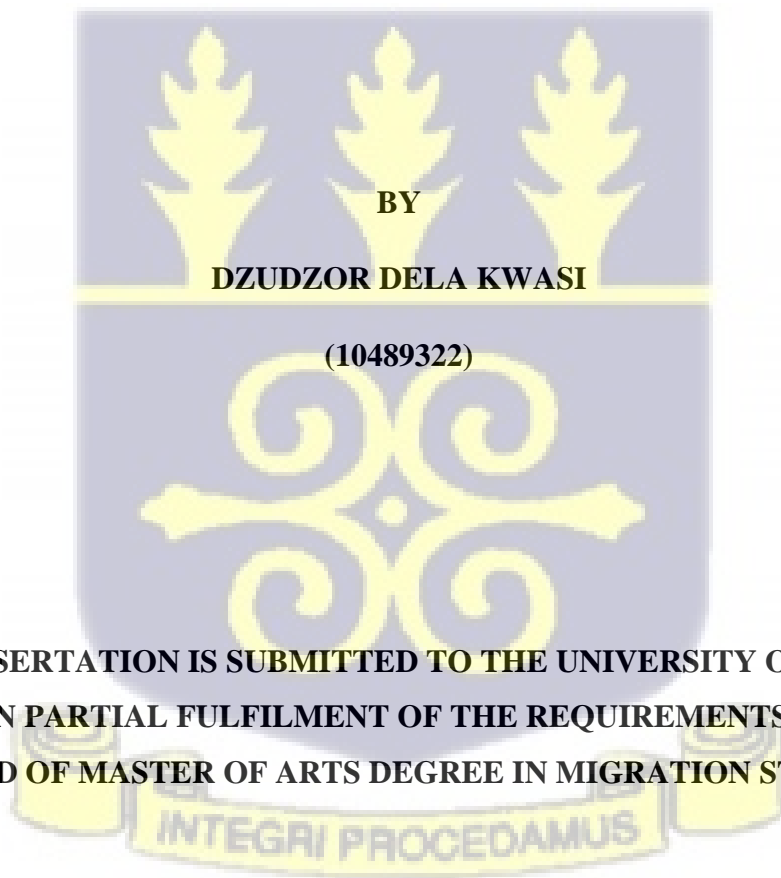


UNIVERSITY OF GHANA
CENTER FOR MIGRATION STUDIES

**THE EFFECTS OF RURAL URBAN MIGRATION ON AGRICULTURAL
PRODUCTION IN THE KETU-NORTH DISTRICT**



**THIS DISSERTATION IS SUBMITTED TO THE UNIVERSITY OF GHANA,
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**UNIVERSITY OF GHANA
CENTRE FOR MIGRATION STUDIES
COLLEGE OF HUMANITIES**

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PRODUCTION IN THE KETU-NORTH DISTRICT**

**BY
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DECLARATION

I Dzudzor Dela Kwasi thereby declare that this dissertation is as result of my efforts and hard work in conducting an independent research conducted at the Centre for Migration Studies, University of Ghana Legon under the supervision of Dr. Leander Kandilige. People whose works were partly referenced and adopted have been duly acknowledged in the text.

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Date

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(Supervisor)

Date

DEDICATION

This dissertation is dedicated to my family Mrs. Dzudzor-Gbegble Gifty, Mr. Dzudzor Bright and Dzudzor Makafui.

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My ultimate gratitude goes to the Almighty God for His mercies, favour, kindness and love towards me from the beginning to the completion of this work. Through Him all things were made possible.

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ABSTRACT

Migration is a topical issue that has caught the attention of researchers over the past few decades. There are many effects of migration, especially from rural to urban areas. The purpose of this study is to examine the causes and effects of rural-urban migration on agricultural productivity from the perspective of non-migrant farmers left behind. Data were obtained using a mixed-method approach where the instruments used in this study were a structured questionnaire and an interview guide for key informant interviews. A field survey was conducted in gathering primary data from 100 farmers in Dzodze in the Ketu-North District. Using descriptive statistics, the factors that influence out-migration, the relationship between outmigration and labour availability, the effect of out-migration on production levels and food availability are analysed.

The results of the study indicate that among the farmers, unemployment is the main factor that influences out-migration from the Ketu-North District. The findings also reveal that out-migration adversely affects agriculture labour availability and production levels. Thus, increasing the cost of hired labour and reducing the potential volume of production. It is recommended that the government promotes rural industrialisation to revamp the local economy, thus creating more opportunities for the citizens. Also, adequate provision of infrastructure and social amenities to attract others into the area is needed. Finally, the government should invest in modernising the agriculture sector so as to improve the efficiency of farmers and increase production volumes.

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CHAPTER ONE

INTRODUCTION

1.1 Background of study

Migration over the past decades has been a topical issue and has received immense attention from academics, scholars and policymakers from all over the world. It is a widespread phenomenon with its underlying mantra being “for livelihood diversification” in many developing countries and considered an integral component in population change (Gautam & Anderson, 2016). Migration dynamics is still one of the most important demographic features in recent times.

Migration according to the International Organization for Migration (IOM), is the movement of people from one geographical location to another either voluntary or involuntary as a permanent or temporary change of residence (IOM, 2005). Migration takes different forms, these include internal, regional and international migration. Even though international migration has received a lot of attention globally, internal migration is considered to be more important because of its potential in poverty alleviation, the large amount of remittances accrued and the number of people involved in the internal migratory flows. (IOM 2002:13 Sander, 2003)

Dugbazah (2007) indicates that internal migration consists of four types. These include rural-urban migration, rural-rural migration, urban-rural migration and urban-urban migration. The commonest form of internal migration is rural-urban migration (Brown & Chikagbum, 2015). Globally, most people live in urban areas. About 55% of the global population is found in urban areas resulting from rural-urban migration. (UN, Department of Social and Economic Affairs, 2018)

Rural-urban migration is very prevalent in Africa (Brown & Chikagbum 2015) and it is the most basic form of migration which involves the movement of youths in the rural areas to the urban centres in seeking for a better prospect (Mabogunge 1970).

Just as in many Sub Saharan African countries, Ghana is no exception to these rural-urban migratory flows where it is estimated that about 35 percent of its urban population is as a result of movement from rural areas to urban centres. (GSS, 2000). Mahama (2013) indicates that Ghana has a long-standing history of population movement particularly rural-urban migration and Awumbila and Schandorf (2008), and Caldwell (1969) note that this movement plays an important role as livelihood strategies in many farming households. Awumbila (2015) indicates that people's movement from rural areas to the urban centres are as a result of multiple factors. However most of these movements are founded on economic factors and the expectations of improved living standards. Again, most of these movements are mainly the youth who go in to search for better opportunities in urban centres. (Awumbila, 2014).

Agriculture is a mainstay in the economy of many African countries including Ghana. Ghana is endowed with fertile soils and a fairly well-distributed rainfall which makes agriculture a major stakeholder in the economy of Ghana. The sector is a major employer of the economically active population, supporting the livelihood of approximately 55 percent of the population (Ghana Fact Sheet, 2010). There has, however, been a constant decline in the sector's contribution to the Gross Domestic Product (GDP). For example, the contribution of the sector to GDP in 2007 was 29.1 percent and this declined further to 20.3 percent in 2015 (ISSER, 2014; 2016). Although the sector's contribution to the national GDP is on the decline, the sector still employs the largest share of the labour force (ISSER, 2016). According to the Food and Agricultural Organisation (FAO) Corporate Document Repository, the primary source of income and the main form of land use in the Volta Region is farming. According to the Ministry of Local Government and Rural Development, the agrarian sector takes up about

70 percent of the economically active labour population and nearly every household within the district carries out agricultural related activities.

Nonetheless, the outmigration of the youth from the rural communities to the urban areas is creating a notable demographic phenomenon where there is a shortage of the active labour force and this is partly contributing to food insecurity (Agesa & Kim, 2001). This is because the youth in the communities tend to migrate to other destinations when they could have remained to promote the growth and development of the community. Interestingly, the migration of the able-bodied youth from the rural areas is linked to the stagnation and even a decline in the agricultural productions of these communities (Regmi & Tisdell, 2002).

1.2 Research Problem

Agriculture in Ghana is relatively non-mechanised and still labour intensive. Nonetheless, as a result of the numerous challenges faced by the sector, many people especially the youth in rural communities tend to abandon activities pertaining to farming or any agriculturally related activity and leave to the cities. The result of their actions partly leads to a reduction in the labour force of the community and thus potentially leads to the reduction in the total cultivated area.

Also, as a result of the outmigration of the youth, it does affect the quality of work on cultivable lands since the left behind farmers are predominantly the aged and weak, and not the young able-bodied youth. Consequently, the reduction in cultivable lands and quality of work on farmlands ultimately leads to poor crop yields; that is, a decline in food production which does affect the income levels of the farmers thereby reducing the household wealth and eventually causing some amount of food insecurity.

Aworemi, et al., (2011) in a study conducted in Nigeria espouse that rural-urban migration can be likened to a coin with two sides which implies that, the result of the outmigration of the

youth does create problems both in the rural areas and the potential destination of the migrant. They argue that, the rural community is affected because the development of the rural community is dependent on the presence and availability of the youth in the community who contribute to the high production levels of agricultural yields, however that is not the case since most of these able-bodied youths are lost to outmigration to other destinations specifically to the urban areas. The outcome is stagnation of the agricultural sector on both a micro and macro level which has serious implications for household welfare and economic activities.

However, there is also evidence in the literature to show that due to out-migration, there is an increase in remittances received by households whose members have migrated. Several authors (De Haas, 2006; Li. Wang, et al., 2013; Rozelle, et al., 1999) in their studies have highlighted the positive effects of migration on rural communities. Households that have members who migrated outside their communities have increased household incomes, invested in other non-farm ventures, acquired capital assets to improve their agricultural production and increased their purchasing power.

Like other rural communities in Ghana, Dzodze has experienced out-migration especially by the youth and that little work has been done in this area to analyse the effects of this phenomenon on agriculture production. Therefore, this study seeks to study the effects of rural-urban migration on agricultural production among farmers in Dzodze in the Ketu-North District. Based on the issues raised, the primary research question of this study is presented below.

1.3 Objectives of the Study

The primary research objective of the study was to examine perceived causes and effects of rural-urban migration on agricultural productivity in the Ketu-North District. The secondary objectives that were employed in addressing the primary research objective are presented below:

1. To identify the factors that influence outmigration from rural areas into urban areas.
2. To determine the relationship between outmigration and agricultural labour availability in rural areas.
3. To assess the influence of outmigration on production levels in rural areas.
4. To examine the effects of outmigration on food availability in rural areas.

1.4 Research Question of the Study

The primary research question for this study is, what are the causes of out-migration and how does it affect agricultural productivity in rural areas? Based on this primary research question, the following specific research questions are derived:

1. What are the factors that influence outmigration in rural areas into urban areas?
2. What is the relationship between outmigration and agricultural labour availability in rural areas?
3. What is the relationship between outmigration and agricultural production levels?
4. What is the effect of outmigration on food availability in rural areas?

1.5 Significance of the Study

The sustainable production of agriculture is important for poverty reduction and food security. Given governments' intervention in the sector and the challenges that still persist, it is

important to understand the main variables that affect agricultural production in the various producing areas in Ghana. Though there are general factors that affect agricultural production, the level of effect and the importance of each factor may vary from region to region and from district to district. This can be attributed to the local dynamics such as fertility of the soil, access to inputs, culture and other competing land uses. Therefore, this study is significant because it will highlight the key implications of rural-urban migration affecting agricultural production in the Ketu-North District.

Furthermore, the study is significant because the effects of outmigration on food availability in rural areas is analysed. That is, the study will provide an insight into how rural urban migration has implications on food crop production and food security.

From the limited review of literature on the factors that perpetuate outmigration and the effects it has on agricultural production in the Ketu-North District, not much literature is available on the subject matter. Therefore, this study will close the literature gap on effects of outmigration on agricultural production in the Ketu-North District and add generally to the existing literature on outmigration and more specifically its effects on agricultural production in the Ketu-North District.

1.6 Organisation of Study

The study will be structured under six chapters. Chapter one will entail background information about the research topic and a problem statement of the research topic, outlining the research questions and objectives of the research. Chapter two will present a literature review of the study. In this chapter, existing literature on the study is synthesized. Literature is reviewed on rural-urban migration and the agriculture sector of Ghana. A Theoretical framework is also developed in this chapter.

Chapter three presents the methodology of the study. Some of the highlights of the chapter include research design, profile of the study area, the sample and the sampling process, instrumentation and data collection and method of analysis. Chapter four and five presents the results and discussion of the study respectively, the results of each specific objective of the study is presented in chapter four and chapter five discusses and analyses these results.

Finally, chapter six presents the summary, the conclusion of the study and the recommendation of the study. The chapter is divided into three sections. The first section presents a summary of the study. It covers the objectives, methodology and the results of the study. The second section covers the conclusion of the study which is based on the results and discussion of the study, conclusions will be drawn. The final section presents recommendations of the study.

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

This chapter presents the literature review by focusing on certain terminologies, definitions and conceptualisations. A precise understanding of these terms is essential because it explains the relationship between out-migration and agricultural productivity of the rural folks. The chapter also discusses related literature on migration and how this phenomenon affects agriculture in general. The conceptual framework is additionally presented in this chapter. This chapter ends by reviewing some empirical studies related to this study.

2.1 Conceptualisation of major terminologies

2.1.1 Agriculture in Ghana

Agriculture is a mainstay in the economy of many African countries including Ghana. Ghana is endowed with fertile soils and a fairly well-distributed rainfall which makes agriculture a major stakeholder in Ghana's economy. One of Ghana's most important employers of the economically active population is the agricultural sector which supports and sustains the livelihood of approximately 55% of Ghana's population (Ghana Fact Sheet, 2010). The sector's contribution to the Gross Domestic Product (GDP), has seen a constant decline. For instance, in 2007, the sector contributed 29.1 percent to the GDP and this further declined to 20.3 percent in 2015 (ISSER, 2014; ISSER, 2016). Although the sector's contribution to the national GDP is on the decline, the sector still employs the largest share of the labour force (ISSER, 2016).

Government policy for the agricultural sector (FASDEP I & II, METASIP I & II) has consistently prioritized certain aspects of the sector that can be developed given its potential to make the needed economic impact. However, the challenges facing the sector still persist.

Challenges confronting the sector include aging farmers, poor seeds, over-dependence on rainfall, lack of credit, lack of inputs, lack of extension services, postharvest losses, declining soil fertility and in recent times the challenges of climate change (MoFA, 2002, 2007, 2010, 2015).

2.1.2 Migration in Ghana

Migration has been a major component of the experiences of people throughout history in many parts of Africa (De Bruijn et al., 2001) and Ghana is no exception. Due to trade and circulatory nomadic paths and forced labour, migration flows were typically regional (Anarfi et al., 2003). The early twentieth century of Ghana's migration was basically within the frame of rural-rural migration as individuals moved to work on cocoa plantations and mineral mines such as gold, bauxite, manganese, etc. (Brydon 1992). The era of pre-colonial period through to the early 1970s saw self-employed traders from neighbouring regions of Ghana move into the country to trade (Anarfi et al., 2003). In the mines and cocoa farms, there was the need for labour which attracted the youth into Ghana particularly the young unmarried men from neighbouring countries (Anarfi et al., 2003). Ghana during this period had comparatively economic prosperity. As a result, immigration was the major trend in colonial times and migration in Ghana was mainly internal. However, because of language and colonial ties some few highly qualified migrants migrated mainly to England (Schans et al., 2018). The colonialist during this era actively recruited labour from the North to construct rail lines, roads etc and also to work on plantations in the South. This is because the North was regarded to be the Souths labour reservoir (Lentz, 1994; Adaawen and Owusu, 2013). Migration in Ghana from North to South was often seasonal and migrants returned once a year during the harvesting season in the North (Anarfi et al., 2003). This was mainly due to inter-regional migration after colonial legislation that limited rural-urban migration was relaxed (Anarfi et al., 2003). Migration routes have been augmented in recent years by enhancing rural to urban migration as cities such as

Accra and Kumasi have become magnets not only for traders and labourers but also for young migrants seeking for jobs and academic opportunities (Adepoju 2003; Anarfi et al., 2003).

Awumbila & Schandorf (2008) espouse that migration patterns in recent times are changing as formerly migration from North-South was dominated mainly by the male who travelled long distances with the females migrating as dependent wives. However, these migratory patterns have seen changing dynamics as North-South migration is increasingly been dominated by female youths who migrate independently from their family and husband to the urban areas such as Accra and Kumasi (Anarfi et al. 2003). Whitehead & Hashim (2005), indicate that these young girls migrate from the rural areas to the urban cities to work as kayayei (head porters) who carry loads as a means of livelihood. Recent internal migration literature emphasizes seasonal, temporary or circular movements as well as improving the involvement of children in work as strategies for family survival in reaction to poverty. (Litchfield & Waddington, 2003; Whitehead & Hashim, 2005).

Whiles permanent migration has taken on increasing significance over the past few decades, data limitations have significantly restricted the accessibility of information on the migratory flows and patterns of temporary and seasonal migration. The Ghana Statistical Service in 2000 indicates that 52 percent of Ghana's population was deemed migrants of which 51.4 percent were men and 52 percent were women. Given these statistics, there is quite an elevated population mobility in Ghana. With regards to temporary and seasonal migration in Ghana, these forms of migration are primarily associated with agrarian activities as Beals and Menezes (1970) asserts that Ghana's major form of mobility is on the basis of temporary migration.

Although there has been an increase in permanent migration as a result of contributions to increasing levels of manufacturing and other non-agrarian activities, there is no reason to doubt the significance of temporary migration. The North-South migration is justified by the seasonal

difference between the north and the south. The slack season in the north comparatively is the busiest season in the south. Migrants, therefore, would ordinarily tend to move to Ghana's southern areas to be engaged on cocoa and other crop plantations as a form of diversification of livelihoods. Migratory movement from the Northern Savanna areas to the Southern Forest zones is thus a natural adaptation especially since the types of work required on these plantations involve some form of labour such as harvesting, clearing of land, etc. (Berg, 1965).

The major forms of migratory patterns in Ghana include rural to rural, rural to urban, urban to rural and urban to urban migratory patterns (Tutu, 1995). In addition, Greater Accra, Western Region and Ashanti Region were among the dominant regions of migratory destinations. According to the GSS (2000), the migratory patterns in Ghana with regard to the typologies were 35 percent rural to urban, 23 percent urban to urban, 14 percent rural to rural and 10 percent urban to rural with 18 percent been seasonal migration.

2.1.3 What are Rural Areas?

Rural area is a significant variable when it comes to agricultural production and migration. The contextualisation of its meaning is very important when alluding to it in developing countries like Ghana. Rural areas rely exclusively on the context in which they are being defined and the country in question. Its meaning varies between developed countries, countries in transition and developing countries such as Ghana. These areas are areas with a population threshold between 5000 and 10000 whose main livelihood dependence is on agriculture and natural resources (Nwanze, 2000). However, this definition cannot completely describe the scenario in Ghana since many other urban residents rely on agriculture as the main livelihood dependence. Also, in Ghana, the classification of an urban settlement is a population threshold of 5000 whilst a population size of less than 5000 denotes a rural area (GSS, 2000).

There has been the incorporation of qualitative and quantitative characterisation of some definitions of rural areas. For instance, the International Fund for Agriculture Development (IFAD, 2001) juxtaposed rural areas to urban area establishing key differentiation between them as rural areas having certain specific assets such as farmlands for agrarian activities and production, livestock per person and household as well as irrigation schemes per person among other things. Another characterisation of rural areas is the sparsely populated nature with a high dependency on natural resources (South African Rural Development Framework, 1997).

The socio-economic circumstances surrounding rural areas and its indigenes may adversely affect food production as a whole denying them the chances to maximize their farm income and enhance their living conditions. The basic conceptualizations derived from these definitions consist of population density as well as high dependency on agriculture and natural resources for livelihood sustainability.

2.1.4 What is livelihood?

Livelihood is basically considered as a “means of support”. The term includes the capabilities of people, their assets, income and activities required to secure the necessities of life.

A livelihood is viable when it enables individuals to be able to withstand stress and shocks such as economic, natural and social crisis as well as improving their capabilities and assets currently and for the future generation without damaging the natural resources (Chambers & Conway, 1991).

Rural Ghana has seen significant economic changes as households are increasingly adding value to their livelihoods through both increased migration and more non-farming activities (Lay et al., 2008). Aduse-Poku et al. (2003), also offer credence to the claim that Ghana’s rural livelihood alternatives include farming which involves (crop production and animal rearing), craft making, trading, government or civil work/service etc For most farmers in Ghana, however, crop farming has become unexciting since the marketing of the agricultural produce,

irrigation schemes to increase production levels, mechanization of farming, etc are issues they face (Taylor & Dyer 2009).

Rural communities in Ghana mostly rear livestock on a free-range basis and are purposely for household consumption. However, for commercial purposes, only a few individuals engage in it (Adams & Laughlin, 2016; Nyantakyi-Frimpong et al., 2018). The primary problem hampering the development of commercialization of animal rearing is ascribed to high start-up capital for setting up structures, high feed costs, acquiring veterinary services and products etc. (Adzitey, 2013).

Fishing is another essential source of livelihood for the rural folks who are close to water bodies such as lakes, river ponds or dug outs engage in fish farming either for the household consumption or for commercial purposes (Amevenku et al., 2019). Unfortunately, since overexploitation of these water sources has taken place, fishing as a livelihood strategy has become unsustainable.

Trading has become very prevalent in most rural economies of Ghana, with the introduction of “commercialisation” (Aduse-Poku et al., 2003). Food crops, local artefacts, imported goods, etc include items being sold. Women, children and the youth are all involved in trading as a means of livelihood. The cottage industry such as wood carving, basket weaving, soap making, pottery etc. is also prevalent in some rural communities (Fening, 2015). In addition, some rural folks are employed in public services such as civic education officers, teachers, nurses etc as their means of livelihood. These people have received some form of formal training. (Mensah, 2014).

2.1.5 Rural-Urban Migration

Rural-urban migration is one of the most common kinds of migration in developing countries including Ghana and since colonial times it has been a major type of migration in Ghana. Rural-urban migration generally brings changes as individuals migrate for temporary or permanent

residence from one geographical region to another. A major change that results from rural-urban migration is urbanisation which leads to an increase in the number of people residing in towns or cities. On the other hand, rural-urban migration leads to a reduction in the number of people residing in these rural areas which have adverse effects on certain sectors such as agriculture since the remaining individuals residing in the rural areas are the aged and the children.

According to Pretty, Morison and Hine (2003), rural-urban migration leads to a decrease in farming activities as a result of a reduction in population. According to Deshingkar and Grimm (2005), the breakaway from subsistence farming to cash crop farming and manufacturing in SSA countries has resulted in the temporary or permanent movement of the youth particularly the males from the rural areas to the urban areas in search of paid jobs.

Rural-urban migration was formerly a process of economic expansion and growth as well as development since the excess labour in the rural areas were needed for industrial development. (Todaro, 1969; Weeks, 1989). Nonetheless, in recent times, the perspective of rural-urban migration has altered drastically with regards to the conceptualisation that have defined it in contemporary times.

Rural-urban migration according to certain policy experts and urban developers perceived rural-urban migration to be negative given that it is seen as disrupting urban city development in many African countries including Ghana creating urban slums and increasing crime rates. (Gazdar, 2003; Yang, 2004). Consequently, many countries have implemented prudent measures to reduce poverty and increase economic development both at the rural and urban areas (Harteveld, 2004).

2.1.6 Migration and Agriculture

The world's rural population now stands at nearly 3.4 billion, however, it is projected to decline by 2050 to 3.1 billion. Whilst the African and Asian continent is quickly urbanising, approximately 90% of the world's rural population still reside in these areas. However, these rural populations are predominantly dependent on agrarian activities for survival (IFAD, 2007). Certain phenomena such as natural disaster and civil conflicts are common causes of food insecurity and poverty which limit the rural population the opportunity to have access to resources and viable livelihood possibilities. In situations where there are scarce and inexistent local alternatives, disadvantaged families in these rural areas would often resort to the idea of sending "responsible" family members to the urban centre in search of paid jobs.

The concordance in the literature on migration-development nexus with regards to rural development remains thin. This indicates that migration generally does not result in a paradigm shift in rural agriculture but often plays a key role in maintaining the livelihoods of rural people (De Haan, 1999; Kennedy et al., 2004). In the migration literature, internal and international migration has been discussed as part of the causes of a substantial decrease in agriculture and general discontent with small-scale farming.

A research carried out in Nigeria by Aworemi, Abdul-Azeez & Opoola (2011) shows that rural-urban migration is a two-sided issue influencing both the rural areas and the urban destination. They argue that the rural areas are the most affected because the youth and the grownups who are expected to stay in the rural areas and contribute to the growth and sustainability of agriculture and the community, in general, tend to leave to the urban centre for nonexistent greener pastures and shun farming activities to achieve certain things they believe hitherto cannot be gained in the rural area. This subsequently tends to decrease the supply of agricultural products /produce and reduce the availability of food in these sending areas.

A main role in the agricultural decline process is ascribed to the “lost labour” of able-bodied men and women who have migrated from the rural areas. Rural and agriculture declines are often linked to internal migration (Regmi & Tisdell, 2002; De Haas, 2007) rather than to international migration to developed countries. This is because much greater remittances are anticipated to be remitted to the communities or countries of origin and families to make it possible for the families to replace lost labour and compensate it with channelling and investing of the remittances into agricultural production and other sectors. The mass movement of rural labour force results in a decrease in agriculture and full neglect of agricultural production by the left-behind individuals in the communities (De Mas, 1990; Kerbout, 1990; Ferry and Toutain, 1990).

The increasing out-migration of the rural labour force has serious implications on agricultural production as the majority of the work which hitherto was supposed to be done by the youth now falls on the aged and children (Angba, 2003). Also, it is undeniable that these labour burdens fall on rural women who play significant roles in agricultural and food production (Raney et al., 2011). Household allocation of labour to certain local agricultural production activities is fewer while migrants are away hence if the output levels of a maximum household are positive, then the output production levels will drastically decrease if the household sends out migrants.

The negative impact of labour losses on agricultural production is paramount since migrants who migrate tend to be younger and better equipped than the conventional rural labourer. A study by Rozelle et al., 1999, expounded the appalling and negative impact of labour loss on agricultural production outputs. The reduction in output levels is ascribed to loss of rural labour force but is partially compensated by migrants’ remittances (Taylor et al., 2003; Rozelle et al., 1999). These remittances are used in the acquisition and purchasing of agricultural equipment as well as leasing labour force as a replacement for out migrant in agricultural production.

Again, the study indicates that remittances sent to the households elevate the migrant household to greater economic position thereby participating in other economic ventures were they partially or completely withdraw from agrarian activities rather than investing. With regards to the role of return migrants, the study noted that returning migrants invest in agrarian activities not because of financial gains but due to their profound emotional attachment to agricultural production. This explains the concept where migrants practice “sentimental” or “hobby farming” (Bencherifa & Johnson, 1991; Bencherifa & Popp, 2000).

It is obvious from the literature that, rural-urban migration rather than international migration appears to be closely connected with the cause of declining agriculture due to reduced supply of household labour in production (De Haas, 1998; 2003).

2.2 Theoretical Perspectives

2.2.1 Theoretical overview of migration

Literature evidently notes that, few scholars deny the significant contribution of migration on livelihoods and survival of left-behind families. The magnitude by which migration and remittances leads to sustainable human development as well as economic growth in the migrant-sending households and communities cannot be disregarded (De Haas, 2007). This topical issue has been a subject of debate for some decades now. During the 1950s and 1960s, “developmentalist” optimism prevailed with wide-spread pessimism emerging in the 1970s through to the 1980s. The shift led to a more diverging opinion in the 1990s as demonstrated in many empirical studies resulting from the intricate nature of migration.

2.2.2 Developmentalist Views

According to the Developmentalists, they believe that developing countries would have achieved rapid economic growth and modernization in the 1950s and 1960s through adopting a strategy of infusing large-scale capital and enhancing industrialisation of agriculture.

Concurrently, large scale migration of labour shifted from developing countries to developed countries reducing labour surplus in the sending countries. In the midst of these situations, the migration process involved many developing countries who took part in the migratory flows. (Papademetriou, 1985). Many governments of developing countries used migration which was deemed as one of the main drivers for national economic growth to actively encourage and support their citizens to engage in the migratory flows (Heinemeijer et al., 1977; Adler, 1981; Pennix, 1982).

Developmentalist migration optimist believed that migration plays a major role in North-South investment capital transfer and introduces the local community to liberal democratic idea, rational contemporary knowledge as well as education (De Haas, 2007). De Haas continues to explain that, return migrants are seen as significant agents of change as well as innovators and investors. In addition, the overall expectations of migrants are not only to be remitting but also their skills, capabilities, ideas knowledge and expertise should be applied to their economic status upon return (Peggy, 1998). Returning migrants in countries of origin were envisaged to invest a large amount of capital into enterprising sector or enterprises. However, this positive view of migration from the perspective of the developmentalists has undergone contemporary changes.

2.2.3 Neo-Classical Views

The Neo-classical theory of migration is based on the functionalist approach which establishes that people's movement from the rural areas to urban centres is as a result of disparities of the two areas, that is, differentials in wages and income, variations in employment opportunities, levels of supply and demand of labour etc (Massey et al., 1993; Bauer and Zimmermann, 1999; Borjas, 2008). Migration is positively viewed by the neo-classical economists and perceives it as a mechanism that helps to optimize the productivity distribution. Neo-classical economists also indicate that migratory flows from sending to receiving areas would reduce or/and

eventually stop if *Factor Price Equalisation* is attained. That is, where wage differentials at the sending areas are almost equal to that of the receiving areas (Massey et al., 1998). With this perspective in mind, a major significant requirement needed for economic development which constitutes a portion of the entire cycle of the development process is the re-distribution of the rural agricultural labour force to the urban industrialised centres (Todaro, 1969). Ultimately, the voluntary movement of labour is anticipated to result in increased labour shortages and greater marginal productivity in migrant-sending areas. While this occurs, labour migration and capital flows are likely to move in the reverse directions.

Migrations developmental role is highly realised in the neo-classical space through the factor price equalisation. At the traditional micro level, the theory of neo-classical migration identifies migrants as rational beings who weigh the cost and advantages of the present situation and the future employment opportunities to make migration decisions (Bauer and Zimmermann, 1999). Consequently, after considering the individual's investments in his or her human capital as well as connections with his or her social networks, the outcome from these cost benefits analyses becomes the basis for migration. (Sjaastad, 1962). Again, the theory indicates that internal migration occurs relative to global labour supply and demand (Zaslavskaja & Liasschenko, 1976).

Currently, international financial institutions have acknowledged and recognized the integration made by the neo-classical point of view on migration and development. For instance, the World Bank's *Globalisation Growth and Poverty Report (2002)*, section on "Migration Policy" saw the importance of migration on receiving countries with regards to the factor price equalisation without the mention of benefits of remittances in its report. This assertion in some ways contradicts parts of Ratha's (2003), chapter called "workers remittances" because Ratha indicates the significant role that remittances play in migration, particularly to developing countries.

2.2.4 Push-Pull Model of Migration

Paramount to the understanding of rural-urban migratory flows is the traditional push-pull factors. Many academics have asserted that, among other things, migration decisions are based on proximate factors such as economic, environmental demographics, political, etc (Lee, 1966; De Haas, 2008). The push-pull model under the migration phenomena is based on certain circumstances at the origin areas such as unemployment, poor crop yields, famine, etc which pushes people to migrate out of the area while other situations such as employment opportunities, better income levels/ wages, improved living standards etc. attracts and pull people to migrate to these destinations areas.

Socio-economic conditions according to some scholars are the major factors that result in the creation of the repelling and attraction of individuals to certain destinations. Prominent among these socio-economic conditions are increasing rural population growth causing Malthusian pressure on limited natural and agricultural resources and economic conditions (improved wages) that attract migrants to urban and industrialised cities (King and Schneider, 1991; Schwartz and Notini, 1994; Skeldon, 1997). Generally, the push-pull model is considered very important because of its ability to incorporate all other factors necessary for making a decision on migration (De Haas, 2008). However, there have been some critiques to this theory suggesting that it is too simplistic and deterministic (Skeldon, 1990; de Haas, 2011). De Haas and Fokkema, (2011) points out that, the presentation of the migration phenomena as a single action as to a process is in itself a failure given that the theory failed to take into account changing motivations and modified decision en route. Notwithstanding these criticisms, it is argued by some researchers that, the push-pull model is the best model to be used in analysing labour migration due to its incorporation of other theoretical perspectives (Bauer & Zimmermann, 1998)

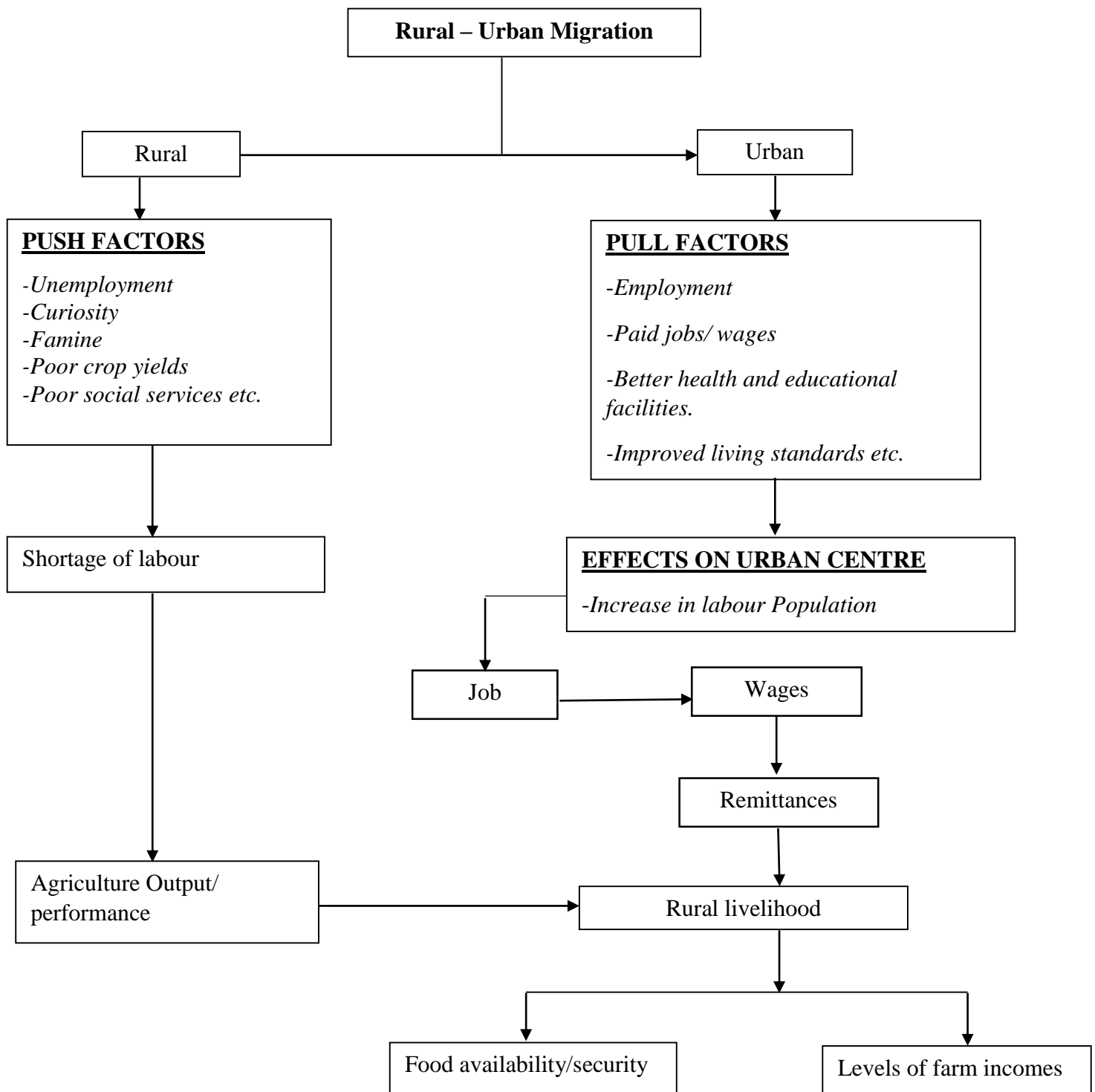
Factors such as demographic stress on the limited availability of land due to excess population and environmental degradation were noted as some of the main causes of migration in addition to wage differentials (King & Schneider, 1991; Zachariah et al., 2001). Out-migratory flows from rural areas aside limited availability of lands is unfavourable weather conditions and poor harvest which are used as reasons for migration and a strategy for risk aversion and livelihood diversification. Notwithstanding these repulsive push factors that cause people to migrate out of the rural areas, the urban centre also on the other hand has certain pull factors that attract people to migrate to these areas for better opportunities and improved living standards.

However, migrants who decide to migrate from the rural areas find another set of conditions known as the intervening variables (Lee, 1966). According to Lee (1966), these intervening variables include distance involved in the migration, financial expenses, cultural and emotional attachments to the place etc. these variables may or may not influence migration decisions despite push-pull factors.

2.3 Conceptual Framework

Concepts play a major and vital role in academic research and have been used to explain complex phenomena into simple terms. As explained by Dingwerth and Pattberg (2006), concepts are the most basic tool in scientific research and coupled with other things helps to make conclusions about the significance of the information, to evaluate specific existing phenomena or to form new ideas. With reference to the literature review, this conceptual framework was conceived and adopted for this study.

Figure 1: Conceptual Framework Effects of rural-urban migration on agricultural production.



Source: Authors own construct, 2019

CHAPTER THREE

STUDY AREA and METHODOLOGY

3.0 Introduction

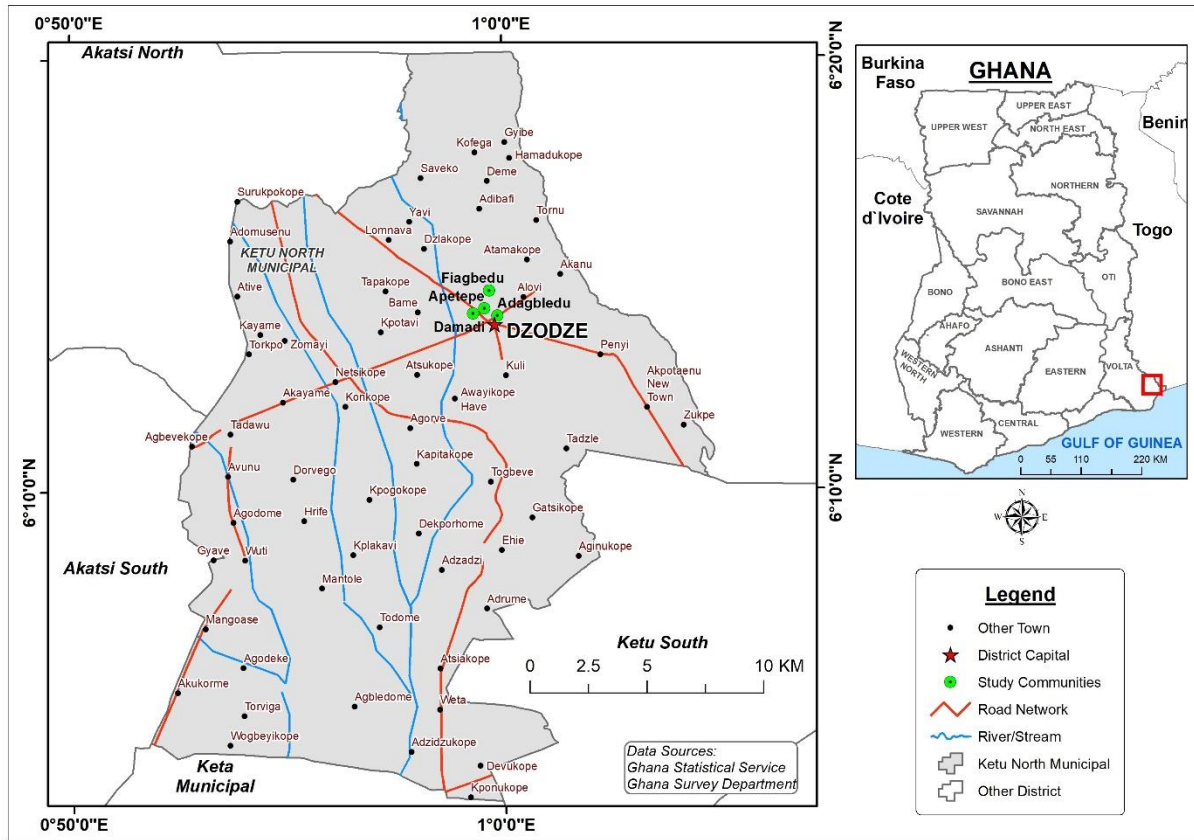
This chapter deals with the description of the study area as well as the methodology adopted in the study. This includes the study area, the methodological design used, the method used for sampling and the method used for data collection, data analysis and data interpretation.

3.1 Description of the Study Area

3.1.1 Location

The Ketu-North District which was formed from the Ketu District in 2008 is located in the south-western corner of Volta Region, Ghana. It lies between latitudes 6°03N and 6°20N and longitudes 0°49E and 1°05E. The Ketu-North District shares boundaries with the Akatsi District to the North and the Republic of Togo to the East and Keta District on the West and to the South is the Ketu Southhand. The district capital is Dzodzo which is situated on the main trunk road that connects the regional capital Ho to Afloa which is 80km away from Ho. The District has a total land area of 754km² (MoFA, 2011).

Figure 2: Map of Ketu-North District



Source: Authors own construct, 2019

3.1.2 Climate and Vegetation

The district experiences dry equatorial climate with a monthly temperature of 24°C to 30°C.

The districts mean annual rainfall is about 1270mm. it has a double maxima rainfall pattern with the peak's periods in June and October.

The districts vegetation is savannah woodland consisting of short grassland with short clumps of bush and trees. The district is also home to the mangrove forest in the marshlands.

However, the districts extensive farming activities have decreased the natural vegetation over the years.

3.1.3 Soils and Geology

The main soil found in the district range from sandy to clay loom, with sandy loom and clay loom being the majority. This soil group supports most crops suitable in tropical areas for example maize cowpea, rice, oil palm, cassava, mango, plantain, pears, and most vegetables.

The district is underlined by 3 main geological formations. These are Viz the Dahomenyan formation to the North composed of soils which include tropical grey and black earth, Regosolic groundwater laterites, and recent deposits of the littoral consisting of marine sands and the Tertiary formation composed of Savannah ochrosols. This together with drainage, vegetation and climatic conditions experienced in the district support the cultivation of some crops and the rearing of animals. (MoFA, 2011).

3.1.4 District Economy

According to the Ministry of Food and Agriculture (2011), the Ketu North's district economy is mainly characterised by the agrarian sector as well as certain economic sectors such as manufacturing and service sector which is underdeveloped even though they exist to serve only the local population on a small scale.

Agriculture is the Ketu North Districts main economic pillar. Farming is largely carried out only on a small-scale basis. The average cultivated acreage varies from 4 to 6 acres for all crops. The crop industry accounts for approximately 60% of the district economic and agricultural activities. Soil types in the district favour a range of crops such as maize, sweet potato, cassava, rice and cowpea production. There are several varieties of cassava in the district as a result of the cross-border interflows with farmers from the Republic of Togo. The Ohawu Agricultural College and its experimental farms which are located in the district have helped to make available improved cassava planting materials to the farmers. (MoFA, 2011)

The districts industrial sector is less developed. There are no large-scale industrial holdings in the district at the moment. Small scale business presently characterize the industrial sector. Kente weaving and smock making is a popular industrial activity, especially for the youth. These kente and smocks are widely sold at Agbozume, Kpetoe and as far as Kumasi and Accra. The Kente weaving sector in the district is a potential tourist attraction but needs to be developed.

3.2 Research Design

The research employed the use of a mixed-method approach which involved the use of both qualitative and quantitative methods. The use of a mixed-method approach provided a more credible and clearer understanding of rural-urban migration than the use of either a single method (Creswell, 2010). The quantitative approach was used to provide a wider response to the perception and effects of migration on agricultural activities and reason for the out-migration of the youths as well as the socio-demographic characteristics of the respondents. The qualitative approach focused on key informant interviews with one extension officer and two opinion leaders who doubled as farmers. Thus, the use of both research approaches complemented each other's strengths and weaknesses thus increasing the validity of the

research findings (Teye, 2012; Bryman, 2007; Creswell, 2009). By using both research methods, it simultaneously facilitates a thorough comprehensive assessment and provides a better understanding of the effects of migration on agriculture on the study area.

3.3 Research Methods

This section explains the methods used in data collection and analysis. For this study, both primary and secondary data source was obtained. The gathering of data was based on a field survey. Mainly, the use of a structured questionnaire and in-depth interviews was the method used to collect the primary source of data for this study. Secondary data on the state of agriculture in the study area was obtained from MoFA (Ministry of Foods and Agriculture) and other relevant sources such as journals, workshop, documents, books, internet etc. Descriptive statistics like percentages, ratio, graphs, pie charts and frequencies will be used in the analysis of the gathered data from the field.

3.4 Target Population

The target population of the study was a migrant agricultural household in the study area. The main respondents of the study were heads of households who are also farmers in the community.

3.5 Inclusion and Exclusion Criteria

Respondents selected for the study were 18 years and above either a male or female farmer who is a head of a household and resides in the communities selected for the study. The farmer should have been practicing farming for a period of more than 2 years. This is because these categories of farmers would be able to address pressing issues and question on agricultural production in the study area.

Anyone under the age of 18 years and as at the time of the study was not a farmer was excluded from the study. Also, farmers who did not reside in any of the farming communities for the study was excluded. The last exclusionary criteria for the study was that any subsistence or commercial farmer who did not practice farming for more than 2 years at the time of the study was excluded.

3.6 Sampling design and Sample size

The multi-stage sampling technique was employed in this study. A list of registered farmers with the MoFA branch of the district was obtained. This served as the sample frame which consisted of 374 registered farmers. The sample size of the respondents for the quantitative study was obtained using the Miller and Brewer (2003), sample size determination formula.

This is given by

$$n = \frac{N}{1 + N(\alpha^2)}$$

Where N = sample frame,

n = sample size,

α = confidence level.

The confidence level is given as 95% and the margin of error is 5%. This is because unlike the physical sciences the study dealt with humans as research subjects whose accuracy of information is subject to biases.

$$N = 374 \quad \text{and} \quad \alpha = (0.05)^2$$

$$\text{Therefore} \quad n = \frac{374}{1 + 374(0.05^2)}$$

$$n = \frac{374}{1 + 0.935}$$

$$n = \frac{374}{1.935}$$

Hence n = 193.281 = 193 respondents.

The sample size of 193 respondents was obtained and to be used for the study. However, due to financial and logistical constraints simple random sampling technique was employed to cut down the number of respondents to 100 respondents.

Respondents were selected from farming communities within the district capital Dzodze which was purposely selected because it is mainly characterised by agrarian activities and one of the leading producers of food production in the district. Also, purposive sampling technique was employed to select 10 farmers as well as the key informants for the in-depth interviews because as the head of the farmers associated the respondent was able to address issues relating to the study. Also, as an agriculture extension officer in the district, he/she was able to provide viable information useful for the study. Hence the technique aided in selecting persons who were deemed to have ample information about the topic under study.

3.7 Research Instrument

The instrument used for the data gathering was a structured questionnaire for the quantitative method comprising of both open and closed-ended question. It was divided into 5 sections which included the background information or demographic characteristics of the respondents, factors that motivated out-migration in the community, effects out-migration has on agricultural labour availability, effects out-migration has on agricultural production and finally the influence of out-migration on agriculture food availability and livelihoods.

The in-depth interview guide was used to gather the qualitative aspect of the study and was designed based on issues pertaining to migration and agricultural activities in the community such as perceived factors responsible for the outmigration of the youth, availability of labour as well as the influence of out-migration on food production.

Questionnaires were personally administered by the research with the help of a translator when there was the need. Again, the researcher was able to ask more probing question by directly administering the questionnaire.

3.8 Data Analysis

The information and responses obtained from the field were coded, sorted, grouped and transferred to allow further examination. Data obtained was analysed quantitatively using Statistical Package for Social Science (SPSS) software. The analysis of the data involved descriptive and inferential statistics. The data was then presented as frequency distributions and percentages. Also, other data were presented in the form of charts and tables for interpretation and discussion.

In-depth interviews were recorded using audio recorders. All interviews were conducted in English and Ewe the common language in which both the researcher and respondents were able to communicate. The recorded interviews were transcribed, coded put into themes based on the study objectives. Data was analysed using the themes reducing the number of words into consistent, coherent rational phrases which supported the interpretation of the qualitative data.

3.9 Ethical Consideration

The researcher will like to point out that this study has some similarities with my undergraduate thesis. However, this study is a build-up on my undergraduate research work. In this current study, I work with a larger sample size and provided a more in-depth analysis and discussion of the results based on my further understanding of the subject.

Since humans were at the core of the research, ethical considerations were very key. This is because the respondents' rights were taken into account in as much as the researcher intended to seek the thoughts and opinions from participants to construct new and additional knowledge to the area of study. Hence efforts were put in place not to violate the rights of the respondents.

The study acknowledged the respondents' rights and ensured that those rights on all occasions were respected. Ethical considerations of the study were maintained as the student's identification card of the researcher was shown to the respondents. This facilitated the easy approval of the respondents and the needed help in obtaining reliable and credible information for the study.

Also, during data collection, confidentiality between the researcher and the respondents was assured. Data gathered from the respondents was treated confidentially and anonymously. Audio recordings during interviews were also kept private between the respondents and the researcher. Interviews and discussions held between the researcher and the respondents were done at a time convenient for the respondent.

CHAPTER FOUR

RESULTS OF STUDY

4.0 Introduction

In this chapter, the results of the study are presented. Based on the primary data gathered and with the appropriate method of analysis, the results of the study are presented. The chapter is subdivided into five (5) sub-sections. The first section presents the demographic characteristics of the respondents. These sections cover the age distribution, marital status, gender distribution, religion and household size of respondents. Section two to section five presents the results of each specific objective.

4.1 Descriptive characteristics of respondents

Table 1 presents the descriptive analysis of the demographic characteristics of the respondents used in this study. The respondents were sampled from four (4) communities in Dzodze in the Ketu-North District. These communities are Adagbledu, Apetepe, Damadi and Fiagbedu. Majority of respondents were sampled from Damadi (33%). This is followed by respondents from Apetepe (28%) and Adagbledu (23%). The least number of respondents were sampled from Fiagbedu (16%).

The sample comprised of 90 percent men and 10 percent women. The mean age of respondents is 50 years. The age difference between male and female respondents is statistically the same at a 5% alpha (α) level. The mean age of male respondents is 50 years while that of females is 49 years. Majority of respondents are 49 years while the minimum and maximum ages are 30 and 67 years respectively.

Majority of respondents are married. About 82 percent of respondents are married while 11 percent are widowed. Only 1 respondent is single while 6 respondents are separated. The

average household size was 7. However, majority of households are made up of 6 members. This figure is higher than the national average of 4.4 according to the 2010 Housing and Population Census. But this is not surprising because, the household size of rural communities is higher than the national average.

All respondents have formal education. The majority of respondents (53%) have either O'level or JHS level of education. Twenty-five (25) percent of them had primary education while 11 percent each have A'level/technical/vocational or tertiary/polytechnic education.

Only two (2) religions are represented in the sample. They are Christianity and traditional religion. The dominant religion among respondents is Christianity. Christianity accounts for about 84 percent of respondents while the traditional religion accounts for 16 percent of respondents.

The main occupation of respondents is farming. About 70 percent of respondents have farming as their primary occupation. The other 30 percent are artisans/craftsmen, auto electricians, carpenters, drivers, teachers, masons, steel benders/welders and waste management officers.

Table 1: Descriptive characteristics of respondents

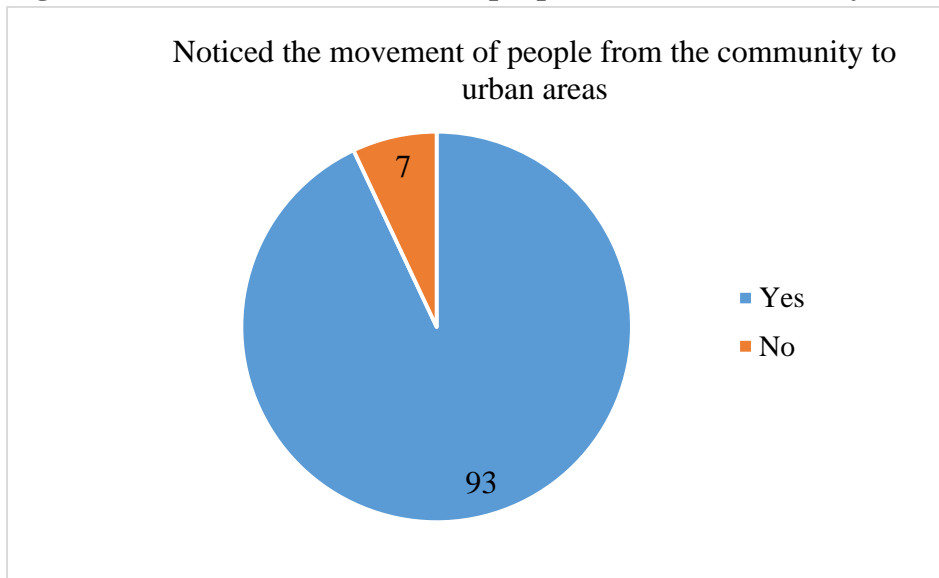
Variables	Frequency	Percentage
Community		
Adagbledu	23	23
Apetepe	28	28
Damadi	33	33
Fiagbedu	16	16
	100	100
Gender		
Male	90	90
Female	10	10
	100	100
Age (years)		
Mean age		50.2
Mean age (male)		50.4
Mean age (female)		49.2
Mode age		49
Min age		30
Max age		67
Marital status		
Single	1	1
Married	82	82
Separated	6	6
Widowed	11	11
	100	100
Household size		
Mean Household size		6.8
Mode household size		6
Educational level		
Primary	25	25
O'level/JHS	53	53
A'level/SHS/technical/vocational	11	11
Tertiary/polytechnic	11	11
	100	100
Religion		
Christian	84	84
Traditionalist	16	16
	100	100
Main occupation		
Farming	70	70
Others	30	30
	100	100

Source: Author's computation, 2019

4.2 Factors that influence outmigration from rural areas into urban areas

Out migration is a topical subject among respondents. As indicated in figure 3, ninety-three (93) percent of respondents said they have noticed the movement of people from the community to urban areas. Furthermore, all respondents indicated that they have had a family member move to urban areas in the last 5 years.

Figure 3: Noticed the movement of people from the community to urban areas



Source: Author's construction, 2019

Figure 4 presents the factors that influence out-migration in Dzodze in the Ketu-North District. The main factor that accounts for out-migration among households sampled is unemployment and poor crop yield. Unemployment and poor crop yield are critical push factors that cause people to migrate. From the multiple-choice responses of respondents ninety-six (96) and 21 percent of respondents identified unemployment and poor crop yield as the critical factors that influence out-migration from the community.

When people are not employed, their likelihood of food insecurity, vulnerability and poverty is increased. They will seek opportunities that will give them a constant stream of income whether within their locality or outside. Thus, where the opportunities are not available locally,

they tend to migrate to places where they can gain employment. Views of various farmers on the factors that influence the migration of the youth from the community to the urban areas.

edor manor manor ni ta (meaning unavailability of jobs) is the main reason why the youth are migrating. Those who migrate come back to come and tell those left in the village the job opportunities that exist in the urban areas so they also follow them to the big cities...

(A farmer at Damadi-Dzodze)

The youth of today want quick money and here in this community there is not enough job opportunities and most of the youth see farming as job for the poor which comes with low incomes so rather than go into farming they would rather migrate. So, unavailability of job is the main reason why our youth are migrating...

(A farmer at Apetepe-Dzodze)

There are no jobs that's the only reason why our youths are migrating. We pray the current government will implement their one district one factory policy to create more jobs in the area because there simply no jobs...

(A farmer at Fiagbedu-Dzodze)

Again, when farmers are heavily dependent on rainfall and their main source of livelihood is destroyed by natural disasters or other occurrences, they are likely to relocate whether temporarily or permanently to places where they can have a steadier livelihood. An opinion leader noted:

Over here, we have two seasons for agricultural activities, these are 'Ada' (rainy season) and 'Kele' (dry season). We do not have irrigation schemes so our agriculture is predominantly rain-fed so we greatly depend on the rains for our farming. We mostly farm on 'Ada' and sometimes we make very huge gains. We sometimes sow on Kele and just pray the heavens are good to us nonetheless we are mainly concerned with 'Ada'.

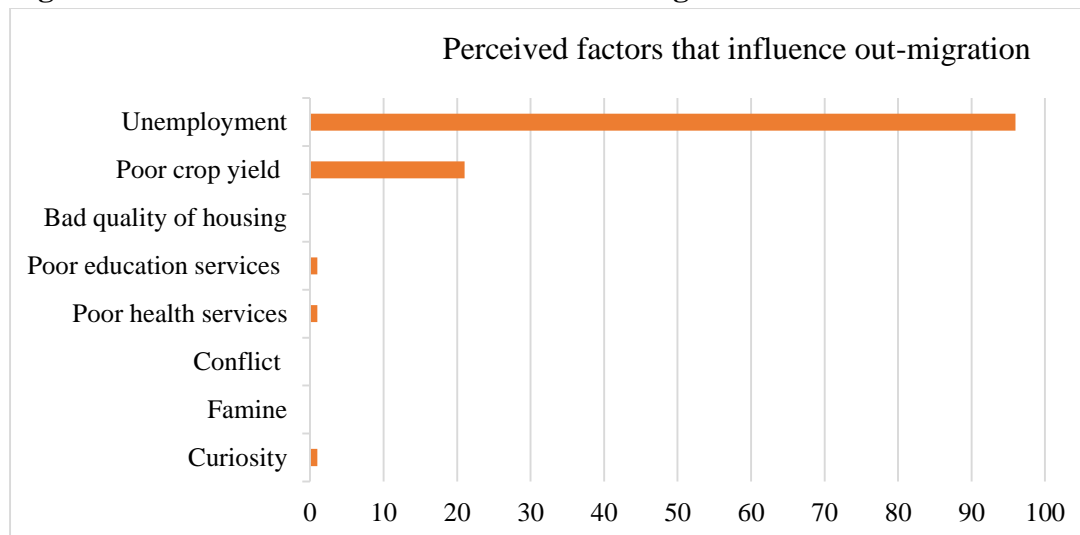
However, there has being a major change in rainfall patterns, we are unable to predict rainfall as we use to do before and even to worsen things the rains do not fall as expected. Right now, our crop yields are reducing, they are not of good quality because they do not get the required amount of water they need, also because they are of low-quality their market prices are reducing. The changes in rainfall patterns are greatly affecting us.

(Head of a farming association in Dzodze)

Other factors that influence out-migration of people from the area include; poor education and health services, and curiosity. No respondent mentioned bad quality of housing, conflict, or famine as factors influencing out-migration from the area. It is not surprising that conflict or famine were not mentioned by any of the respondents because the study area does not have any on-going communal conflict or draught.

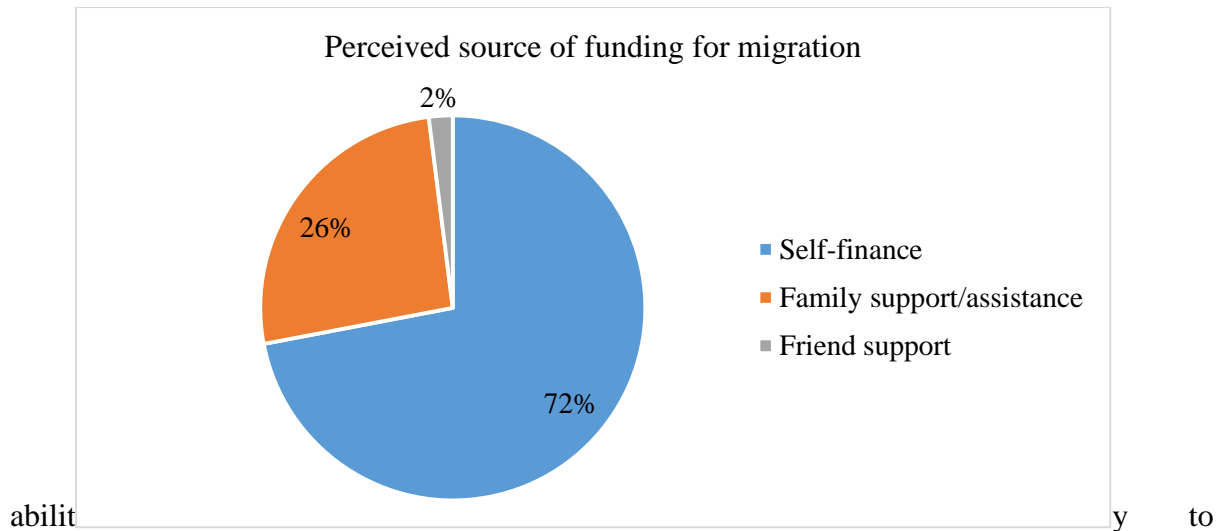
The findings of this study are consistent with other similar studies. Push factors such as crop failure/natural disasters, lack of employment opportunities, financial challenges, etc., in rural areas and pull factors such as the availability of jobs and access to larger markets in urban areas are some of the factors that influence out-migration (Ishtiaque & Ullah, 2013). Afifi, Liwenga, and Kwezi (2014), also in a study in Tanzania found out that when farmers’ sources of livelihoods are affected by climatic conditions they tend to migrate. Their results showed that insufficient rainfall and water shortage account for out-migration in Same-Kilimanjaro.

Figure 4: Perceived factors that influence out-migration



Source: Author’s construction, 2019

Financial capacity of the individual or the family is a critical factor in influencing out-migration decisions. The distance to urban area which a migrant will locate is partly dependent on their



ability to finance the journey. Figure 5 presents the sources of funds for migrants to travel. The results of my study indicate that to undertake their journey, most migrants finance their own journey. Among the respondents spoken to, 72 percent of them indicated that the migrants self-financed their movement to urban areas. About 26 percent indicated that family members/relatives assisted the migrants to travel while only 2 percent said their relatives received assistance from friends.

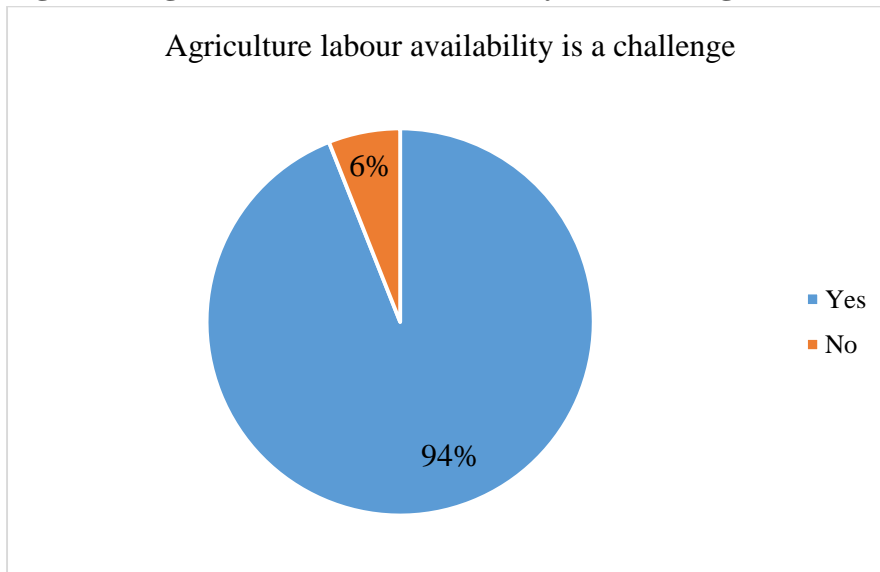
Figure 5: Perceived source of funding for migration

Source: Author’s construction, 2019

4.3 Relationship between outmigration and agricultural labour availability in rural areas

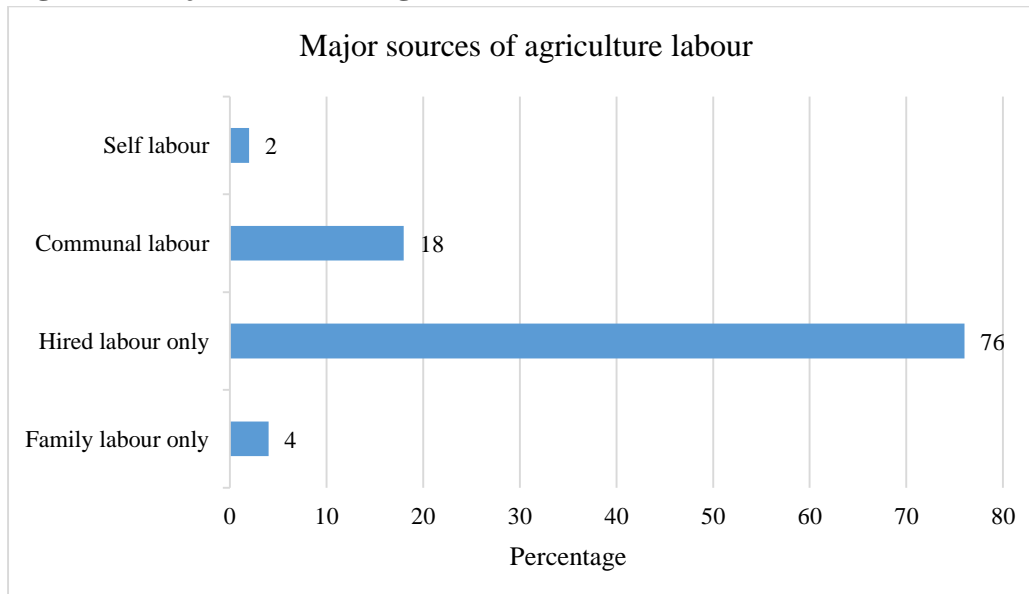
Labour is a critical input in agriculture production especially in developing countries where agriculture mechanisation is still very low. Thus, there is a direct correlation between agriculture labour availability and production levels. Therefore, out-migration has an impact on agriculture labour availability and ultimately, agriculture production. Therefore, it is not surprising that about 94 percent of respondents indicate that agriculture labour availability is a challenge for them (figure 6).

Figure 6: Agriculture labour availability is a challenge



Source: Author's construction, 2019

Figure 7 presents the major sources of agriculture labour in the study area. Currently, the major source of agriculture labour is hired labour. About 76 percent of respondents rely on hired labour for their agriculture activities. This is followed by communal labour and family labour with 18 and 4 percent respectively. This observation is in line with the previous finding where the average age of the respondents is 50 years. Farming involves a number of laborious activities, therefore the older the farmer gets the less physical strength he/she is able to exert. Thus, it is not out of place for majority of respondents to engage hired labour in their farming activities.

Figure 7: Major sources of agriculture labour

Source: Author's construction, 2019

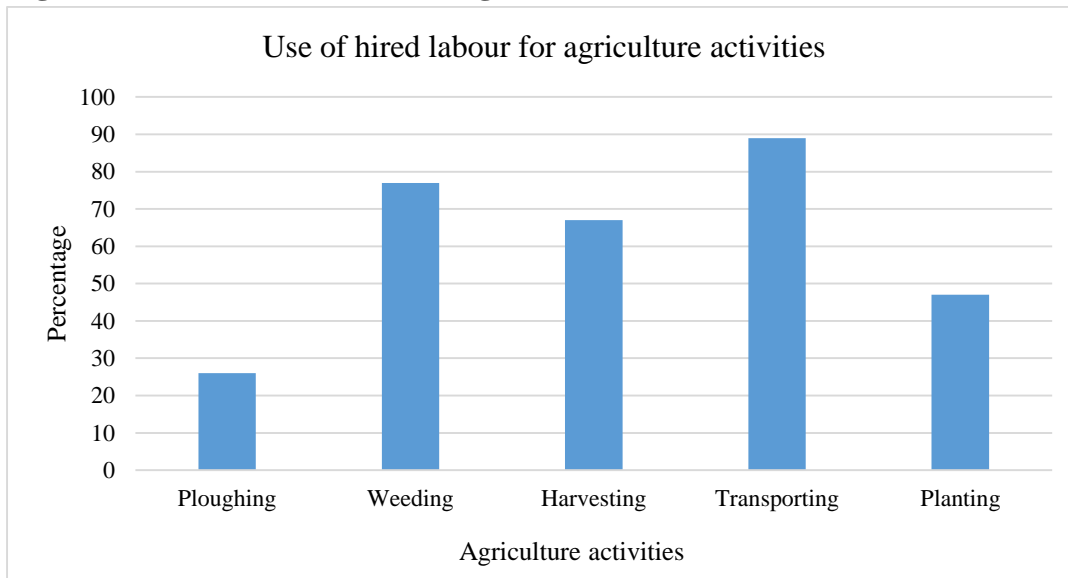
Due to the challenges of labour availability caused partly by out-migration, the cost of hired labour has increased. All respondents indicated that the cost of hired labour has changed and they attribute this change to the out-migration of people to urban areas. This is a major challenge because, given the relatively older age of farmers coupled with low mechanisation of farming activities, they need relatively cheaper sources of labour for their farms. The farmers lamented that the young strong men and women who will be hired to work on the farms have all relocated to urban areas. Thus, the few ones left in the community either charge high fees to work on the farm.

Labour is very scarce, on some occasions where it is severe, I go to Togo to hire labour. They sometimes stay for a month or even 2 to 3 months and I feed them. I normally take about 12 to 15 on a regular farming season or even depending on the farming season I go as high as hiring about 20 labourers. My son it is not easy oo... the cost alone is unbearable but if we don't do it that way how are we going to survive...
(A maize farmer in Apetepe-Dzodze)

These findings are similar to that of other authors like Kessie (2016) in a study on the “effects of migration on the livelihood of rural households in the Kpando District” found out that the

migration of people from food crop production areas affects food crop production negatively due to the high cost of human labour which increases the cost of food production. Yet, farmers still employ the services of hired labour in labour intensive farm activities (figure 8). The graph shows that hired labour is mostly used for transporting, weeding, harvesting, planting and ploughing.

Figure 8: Use of hired labour for agriculture activities



Source: Author's construction, 2019

4.4 Influence of outmigration on production levels

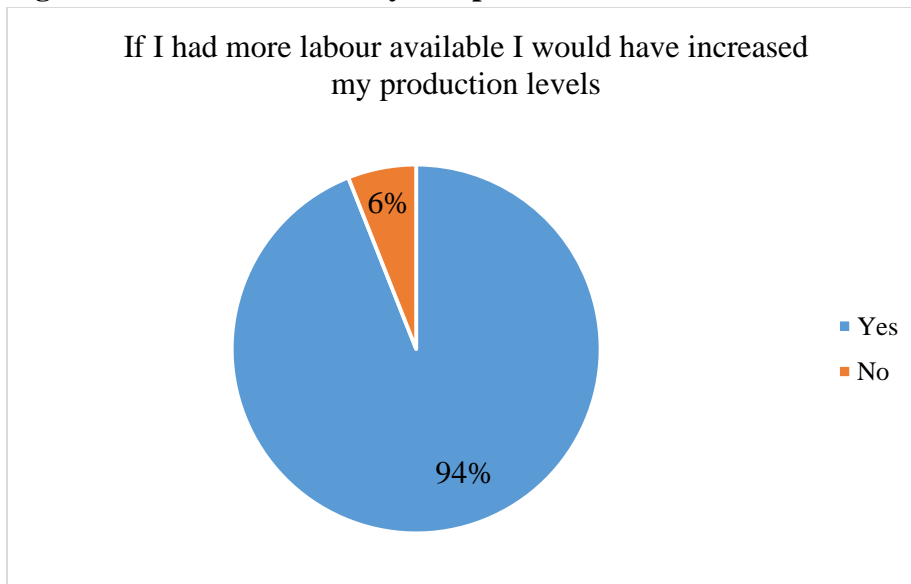
Out-migration does not only affect labour availability but also the level of agriculture production. As the younger energetic youth migrate out of the community and there is no corresponding improvement in mechanisation and other improved technologies, the greater the effect of out-migration on production. Figure 9 presents respondents' response of out-migration on their production levels. Ninety-four percent of respondents said their production levels will have increased had they had access to more labour. Farmers indicated that they are restricted in the number of farming activities and agronomic practices they undertake due to the low number of farmhands. On the question of whether respondents would have produced more if more labour was available, majority of the respondents said yes as indicated earlier.

Respondents said that currently, land availability is not a major problem, but the labour to work on those farms to increase production levels is a constraint due to the fact that the youth are migrating to urban areas to look for better opportunities.

The land is there, see, see for yourself, look behind you, you see. There is available land but the problem is we do not have enough help on the farm by way of labour. Most of the youth are just migrating and it is left with us the oldies. We do not have much strength and energy to farm for long hours let alone farm on large sizes of land. The lands are in abundance but the labour is not there. If I had more labour, I would have increased my farming capacity and I will be producing large quantities of maize but there is no labour...

An opinion leader in the Dzodze Township

Figure 9: Labour availability and production levels



Source: Author's construction, 2019

Over the last cropping season, farmers were able to cultivate about 5 acres of land and were able to harvest on average about 7.7 bags of 50kg bag of maize (Table 2). This is equivalent to about 2 hectares. The average farm size of our study area is similar to the national average for smallholder farms which according to the Ministry of Food and Agriculture is equal to or less than 2 hectares.

On the question of income earned from farming activities, only 75 percent of respondents answered this question. Majority of those who responded to this question indicated that they earned more than GH¢400 from their farming activities during the last cropping season. About 63 percent of respondents said they earned more than GH¢400. This is followed by 27 percent who earned between GH¢301-400 and 10 percent who earned between GH¢201-300. Nobody earned less than GH¢200 (Table 2). It is key to note that the question on income was one of the least responded to questions. Respondents were very reluctant to provide the income they earned from their farming activities. They deemed it private and therefore refused to share it with the researcher.

About 79 percent of respondents say that the amount earned in the last cropping season has reduced while the other 21 percent said it has remained the same. The decline in earnings is attributed to out-migration. About 88 percent of respondents said the decline they experienced in their earnings is partly attributable to out-migration (Table 2).

Table 2: Acreage cultivated, production levels and income earned

Variables		
Mean acreage cultivated (acres)		5.08
Mean maize harvested (50kg bag)		7.68
	Frequency	Percent
Income earned (GH¢)		
201-300	8	10.67
301-400	20	26.67
Above 401	47	62.67
	<hr/>	<hr/>
	75	100.00
Income reduced in the last cropping season		
Reduced	57	79.17
Remained the same	15	20.83
	<hr/>	<hr/>
	72	100.00
Out-migration partly responsible for decline in income		
Yes	66	88.00
No	9	12.00
	<hr/>	<hr/>
	75	100.00

Source: Author's computation, 2019

Table 3 presents the cross-tabulation of respondents who have farming as their major occupation and, acreage cultivated and production levels. The results show that respondents who have farming as their major occupation invest more resources in acreage cultivated and thus, have higher production levels. From the results, the average acreage of respondents who have farming as their major is 5.6 acres compared to 3.8 acres for those who have farming as a minor occupation. The difference of about 1.8 acres is statistically significant at 1% significance level. This means that farmers who have farming as their major occupation cultivate 1.8 acres more on average compared to others.

Similarly, respondents who have farming as their major occupation produce 8.6 bags of the 50kg bag of maize compared to the 5.4 bags by the minor maize farmers. The difference of 3.2 bags more of maize is indicative of the level of investment and resources committed to production of maize by major maize farmers. The observed difference between these 2 groups is statistically significant at 5% significance level.

Table 3: Cross tabulation of farming as major occupation and maize production and acreage cultivated

Variable	Farming is major occupation	Average	Change in means	t-test value	<i>p-value</i>
Production level (50kg bag)	Yes	8.6	3.2	-2.4387	0.0165**
	No	5.4			
Acreage	Yes	5.6	1.8	-2.6511	0.0094***
	No	3.8			

*, **, *** =10%, 5%, 1% significance level respectively

Source: Source: Author's computation, 2019

4.5 Effects of out-migration on food availability in rural areas

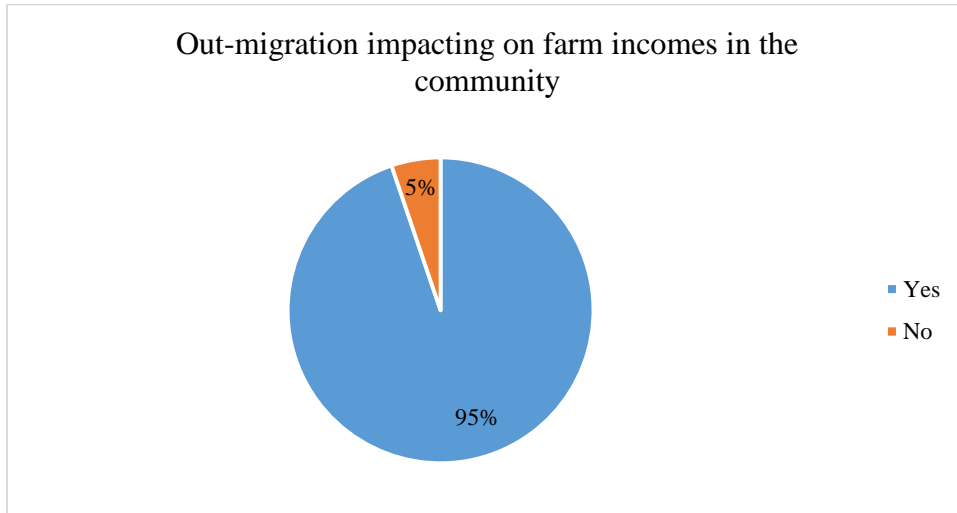
Agriculture is a very important component of the rural economy. Households depend on the local economy for their livelihoods. A critical component of the food consumed by households in rural economies is self-production. Therefore, the decline in agriculture production levels can have adverse effect on food availability. This has implication for household hunger and food insecurity. It is emphatic that out migration is affecting the availability of food in the area given that from the previous sections, there is evidence that the number of farmhands is on the decline.

Ninety-five percent of respondents said out-migration has had an impact on their farm income (Figure 10). In terms of the general economic activity in the area, the impact of out migration is significant. 93 percent of respondents said out-migration has had an impact on economic vibrancy in the area. (Figure 11). From their assertion, their purchasing power has declined since they are not able to produce enough to sell and have money to also buy other things which they need.

We are not able to buy and sell a lot as we use to do in those days. We do not produce as much as we use to do and the little that we produce with a high cost of production end up being sold at relatively lower prices. Mostly the produce we bring to the market are normally purchased at the buyer's price and because we have a family to feed, we have little say on the prices of our farm produce. We sometimes do not produce enough to sell on days that there is high demand...

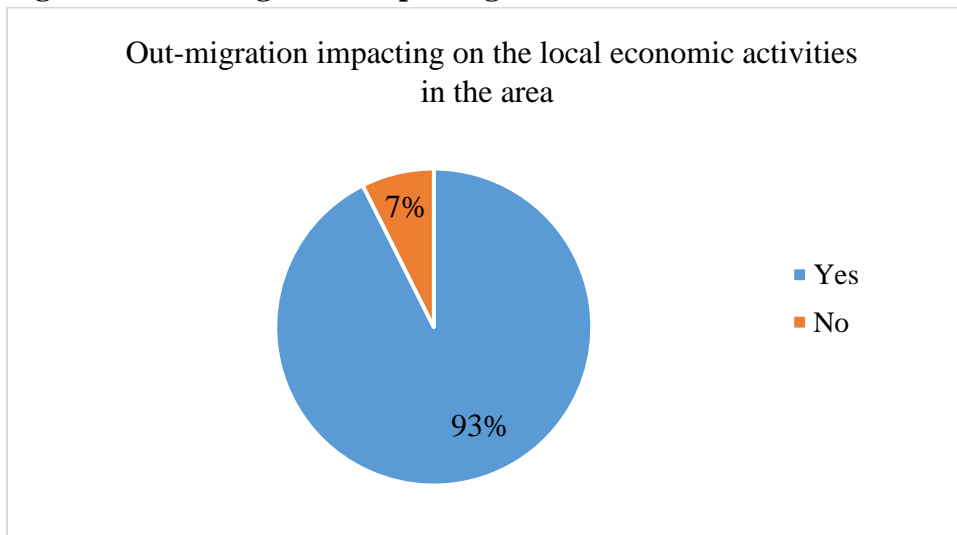
(A farmer/trader at the Dzodze market).

Figure 10: Out-migration impacting on farm incomes in the community



Source: Author's construction, 2019

Figure 11: Out-migration impacting on the local economic activities in the area



Source: Author's construction, 2019

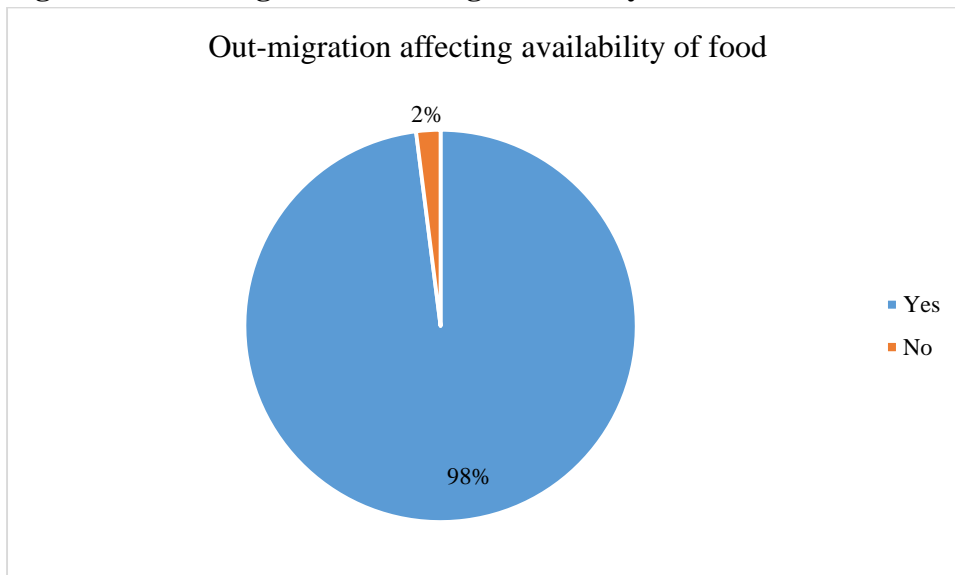
From figure 12, 98 percent of respondents said out-migration affects food availability. They also indicated that out-migration is leading to a decline in the availability of local produce in Dzodze. Some of the reasons given for the decline in the availability of local produce include; low availability of labour, and erratic rainfall patterns cause agricultural produce to decline; just a few people are farming to support the numerous people and also because of lack of finance; those that are to farm have migrated and lands have been left to fallow; cost of

production is increasing because of hired labour while produce is declining; and labour is expensive and farm inputs are also expensive.

If the youth who are to go into farming and help with farming activities are all migrating how do you expect food availability to increase? If the youth were to stay, farm produce would increase because they would help on the farm, we will be able to cultivate on larger sizes than we are doing now. Because they are not there that's why we are reducing the acres of cultivation. If they were present food availability would be common. Definitely out-migration is affecting the availability of food...

Opinion leader in Damadi

Figure 12: Out-migration affecting availability of food



Source: Author's construction, 2019

CHAPTER FIVE

DISCUSSION OF RESULTS OF THE STUDY

5.0 Introduction

This chapter discusses the results of the study and provides relevant analysis and explanation of the results. The aim of the chapter is to provide possible explanations and insight into the observed results. Thus, the chapter is divided into three (3) sub-sections. The first section presents the discussion of the demographic characteristics of the respondents. Section two analyses the factors that influence out migration from rural areas into urban areas. The final section analyses the effect of outmigration on agriculture labour availability, production levels and food availability in rural areas. This section will draw the linkage among these issues.

5.1 Descriptive characteristics of respondents

From the demographic characteristics of respondents (see table 1), majority of respondents are male. This finding is consistent with the national figure where majority of people in the agriculture sector are male. Furthermore, the questionnaire was addressed to the head of households in this study. From the cultural and religious perspective, the head of household in Ghana is the husband and the primary decision taker in the household. Therefore, where they were available, the man responded to the questions and in their absence, another household member.

The demographic characteristics also show that the average age of respondents is 50 years. This shows the ageing of farmers in the agriculture sector. Thus, government's drive to encourage the youth to go into agriculture not only to help in job creation but also to replace ageing farmers.

Also, given the average age of farmers, it is not surprising that majority of them are married with an average household size of six (6) people. The relatively higher family size is characteristic of rural areas. Family labour is very important in a farming household's agriculture activities. Farming households rely on family labour for some of their farming activities. Therefore, as this critical labour force migrates to the cities, it possesses major challenges to households that loose out. Farming activities become relatively more expensive due to the engagement of hired labour. This assertion is confirmed by the results of the study that the major form of labour used by households in farming now is hired labour (see figure 5).

A critical result from the demographic characteristics is the educational status of respondents. Although, all farmers had formal education, about 78 percent had either primary or O'level/JHS education. This shows the low level of formal education attainment by respondents. Educational level can be positively linked with the adoption of new technologies and farming practices in agriculture (Meijer et al., 2015; Kassie, Shiferaw & Muricho, 2011; Doss & Morris, 2000). From the researcher's observation and informal conversations with farmers, the type of farming engaged in by respondents does not make use of the latest technologies and farming practices. Thus, making farming look laborious and tedious, and unattractive to the youth, which contributes to their migration decisions.

5.2 Factors that influence outmigration in rural areas into urban areas

As presented in figure 1 in section 4.2, out migration is a major issue confronting respondents. Every household spoken to has experienced some form of out migration. Unemployment is the major push factor affecting out migration. As indicated in the conceptual framework of this study, unemployment and poor crop yield are major push factors affecting migration. The literature on migration indicates that the most common reason for migration is because of economic considerations (Foresight, 2011). This is also reflective in some of the quotes of

respondents in this study. People who leave and succeed in the cities, come back to encourage others to also migrate. This creates a cycle of people moving out of the area. In order to reduce this trend, economic opportunities need to be provided to the youth. Policy and programmes that will make agriculture attractive to them and the creation of other economic opportunities like factories are needed.

The issue of poor crop yields raised by respondents reveals a number of issues about their agriculture activities:

First of all, the agriculture activities of farmers are largely rudimentary with minimal use of technologies. Most farmers still use hoe and cutlass, with minimal use of plough to till the land. Therefore, they are not able to produce their crops on a large scale and ultimately make enough revenue out of it. With the use of these tools, they are not economic and technically efficient in their production activities.

Secondly, from my observation of the farms, no farm is under irrigation. Therefore, this limits the farmers' ability to produce crops throughout the year. The dependence of farmers on rainfall to determine their production is a great challenge to their farming activities. The seasonal nature of farming makes the youth idle in the lean season and thus affect their income sources. Therefore, they are forced to migrate to the cities to look for jobs to do and if they are successful, they will not return to till the land during the planting season.

Thirdly, most farmers are not using appropriate inputs such as improved seeds and fertilisers. New scientific maize varieties that are drought, and pest and disease resistance have been developed. The use of these seeds will help address the challenges of poor yields resulting from the lack of adequate rainfall. These new seeds are produced to give high yields to help farmers maximise a plot of land and increase his/her revenue. An improved return from farming can lead to people staying in agriculture and slow down out migration.

In terms of funding for migration, most respondents indicated that the migrants self-financed their own journeys and some also received family support. These findings are not surprising because an individual who migrates is financially capable to save and fund his/her journey. There is a plethora of literature on self-selection of people who migrate. These people have a set of characteristics and conditions that makes it possible for them to migrate. These include; strong, youthful, ambitious, skilled, entrepreneurial, and educated (Chiswick, 1999; Chiquiar & Hanson, 2005; McKenzie & Rapoport, 2010).

For the household, families consider supporting their relatives to migrate to urban areas as financial investments. They are hopeful that if their relatives succeed in the urban areas, there will be a trickle-down effect on the family that will improve their wellbeing. These findings support similar studies by Ajaero & Onokala (2013), where migration functions as a catalyst in the process of transforming not only the fate of the individual migrant but also improving the wellbeing and conditions of the left behind family.

5.3 The effect of outmigration on agriculture labour availability, production levels and food availability in rural areas

The direct consequence of out-migration on labour availability is the decline in family labour and generally hired labour. As a result, labour becomes very expensive and this increases the cost of maize production. To counteract the high cost of hired labour, the proportion of mechanisation in farming activities need to increase. However, this is not the case among farmers in Dzodze. The results of this challenge is the costly production of maize and ultimately leading to low profits from sales.

The sentiments of respondents are captured in some of their quotes in section 4.3. A particular farmer was complaining about the high cost of labour. He/she engages them for 2 to 3 months to work on his farm. The farmer engages about 12 to 15 labourers on a regular basis. This

shows the farmer's high dependence on hired labour. Given the average plot size of farms which is about 5 acres, if the farmer had access to agriculture machinery, he/she will produce more maize efficiently than relying on this high number of hired labour to undertake his/her farming activities.

Out migration does not only affect labour availability but it is closely linked to production levels. Respondents indicated that their production levels have declined and it would have increased had they had access to more labour. This statement has implications for food availability and the food security status of households and the community at large. The food security status of households can be threatened if households are not able to produce enough food for consumption or are not able to receive enough remittances from their migrant relatives to boost their purchasing power.

Respondents attribute the decline in food availability to the exodus of the youth from the area. Their exodus is affecting the local economy. Mechanisms should be put in place to make the youth stay and go into agriculture. Providing improved technology and ready market where the prices of products are not detrimental to the farmer are important to helping attract the youth into the sector.

CHAPTER SIX

SUMMARY, CONCLUSION AND RECOMMENDATION

6.0 Introduction

This chapter provides the study's overview, conclusion and recommendation. The chapter is divided into three primary sections. The study's summary is presented in the first section. Highlights of the study's primary objectives, the purpose of the study and methodology used are presented. The second section presents the conclusion of the study. The conclusion is presented based on the results and analysis provided in chapter four. The chapter ends with some recommendations for policy consideration based on the study's findings.

6.1 Summary of Research study

In assessing the effects of rural urban migration of agricultural production on rural communities, the purpose of the study was to highlight the effects out migration has on rural communities with regards to agricultural production on the Ketu-North district. The study's primary objective was to examine the causes and effects of rural urban migration on productivity levels from the perspective of left behind/non migrant farmers. The specific objectives included identifying factors that cause out migration, the nexus between out migration and availability of agriculture labour, the effects on food availability as a result of outmigration as well as the influence of out migration on production levels.

To achieve these objectives a field survey was conducted among farmers in the Ketu-North district. A standardised questionnaire based on the research objectives was developed. Simple random sampling was done among farmers after contact was established with farmer-based organisations (FBO) in Dzodze for the quantitative aspect of the study while purposive sampling was used in selecting respondents for the in-depth interviews. Based on the

communities where production is high, the list of farmers was obtained and they were randomly selected for the study. The researcher personally administered the questionnaires to each respondent. A total of 13 days was used for the data collection.

After the data gathered, it was cleaned up. This was to make sure that all responses were clearly written and all conversion were properly done. After this process, a template of the questionnaire was designed using Statistical Package for Social Sciences (SPSS) version 23. The data was then coded and entered into the designed template.

The main analysis was descriptive Statistics. In presenting the results, the demographics of the respondents was presented. After which the specific objectives of the study were presented. For objective one, the factors that influence out migration in the rural areas was presented in the form of graphs. The frequency with which these factors were mentioned by respondents was indicative of its importance in influencing out migration.

Similarly, the results of objective two, three and four were presented using graphs, pie charts, mean, percentages and ratios. The results were analysed based on literature reviewed and plausible explanations provided for observed trends and patterns. Also, some quotes from the respondents during in depth interviews, as well as informal interviews, were also presented to buttress the quantitative results. Furthermore, the results obtained were compared to similar studies to determine whether there are differences or similarities in the results. The study reached the following conclusions based on the results and analysis carried out.

6.2 Conclusion

From the analysis of the results, a number of conclusions can be drawn. First of all, unemployment is the major factor identified by respondents to be accounting for out-migration of people in the Ketu-North District. This is followed by poor crop yields. Therefore, push factors dominate the factors influencing out migration from rural to urban areas.

Secondly, out-migration is having a major adverse effect on farm labour availability in the rural areas. The youth who would have been engaged in performing some of the laborious activities on the farm are leaving for the urban centres. Thus, there is not sufficient farmhands available to cultivate the land.

Thirdly, due to the shortage of available labour, production levels and acreage cultivated by the older farmers is limited. The older farmers are not able to cultivate larger acreages because, there is shortfall in labour and also the few that still remains are costly. Therefore, this is limiting the potential production volumes coming from the district.

Finally, out-migration also affects the availability of food in rural areas. Due to out-migration, general economic activity in rural areas is slower. The market for goods and services is reduced and farmers cannot sometimes cultivate enough to feed themselves while selling the surplus.

6.3 Recommendation

The study therefore makes the following suggested recommendations for reducing the rural urban drift particularly in the Ketu-North district and Ghana in general.

The study recommends that:

Rural-Urban migration as a consequence of unemployment can be curbed by promoting and intensifying rural industrialisation (agro-based, agro-allied and related sectors such as poultry farming, animal husbandry floriculture, fish farming, pig farming etc). In addition, it should be

supplemented with the provision of modern incentives to the farmers which will make farming attractive thereby retaining the potential rural migrants who are likely to migrate to the urban areas for employment.

Government should provide individuals with loans and loans schemes that are favourable to farmers, thus loans at much reduced or lower interest rates in order to expand their farms, businesses and for them to be able to purchase new food crop seedlings. Again, Government should subsidize significant part of the cost of agricultural inputs such as fertilizer, weedicide, tractors, hybrid seed and others; so, that the averagely poor farmer can afford the needed inputs for his or her farm. The state/government can buy farm inputs directly from the companies and sell them to the farmers at a subsidized price to the farmers or on credit to be paid in instalments.

Investing in the skills development, basic education, early nutrition and health of rural folks will also curb rural out migration. Not only will this enhance work/job opportunities for the rural folks, it will also bridge the unreasonable disparities between the rural and urban people. If state resources are appropriately allocated, much can be done to close the urban-rural divide.

Building of irrigation schemes will encourage the youth to go into farming since there will be water available for farming all year round. Hence, they will not solely depend on the rainfall which sometimes affect crop output and farm incomes.

Also, promotion of non-farming income activities will encourage people to stay in the district. Non-farming income activities include all those activities that are related to wage or self-employment income generating activities that are not agrarian in nature but also produce revenue for the individual. Some of these activities include basket weaving, shop keeping, motor transport (zemija), remittances etc.

In addition to the above recommendations, establishing of factories would help to increase the living standards of the people. Both the farmers and the industries could go into an agreement

known as contract farming. This creates employment for the youth both in the industries and on the farm where farmers would seek the services of the youth in trying to meet the contract agreement.

Farming in the district should be mechanized to prevent significant farming activities such as transporting harvesting weeding planting etc from relying heavily on hired labour. This will immensely reduce the effects of migration on the supply labour when implemented.

Finally, the establishment of a farmers' association fund will help to cushion famers during the lean season and unforeseen disasters. This could be done through a consensus by the farmers to contribute a certain minimum amount of money into the fund every month.

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APPENDICES

APPENDIX A

**UNIVERSITY OF GHANA
CENTER FOR MIGRATION STUDIES**

FIELD INSTRUMENT

**THE EFFECT OF RURAL-URBAN MIGRATION ON AGRICULTURAL PRODUCTION
IN DZODZE IN THE KETU-NORTH DISTRICT OF THE VOLTA REGION**

I am an MA student at the Centre for Migration Studies in the Faculty of Social Sciences, University of Ghana, Legon. I am conducting a research on the topic “The effect of Rural-Urban migration on agricultural production in Dzodze in the Ketu-North District of the Volta Region.” The research is to find out how outmigration of the youth has affected agricultural production in Dzodze in the Volta Region of Ghana. This is purely an academic work and I assure you that the responses to these questions will be treated confidential and will not be shared with anyone. Please answer the questions freely and candidly. I hope that you will participate in this study since your views are important.

IDENTIFICATION

REGION _____

TOWN/VILLAGE/SETTLEMENT _____

NAME OF INTERVIEWER _____ SIGNATURE _____

NAME OF INTERVIEWEE (OPTIONAL) _____

DATE OF INTERVIEW _____

SECTION A: SOCIO-DEMOGRAPHIC CHARACTERISTICS

1. Name of community
2. Gender of respondent 1. Male 2. Female
3. Age of respondent Years

4. Marital status of respondent 1. Single 2. Married 3. Divorce

4. Separated 5. Widowed 6. Never Married

5. What is your household size?

6. Educational status of respondent.

1. None 2. Primary 3. O' Level/ JHS

5. A' Level/Technical/Vocational/SHS 6. Tertiary/Polytechnic

7. What is your religion? 1. Muslim 2. Christian

3. Traditionalist 4. Others (specify)

8. Occupation of respondent:

a. Major Occupation

SECTION B. FACTORS THAT INFLUENCE OUT-MIGRATION IN RURAL AREAS

9. Have you noticed over the years the movement of people from your community to urban areas?

1. Yes 2. No

10. Have any of your family members migrated to urban areas in the past 5 years?

1. Yes 2. No

11. What was the sources of money for migration?

.....

12. Did they seek for any advice before migrating?

1. Yes 2. No

13. What factors account for the out-migration of people in this area? Check all that apply

1. Curiosity 2. Famine 3. Conflict 4. Poor health services
5. Poor education services 6. Bad quality of housing 7. Poor crop yield
8. Unemployment 9. Others (specify).....

SECTION C. RELATIONSHIP BETWEEN OUT-MIGRATION AND AGRICULTURAL LABOUR

14. What is your major source of agricultural labour?

1. Family labour only 2. Hired labour only
3. Communal labour

15. Has labour availability ever been a challenge to you in your farming activities?

1. Yes 2. No

16. If yes, how did you solve the problem?

1. Hiring of labour 2. By working with neighbours
3. With the help of children 4. With the help of extended family
5. Reducing acreage cultivated 6. Other (specify).....

17. For which of the agricultural activities do you hire labour?

1. Ploughing 2. Weeding 3. Harvesting
4. Staking 5. Transporting 6. Others (specify).....

18. Are you losing labour to work on the farm to migration of people to urban areas?

1. Yes 2. No

19. Has out-migration affected the cost of hired labour?

1. Yes 2. No

SECTION D. RELATIONSHIP BETWEEN OUT-MIGRATION AND PRODUCTION LEVELS

20. How many acres of land did you cultivate last cropping season?acres

21. How many acres of agricultural produce did you cultivate last cropping season?
.....acres

22. How many bags of agricultural produce did you harvest in the last cropping season?
..... Bags

23. Did out-migration of labour affect your farming activities?

1. Yes

2. No

24. Do you think if you had more labour available you would have increased your production levels?

1. Yes

2. No

SECTION E. EFFECT OF OUT-MIGRATION ON FOOD AVAILABILITY

25. Is out-migration affecting the number of people who go into farming?

1. Yes

2. No

26. If Yes, why
.....
.....

27. Do you think out-migration is affecting the availability of food?

1. Yes

2. No

28. Is local availability of agricultural produce declining in the area?

1. Yes

2. No

29. If Yes, why.....
.....
.....

30. How much income do you make annually from your farming activities?

1. GH¢ 10 – 100 2. GH¢ 101 – 200 3. GH¢ 201 – 300
4. GH¢ 301 – 400 5. GH¢ 401 above

31. Has out-migration had any impact on the local economic activities in the area?

1. Yes 2. No

32. Has migration had any impact on farm incomes in the community?

1. Yes 2. No

33. If yes, how.....

.....
.....

34. How can out-migration be reduced in your community?

- a.
b.
c.
d.

APPENDIX B

Interview Guide for key informant.

I am an MA student at the Centre for Migration Studies in the Faculty of Social Sciences, University of Ghana, Legon. I am conducting a research on the topic one to “The effect of Rural-Urban migration on agricultural production in Dzodze in the Ketu-North District of the Volta Region.” The research is to find out how outmigration of the youth has affected agricultural production in Dzodze in the Volta Region of Ghana. This is purely an academic work and I assure you that the responses to these questions will be treated confidential and will not be shared with anyone. Please answer the questions freely and candidly. I hope that you will participate in this study since your views are important.

BACKGROUND INFORMATION.

1. Can you please tell me about yourself (Probe for age, level of education, marital status, Number of children, occupation etc.)?

SECTION 1: PERCEPTION OF CAUSES OF OUTMIGRATION IN THE AREA.

2. In your opinion, what are the causes of out-migration in the area. (Probe for reasons that account for out migration, the effects migration has on them both positively and negatively)

SECTION 2: EFFECTS OF OUT MIGRATION ON LABOUR AVAILABILITY.

3. Is people (youth) leaving this community having any effects on availability of labour? (Probe for type of labour use, amount charged for hiring labour, activities done by hired labour, effects on various aspect of agricultural production etc.)

4. What are some of the main challenges faced as a result of shortage of labour? (Probe for alternative sources and the effects it has on production etc.)

SECTION 3: EFFECTS OF OUT MIGRATION AND PRODUCTION LEVELS.

5. Is out migration affecting agricultural production levels? (Probe for the acreage of land cultivated, number of bags of crop produced in the last season, how out migration has in any affected the production levels etc.)

SECTION 4: EFFECTS OF OUT MIGRATION ON FOOD MIGRATION.

6. In your opinion, is out migration affecting the availability of food in the community? (Probe for whether or not out migration has affected number of people who go into farming, impacts of outmigration on the availability of food whether or not there has been a reduction or increase.)
7. Is out migration affecting livelihoods of agricultural farmers? (Probe for impacts of outmigration on farm income, impacts on economic activities in the community etc.)