-arranged land before your migration?
- How do you explain the situation of your exposure to lack of access to suitable and affordable land for farming?
- What measure do you take as risk management strategies associated to lack of access to suitable and affordable land for farming?
- How do you see the effectiveness of risk management strategies?

B) Employment shocks (for full-time and casual wage labor migrant focus groups only)

- How do you explain your vulnerability to shocks at the destination?
- How do you explain the situation of lack of job or unable to work or work with a minimal wage at the destination?
- Why do you think you are exposed to these shocks?
- What measures do you take as risk management strategies associated with employment shocks?
- How do you see the effectiveness of risk management strategies?

1.3.4. **Health shocks (for all focus groups)**

- How do you explain your exposure to health shocks at the destination?
- Why do you think that you are exposed to health shocks?
- What measure do you take to manage your exposure to health shocks?
- How do you see the effects of your risk management strategies?

1.3.5. **Crime shocks (for all focus groups)**

- **Theft**
  - How do you explain the situation of theft in your potential destinations?
  - What are the factors behind your exposure to theft?
  - What the measures do you take to manage your exposure to theft?
- **Breaching agreement**
  - How do you explain your exposure to breaching agreement from your employers?
  - What are the factors behind your exposure to breaching agreement?
  - What measure do you take to manage exposure to breaching agreement?
  - How do you see the effectiveness of your risk management strategies towards breaching agreement?
- **Conflict**
  - How do you see your exposure to conflict in your potential destinations?
  - What are the factors for your exposure to conflicts?
  - What measures do you take to manage risks related to conflict?
  - How do you see the effectiveness of your risk management strategies?

1.4. The outcomes of shocks at the destination on the vulnerability of migrant sending households (for all focus groups)

- How can shocks at the destination can contribute to food insecurity of migrant sending households?
- How can shocks at the destination can contribute to asset decumulation of migrant sending households?
- How do you describe the outcomes of household members' exposure to shocks at the destination on food insecurity of your households?
- How do you see the outcomes of household members' shocks at the destination on asset decumulation of your households?
- Why do you participate in migration in the condition of risks at the destination?

2. Key Informant Interview Guides

- Place of interviews……
- Time of interviews……
- Name of interviewee…….
- Position of interviewee ……..

2.1. Interviews at the place of origin

2.1.1. Interviews with agricultural experts

- What are the major crops grown in the district?
- What are the challenges of crop production in the district?
- How do you see the natural resource degradation status in the district/locality?
- How do you see the soil and water conservation practices in the locality/district?
- What are the main livestock reared by households in the district?
- What are the challenges of livestock production in the district?
- How do you explain the resettlement program occur from the district to other districts of the country?

2.1.2. Interviews with elders and migrants

- Why do people migrate from the village to other rural districts of the country to get temporary employment?
- Who (married or single, students, male, female, etc.) migrates in each type of migration? Why?
- When do people temporarily migrate from and return to the district across different forms of migrants?
- How is the change in volume of migration among different forms of migrants across time and place?
- How is the spatial pattern of migrants' destination changes across time**?**
- What are the shocks to which migrants are exposed at the place of destination? (for migrants only)
- What are the factors for migrants' exposure to these shocks? (for migrants only)

2.2. Interviews with experts at district level offices at the destination and other level of administration

2.2.1. Interview with health experts

- What are the health shocks in areas where temporary migrants get employment?
- What are the driving forces for migrants exposure to health shocks?
- What measures taken by your offices to solve migrants exposure to health shocks?
- What challenges have you faced to address health issues of migrants

2.2.2. Interview with experts in Labor and Social Affairs Offices

- Which agricultural activities are the major sources of employment opportunities for temporary migrant laborers?
- Where does temporary employment opportunities available for temporary rural-rural labor migrants?
- Which time of the year does employment opportunities available for temporary rural-rural labor migrants?
- Which type of temporary migrant workers does your office concerned with?
- Who are the major employers of casual wage laborers?
- What are the responsibilities of your organization related to regulating the working and living condition of temporary migrant workers?
- How do see temporary migrants' exposure to employment shock?
- What do you think the reasons for of migrants' exposure to employment shocks at the destination?
- What measures does your organization take to address migrants' exposure to employment and associated shocks?
- How do you see the interest and commitment of government towards the management of migrants working and living environment at the destination?
- What are the challenges your origination face to address migrants' exposure to shocks?

2.2.3. Interview with Police officers

- **Theft**
  - How do you see the situation and extent of temporary migrant workers exposure to theft?
  - Why do migrants vulnerable to theft?
  - What measures does your office take to solve the problem?
- **Breaching agreement**
  - How do you see the extent and manifestation of breaching agreement related to temporary migrants' employment at the destination?
  - What are the factors responsible to exposure of migrants to breaching agreement?
  - What measures does your office take to address migrants' exposure to breaching agreement?
- **Conflict**
  - How do you see the extent and manifestation of migrants' vulnerability to conflict?
  - Why do different forms of migrants vulnerable to conflict?
  - What measures does your office take to solve migrants' vulnerability to conflict?

2.2.4. Interview with Agricultural experts

- What kinds of crops grow in the area?
- What are the temporal patterns of agricultural activities at the destination?
- What is the average yield of sesame per hectare? What factors determine the variation in yield in a given plot of land?
- How do you see the trend of crop failures in sesame farming in the area?
- What are the factors for (migrant) farmers' exposure to crop failure shock in sesame farming?
- What factors determine variation in vulnerability to crop failure between individuals?
- What measures do your office take as risk management strategy of crop failure?

2.2.5. Interviews with experts from Ethiopian Comodity Exchange and SBN program Offices

- How do yo explain the market chain and power distribution in the sesame market chain?
- How do you explain the extent of market shock in sesame sector ?
- What are the factors for price shock of sesame?
- What measures are taken to manage market shock?

3. Observational Gide (at the origin)

- Land use and cover
- Available social services and infrastructure
- Agro-climate condition
- Energy sources
- Water and soil conservation practices
- Records on agricultural activities, social services , infrastructure, etc

4. Observational Gide (at the destination)

- Living and working environment of casual wage laborers
- Sesame crop farming practices
- Agro-climate condition
- Land use and cover
- Available social services and infrastructure

Appendix 3

Table 1: VIF with the presence of household size variable

```
. vif

    Variable |       VIF       1/VIF
-------------+----------------------
       HHSIZ |     12.55    0.079708
        NDEP |      7.29    0.137083
       NMADU |      4.50    0.222034
       NFADU |      3.66    0.273213
        SLAO |      2.02    0.493873
        SLIO |      1.72    0.582268
       FLAND |      1.57    0.637117
       AGEHH |      1.53    0.653858
       SEXHH |      1.38    0.723909
       AGROE |      1.30    0.769326
       ACIRW |      1.27    0.784403
       EDUHH |      1.19    0.837681
        ACCR |      1.19    0.839714
       NSOHP |      1.13    0.884354
        ACTR |      1.12    0.888905
       ACMNE |      1.09    0.920515
-------------+----------------------
    Mean VIF |      2.78
```

Table 2: VIF in the absence of household size variable

```
. vif

    Variable |       VIF       1/VIF
-------------+----------------------
        SLAO |      2.01    0.496306
        SLIO |      1.72    0.582313
       FLAND |      1.56    0.641252
       AGEHH |      1.53    0.654896
       SEXHH |      1.38    0.724723
       NMADU |      1.35    0.739912
        NDEP |      1.33    0.752036
       AGROE |      1.30    0.769946
       ACIRW |      1.27    0.784421
       NFADU |      1.22    0.822018
        ACCR |      1.19    0.839996
       EDUHH |      1.19    0.840396
       NSOHP |      1.13    0.886641
        ACTR |      1.12    0.889005
       ACMNE |      1.09    0.920781
-------------+----------------------
    Mean VIF |      1.36
```

Table 3: Descriptive statistics of continuous variables used in the regression analyses across type of migrant households

Variables	Types of migrant households						Total		Sig
	Crop farming MHHs		Casual wage labor MHHs		Full-time wage labor MHHs				
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	
AGEHH	51.48	12.55	42.53	12.72	50.02	11.49	47.34	13.76	0.00
HHSIZ	6.25	1.88	5.84	1.94	6.34	1.83	5.86	1.94	0.20
NDEP	2.0	1.33	2.39	1.25	2.15	1.31	2.43	1.4	0.10
NMADU	2.43	1.08	1.81	1.02	2.17	1.24	1.77	1.09	0.00
NFADU	1.88	.96	1.64	.88	1.98	1.01	1.66	.92	0.06
SLAO	1.05	.41	.66	.44	.88	.42	.89	.459	0.00
SLIVO	3.54	2.09	2.37	1.59	2.93	2.13	2.98	1.88	0.00
NSOHP	3.71	.81	3.36	.70	3.58	1.03	3.57	.85	0.01

Source: Own Household Survey, 2015

Table 4: Descriptive statistics of non-continuous variables used in the regression analyses across type of migrant households

Variables	Types of migrant households				
	Crop farming MHHs	Casual wage labor MHHs	Full-time wage labor MHHs	Total	Sig
SEXHH (% of male)	91.1%	89.6%	83.0%	87.7%	0.33
ACMNE (% of yes)	89.1%	72.9%	84.9%	78.1%	0.01
EDUHH (% of literate)	41.6%	54.2%	49.1%	49.2%	0.21
AGROE (% of midland)	56.4%	20.8%	35.8%	42.5%	0.00
ACCR (% of yes)	34.7%	46.9%	41.5%	37.9%	0.22
FLAND (% of infertile)	32.7%	46.2%	41.7%	35.6	0.18
ACIRW (% of yes)	34.7%	22.9%	32.1%	34.7%	0.72
ACTR (% of yes)	6.9%	6.2%	7.5%	9.8%	0.95

Source: Own Household Survey, 2015

Table 5: Average land holding size across type of migrant households

Size of land owned	Types of migrant households			Total	X^2
	Crop farming MHH	Casual wage labor MHH	Full-time wage labor MHH		
Landless	4(4.0)	19(19.8)	6(11.3)	37(9.3)	
0.1-0.5	9(8.9)	23(24.0)	5(9.4)	60(15.1)	
0.5-0.75	13(12.9)	13(13.5)	6(11.3)	56(14.1)	0.00
0.75-1	25(24.8)	28(29.2)	22(41.5)	124(31.2)	
1-1.5	44(43.6)	13(13.5)	13(24.5)	104(26.1)	
≥1.5	6(5.9)	-	1(1.9)	17(4.3)	
Total	**101(100)**	**96(100)**	**53(100)**	**398(100)**	

Source: Own Household Survey, 2015; numbers in parenthesis are percentages