UNIVERSITY FOR DEVELOPMENT STUDIES

WOMEN ACCESS TO LAND AND FOOD SECURITY IN SAVELUGU MUNICIPAL: A CASE OF INTEGRATED TAMALE FRUIT COMPANY LAND ACQUISITION

BY

ZIBLILA RASHIDA CHANTIMA

BA. INTEGRATED DEVELOMENT STUDIES (DEVELOMENT COMMUNICATION OPTION)

(UDS/MIC/0076/16)

A THESIS SUBMITTED TO THE DEPARTMENT OF AGRICULTURAL EXTENSION, RURAL DEVELOMENT AND GENDER STUDIES, FACULTY OF AGRIBUSINESS AND COMMUNICATION SCIENCES, UNIVERSITY FOR DEVELOPMENT STUDIES IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE AWARD OF MASTER OF PHILOSOPHY DEGREE IN INNOVATION COMMUNICATION

SEPTEMBER, 2019

DECLARATION

Candidate's Declaration

I hereby declare that this thesis titled **"Women Access to Land and the SDG Five in Ghana: A Case Study of ITFC Land Acquisitions and Food Security of Rural Women in Northern Region"** is my own original work and has never been submitted in whole or in part for the award of any degree in this university or elsewhere.

Name	**Signature**	**Date**
Ziblila Chantima Rashida	……...	……

Supervisors' Declaration

We hereby declare that the preparation and presentation of this thesis was supervised in accordance with the guidelines on supervision of thesis laid down by University for Development Studies.

Name	**Signature**	**Date**
DR. Jasper Ayelazuno	……...	……
Principal Supervisor		

Name	**Signature**	**Date**
DR. Eliasu Mumuni	……...	……
Co-Supervisor		

ABSTRACT

The population of the people in the Northern region is predominantly rural and as such depends mostly on land and its related resources for their livelihood. This is especially true for women since land is critical for them in achieving their responsibilities as food producers and food processors and also for achieving food security. However, women access to land is deeply inequitable under the Dagbon land governance system which is typical with patrilineal societies. Their access is often mediated by a male relative which is likely to be lost with changing priorities of male land owners. With growing interest in rural land by investors for commercial agriculture, land in the countryside have come under pressure and women are increasingly faced with challenges of losing an important livelihood source which have implications on their food security. The study therefore examined women's access to land and SDG five using the Integrated Tamale Fruit Company (ITFC) as the case of a large-scale land acquisition for commercial agriculture while relating it to the food security of women in the Northern region. Using a case study design, ITFC was examined in-depth in order to make logical description of the issues under study. A mixed method of data collection was adopted to answer the research questions. Two key informants; a current and retired manager of ITFC were interviewed. Sixty organic mango association members constituted 6 (membership of 10) separate focus group discussions. One in each of the 6 study communities and 185 respondents selected for the survey in the same communities. Data was collected using interview guides and questionnaires to find out the relationship between access to land and the food security of rural women. The study also sought to find out the effects of the mango out-grower scheme of ITFC on rural women access to land and their food security and the opportunities large-scale commercial agriculture offers to rural women to improve their food security. The results showed that, women recorded higher levels of food insecurities while their male counterparts recorded higher levels of food security. The results from the Wilcoxon signed rank test further revealed a strong relationship between women food insecurity and their low levels of access to land and the loss of common resources. The results further show since it started operation, several employees have been laid off as the company's operations have seen a decline resulting from cash flow challenges. The mango outgrower scheme instituted by the company have generally been characterized by poor yields and low incomes. Recommendations are geared towards ensuring that investment projects generate real positive benefits to rural women. Lands Commission should make gender certification an additional requirement before permits are granted to commercial agricultural investors. Contracts should clearly state and define agreements and should also include opportunities for periodic cost-benefit analysis so that challenges are identified and resolved. Commercial agriculture investors should endeavor to practice innovative agriculture that conserves the environment so that common resources are not lost as a result of their operations.

ACKNOWLEDGEMENT

I express my profound gratitude first and foremost to the Almighty Allah for bringing me this far in my academic endeavor. I am much grateful to my dear husband for his continued prayers, encouragement and patience throughout this study.

I would like to thank my principal supervisor Dr. Ayelazuno Jasper who without an unflinching doubt of my capabilities made a bold decision to fund my study and also to supervise my work. By introducing me to the concept of political economy of land you have opened up countless opportunities for me. Your guidance, contributions and patience have seen to the final completion of this study. To my co supervisor Dr.Eliasu Mumuni I have highly appreciated your constant supervision and encouragement. Your open door policy made it possible to have several discussions with you which inured to the shaping and completion of this work.

I also extend appreciation to Dr.Nashiru Sulemana the coordinator for the Next Generation Researchers (NGR) through whom I was awarded an Education for Sustainable Development in Africa (ESDA) NGR Graduate Research Grant to support the field work of my thesis. The grant was very valuable to the completion of this thesis. My sincere gratitude goes to Mr. Mohammed Sulemana a teacher at Al-Maktoum Islamic Senior High School and Mr. Mohammed Alidu (May Allah be pleased with him) who both sacrificed a lot to ensure a successful completion of my field work. I would like to acknowledge the management of ITFC Mr. James Amaligo (Retired) and Mr. James Japion for their warm reception and granting me the interviews.

To my mother Hajia Fati Lansah I greatly appreciated you offering a listening ear at all times. Your words of encouragement, prayers and general support have kept me going when everything seemed impossible at some point. To my classmate Mr.Kasim Imoro Abu I want to say thank you for your continuous encouragement and friendship.

To all those not mentioned, I want to say Allah richly bless you.

DEDICATION

To whoever was made proud by this work, I dedicate it to.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

LIST OF ACRONYMS AND ABBREVIATIONS

ESDA	Education for Sustainable Development in Africa
FAO	Food and Agriculture Organization
FASDEP	Food and Agricultural Sector Development Policy
FDI	Foreign Direct Investment
FGD	Focus Group Discussion
GCAP	Ghana Commercial Agriculture Program
GDP	Gross Domestic Product
GIPC	Ghana Investment Promotion Center
GoG	Government of Ghana
GPRS	Ghana Poverty Reduction Strategy
GSGDA	Ghana Shared Growth and Development Agenda
ITFC	Integrated Tamale Fruit Company
IWAD	Integrated Water Management and Agricultural Development
METASIP	Medium Term Agriculture Sector Investment Plan
NDA	Northern Development Authority
NGO	Non-Governmental Organization
NGR	Next Generation Research
OMOA	Organic Mango Outgrowers Association
PPP	Public-Private Partnership
SADA	Savanah Acceleration Development Authority
SDG	Sustainable Development Goal
SPSS	Statistical Package for The Social Sciences
UN	United Nations
UNDP	United Nations Development Program
USDA	United States Department of Agriculture
WFP	World Food Programe

CHAPTER ONE

INTRODUCTION

1.1 Background

The Sustainable Development Goals (SDGs) emerged in 2015 as the new global development agenda transitioning from the 2000 Millennium Development Goals (Balestri & Beretta, 2015), which sought a global effort to tackle the indignity of poverty (UNDP, 2019). The SDGs is a re-launch of new goals by the United Nations General Assembly to tackle urgent environmental, political and economic challenges facing the world (UNDP, 2019) and have been adopted by all 193 member states of the United Nations. The new global agenda pursues a total of 17 interconnected goals with 169 associated targets, ensuring that no one is left behind by 2030 (UNDP, 2019).

To ensure that vulnerable groups such as women and girls are not left behind, the Sustainable Development Goal 5 (SDG 5) seeks to 'Achieve gender equality and empower all women and girls'. One of it targets specifically seeks a stepped up action to 'Undertake reforms to give women equal rights to economic resources, as well as access to ownership and control over land and other forms of property, financial services, inheritance and natural resources, in accordance with national laws' (Senu, 2017).

Land is critical to the economic development, food security and poverty reduction of developing countries such as those in Sub-Saharan Africa (Cotula et al., 2004). Land is relied on for shelter, food, income and a critical source of transfer of wealth to the future generation. In the rural areas in particular, land is the main livelihood basis for a large portion of the population and has traditionally been the object of multiple rights and uses; farming, settlement, herding (Cotula et al., 2004). The diversity of interests suggests that,

land plays a central role in positioning and shaping the livelihoods of various interest groups especially for largely rural agrarian communities of Ghana (Apusigah, 2008). Land is, therefore, central to accomplishing SDG five in Ghana and many other African countries where majority of people still live in the rural areas and depend on land for their livelihood. For example, 62% of the population in Ghana, most notably in the Northern regions, live in rural areas (FAO, 2012) and are mostly women engaged in the agricultural production which is the backbone of the Ghanaian economy (Dako-gyeke & Owusu, 2013).

Yet, the view that land seemed almost inexhaustible in Africa (Toulmin, 2005) is no more tenable because, with time, land has come under pressure especially in rural areas as a result of population growth and economic development (Quan & Geoffrey, 2008). This pressure on land intensified in the 2000s as a result of the global food, energy and financial crisis which led to multinationals , governments of the global North and domestic investors acquiring vast tracts of land in the area of agriculture investments in Africa (GRAIN, 2008; Schoneveld, 2013), a phenomenon described in politically charged language or in value-laden terms as 'land rush' and 'land grabs' and in relatively politically neutral language as large-scale land investments or transactions in Africa (Boamah, 2014; Tsikata & Yaro, 2011).

The phenomenon of land appropriation has however long existed before this current wave (Boamah, 2014; Nyantakyi-Frimpong & Bezner Kerr, 2016; Yaro, 2017). Ghana for example traces commercial agriculture to the British colonial government in the 1890s which used smallholder farmers to produce commercial crops for the British Crown and established large-scale plantations for cultivating tree crops (Schoneveld, 2013; Yaro,

2017). Post-independence governments continued in the steps of their colonialist driven by the belief that development of plantation agriculture is a necessity to modernize the agricultural sector, thus supportive of Foreign Direct Investments (FDIs) in land (Boamah, 2013; Tsikata & Yaro, 2011a) and in the 1980's deliberately established The Ghana Investment Promotion Centre (GIPC) as a means to attract foreign investments while at the same time also assisting domestic investors (Tsikata & Yaro, 2014). Ghana is among the topmost countries in Africa to have attracted foreign direct investment (FDI) into farmlands (Schoneveld, 2013) for biofuels (jatropha) for the production of liquid biofuels primarily to improve energy provision and the employment situation in Ghana (Boamah, 2013), and fruits for export (Tsikata & Yaro, 2011a). For instance, Cotula et al., 2014 suggests that, an estimated 402,941 hectares of land was under transaction from 2005 and 2012 for 13 deals in Ghana for investments in large-scale agriculture, mining and biofuels production.

Even though land grabs are not new, the recent grabs for the cultivation of biofuels and fruits for export is overwhelming; and as Tsikata & Yaro, 2011 suggests can lead to loss of natural resource based livelihood activities, deepened food insecurity and poverty. Ghana has a wide variety of experiences of land deals ranging from compulsory acquisition by government (using its right to eminent domain) in the case of Aveyime Rice Project in Mafe Dove in the Volta Region for the cultivation of rice with a total land area of about 1,270 hectares (Tsikata & Yaro, 2011a) to chiefs willingly giving out land to private investors in the case of the Kimminic Project in the Brong Ahafo Region for

the cultivation of jatropha with a total land area 65,000 hectares (Boamah, 2013) as a form of joint plantation ownership between the private investors and the chiefs.

Land deals have also taken the forms of outright lease to foreign investors by traditional leaders or government such as the case of Biofuel Africa Ltd (now Solar Harvest) in the Northern region where the investor was granted leasehold with a total land holding of 13,600 hectares by the traditional ruler for the cultivation of jatropha and later maize (Tsikata & Yaro, 2011a, 2014) and Azuma Resources Ltd, a foreign based mining company with a total land holding of 316,400 hectares granted as a concession from the state in North-western Ghana (Nyantakyi-Frimpong & Bezner Kerr, 2017) . Local investors have not been left out in commercial acquisition of land. The case of commercial mango farmers in Somanya with majority of farms over 20 hectares owned by pensioners, urban- based businessmen and civil servants (Yaro, Teye, et al., 2017a) is a clear example.

The northern part of Ghana, especially Northern Region, has not been left out of this FDI into farmlands in Ghana, despite its harsh climatic conditions (Acheampong & Campion, 2014; Ayelazuno, 2017; Boamah, 2014; Bugri, 2012; Williams,et al., 2012). Despite it recording a very high incidence of poverty (Osei, 2008; Tsikata & Yaro, 2014), paradoxically, the region is endowed with rich natural resources; land, labor and water and is therefore considered ideal for investors interests in agriculture commercialization (Ayelazuno, 2017a). The supposed existence of unproductive, marginal, unused, cheap lands and free access to water in the region have lured a good number of foreign and

local investors to acquire land, that only a short time ago seemed of little outside interest (Cotula, et al., 2009). Cotula et al. (2009) alludes to rising food security concerns in investor countries, global demand for biofuels and other non-food agricultural commodities, expectations of rising rates of return in agriculture and land values, and policy measures in home and host countries as factors that underpin these new patterns of land acquisitions.

The region therefore passes for good investment destination for both foreign and local investors and resonates with the government of Ghana's vision to promote rural development through the modernization and diversification of the agricultural sector.

Some studies have stressed that, large-scale land investments have the potential of bringing macro level benefits such as growth in GDP and increased government revenues (Cotula et al., 2009) and may create opportunities for technology transfer, jobs, improved infrastructure and earning foreign exchange. These opportunities form the basis for industrialization, increased food production and food security that helps to support the local economy there by making it irresistible (Behrman, et al, 2012; Nyantakyi-Frimpong & Bezner Kerr, 2017; Hall, et al, 2015). On the flip side, this new context may result in displacing local people from their land thereby losing access to the resources on which they depend on for their livelihood. Concerns are raised even for countries where land is being classified as abundant, unproductive, marginal or unused. In many of such cases land is being used or claimed by users whose uses and claims go unrecognized because they are marginalized from formal land rights, law and institutions (Cotula et al., 2009).

1.2 Problem Statement

Despite the optimist perspective of large-scale acquisitions, other studies point out their negative effects on the livelihoods of rural people. They result in social differentiation manifesting in landlessness, land scarcity, disruption of rural livelihoods, loss of commons, poverty and food insecurity (Tsikata, 2015a). Large-scale land acquisitions have activated struggles between different social groups with competing interest for land, with men exercising a far greater monopoly over land resources because of its increased economic value than had previously been the case (Nyantakyi-Frimpong & Bezner Kerr, 2017), struggles that are often to the detriment of women. Furthermore, these issues are further complicated because land acquisitions are taking place in the Northern region under a customary land tenure system that favor men at the expense of women. At the heart of these acquisitions are preexisting gender inequalities which are reinforced by large-scale land acquisitions.

The Northern region like most parts of Ghana have over 80% of land held under customary tenure system. Chiefs occupy the apex of the tenure groups and serve as custodians of the land and as such hold land in trust for the people (Bugri, 2012). Custodianship is purported to guarantee use rights or customary freehold over land equitably amongst male and female (Apusigah, 2008; Daley, 2013). However, Cotula et al., (2004) argues that, in practice customary institutions may be deeply inequitable, as women are often not represented within them especially for predominantly patrilineal societies like the Northern region. With discriminatory inheritance practice characterizing these communities, women derive rights of access from their husbands or male lineages which means that women are dependent on men for access and are likely

to be lost in breakdown of relationship, divorce, and the changing priorities of male landowners (Namubiru-Mwaura, 2014).

That said, when access to land is granted to women, they are usually smaller than those of men. Daley et al., (2013) in their study revealed that the Northern region is one of the four regions that records greatest disparity in the country in land access with men having average acreage four times larger (10.7) than that of women (2.5). Discrimination also exists in the type of plot allocated to these women. They are characterized by low soil fertility, difficult to work and far away fields (Cotula et al., 2004; Tsikata & Yaro, 2011a). Women are further disadvantaged in having access to credit and extension services (Daley et al., 2013). Confronted with these limitations women focus on the cultivation of groundnut, beans and vegetables usually referred to as "women crops" for soup ingredients to meet their traditional provisioning responsibilities whiles helping on their husbands or fathers' farms. Also, to meet their household provisioning and care obligations, women are tasked with the responsibility of gathering commons resources such as fruits, water, clay, fuel, vegetables and medicinal plants (Apusigah, 2008) and undertake activities such as charcoal burning, shea butter and dawadawa processing and trading during the long dry season to support their agrarian household livelihoods (Tsikata & Yaro, 2011a). In spite of having limited access to resources especially land, rural women still play critical roles in their households. For these resource poor women their subsidiary title to land may further weaken as they are increasingly vulnerable to loosing land as a result of commercial land acquisitions by international, national and local investors for agriculture investments.

In the context of the Dagomba customary land governance system, large-scale land acquisitions are more likely to deepen the exclusion of women rather than promote their access and user-rights as SDG Five seeks to accomplish. However, the extent or magnitude of this problem is not known, nor the benefits of large-scale land acquisitions for women; especially how these potential benefits contribute to realizing other SDGs which are critical to the wellbeing of women. For example, SDG One (end poverty), SDG Two (aims at ending hunger, achieving food security and improved nutrition and promoting sustainable agriculture), and SDG Eight (aims at promoting, inclusive and sustainable economic growth, full and productive employment and decent work for all) (ICLEI, 2015).

The Integrated Tamale Fruit Company (ITFC) is a classic example of large-scale land acquisition in Northern Region by a corporate body for commercial farming. Using the company as a case study, this thesis explores the implications of its business model for access to land by women and use of land for their livelihoods, and one of the targets of SDG Five; namely, 'Undertake reforms to give women equal rights to economic resources, as well as access to ownership and control over land and other forms of property, financial services, inheritance and natural resources, in accordance with national laws'(Senu, 2017). The study focuses specifically on access, control, ownership and inheritance of land and its cognate resources like economic trees such as shea nut and dawadawa trees.

1.3 Research Questions

This study addresses one main question:

What are the implications of large-scale land acquisitions for women's access to land in the Northern Region and for the attainment of SDG Five in Ghana?

The study addresses the following specific questions, drawn from the main question

1. What is the relationship between access to land and the food security of rural women in Savelugu Municipal?
2. What are the effects of the mango out-grower scheme of ITFC on rural women's access to land and their food security in Savelugu Municipal?
3. What opportunities do large-scale commercial agriculture offer to the food security of rural women in Savelugu Municipal?

1.4 Research Objectives

This study seeks to achieve one main objective:

To find out the implications of customary land tenure system and large-scale commercial agriculture on the food security of rural women in Northern region.

The study seeks to achieve the following specific objectives, drawn from the main objective

1. To find out the relationship between access to land and the food security of rural women in Savelugu Municipal.
2. To find out the effects of the mango out-grower scheme of ITFC on rural women access to land and their food security in Savelugu Municipal.

3. To find out the opportunities that large-scale commercial agriculture offers to rural women to improve their food security in Savelugu Municipal.

1.5 Justification of the Study

The SDGs are the current development compact of leaders of the UN member states who have committed to accomplish key development targets by 2030.

Appreciation for gender is growing as stated in a 2011 FOA report, "Gender analysis is important for understanding the causes of hunger and malnutrition because women play critical roles in the food system, in the production, processing, preparation, consumption as well as in its distribution" (FAO, 2011 cited in UN Women, 2014). Gender can then intersect with other inequalities often resulting in even more limited negotiation power for women (UN Women, 2014). The people of the Northern region prior to any land deals face endemic food insecurity and stark gender inequalities. Access to food becomes more constrained and the prospects of achieving food security is threatened when resources such as land and other commons are less available or taken away with women being at an extreme disadvantage particularly because they act as guardians to household food security.

This complex situation is taking place at the same time when the government is putting in much effort to promote FDI in the country on one hand and on the other making efforts to achieve gender equality. Owing to this, the study seeks to make three main contributions to the development of literature in Ghana, generally, and on large-scale land investment and SDGs, specifically. First, the study will contribute a gender perspective to the literature on land investment in the Northern region through an in-

depth case of the land-acquisition process of ITFC and the implications of its business model in general for the income and food security of women in the study area.

Second, it will shed more light on the mutually reinforcing or contradicting development policies of the Ghanaian government on large-scale commercial agriculture on one hand, and on the other, policies aimed at accomplishing some of the set-targets of SDGs 5 as well as SDGs 1, 2, and 3

Lastly, based on the gender perspective of development and the findings of the study, to contribute to the design and implementation of appropriate policies for promoting the wellbeing of women and their children in the context of the mounting pressure on farmlands in Ghana.

1.6 Scope of the Study

With its 17 goals and 169 targets, the 2030 Agenda for Sustainable Development embraces gender equality through a number of gender related goals and targets. However, this study is delimited to SGD 5 'Achieve gender equality and empower all women and girls' and target 5.a which specifically seeks a stepped up action to 'Undertake reforms to give women equal rights to economic resources, as well as access to ownership and control over land and other forms of property, financial services, inheritance and natural resources, in accordance with national laws'. The goal and target highlight systematically women access to economic resources such as land thus making it best suited for this study.

Large-scale land acquisitions are often for the cultivation of biofuels, mining, logging and fruits for export such as pineapple and mangoes. However, this study focuses on

largescale land acquisitions for mango plantation. This is because researchers have raised concerns that its cultivation can be a threat to natural resource based livelihood activities and consequently food security with women likely to be most affected.

1.7 Limitations of the study

Although the use of in-depth case study design in specific geographical contexts is a fairly common approach by researchers to understand the rapidly unfolding phenomenon. However, it falls short of providing a complete picture due to limited geographical validity thus resulting in its inability to deliver needed generalizations for policy making at the national level and beyond. Also, due to limited time data was collect from ITFC operational areas only. It would have been relevant to collect data from ITFC operational areas (treatment) and areas without ITFC interference (control) to demonstrate the implications of ITFCs land acquisition on women access to land and their food security.

1.8 Organization of the study

This study is organized under five chapters. Chapter one entails the background of the study, the problem statement as well as research questions, objectives of the study, scope of the study and the limitations of the study. Chapter two details a literature review of the study. Chapter three describes the research design, area and methodologies for collecting data for the study, analysis and presentation plan and finally a presentation of the theoretical framework. Chapter four analysis, presents and discusses the research results from the field study. Then chapter five, the last chapter presents a summary of the main

findings of the study and then conclusions, followed by recommendations and suggestions for further research are made.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

The chapter reviews the relevant literature on women access to land and the Sustainable Development Goal 5 'Achieve gender equality and empower all women and girls' in Ghana. To enhance understanding of the main issues covered in the study, the food security of rural women is also discussed while situating it in the general context of customary land tenure and large-scale land acquisitions in Ghana. More specifically in this chapter, the Dagbon land tenure system and the Integrated Tamale Fruit Company's land acquisition in the Northern region is discussed. The chapter is thematically organized from section 2.2 to 2.10.

Section 2.2 discusses land and its significance in Ghana; section 2.3 and 2.4 discusses land governance regimes in Ghana, land relations and gender inequalities respectively. Section 2.5 discusses the concept of largescale land acquisition; 2.6 elaborates large-scale land acquisition in Ghana; while section 2.7 discusses large-scale commercial agriculture in the Northern region. Also discussed is largescale commercial farming and food security in the Northern region in section 2.8; section 2.9 models of agricultural commercialization in Ghana and in the final section 2.10 the Integrated Tamale Fruit Company (ITFC) and its business model is discussed.

2.2 Land and its Significance in Ghana

Land is a resource that is critical for both survival and livelihoods on the African continent (Nadasen, 2012). Rural populations around the world rely on small-scale

farming and other uses of land and natural resources, which are often governed by customary, traditional, and indigenous systems of common property (Dell, Odorico, & Cristina, 2017). It serve as a physical resource for production (Apusigah, 2008) in most societies, and recognized as an anchor for social identity through which kinship groups trace their origins and commune, and connect with each other, their ancestors and the yet-to-be born. Hence, land is treated as a divine entity that must be worshipped through cultural symbols such as shrines and gods, and this divine character contributes to sustaining traditional authorities (Apusigah, 2008). The author is therefore right to conclude that land has spiritual, physical and social components (ibid).

Not only is land in itself a valuable resource, it is endowed with other valuable natural resources such as minerals, carbohydrates, water, fish, wildlife and herbs which are critical to human survival (Ayelazuno, 2018). The FAO defines land not simply in terms of soils and surface topography, but their definition encompass features such as underlying superficial deposits, climate and water resources and also the plant and animal communities which have developed as a result of interaction of these physical conditions (FAO, n.d.). In Ghana, Article 257(6) of the 1992 Constitutions definition of land encompasses every mineral in its natural state, in, under or upon any land, rivers, streams, water courses throughout the country, the exclusive economic zone, and any area covered by the territorial sea or continental shelf (1992 Constitution, Kasanga & Kotey, 2001).

It is therefore right to conclude from both statutory and technical definitions from the 1992 Constitution and the FAO respectively, that land means more than the mere surface of the earth. Land also includes the results of human activities such as terracing, water

storage, or drainage structures, roads and buildings which reflects changes in vegetative cover or by structures (FAO, n.d.). Odeny, 2013 describes land as one of the cornerstones of economic development on which farmers, pastoralists and other communities derive a livelihood. She opines that it is a significant component of business assets, especially African economies, which continue to rely heavily on agriculture and natural resources for a significant share of GDP, national food needs, employment and export revenue (Toulmin, 2005) and in rural areas it is a means of agricultural production, livestock rearing and a place for gathering natural products that play an important role in local economies such as woodcutting, wild harvesting, grazing, fishing, hunting (Odeny, 2013). Beyond agricultural production, land serves as a means of investing, accumulating wealth and transferring it between generations (Nnadi et al., 2012).

2.3 Land governance regimes in Ghana

Across Africa the bulk of the population get access to this critical resource based on existing customary land tenure systems (Cotula, 2007). Cotula, n.d. explains that such systems claim to draw their legitimacy from "tradition" and are commonly referred to as "customary". He further explains that, Customary "law" is a body of (usually unwritten) rules founding its legitimacy in "tradition", i.e. in its claim to have been applied for time immemorial, while tenure systems regulate the "bundle of rights" existing over each piece of land, including "operational" rights (right to access land, to cultivate it, to withdraw produce, etc.) and management rights, example the right to allocate and transfer land, (Schlager and Ostrom, 1992 as seen in Cotula, 2007).

Customary land tenure systems promote the use of policies that ensure the ownership and usage of land is administered in accordance to customs and norms (Nadasen, 2012). It is worth noting that customary rules that govern customary land tenure systems are not static but dynamic thus they do undergo change continually as a result of cultural interactions, population pressures, socio economic change and political processes (Cotula, 2007). A century or more of developments, interpretations and interferences by courts, pre-colonial and post-colonial governments explains the much change experienced by customary systems (Cotula, 2007).

Ghana in common with much of Sub-Saharan Africa has a profound history of evolution in its land tenure literature. The changes and interpretations over time is attributed to established customs and norms, the colonial past and the dynamics of contemporary sovereign societies (Yeboah & Shaw, 2015). The country has 80% of its land holding vested under customary land ownership regimes mainly through families, clans and traditional authorities, while the remaining percentage is a combination of statutory and individual entitlements (Boamah, 2013) thus land in Ghana is governed under a system of legal pluralism. Prior to this hybrid arrangement however, was the preexisting customary land tenure system.

The precolonial era land tenure was guided by customs and norms of traditional societies. Individuals acquired land through first clearance of virgin bush for farming purposes and this mode of acquisition was considered legitimate such that the community respected and/or protected the acquirers right to use the land for life. Commonly, the rights could be inherited through the male or female ancestor depending on the lineage of inheritance. While inheritance is possible, restrictions usually existed on sales and on female

inheritance. Men had the duty to feed their respective families and so they cultivated more land even though on small scale but enough land than women in other to meet this obligation.

Aside the historical, spiritual, social and economic significance of land, in most African economies it is at the heart of political life (Toulmin, 2005). In Ghana, in common with much of sub-Saharan Africa, agriculture is the major occupation and livelihood strategy of individuals as such ownership of land is politically significant and directly associated with power (Nnadi et al., 2012). The diversity of interests by different social groups such as men, women, indigenes, migrants, pastoralists among others activated by the multiple uses of land generates both class and gender struggles leaving land a political and negotiable asset (Apusigah, 2008). The political significance of land plays an instrumental role in constructing different social groups especially men and women relationship to land. Therefore, the question of who owns, has access to and exercise control of which land and its related resources is shaped by politics in both formal and traditional land administration systems(Apusigah, 2008).

Colonial authorities in the 19th and 20th centuries with the use of coercive rules and incentive structures, established land and labor markets which led to the growth of social differentiation in settler colonies(Tsikata, 2015). Colonial authorities with its aim of sustaining the economies of the metropole, coerced natives to produce export crops which fueled the commercialization of agriculture, mining and other natural resources extraction activities (Doss, Summerfield, & Tsikata, 2014; Yaro, Teye, & Torvikey, 2017). Perceiving the radical land transformation as a recipe for potential land dispossession and disruption of the traditional land tenure regimes, small scale

landholders resisted the move to vest all unoccupied land, forest land and minerals in the British Crown (Boamah, 2013). Owing to this resistance, colonial authorities resorted to the smallholder system which they eventually preferred to plantations due to the successes of the small scale farms (Yaro, Teye, et al., 2017). The colonial smallholder economies were distinguished by growth and/or strain in land and labor markets, land concentrations (Tsikata, 2015)and the nature of crops cultivated.

Post-colonial governments have engaged more substantively to modernize the Ghanaian agricultural sector through the adoption of economic liberalization and structural adjustment policies to encourage foreign direct investment into agriculture (Tsikata, 2015). This they have achieved through the liberalization of land markets by establishing land courts and a reformed Lands Commission to ease and promote land titling and registration (Tsikata & Yaro, 2011a).

However, the Ghanaian governments goal to stimulate economic development, reduce poverty and promote social stability by improving security of land tenure, simplifying the process for accessing land and making it fair, transparent and efficient; developing the land market and fostering prudent land management (Ministry of Land and Forestry as seen in (Yaro, 2012), presupposes that, our existing customary land tenure systems are not robust enough and therefore inappropriate to achieve the development it so much desires (Yaro, 2012).

2.4 Land Relations and Gender Inequalities

While land is crucial for survival, access to, control, ownership and use of land have been highly politicized and gendered (Nadasen, 2018). The competing interests generated by

struggles for resources results in social differentiation in class, gender and kinship relations (Tsikata, 2015). Since land, land related resources and other land based activities are critical to the livelihoods of agrarian societies, its management and conservation are considered paramount and placed under customary (Maha-Atma, 2014) and/or statutory tenure arrangements. However, land issues continue to evoke passions, raising questions of social equity and justice among social groups such as men and women, indigenes and settlers, guardians and guarded, titled and untitled and farm owners and farm hands.

Gender struggles are usually in the form of non-violent conflicts operating within households (Apusigah, 2008). For the people of the Northern region for example, conjugal relations are underpinned by culturally specific meanings that trigger gender based conflicts (Apusigah, 2008) leaving women in a disadvantaged position. Under this deeply patriarchal culture, culturally specified gender roles tend to privilege men at the expense of women (Daley et al., 2013). Men are positioned as super-ordinates; de-facto heads of households who have the greatest role in decision-making about resources both at the household and community level (Apusigah, 2008). According to the author, men are socialized as providers even at their early ages, thus positioning them as heirs of the household resources especially land over which they exercise decision-making concerning production and distribution. Women on the other hand, are limited in their access to household resources. This results from them being culturally socialized into subordinate positons as non-heirs which gives them no direct inheritance rights. However, in other to meet their responsibilities of household production and provisioning, women are granted access to use land for farming mainly through their

social relations with male members of the community (Dittoh, n.d.) usually husbands or fathers and maintaining those rights depends on continuing the relationship because they can lose it in the event of divorce or if they are widowed (Quisumbing & Meinzen-Dick, 2001). These arrangements gives them unequal entitlements and capabilities in the use of the land as a result of the uncertainties it comes with (Apusigah, 2008).

It is therefore right to conclude that; these women live under a land tenure system that does not recognize a woman's right to have equal access to resources such as land within their communities and households. These arrangements are however not questioned and have only persisted and flourished since time immemorial because patriarchal arrangements are enjoyed by men and they are the occupants of highest corridors of decision making within the community and household. Access to land and the conditions under which it happens play a fundamental role in how that land is used.

In the Northern region, this is reflected in the decision's women make on the nature of crops to cultivate, financial and human investments made on the land, decision on how final produce is used because expansion of production, cultivating of long-term crops and financial and human investments made are all determined by whether a person's access is on secured or insecure basis. Being ascribed secondary rights to land characterized by smaller and less productive plots, women resort to the cultivation of non-staples such as rice, beans, groundnut and vegetables in order to meet their household production and provisioning obligations. One easily finds that, women cultivate crops mainly used for household consumption and sometimes sold to earn income to take care of the welfare needs of household members. Alongside farming, women engage in petty trading of food stuffs, shea and dawadawa picking and

processing, charcoal production and collection of firewood as alternative livelihood sources to supplement their household obligations (Daley et al., 2013).

Faced with insecurity in land access, women's productivity is often constrained because they are limited in the decisions they can make on land and often cannot get credit from financial institutions who usually require land as a collateral. Women are also likely to miss out in government and NGO's interventions such as agricultural inputs, skills training and technology transfer because such interventions which they can benefit to improve their capabilities and productivity usually target people with secured access to land, in this case men.

Many including the FAO (2011) have blamed the decades of underperformance in the agricultural sector to the existence of persistent gender inequalities in access to land. Dittoh, n.d. argues that, for sustainable development, a stable and equitable land tenure regime needs to be guaranteed. Similarly, Quisumbing & Meinzen-Dick, 2001 makes reference to the fact that, just as increases in women's education have culminated in improvements in women status, increasing assets women control over the past quarter century have been able to contribute to more than half of reduction in the rate of child malnutrition and have had positive impact on education and health. Therefore, giving women the same access to physical and human resources as men can also increase productivity in agriculture. Whereas, persistent disparities will only have dire consequences on women, their households and societies food and nutrition security (Quisumbing & Meinzen-Dick, 2001).

These consequences are already being felt if not worse. Even more worrying is the revelation of some authors which proves that, the rapid growth of population and

commercial acquisition of land in the country side for all sorts of purposes, makes land in these areas assume a more important role (Cotula, Oya, Codjoe, Eid, et al., 2014; Tsikata & Yaro, 2011) and due to acute land shortages, women's culturally determined rights to use land are becoming insecure, as their vegetable plots are being reclassified as male-controlled household fields, thus men begin to exert a far greater monopoly/control over land resources than had previously been the case (Nyantakyi-Frimpong & Bezner Kerr, 2017).

The burgeoning literature on land tenure in Sub-Saharan Africa reveals an ever changing pattern recorded by various land tenure regimes of these societies, showcasing momentous changes in agrarian economies and societies altogether, consequently leading to changes in land and social relations (Tsikata, 2015). The author notes that, social relations such as class, patron-client, gender, kinship and generation, as well as the host-stranger relations of race, nationality and local citizenship is born out of systematic interactions of social groups and individuals within these groups for production, exchange, consumption and reproduction, which are governed by institutions such as markets, states, civil society ad households. It is important to note however that, in their realm of operations, they do not work in isolation but involves an array of intersection and interlocking giving rise to reinforcing or qualifying privileges, advantages, hierarchies, inequalities and disadvantages leading to social differentiation on the lines of gender, class and kinship relations (Tsikata, 2015).

In Ghana, the ever changing land relations has its roots in wider social change involving economic processes of state building and trials of different pathways to modernizing the Ghanaian economy, with winners and losers from different segments of the population

emerging along with these changes (Yaro, 2012). Sparked by differences in interests, strategies and power, certain groups and individuals accumulate material resources; land, labor, capital and non-material resource; knowledge, skills, technology and social and political status, adversely affecting the fortunes of others (Tsikata, 2015). The discussions and debates that have often emerged on the implications of the on-going land tenure changes in Ghanaian agrarian societies; (neoliberal capitalism, land commodification, land scarcity, landlessness and agricultural intensification) have all illuminated the existence of gender struggles over resource access and control.

While this is not to say that social inequalities haven't existed in the past, they did, but social systems ensured everyone including indigenes and migrants alike had reasonable access to land. Riding on the backs of existing inequalities, the emerging patterns of land tenure resulting from land commercialization, land concentration and land scarcity reinforces and/exacerbates inequalities in traditional social structures. While weakening the interest of social groups without social capital and destroying the possibility for protecting access by the poor to land, the rights of individuals with social capital are guaranteed and strengthened.

2.5 Large-scale Land Acquisition in Ghana

In the last decade, the phenomenon of large-scale land acquisition has gained growing interest and have been the subject of heated debates among a wide range of interest groups such as researchers, the media, national governments, the international investment community and national and international civil society organizations (Behrman, Meinzen-dick, & Quisumbing, 2011).

Daley asserts that, land acquisitions are mainly driven by market pressures whereby poorer holders of actual rights to land sell or lease their land to people who are wealthier than them, enabling the concentration of land ownership and rights into the hands of those few with the resources to invest in land development on a larger scale (Daley, 2011). Notable among the acquirers are countries of the Global South and Eastern Europe, whereas acquisitions have been widely reported in Africa, Asia and Latin America (Cotula, Oya, Codjoe, Eid, et al., 2014). However those taking place in sub-Saharan Africa is what is receiving the most international attention because they are happening at a rapid pace and also characterized by staggering large sizes (Behrman, Meinzen-Dick, & Quisumbing, 2012). For example, globally, out of a total of 56 million hectares of land acquisitions recorded in 2010, a staggering 29 million hectares of it was acquired in sub Saharan Africa alone. This means that more that 50% of these acquisitions took place in the subcontinent (Deininger & Byerlee, 2011).

Investors are driven by a wide range of interests such as food production, tourism development, biofuels production, oil exploration, mining, other commercial agricultural uses or even speculation and also the perception that the sub region has the largest amounts of uninhabited and underutilized (Medie & Darkwah, 2017) cheap arable land. These pressures are felt as part of a global phenomenon that dates back to the oil price hikes of the mid-2000s, quickened in the wake of the twin effects of the 'food price crisis' of 2007-2008 and the crisis in world financial markets in 2008, triggering a global recession into 2009 all of which culminated in a renewed interest in land investments and in the sudden increase of large-scale land acquisitions in target countries (Hall, 2011). GRAIN explains succinctly that, food insecure governments that rely on imports to feed

their people are shopping for land elsewhere for their own offshore food production while at the same time food corporations and private investors such as investment banks, hungry for profits in the midst of deepening financial crisis also saw investment in foreign farm lands as important new source of revenue (GRAIN, 2008). Acquirers range from transnational to national economic actors, including but not limited to investment banks, sovereign wealth funds, agribusinesses, commodity traders, mining companies, governments and local private sector investors such as domestic elites (Behrman et al., 2011).

An extensive body of literature well represented by the works of Behrman, Meinzen-dick, & Quisumbing, 2011; Zoysa, 2013 has revealed that the existence of the phenomenon of largescale land acquisition is not new and what is being experienced currently has its roots in the history of most African states dating back to colonialism with Zoysa (2013) comparing it to "an old wine in a bottle". For many developing countries during their colonial era, it was not unusual for colonizers to take away their customary lands to set up large estates dedicated to the production of export crops to sustain the economies of colonialist (Behrman et al., 2012). In many instances (Ghana, South Africa and Zimbabwe as classical examples), the relationship continued as foreign-owned estates continued to operate even after colonies gained independence. Nationalist governments emerging from the decolonization process also sought to transform land policies as part of their political agenda for development Zoysa (2013) by privatizing or leasing property of the remaining public/communal lands in order to attract investment either through domestic or Foreign Direct Investments (FDI) (Borras,2006).

Aside the conscious efforts of governments to attract investors to acquire lands, due to weak governance structures, investors were quick to realize that, much of the land in the continent were governed under customary land tenure systems and as such the land rights of the people were formally unregistered and generally unprotected so they took advantage of the situation to acquire large tracts of land (Medie & Darkwah, 2017).

While current land acquisitions show some continuities of the past, they are comparatively unique as new global 'drivers' are refracted through the particularity of the present nature of land relations and political economies of countries in the region (Hall, 2011). Because of its historic trend of dispossession of native populations (Dell et al., 2017) and the reports on the outcomes of on-going land acquisitions (Cotula, Oya, Codjoe, Kakraba-ampeh, et al., 2014), proponents belonging to the "win-win" and "critical" discourses respectively are strategically applying two contested concepts' 'land grabbing'' and ''land transaction'' to describe outcomes of land deals (Boamah, 2013; Cotula, Oya, Codjoe, Eid, et al., 2014).

The proponents of the "win-win" discourse are of the view that it is much needed form of investment in land for technological and economic progress thereby preferring the term "land transaction" while from the "critical" perspective land grabbing is used to describe potentially negative consequences of land deals for food security, land tenure and livelihoods in host countries. It could also portray a case of dispossession of local land users and eradication of a traditional system of production (Boamah, 2013; Dell et al., 2017). In order to put into perspective the claims from the emerging discourse, researchers such as Behrman & Meinzen-dick, 2011; Cotula, Oya, Codjoe, Eid, et al., 2014; Medie & Darkwah, 2017 all move beyond descriptors; land grabbing and land

acquisition which are based on the outcomes of land deals and concentrate on what makes these recent deals stand out from the historical trends examining them under the scale, the actors involved, the political contexts and their impacts. It is important to make examinations based on these features because, while the general terms "land grabbing" and "land acquisition" are used to encompass numerous land deals, those acquisitions are not homogenous and can represent a wide degree of variations from one to the other (Medie & Darkwah, 2017). Thus within continents, subcontinents, between countries and in-country variations are most likely to exist, therefore, Cotula,et al. (2014) cautions of the quick uptake of 'big', over-generalized narratives on identifying land deals, their trends and outcomes.

There are also increasing concerns and advocates for a disaggregate analysis of socio-economic outcome assessment because contrary to prevailing generalizations (Cotula,et al., 2014), differentiated groups of people on the basis of their demographic, socio-political and economic characteristics are likely to experience differentiated livelihood outcomes. For example, when assessing the benefits or negative outcomes of land deals on members of a host community, the affected people can be categorized under their gender, farm size and residential status in order to record the true and full reflection of outcomes. Socio-economic outcomes assessments are also done in cognizance on the culminative outcomes of land deals on the different geographic areas within a country's overall economic and societal transformation such as economic growth (Cotula,et al., 2014), migration, land markets and agrarian social differentiation.

2.6 Large-scale Commercial Agriculture in Ghana

In Ghana, as elsewhere on the continent, nationalist governments emerging from the decolonization process sought to transform land policies as part of their political agenda for development (Zoysa, 2013). Ghana joined the bandwagon of renewed commitments to modernize agriculture driven by the belief that Foreign Direct Investments (FDI) can be a catalyst for transforming agricultural production (Yaro, Ko, & Torvikey, 2017). Aggressively supported by protagonist of neoliberal capitalism such as the World Bank (Yaro, 2012), successive governments after independence instituted various land administration reforms as a solution to modernize the Ghanaian economy. Yaro, 2012 explains that, "the long-term goal of the Ghana Government's land policy (prefabricated by the World Bank) is to stimulate economic development, reduce poverty and promote social stability by improving security of land tenure, simplifying the process for accessing land and making it fair, transparent and efficient; developing the land market and fostering prudent land management" (Ministry of Land and Forestry 1999).

The state was surely getting the foreign investment it was longing for because as far back as the 1980's there were evidences of land expropriation and concentration in foreign investors, to invest in the sectors of mining, tourism, logging, real estate and commercial agriculture (Tsikata & Yaro, 2011), a positive sign that the Ghana Investment Promotion Centre (GIPC) which was established to boost foreign and local investor interest in several sectors of the economy (Daley et al., 2013; Tsikata & Yaro, 2014) was living up to its task. This created tensions with local communities around the loss of farming land esecially considering that 80% of land in ghana is held under customary land tenure and majority of the people are engaged in smallholder agriculture (Tsikata & Yaro, 2011).

However in the mid 2000s, ignited by a myriad of factors such as the global food crisis, financial meltdown and oil price hikes, the world exerienced a striking rise in cross border transnational land acquisitions because rich countries with insufficient supplies of natural resources (particularly land) sought out new avenues beyond their borders to acquire food and biofuels (Cotula, Oya, & Codjoe, 2014; Daley et al., 2013; George Christoffel Schoneveld, 2013; Tsikata & Yaro, 2014). In 1995, the country launched a National Economic Plan known as the "Ghana Vision 2020" which envisions the country to become the first African developed nation between 2020 and 2029 and a newly industrialized country between 2030 and 2039 (FAO, 2015). The agricultural sector was identified as key to enable the country to realize this ambitious vision, however, to achieve this there was a need to modernize the agriculture sector (FAO, 2015). Therefore, the interest of foreign investors in land for commercial agricultural purposes came as welcoming news to the Ghanaian government since the interests of the investors were in resonance with the country's economic agenda.

To further lure investors and promote agricultural investments among other goals, successive governments over the years instituted an endless cycle of Medium-Term National Development Policy Frameworks, notable among such programs and plans were; Growth and Poverty Reduction Strategy GPRS I and II (2003-2009), Ghana Shared Growth and Development Agenda GSGDA (2010-2013), Food and Agriculture Sector Development Policy FASDEP I (2002)and II (2007) and the Medium Term Agriculture Sector Investment Plan METASIP I (2011-2015) and II (2014-2017) under which specific projects such as the Ghana Commercial Agriculture Project (GCAP), Savanah Accelerated Development Authority (SADA) now the Northern Development Authority

and other Public-Private-Partnership (PPP) programs have been implemented with a market-driven approach, creating favorable conditions for private investors to thrive thereby encouraging a greater engagement from the private sector (FAO, 2015).

The government have always been driven by the belief that, FDI in large-scale commercial agriculture would result in technology transfer which forms the basis of the much needed industrialization the state has always sought through foreign exchange earnings, employment, food for local market and also benefits to small holders (Hall, Scoones, & Tsikata, 2015).

Certainly, as a result of the conscious efforts made by the state, Ghana was not left out as a destination for the rush for land in Africa and has featured prominently as one of among the top hotspots for large-scale land deals globally (Boamah, 2013) because just like the others, aside the favourable investment policies, the country is purpoted to have a vast reserve of unused ,underutilised fertile and cheap land (Boamah, 2013; Cotula, Oya, & Codjoe, 2014; Hall et al., 2015; George Christoffel Schoneveld, 2013). In fact it was very much felt that, investors had gained access to approximately 1.2 million hectares of land just over a period of five years, most of which is located in central Ghana's forest savanna transition zone (German, Schoneveld, & Mwangi, 2011).

Significant parcels of land have been dedicated to biofuel crops (jatropha and sugar cane), oil plam plantations, mango, pineapple, rice and other export crops and the state is finally getting the foreign investment it has long sought however, evidence also points to state-owned companies, citizens, the diaspora and national political elites as actors in the current large-scale land investments in the country (German et al., 2011).

Several authours have reported extensively on large-scale land acquisitions for different agricultural investments dotted across the country. Tsikata & Yaro (2011) reports on 10,600 hectares acquired by Solar Harvest Limited for jatroha cultivation and over 1250 hectares acquired by Priarie Volta Rice Limited for rice cultivation in the Northern and Volta Regions respectively. Daley et al. (2013) also reports on the 155 hectare mango plantation by the Integrated Tamale Fruit Company (ITFC) in the Northern region. In Westhern region, 4500 hectares oil palm plantation by NORPALM and 433 hectares of fruit plantation by Blue Skies Company Limited in the Easthern region is reported by Yaro et al. (2017), a 1200 hectare banana plantation by Premier Fruits is also reported by Medie & Darkwah (2017) in the same region. Boamah (2013) also reports on a 65000 hectare jatrpoha plantation acquired in a joint venture between Kimminic and some Traditional Councils in the Brong Ahafo region and 13000 hectares of land acquired by ScanFarm Ghana limited in Southern Ghana for the cultivation of jatropha but later switched to maize and soy beans.

Acquisions have ranged from cases of the state using its right to eminent domain to acquire some lands; Priaire Volta Rice Limited serves as an example to an extent, to joint ventures in the case of the Kimminic project and lease agreements such as the case of ITFC which constitutes majority of the acquisition arragements in the country. It is improtant to note that almost all investments in the country have faltered (Hall et al., 2015). While some are still operational albiet some difficulties, others have haltered operations entirley owing to colapse and for some they have had to restrategise and restructure along the way in order to continue or absorbed by some other companies.

In these new processes of land acquisitions one finds that, the government did not seem to play an active role in enabling these acquisitions (German et al., 2011). This presupposes that, much of the land accessed by these varied investors are cutomary lands and traditional leaders who since time immemorial have served as custodians of the land and as such management rights have been conferrered upon by the constitution, are leasing customary lands to investors who are in some cases led by local intermidiaries or partners (Schoneveld, 2013;Yaro, 2012). For example in the case of ITFC and Solar Harvest in the Northern region, the land was acquired directly from the Dagbon King (Tsikata & Yaro, 2014). Driven by the direct benefits of payments they receive, allodial title holders are re-inventing tradition in parallel with neo-liberal modernization forces and expopriating land from their citizens to investors disenfranchising them of their landed property (Yaro, 2012). Traditional leaders are also driven by the expectations that, large-scale land investments in their communities will contribute to job creation,market opportunities and the provision of social infrastructure such as schools and hospitals (Medie & Darkwah, 2017).

In Ghana, despite according customary rights with legal recognition, compared with formal property rights, they are rarely accorded the same legal protection because the claims are yet to be formalized (German et al., 2011; Schoneveld, 2013). While this arrangement have not posed a threat to customary right holders in the past, holders of these rights are now at a risk of loosing it under this current commoditized regime, that is if they haven't already lost it, leading to the displacement of poor and marginalized families from their land threatening to deprive the rural poor of vital livelihood resources (Schoneveld, 2013).

While these investments are seen as means to benefit from the cumulative impacts on macroeconomic indicators such as ending rural poverty, economic growth, tax revenue, opportunities for local businesses (Cotula, Oya, & Codjoe, 2014), some researchers who perceives it as neo-liberal capitalism (Yaro, 2012), neo-liberal colonialism (Hall, 2011) and neo-liberal globalization (Zoysa, 2013) are of the belief that, the macroeconomic benefits do not in reality translate into real life gains for the poor, especially for people displaced by the deals but only threatens to dispose the rural poor of vital livelihood resources.

In the wake of these varied outcomes, a heated academic debate has ensued with regard to the benefits and/or detriments of these acquisitions for local populations. The debates are characterized by the discourse that beliefs that, large-scale land investments are much needed to ensure development through its potential to generate jobs both on and off farms; infrastructure, particularly health posts and schools; and increased food production as well as access to improved farming technologies and practices and those disposed of their land could still accrue benefits from the employment they gain thereby leading to a "win -win" situation for all (Boamah, 2013; Medie & Darkwah, 2017).

Typically, those who propagate this include foreign investors, the host governments, traditional leaders and local (elite) investors on the flip side is the motion that holds the pessimistic view of large-scale land acquisitions and typically includes, academics, the media and civil society organizations (Medie & Darkwah, 2017). They are of the view that, the benefits that accrue in the long run are not equivalent to the implications of long term dispossession of farmers who hitherto relied on land for cultural and economic purposes and the loss of natural resources and thus the visible outcomes of

commoditization, structural adjustment, market liberalization and globalization are widespread processes of exclusion, deepening inequalities and social differentiation (Hall, Scoones, & Tsikata, 2017). Worse situations are reported among people already marginalized in terms of resource access and tenure such as women, the young and migrants whose livelihoods depends heavily on farming and harvesting of natural resources (Hall et al., 2015). A case in point is the loss of Kpachaa commons as a result of the 1250 hectares acquired by Solar Harvest Limited. The women reported to have lost a good number of fruit trees and fuel wood and having to walk farther into bushes to source them. Men also reported to have lost their grazing fields for their animals and also thatch and wood for building. These were important resources harvested freely to support their livelihoods and therefore losing it had unimaginable consequences for their productive and reproductive activities (Tsikata & Yaro, 2011). This proves to a large extent that, large-scale land investments and its consequent expropriation pose very real challenges to the rural population especially for the already marginalized in the society such as women and therefore its outcomes are likely to exacerbate rural inequalities thus conflicting with rather than supporting governments policies and programs aimed at modernizing subsistence agriculture.

Under these contexts, the acquisitions are taking place especially without formal regulations and intermediaries such as the officials from the Lands commission and therefore likely to be influenced by unfair and exploitative conduct usually from the investor with some blaming it on low literacy rate of local actors (German et al., 2011). For example, the amount paid is usually not reflective of the value of the land and also little attention is paid to accountability issues, therefore, farmers/rural people are unlikely

to receive the appropriate compensation package from their dispossessed land and more importantly women are less likely to be considered for compensation or employment by investors even though they are more likely to be affected with the privatization of land or clearing of vegetation (Medie & Darkwah, 2017). Also agreements are sometimes shrouded in secrecy or without consultation of the people of the community and some aspects of contracts (usually compensations and promises of corporate social responsibility) are based on verbal agreements which are not binding (German et al., 2011; Medie & Darkwah, 2017). As a result, large-scale farming has often led to new sets of conflicts between the investor and traditional leaders, investors and whole community and then traditional leaders and their subjects often relating to losses, gains and sharing of opportunities (Hall et al., 2015). Conflicts and tensions arising from disappointments have usually followed the period of initial support investors first received. Investors too have moved from initial points of enthusiasm, high expectations and general optimism to low production outs and contraction of initial project plans (Hall et al., 2015).

Belonging to a wider policy environment, Ghana is a signatory to the UN Sustainable Development Goals (SDGs) which have specific goals and targets focusing on issues such as poverty, hunger, gender equality and women's empowerment, food security, nutrition among others. The fact that the country is a signatory means that it is committed to achieving sustainable development. The goal of the GoG land policy among others to reduce poverty, promote social stability and also improve the security of land tenure is a path towards sustainable development. However, the outcomes of investment promotion

and achieving the goals of sustainable development are threatening to become conflicting policy objectives leaving the government in a state of flux.

2.7 Large-scale Commercial Agriculture in the Northern Region

The Northern region like most parts of Ghana has 80% of land held under the customary land tenure system and more than 70% of these lands are managed by traditional rulers on behalf of members of their traditional areas (Acheampong & Campion, 2014a). The economy is dominated by peasants (Yaro, 2012) as such, land and its related resources is the most productive asset for the people on which they depend mainly on agriculture for their livelihoods. According to Kansanga, even as late as 1999, indigenes in the region need not worry about insecurity of title or tenure, as access to land by even strangers was guaranteed. However, same cannot be said for the contemporary Northern society because it's land tenure is undergoing rapid transformation from egalitarian principles to private property principles. The mutation has its roots in wider social change involving colonial and post-colonial governments political economic processes of state building and the trials of different pathways to modernizing the Ghanaian economy in tandem with the food, fuel and financial crisis in the 2000s that led to foreign investors acquiring large tracts of land in the region and other parts of the country for the cultivation of food and biofuels (Yaro, 2012).

The Northern region is one of the two regions that feature more prominently in the recent land deals in the country (Cotula, Oya, & Codjoe, 2014). This comes as a surprise because, large farms have previously not existed in the region (Tsikata, 2015). While all sorts of natural factors such as poor soil quality and soil quality depletion, variable

rainfall pattern, lengthy dry seasons, seasonal bushfires, floods, high temperatures and long droughts have been offered as explanation to the poverty and underdevelopment of the Northern region (Ayelazuno, 2017b), ironically, the agro-ecological zone it belongs to (Guinea Savannah) is considered conducive for agriculture production and even considered one of the major agricultural production zones in the country (Cotula, et al., 2014). Despite its harsh climatic conditions, the region is paradoxically endowed with rich abundant natural resources such as land, labor and water crucial to capitalist farming (Ayelazuno, 2017b). The agro-ecological zone coupled with the abundance of crucial resources such as land (which were in some cases labeled as unproductive, marginal, unused, cheap) reflects investors preference for the Northern region as an investment destination. Aside the two reasons mentioned, political considerations also seem to be at play as governments have been making efforts to bridge the long-existed North-South development divide through the integration of the Northern region into the national economy. The activities of the Ghana Commercial Agricultural Project (GCAP) and the Savannah Accelerated Development Authority (SADA) now the Northern Development Authority (NDA) are all geared towards modernizing the agricultural sector of the Northern Savannah ecological zone through the creation of conducive environment to attract investors and for investments to thrive (Schoneveld, 2013). The growth in large-scale commercial agricultural companies in the Northern region therefore appears to be part of governments' strategy that cannot be overlooked.

Growing alongside the increased number of land deals and commercial farming in the Northern region is the substantial body of work that has emerged to cart the large-scale commercial agriculture literature. This means that, the phenomenon has not gone

unnoticed by the affected population, researchers, social movements and NGOs. Their works have offered insights into the implications of large-scale commercial agriculture for livelihoods, inequalities and food security and whether the land deals offer positive or negative socioeconomic outcomes. Notable among these studies is the work of Tsikata & Yaro (2011) whose study focuses on the liberalization of land markets and its consequent growth of land transactions. In their work, the authors discuss the case of land acquisition by Solar Harvest Ltd in Kpachaa for the cultivation of jatropha. They achieve this by situating the study within the framework of agrarian stagnation, failure of agrarian transformation and the ongoing livelihood crisis in rural areas prior to the deals and how Solar Harvest Ltd operations play out under the existing local land tenure, land use and land availability conditions. The authors report general disappointments from the affected communities who lost their farm lands and common resources which served as important sources of their livelihoods and the promises of employment as an alternative livelihood source was short lived and did not last long to offset their loss.

A study is conducted by Ayelazuno (2017) on Integrated Water Management and Agricultural Development Ghana Limited's (IWAD's) large-scale land acquisition at Yagba in the Northern region for crop husbandry. Ayelazuno, establishes the implications of the business model of IWAD and the social (re)production of peasants integration in the capitalist global economy. To give perspective to the study, the author situates it in a long historical span of land grabbing and draws from the linkages of land acquisition, capitalist agriculture, agrarian change and industrialization in the contemporary global economy and finds that while the states' visons and policies turn to give the impression that the well-being of peasants and profit making logic of IWAD are

reinforcing, the reality is a host of contradictions which is to the disadvantage of the host and near-by communities. On one hand is a state implementing policies aimed at promoting the food security of rural folks who were mainly peasants while on the other, the same state is promoting capitalist farming through IWAD's project with its resultant land tenure reforms in other to promote the food security of the peasants who consequently lost access and use of their land in a bid to promote the two contradictory policies. He adds that, while the scheme provided cheap food for the urban populace and feed stock for factories, it left the peasants vulnerable to food insecurity.

A gender perspective on the socioeconomic outcomes of large-scale commercial agriculture has also been examined by Tsikata & Yaro (2014) in their study of ITFC and Solar Harvest Limited in Dipale and Kpachaa respectively. Their study explores both land deals based on the local political economy and the existence of different social groups within the communities, considering the already existing conditions of the land tenure and rural agrarian production systems of both societies. Aside that, the discussion of project benefits and disadvantages are viewed with gender lenses in other to gain a gender perspective on the outcomes of large-scale land acquisitions. The authors find that although the two projects are operating different business models, the gender impacts were very similar. In terms of the major benefits from both projects, their study finds that men are more likely to be considered for jobs created by the companies than women. When benefits of project accrue, only a few minority interests, usually men stand to gain from it. The clearance of land and the forest resources to make way for the operations of the two companies serve as a threat to livelihood prospects of women. To them, the dispossession the land deals come with was more likely to affect women than men.

Although the authors concentrated on different commercial agriculture companies while exploring and examining the phenomenon of large-scale commercial agriculture and also from different perspectives, their findings produced similar insights into the implications of large-scale commercial agriculture in the Northern region. They find that, the affected communities lose their access and use rights to land without adequate redress, few benefits accrue to affected communities and also natural resource-based livelihoods are lost. This hinges on the arguments of Behrman et al. (2011) that, the pre-existing local context such as the production system and the socio-cultural contexts in which land deals are conducted plays a major role on how their outcomes play out.

2.8 Large-scale Commercial Farming and Food security in the Northern Region

Food and nutrition security of the people of the Northern region is strongly linked to their agricultural production and size of land cultivated. However, smallholders in the region experience high levels of food insecurity and poverty with entrenched gender inequalities (Daley et al., 2013; Tsikata & Yaro, 2014) even though almost half of the households (46%) acquire their income from crop cultivation (WFP, 2012). The region still remains one of the poorest in the country, recording the third highest poverty head count at 50.4% and has the largest population of the poor (with 1.3 million poor individuals) in the country (Ghana Statistical Service, 2015).

The underperformance of the agrarian economy for several decades in the region is attributed to adverse weather conditions, natural disasters and seasonal difficulties (Nyantakyi-frimpong, & Kerr, 2016). Notwithstanding that, most parts of rural Northern region is dominated by subsistence food crop farmers, the region has 10% of its

households to be either severely or moderately food insecure with the prevalence of food insecurity among poorer households, those with smaller farms, female headed households than other households (WFP, 2012). These poor households have limited means of purchasing food, they have smaller harvests, lower levels of education and are more vulnerable to shocks such as even the slightest increase in food prices which altogether increase their food insecurity. Households within this category, experience severe seasonal difficulties in accessing enough food occurring in the lean season (WFP, 2012). The main source of survival for women and their households during the long dry season is to engage in the collection of shea nuts and dawadawa for processing. It is an important dry season economic activity which supplements family income and provides condiments for food. Women also collect firewood from farms and bushes which serves as fuel for cooking or sold to earn an income (Tsikata & Yaro, 2011). Women are therefore responsible for conditioning the households against food insecurity almost all year round.

As revealed in preceding paragraphs, majority of land acquisitions in Ghana is taking place in the rural north for investments in large-scale commercial agriculture, bio-fuel production and mining (Nyantakyi-frimpong et al., 2016). The lands acquired by investors are supposedly classified as marginal, idle and unproductive, but the reality is that, they are inhabited by smallholders who cultivate food crops on the land and also collect other commons on it to support their livelihoods (Nyantakyi-frimpong et al., 2016). This loss of commons particularly affects women because they are relied upon for much of the household's provision needs, left with inadequate options to meet their household production and provisioning roles, then seek newer, inequitable, laborious,

exploitative, lowly paid opportunities which puts them at a greater risk of becoming food insecure.

While some researchers are of the view that, these acquisitions are put to productive uses such as farm and off-farm employment, improved rural infrastructure and increased food production and food security, researchers such as Behrman, Meinzen-dick, & Quisumbing (2014); Medie & Darkwah (2017); Tsikata & Yaro (2014) based on outcomes of existing land acquisitions in and outside the region maintain that, land acquisitions brings about dispossession of smallholders, loss of livelihoods and compromised food security while some have moved a step further to highlight the gender differentials of these outcomes especially for purely patriarchal societies in the Northern region .

For an already gender inequitable space, while a few minorities accumulate land and benefit from projects (local and foreign investors, chiefs and few male farmers) the silent majority who are usually women are coerced into laboring relations or move to other income sources in order to complement food production from often small farms, a situation that can lead to livelihood and food insecurity for women (Nyantakyi-frimpong et al., 2016). Women are much more vulnerable to food insecurity in commercial agricultural investment areas because they are usually considered for temporal employment which is usually lowly paid coupled with the poor supplementation from their own farms (Medie & Darkwah, 2017). To put this into context, Yaro, Teye, & Torvikey (2017) in their study analyzes the food security conditions in commercial agricultural areas. They reported poor food security outcomes among poorer families and farm workers and attributed the situation to the low wages with resultant low purchasing

power, limited access to land and constrained time to work on their own farms. A phenomenon described by the authors as "squeezing out" food crops while richer farmers were better off because they earned incomes good enough to meet their cost of living as well as investing into high-earned non-farm enterprises (Yaro, Teye, & Torvikey, 2017). Large-scale commercial agriculture has been provided as an option to uplift agrarian households from poverty, however, so far it seems to be providing counter outcomes and, in some cases, aggravating poverty situations between genders, as studies have proven that, women are less likely to benefit from the opportunity's investors offer and the situation is made worse by the gender biases in project design and implementation. In the context of increasing land dispossession, land scarcity and landlessness women are likely to face increasing food insecurities.

2.9 Models of Agricultural Commercialization in Ghana

The literature on large-scale commercial agriculture have often lamented on the effects of land expropriation on the natural resource-based livelihood activities of affected communities. Ghana's experience of past and present investments in which governments have committed to promote over the years, have mostly delivered disappointing results, raising questions on the viability of large-scale commercial farming and its contribution to modernizing the Ghanaian economy as it seems to be undermining the state's efforts. Owing to these broad concerns, the scholarship of large-scale commercial agriculture in Ghana like elsewhere around the world, have ignited debates around the different models of agriculture commercialization.

Commercial agriculture models as we have them now in the country, traces their history back to the colonial and immediate postcolonial developmentalism; plantation farming, contract or outgrower arrangements and medium-scale commercial farming, which have varied in size of land used, the institutional arrangements as well as the labor regimes (Yaro, Teye, et al., 2017).

Debates have often centered on the right model of agricultural commercialization that has little or no tendencies of throwing agrarian societies of their land and reduce improvishment of small-holders while being able to transform small-holder agriculture and the wider economy (Yaro, Teye, et al., 2017) or the model that would avoid dispossession of local people altogether, create quality employment and then promote diversified and sustainable livelihoods for the local people (Hall et al., 2017). These debates have emerged to rekindle the search for an ideal type model for large-scale commercial agriculture in the country.

Hall et al. (2017) describes plantations as self-contained agribusinesses that rely on hired labor and are vertically integrated into processing chains (often with off farm processing). Behrman et al. (2011), adds that, plantations are typically large areas of monoculture that rely on hired labor and extensive use of pesticides, inorganic fertilizer, and hybrid seeds to make land more productive. Hall et al. (2017) confirm on the basis of their review of plantation farms in Ghana, Kenya and Zambia that, they have few linkages into local economies because they buy farm inputs from far afield (including migrant labor) and in turn send their produce into global markets bypassing local intermediaries. Plantations create employment opportunities for permanent and seasonal workers especially if they

have onsite processing units, for resident and non-resident labor which includes migrants (Behrman et al., 2011; Hall et al., 2017).

However, plantations have come under heavy criticism for its clear gender segmentation of work which results in relegating women to lower skilled positions, lower wages and casual/temporary employment (Hall et al., 2015). The best employment opportunities on plantations are the most permanent jobs which men are usually considered for while casual and temporal positions which are characterized by low wages and poor conditions of service are reserved mostly for women. Due to low wages which results in low purchasing power, poor access to land, women are especially left with few opportunities for accumulation which is a major challenge to achieving food security (Yaro, Ko, & Torvikey, 2017b).

Behrman & Meinzen-dick, 2011 refers to contract farming (also known as the outgrower scheme) as an alternative to plantation farming. In this case, the investor instead of establishing a largescale farm, enters a contract farming agreement with the local farmer (Behrman et al., 2014). The authors explain that, "the outgrower scheme is an agreement in which the farmer agrees to provide a given quantity and quality of a product within an agreed-upon timeframe and the investor agrees either to purchase the harvest at a set price or to provide a fixed percentage of the harvest to the farmer as rent. In the latter instance, the farmer will theoretically end up with the same amount of crops as prior to the contract, given that the investor typically also provides a range of production-enhancing inputs, such as improved seed, fertilizer, machinery, and extension services" (Behrman & Meinzen-dick, 2011). One party possess assets which the other party finds difficult to have access to. For example, small holders usually have access to land, labor

and water while finding it difficult to access financial capital, technical expertise and linkages with market which investors have at their disposal and so they enter into a contract that is supposed to be mutually beneficial for both parties (Behrman & Meinzen-dick, 2011). Essentially, it is an inclusive business model that links smallholders (outgrowers) into commercial value chains (largescale commercial agriculture companies) (Hall et al.,2017) while still allowing local farmers to retain control over their land and labor (Behrman et al., 2014). It is therefore touted as a more equitable option for smallholders because not only do they benefit from returns to land they benefit from labor as well (Behrman et al., 2014). Largescale commercial agricultural companies who adopt the outgrower model usually have processing mills and nucleus estates. As such, the outgrowers augment the supply from the company's nucleus estate. What this means is that, aside contracting farmers as outgrowers, both the processing mill and nucleus estates can provide permanent and seasonal waged employment opportunities (Hall et al., 2017). Tsikata, 2015 finds that, contracted outgrowers either use their own land or land from local owners with proponents of the model seeing it as one which does not dispossess farmers of their land.

However, Hall et al., 2017; Yaro, Teye, et al., 2017 have all criticized the outgrower scheme for its rife gender segmentation tendencies because outgrowers are mostly male farmers. Thus their view that the idea of contract farming is often hinged on the idea that the household is a single unit controlled by a male household head who usually signs the contract, however this notion is far from true because the reality is that households are made up of diverse array of actors with different responsibilities and preferences (Behrman et al., 2011). Oya, 2012 and Smalley 2013 posits that, it creates, employment

on a smaller scale than plantation, some disruption of pre-existing livelihood activities, greater exposure to vicissitudes of the global commodity trading system, more intensive labor demands and the loss of decision-making about livelihood strategies which have implications on the food security of agrarian households especially women who are less likely to participate as outgrowers and are more affect by the loss of land and its related resources. In Behrman & Meinzen-dick's view, it's more of theory for outgrower schemes to be mutually beneficial to local populations than in practice.

Operating alongside foreign investors and states plantations and outgrower schemes are an emergent class of independent farmers many of whom are male entrepreneurs and wealthy, middle aged or retired local elites, who enter the scene of commercial farming through investing with off farm sources of income to establish medium scale commercial farms (Hall et al., 2015, 2017). Yaro, Teye, et al., 2017 in their review of the models of medium-scale commercial farming finds that, elite farmers in Ghana are participating as investors with the use of resources from urban employment to establish medium-scale farms in favorable ecological zones. For example, a study conducted by Tsikata & Yaro (2011) in the Northern region, finds evidence of commuter farmers who travelled from the regional capital Tamale to Kpachaa a rural community in the region to acquire lands for farming because of easy access to arable land and cheap source of labor within close proximity. They acquire land through endogenous processes of agrarian differentiation or through national and donor support schemes which establishes commercial farming areas aimed at promoting commercial farming (Hall et al., 2017; Yaro, Teye, et al., 2017). According to Hall, et al,2017 their operations create a lot of job opportunities and stimulate rural economies more than plantations and outgrower schemes. At Kpachaa,

the commuter farmers offered a major source of employment for both men and women and their operations served as an important source of income and food to especially women in the area (Tsikata & Yaro, 2011). Researchers however fear that while these new emerging class of capitalist farmers have access to an appreciable amount of land, they can cumulatively dispossess small-holders and alter existing agrarian structures thus increasing land concentration and accumulation just like big colonial and more recent plantations and estates have done (Hall et al., 2015, 2017). Also unlike plantations, they may be unable to guarantee their employees wage levels given their lower level of capitalization (Tsikata, 2015). Hall et al., 2017 confirms this in their study which reveals that, the expansion of medium-scale commercial farms has dispossessed smallholders of their land in Ghana. The growing situation of landlessness, putting a strain on food crop production coupled with low wages paid for farm work leads to increased vulnerability of smallholders to food insecurity.

Researchers have often reached the conclusion that, all three models have their strengths as well as their weaknesses. In their search for an ideal type model, researchers find that, agrarian change occurs through a variety of processes but at various degrees depending on the model; dispossession of local farmers of land and its related resources, suppressed customary rights to land, social differentiation on the basis of class, gender and age, disruption of social relations, exploitation, land scarcity(Hall et al., 2015, 2017; Tsikata, 2015; Yaro, Ko, et al., 2017). In some cases, the inability to cope with the stress of commercial farming have often resulted in tensions between local farmers, the affected community and then the investors. In the areas the models have been practiced, land markets both formal and informal are evident and land prices are increasingly rising

owing to land marketization. This readily results in changes in access, because while the fortunes of others are adversely affected through exclusion, others are taking advantage to accumulate (Tsikata, 2015). Those who previously could not claim rights to land such as migrants and foreign /local investor farmers, can do so through lease or purchase, leaving those who prior to the growth of commercial farming held onto weaker claims over land such as women and the youth with little or no land to lay claims to, this has immense implications on their livelihood and food security. Even men who usually have better claims over land than women, are compelled to cling to smaller parcels of land than they previously had to for food production. These revelations point to the fact that women are disadvantaged actors in the commercialization of agriculture enjoying fewer benefits as compared to men. This situation however, can be partly blamed on the preexisting sociocultural conditions that disadvantages women (Yaro, Teye, et al., 2017). On the brighter side, the models offer opportunities for livelihood improvement and accumulation through waged employment and flexible temporary employment which means employees can combine their waged work with other livelihood options which can lead to improved food security outcomes (Hall et al., 2015; Yaro, Teye, et al., 2017). For women, waged employment could mean more than earning an income but it also means a source of autonomy (Hall et al., 2017) in decision-making both in the household and the wider society. Researchers have shied away from selecting one of the models as an ideal type model or selecting one model as an alternative to another because studies have shown that, the models present different outcomes under the different contexts they have been applied (Yaro, Ko, et al., 2017). While the search continues for an ideal type model, Cotula (2014) suggests that, the models can always help identify the main features of a

deal. However, to achieve more sustainable and inclusive pathways of commercial agriculture; ideal type model, Hall et al. (2017) suggests investors should take account of the local contexts of historical background, geography, agroecology and agrarian relations of operational areas.

2.10 Integrated Tamale Fruit Company (ITFC) and its Business Model

ITFC is a mango production and processing company based in Savelugu in Ghana's Northern region. It was incorporated in 1999 as an export company. When the company started operations the largest shareholder of ITFC was Wienco Ghana Limited a leading Ghanaian fertilizer and agrochemicals manufacturer with financial and business interests in the production of a wide range of export crops (Gent,2008). The next largest shareholder, with thirty percent (30%) shareholding, was Comma, a Dutch company. The remaining shareholders were Tamale Investments (a collection of local Tamale-area investors) at five percent (5%), African Tiger Mutual Fund (a Ghanaian investment company) at 5 percent (5%) and the Nanton chief at 10 percent (10%) (Osei, 2008). This meant that about 70 percent of the shareholders were Ghanaians. This has since changed. Although the current proportions of shares by shareholders is not readily available, the company is currently operating almost 100% Dutch ownership, owing to some challenges faced by the company which led to local investors relinquishing their shares. Since ITFC started operations, it has benefited from input from development agencies, but is essentially a private sector led initiative with a foreign investor component (Daley et al., 2013). ITFC production is based on a small company-owned plantation (some 150 hectares) one of the three components of the venture located 10km

from the towns of Gushie, at Dipale which it runs with hired labor and extensive mechanization. The company acquired a ninety-nine-year lease from the chiefs of the land for an amount of 100 million old Ghana cedis (about US$5,000), which was to be paid in two installments: 50 percent (50%) was to be paid immediately and the rest to be paid ten years later. The company operates a mango outgrower scheme as well as a processing and pack house located at Gushie (Daley et al., 2013).

ITFC saw the outgrower arrangement partly as a strategy to avoid the complex process of acquiring large tracts of land. So rather than seeking to acquire 2,000 ha, the company only acquired a small portion for the nucleus estate, and sources produce from the outgrowers who cultivate their own land (Daley et al., 2013). For farmers to participate in the outgrower scheme, they had to be in a group of ten and acquire a continuous plot of ten acres, the company would then test the soil for suitability for mango cultivation. Each farmer would then be allocated one acre and mango seedlings. The company provided expertise and farm inputs to the farmers, for which they were to pay later with 30 percent of the proceeds of their farm to settle the long-term no-interest loan. Each farmer is expected to grow 100 mango seedlings on their acre of land. Another precondition to be able to participate as an outgrower required each farmer pay a commitment fee of a bag of maize (Tsikata & Yaro, 2014). The farms planted with mango trees are dotted around the villages in the Savelugu-Nanton District including the villages of Dipale, Dinga, Tigla, Tunayilli, Sogo-Tampia, Gushie, Nabogu, Gbanga and Nakpanzo (Osei, 2008). The outgrower scheme has been lauded especially by the international development community and is widely considered to be a promising model and the right way to go in agricultural investments as compared to commercial and

plantation farming (Daley et al., 2013; Yaro, Teye, et al., 2017) because in theory it doesn't deal with outright acquisition of land by investors but rather leaves the small scale farmer to hold unto land and labor providing a win-win outcome for actors involved.

Although ITFC is not the only mango producer in the country, it is the largest in Ghana's Northern region (Gent, 2008). The company was set up with the ultimate goal of reducing poverty in the surrounding population, which has a high incidence of poverty. The organic mango outgrower scheme, which was started in 2001 was seen as a means to achieving this (Osei, 2008). The company assumed that, in order for it to farm organic mango for the export market it needed to have a strong basis in the agricultural sector with reliable resource base while applying high standards (Gent, 2008). ITFC saw the outgrower scheme as a way of getting the required volumes to enable it to command a higher degree of market power in the organic mango export markets. Market power is directly related to the volume of exports (Osei, 2008). A move the company envisioned will result in outgrowers having a sustainable income from a crop with a higher market value than the traditional crops in the area without having a negative impact on subsistence crops before the potential of mango farming is realized (Gent, 2008).

The company also offers the people in the surrounding areas opportunities to earn incomes through the varied employment opportunities the plantation, packaging and processing sites offers.

2.11 Theoretical Framework

The selection of a theoretical framework for this study was guided by the objectives of the study. The theories selected for this study was based on their ability to best analyze and make meaning of the empirical findings and hence the outcome of the study. Buserup's agriculture intensification, gender and rural development theories are selected for this study.

2.11.1 The political-economic context of large-scale land acquisition. Buserup's agriculture intensification, gender and rural development theoretical framework

Women access to land in the background of three overlapping phenomena; customary land tenure system, large-scale land investments and sustainable rural development is the context under analysis in this thesis. From a gender and sustainable rural development perspective, Boserup's theories of agriculture intensification, gender and rural development will give greater understanding of the transition on-going in agrarian economies as a result of large-scale land acquisition and investment. The theoretical framework is premised on the proposition that, large-scale land acquisition has differential effects on rural men and women. Knowledge of this, gives a clear picture of the impact of large-scale land acquisition and to address the situation, women and men should be treated as unitary components and not a pool. Two interrelated key assumptions, derived from the proposition mentioned above inform the theoretical framework of agriculture intensification, gender and rural development and how it is unfolding in the agrarian political economy of the Northern region of Ghana. To begin with, large-scale land acquisition is taking place in a context where women access to

economic resources such as land is unreliable as a result of the tenural regime that favors men at the expense of women and come with implications which are usually to the detriment of women. Accordingly, large-scale land acquisition may further limit women access to land. And secondly cultivating fruits for export raises concern of food security and also putting commons resource-based livelihood activities at risk which women rely on for most part of their livelihood.

Ester Boserup in the mid-twentieth century came out with ideas that went contrary to neo-Malthusian and other views at the time. In her ground breaking book The Conditions of Agricultural Growth published in 1965, Buserup discusses the concept of agriculture intensification relating it to economic development in rural areas (Behrman et al., 2014). She offered a powerful set of ideas in the opposite direction of Malthusian perspective. Boserup argues that, population growth is the independent variable which is a major factor determining agricultural development (Boserup, n.d.) and that population growth stimulates agricultural development via innovation and productivity improvements (Behrman et al., 2014), rather than the Malthusian perspective that was of the view that the relatively slow growth in the food ceiling served as the upper limit for the faster paced potential growth in population (Turner and Fischer-Kowalski,2010). Dominant theories at the time were of the view that, for increased agricultural output, expansion into new uncultivated areas or initiation of more intensive agriculture was needed (Behrman et al., 2014). Boserup however thought different, arguing that "primitive agriculture" make no use of permanent fields but shift cultivation from plot to plot (Boserup, n.d.). She further adds that, in "primitive "agriculture most of which dominates the developing world (Behrman et al., 2014), there is no sharp distinction between cultivated and uncultivated

land and therefore concludes that emphasis is placed on the frequency with which the land is cropped rather than whether land is cultivated (Behrman et al., 2014; Boserup, n.d.). Buserup distinguished types of land use in "primitive" agricultural systems ranging from truly virgin lands, fallow lands and continuous cropping (Boserup, n.d.). Thus in focusing attention on the frequency of cropping, an important fact that comes to attention is that, transition is characterized by decreasing fallow periods and increasing levels of agricultural intensity through the use of new tools and other investments into agriculture (Behrman et al., 2014; Boserup, n.d.).

The northern part of Ghana, especially Northern Region despite it recording a very high incidence of poverty (Osei, 2008), paradoxically, is endowed with rich natural resources; land, labor and water and is therefore considered ideal for investors interests in agriculture commercialization (Ayelazuno, 2017b). The supposed existence of unproductive, marginal, unused, cheap lands and free access to water in the region have lured a good number of foreign and local investors to acquire land to be used more profitably for commercial agriculture. One such investment is by the Integrated Tamale Fruit Company (ITFC) located in the Savelugu district of the Northern region. ITFC operates a model involving collaboration between the company and local farmers through a nucleus estate and outgrower scheme for the production of organic mangoes.

Arguably, the operations of ITFC is a contemporary example of agricultural intensification in the Savelugu district analyzed by Boserup. At the heart of the company's operations is to cultivate certified organic mangoes for the export market while anticipating that about 10% to 20% will be sold on the local market (Osei, 2008) through the use of high inputs of capital, labor and extensive mechanization (Osei, 2008)

all in a quest to maximize profit. The Dutch-Ghanaian joint venture operates an inversion of Boserup's theory of agricultural intensification described by Behrman et al., 2014a as exogenously induced rather than endogenously induced described by Boserup. The company's operation to satisfy exogenous pressures to feed distant consumers leads to agricultural intensification in the Savelugu district. Tsikata & Yaro (2014) reveal that, for the people of Savelugu, fallowing followed after the land was cultivated continuously for about three to four years which was an integral part of the farming system. The authors report that as at 2012 the company had 1200 out-growers, cultivating 1200 acres of mangoes (Behrman et al., 2014) and the company's nucleus farm a total of 371 acres (150 hectares)(Daley et al., 2013). Under the pressure of ITFC's operations there will be a likely shift from extensive to intensive systems of land in its operational areas owing to the conversion of fallow fields to mango fields. For such systems, Boserup concludes that, cultivators will change from bush fallow to short-fallow systems or annual cropping and many short-fallow cultivators will change to systems of annual cropping with or without irrigation.

Decrease in fallow land can lead to land being cropped more frequently than before. Continuous cropping can lead to decreasing yields as a result of gradual loss of soil fertility. The farmer is compelled to invest in fertilizers to improve soil fertility and consequently his yield. In the project areas farmers were compelled to adopt intercropping practices thus planting two crops, a cereal such as maize is planted first and then followed by rice and groundnut and cowpea. This is in line with Boserups scenario of focusing on the frequency of cropping. She explains that changes in agricultural methods such as a shift from fallow to continuous cropping among others are

closely related to soil fertility instead of regarding it as a gift of nature and this leads to agricultural intensification.

Tsikata & Yaro (2014) explain clearly that, the agrarian crop production system in the Northern region is based on existing traditional land tenure system and thus access to land for smallholder farming has mainly been through settlements, inheritance and gifts. Land however is increasingly becoming commoditized in areas such as Savelugu through leases, share-cropping, contract farming (Tsikata & Yaro, 2014) and foreigners can now claim ownership to lands. Boserup, described the gradual transformation of land tenure during the process of intensification, moving from generalized rights of cultivation and grazing for all members of a clan or family to permanent attachments to particular pieces of land to private property, with property rights becoming more defined (Behrman et al., 2014). ITFC acquired the land through consultation and negotiation with the community-level sub chiefs, the divisional chief and the paramount chief and secured a 99 year lease when all the necessary procedures were satisfied (Daley et al., 2013). This tells how increasingly vulnerable customary tenure is when the value of land rises. Responding to these tenure changes has led an increasing number of wealthy urbanites investing in land for both speculative reasons and for income generation through farming, contributing to the rising land constraints (Jayne, Chamberlin, & Headey, 2014). Buserup also speculate in areas of agricultural intensification, crop land will be lost to urbanization and industrialization raising the demand for agricultural land. An intensified land scarcity will lead to rural-rural migration to other rural areas where land will still be available or rural urban-migration for urban non-farm jobs all of which are likely responses (Jayne et al., 2014). With the district presenting a unique age demographic in which 51.2% of the

population are between 15-64 years (working age)(Ghana Statistical Service, 2014), much of these responses are already underway.

In addition to her work on agricultural intensification, another major contribution of Boserup was her 1970 book *Woman's Role in Economic Development*, where she drew explicit attention to the gendered division of labor in both "traditional" and "modern" agricultural systems and to the fact that for better or worse men and women experience the transition to modernity in different ways(Behrman et al., 2014). She was one of the first to challenge the notion that women made little or no economic contribution at the household or national levels. In disputing this notion, she showed how women's paid and unpaid labor positively contributed to household income and national economic growth and advocated the need to document and understand women's time use and labor burdens, including the amount of time spent on domestic tasks such as cooking, childcare and the collection of water, fuel and fodder. Boserup opines that, there are different but important ways in which men and women contribute to economic development and therefore development processes were likely to affect men and women differently (Behrman et al., 2014).

There is no reason why these arguments advanced by Boserup should be less true in considering the gender implications of large-scale land acquisitions. The foregoing suggests that, owing to the fact that women and men have different responsibilities, rights, and opportunities they will be affected differently by changes in labor opportunities and tenurial regimes, especially for land transfer to investors (Behrman et al., 2014). Based on Boserups analysis it is only fair to include gender perspectives in discussions and debates around large-scale land deals.

The economy of Savelugu is mostly agrarian, with agriculture as the main livelihood activity of the majority of the population done on subsistence basis (Ghana Statistical Service, 2014).Since customary land tenure system is what is referred to, access to land is highly gendered. Women gain access to land and other productive resources only through her husband or other male relatives. This has contributed to women routinely having smaller and less fertile fields resulting in challenges with productivity and livelihood outcomes (Tsikata & Yaro, 2011). Agriculture in much of the region is largely subsistence and as such fallow lands and common resources such as water, fuel, rocks, clay vegetables, fruits, medicinal plants and meat (Tsikata & Yaro, 2011, 2014) for both domestic and commercial purposes are very critical supplements to livelihoods (Tsikata & Yaro, 2011, 2014) of particularly women, who are the most disadvantaged members of the community. As revealed by (Tsikata & Yaro, 2014) ITFC acquired land with some existing cultivable lands inclusive. This included the land of some twenty-three farmers and their families. The men moved to other pieces of land they had but had not been using before the project or borrow land from family and friends. At worse, for the displaced farmers who did not have such land were now farming lesser acreage of land than they previously did. Unfortunately, same could not be told for women. Tsikata & Yaro (2014) recounts that, the land losses suffered by male farmers were passed on to wives who had been using their husbands' fallow lands before the project. Some women now had lesser acreage of land to farm, while others had lost their land altogether and had given up altogether on own-account farming. The common resources, shea nut, dawa dawa and fruit trees, bushes for fuel wood and charcoal burning which provide a critical source of food and fuel which are consumed and sold to meet household expenses were

destroyed in the land acquired by ITFC to make way for the mango plantation. Meanwhile this dry season economic activity is the main source of survival for women and their household. Men also suffered decline and/or losses in wood and thatch for construction and game (Tsikata & Yaro, 2014). Being unable to live without these resources necessitates long distance travel into territory of neighboring villages in order to gain access to alternative sources of shea nut and *dawadawa* in a situation of growing scarcity and competition sometimes involving investments in transport and purchase beyond the poor's reach. It also leads to loss of entitlements, potential conflicts and loss of convenience in the growing situation of scarcity and competition, an important traditional attribute of livelihoods (Tsikata & Yaro, 2011, 2014) threatening for food security. Tsikata & Yaro, 2014 concludes that, while the commons are disappearing so are people also disappearing into urban areas with better resources to offer, deepening the depression of the local economy.

Using Boserup's lens to critically look at ITFC's land acquisition provides the means to examine the implications of large-scale land acquisition on customary land tenure systems, gender and sustainable rural development. Given the rapid pace and exogenous nature of these land deals, which differs from what Boserup proffered, it is important to find out how rural populations are shaken, coping and benefiting from this transition which may have to do more with the company's own interest than their stated and good intentioned goals.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter describes the methodology of this study. Specifically, it describes and provides a narration of how the study was conducted. It sets out the research design of the study, study area and methods used for collecting data for the study, the strategies used to analyze the data, the presentation plan and finally a presentation of the theoretical framework. The purpose of the chapter is to provide solid methodological grounding for the findings of the study discussed in the next chapter, as well clear scientific pathway for replication of the study by peer researchers.

3.2 Study Area

The study is carried out in the Savelugu Municipal within the Northern region of Ghana. The 2010 population and housing census reveals that the Municipal has a total land area of about 2022.6 sq.km with a population density of 68.9 persons per sq.km.(Ghana Statistical Service, 2014). The Municipality is located in the Savannah woodland and receives annual rainfall of 600mm which is considered enough for a single farming season. The vast arable land supports the cultivation of food crops such as rice, maize, groundnuts, yam, cassava, cowpea and sorghum and also large-scale livestock farming. Economic trees of relevance such as dawadawa and shea and are found in quantities that make them a significant livelihood resource particularly for women (Tsikata & Yaro, 2011a). These trees are an important source of income and also provides condiments for food (Ghana Statistical Service, 2014).

Other areas of similar nature in the region could have been studied, but the selection of Savelugu Municipality is due to the following reasons; the existence of ITFC within the Municipal operating with a business model of interest, ITFC operating under a patriarchal system where customary land tenure system is referred to with women having limited access to land and the existence of common resources such as dawadawa and shea found in quantities that make them a significant livelihood resource for especially women.

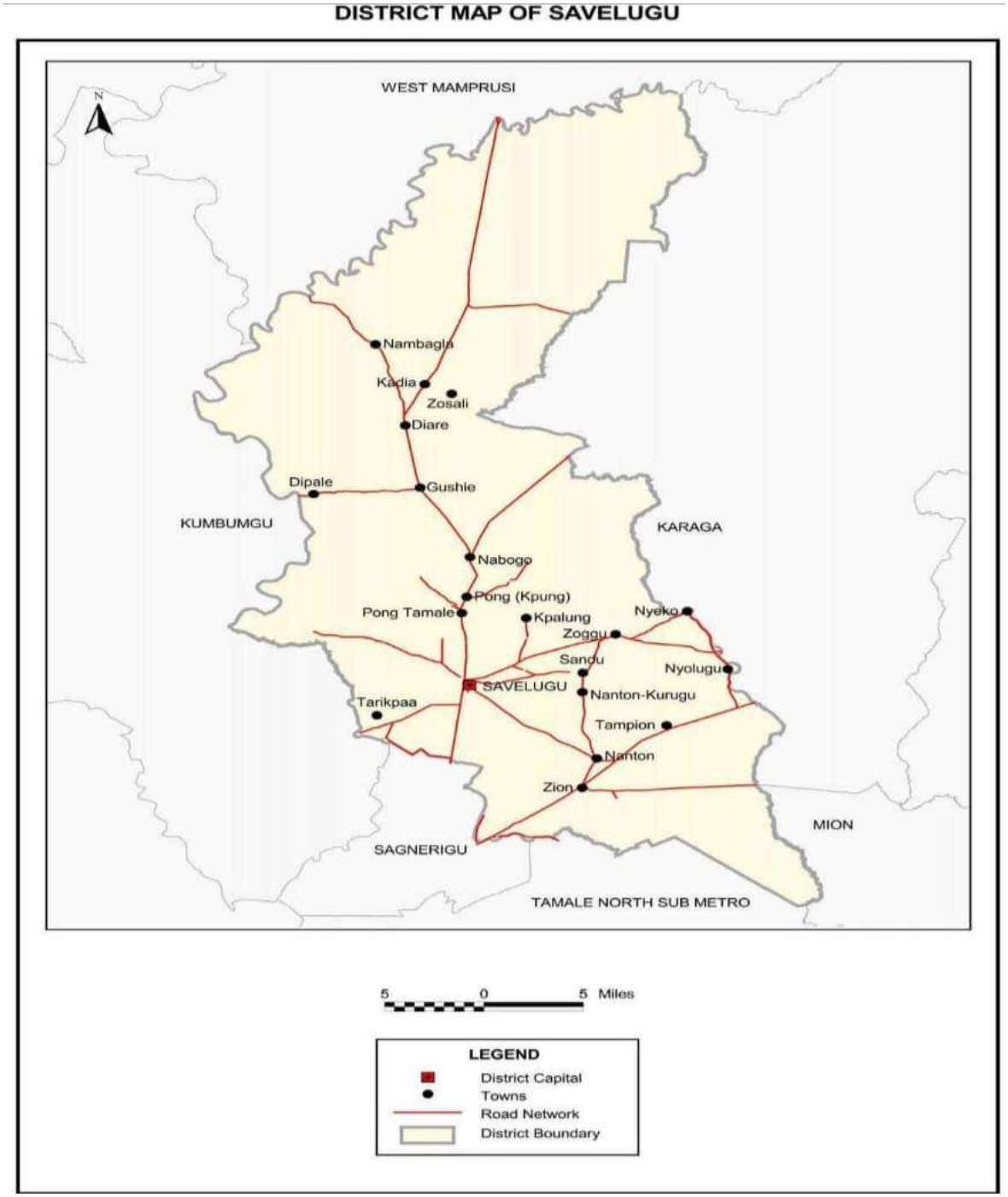

Figure 1: Map of Savelugu

Source: Ghana Statistical Service, GSS

3.3 Research Design

The study used the case study design, to investigate the implications of large-scale land acquisitions for Sustainable Development Goal five (SDG 5)- achieving gender equality in Ghana using the Integrated Tamale Fruit Company (ITFC) as the Case of large-scale land acquisition. The approach is best suited to answer the specific questions outlined in this study. Issues of land, gender and food security unfolding in tandem the phenomenon of large-scale land acquisition in real life context is difficult to study. Yin (2006) explains that, compared to other research designs, the strength of the case study design is its ability to examine in-depth a "case" within its "real life" context (Yin, 2006). In order for the researcher to make logical description of the issues under study, multiple sources of evidence such as interviews and questionnaire were relied on even within the limited research time frame.

3.4 Sampling

Two Non-probability sampling techniques was employed; purposive sampling and snowball sampling to select respondents for the study, the study area, key informants for the in-depth interviews and OMOA members to constitute the focus group discussions. The methods used were the most useful and convenient for the researcher in the case of this research.

3.4.1 Purposive Sampling

Purposive sampling was used as a non-probability sampling method to select Savelugu Municipal as the study area since the Municipality serves as host to ITFC, a company

investing in large-scale mango farming and thus makes it very peculiar to investigate women's access to land and their food security in the area. Respondents selected purposively for key informant interviews included, a retired manager of ITFC and the current manager of ITFC. Also, a total of 60 OMOA members constituted 6 separate FGDs, each group comprised of 10 (male and female) members who were purposively selected. The selection of the study communities was also done to include six of ITFC's operational communities; Nabogu, Dipale, Nakpanzo, Gushie, Bunglung and Nyoglo within the Municipal for purposes of achieving representativeness of the studied population.

3.4.2 Snowball Sampling

A total of 185 individuals (respondents) were selected from the 6 study communities using Snowball sampling. This was done at various stages. The researchers had some criteria to include respondents for the study. The selection criteria included women and men with different marital status (married, divorced, widowed, unmarried) who at the same time was an ITFC out-grower or had any household member being an outgrower and willingness to participate after being read the consent form. The respondents were selected in stages. In each community, the researchers got in touch with four people and asked of participants who met the criteria listed above. If the first contacts qualified, they were interviewed and were asked to give the names of other potential respondents. If they did not qualify, they referred researchers to potential respondents who also referred researchers to other potential respondents after being interviewed. The chain continued until the researchers achieved the desired sample size in all 6 communities.

3.4.3 Sampling Frame

According to the statistical information obtained from the Northern Regional office of the Ghana Statistical Service, the six communities have a total population of 8343. As seen in Table 3.2, this constituted the sampling frame for the study from which the sample size of 185 individuals was selected from.

Table 3.1 Sample Size Distribution among Study Communities

Community	Total population	% of population	Proportion of sample per community
Nabogu	1677	1677/8343*100 =20.1	20.1/100*185 = **37**
Dipale	1936	1936/8343*100 =23.2	23.2/100*185 = **43**
Nakpanzo	1161	1161/8343*100 =13.9	13.9/100*185 = **26**
Gushie	1530	1530/8343*100 =18.3	18.3/100*185 = **34**
Bunglung	1261	1261/8343*100 =15.1	15.1/100*185 = **28**
Nyoglo	778	778/8343*100 = 9.3	9.3/100*185 = **17**
Total	8343	100	185

Source, Field Survey; 2018

3.4.4 Sample Size

Using Yamane (1976) formula for sample size determination $\boldsymbol{n} = \frac{\boldsymbol{N}}{\mathbf{1}+\boldsymbol{N}(\boldsymbol{e})\mathbf{2}^{-}}$ using a 95% confidence level and 5% error margin. Where **n** is the sample size, **N** the population size, **e** the tolerance level (margin of error), a sample size of 190 respondents was obtained. However, due to time constraints the sample size was adjusted to 185 using the finite

population correction formula: $\boldsymbol{n} = \frac{\boldsymbol{n}}{\mathbf{1}+\frac{(\boldsymbol{n}-\mathbf{1})}{\boldsymbol{N}}}$ where **n** is the sample size and **N** the population size (Isreal, 2003).

3.5 Sources of Data Collection

Two sets of data were collected to answer the research questions and meet its objectives. Both qualitative and quantitative data were collected using qualitative and quantitative strategies respectfully. Primary data is data observed or collected from first-hand experience. Interview guides, one for key informants and another for focus groups (see appendix 1.2 and 1.3 attached) were used to collect Qualitative Primary data using methods such as key informant interviews and focus group discussions from the following respondents respectively: management of ITFC and outgrowers.

Quantitative data were also collected from a sample of 185 respondents using pre-coded semi structured questionnaire (see appendix 1.1 attached)

Secondary data is data that have been already collected by readily available sources apart from primary sources. Secondary data was used to gain initial understanding to the research problem, the scope of the study and the appropriate methodology for the study. This gave the researcher a frame of mind as to which direction to go in order to meet the requirement of addressing the problem. For this study secondary data was sourced from journals, articles, books and reports to situate the study within the body of knowledge on the subject area. The internet was of great help for the sourcing of secondary information for this research.

3.6 Methods of Data Collection

The study will employ a mixed method of data collection. The data collection will involve gathering both quantitative (numeric) data using questionnaire as well as qualitative (text) data using interviews and focus group discussions so that the final database represents both quantitative and qualitative information. The decision to use a mixed method for this study stems from researchers that point out that the mixed method is important for collecting diverse (numeric and text) data and best provides understanding of the research problem. Creswell (2009) explains that, recognizing that all methods have limitations, biases inherent in any single method can neutralize the biases of other methods thereby triangulating data sources. A broad survey will be conducted on the sample population using questionnaire in order to generalize results to the population and in-depth interviews with key informants and focus group discussions conducted to collect detailed views of participants.

3.6.1 Key Informant Interviews

By means of a thoroughly composed interview guide, the researcher efficiently collected data from two respondents who were considered well informed and knowledgeable individuals and well experienced about the issues in the topic under study by cross-examining them in separate interviews. The two key informants were a past manager and present manager of ITFC. During the interviews, permission was granted to take notes and permission was further given by the past manager to record his interview which was later transcribed verbatim to aid in analysis. This method was used to gather in-depth views of the management of ITFC on the concept of land, land ownership, access and

control by men and women, land acquisition procedure, business model of ITFC and the gender differentials in operational outcomes.

3.6.2 Questionnaire

A self-administered questionnaire was conducted on the field to male and female farmers. A mixture of closed and opened ended questions constituted the questionnaire. The objective of the questionnaire was to reveal common trends within the research communities relating to ITFC's mango farming and its implication on access to land, livelihoods and food security and how customary practices affect or promote gender relations with regards to the Dagbon land tenure system. The questionnaire was divided into five sections A-E with several issues central to the study raised to reflect the research objectives in forms such as: the extent to which the respondent considered the customary land tenure system as a whole and the specific problem of women access to land as well as their views on large-scale commercial agriculture and its implication on women access to land and their food security. The sections covered questions on: I. Socio- demographic information of respondents, II. Customary land tenure and women access to land, III. Large-scale farming and women access to land and finally IV. Measurement of food security. Although pre-coded answers were provided for some questions explanation was sought from respondents to elaborate more on answers when required and jotted down. The questionnaire was pre-tested and the necessary corrections made before the actual survey was conducted. A total of 185 questionnaires were administered as presented in Table 3.1 below.

Table 3.2: Questionnaires Administered and FGD's per Community

Community	Questionnaires Administered	No. of Participants
Nabogu	37	10 (Male = 7 Female = 3)
Dipale	43	10 (Male = 9 Female = 1)
Napkanzo	26	10 (Male = 8 Female = 2)
Gushie	34	10 (Male = 8 Female = 2)
Bunglung	28	10 (Male = 9 Female =1)
Nyoglo	17	10 (Male =10 Female = 0)
Total	185	60 (Male = 51 Female = 9)

Source, Field Survey; 2018

3.6.3 Focus group discussion

As presented in Table 2.1 above, six (6) focus group discussions were held, one in each community, constituting male and female Organic Mango Outgrower Association Members (OMOA) following the administration of questionnaires to farmers. Using a discussion guide comprising issues of concern and the research objectives to guide the discussion, cross-cutting topics discussed included; the opportunities and constraints of the outgrower model, women's access to land and its resources, the challenges and benefits of ITFC's land acquisition and investments. During the focus group discussions, the researchers sought permission from respondents to take notes and also to record conversations. This was later transcribed to aid in analysis and to ensure that discussions were accurately captured.

3.7 Measuring Food Security

Despite the numerous information developed during the last decade on food security, its operationalization still presents many challenges. As a result there is no standard method to determine food security, since different circumstances may call for different methods (Migotto et al., 2005; Owino, Wesonga, & Nabugoomu, 2014). However, as stated by Owino et al. (2014), the ability to accurately measure the extent or magnitude and severity of food insecurity makes it possible to come up with more realistic, adequate, and robust ways of solving the problem.

The U.S. Department of Agriculture (USDA), in their guide book revised in 2000, details self-assessment indicators developed to assess household food security based on a score derived from 18 survey questions to capture the various combinations of food conditions, experiences and behaviors. Responses to individual questions become the basis for assigning a scale value for determining the food security status of a household, this is referred to as the food security scale and it is expressed by numerical values ranging from 0-10 (Bickel & Cook, 2000). Four food security status level categories have been identified by the authors; **food secure, food insecure without hunger, food insecure with hunger (moderate), food insecure with hunger (severe)** (Bickel & Cook, 2000). Also, detailed in USDA's guide book is a six-item short form of the survey module and the associated six-item food security scale developed by researchers at the National Centre for Health Statistics in collaboration with Abt Associates Inc. The authors advice that, if respondent burden permits, use of the 18-item U.S. Household Food Security Survey Module or the 10-item U.S. Adult Food Security Survey Module is recommended. However, in surveys that cannot implement one of those measures, the

six-item module may provide an acceptable substitute. It has been shown to identify food-insecure households and households with very low food security with reasonably high specificity and sensitivity and minimal bias compared with the 18-item measure. It does not, however, directly ask about children's food security, and does not measure the most severe range of adult food insecurity, in which children's food intake is likely to be reduced (Bickel & Cook, 2000). For determining the food security status of respondents of this study, the six-item short form of the survey module and the associated six-item food security scale was used.

Using the six-item short form of the survey module and the associated six-item food security scale, responses of "**often**" or "**sometimes**" on questions 80 and 81, and "**yes**" on 82, 84, and 85 are coded as affirmative (**Yes**). Responses of "**almost every month**" and "s**ome months but not every month**" on 83 are coded as affirmative (Yes). The sum of affirmative responses to the six questions in the module is the household's raw score on the scale. Food security status is assigned as follows:

Raw score **0-1—High or marginal food security** (raw score 1 may be considered marginal food security, but a large proportion of households that would be measured as having marginal food security using the household or adult scale will have raw score zero on the six-item scale), raw score **2-4—Low food security**, raw score **5-6—Very low food security**. For some reporting purposes, the food security status of households with raw score **0-1 is described as food secure** and the two categories "**low food security**" and "**very low food security**" in combination are referred to as **food insecure** (Bickel & Cook, 2000).

3.8 Data Analysis and Presentation

The process of data analysis involves structuring and bringing logical order to the vast volume of data collected. Both quantitative and qualitative method of data analysis was used for this research. The data processing and analyses were guided by specific research objectives, research questions and the theoretical framework of the study.

To analyze quantitative data, responses from interviews obtained from men and women farmers is analyzed using SPSS 23.0 software package for descriptive statistics and frequency distribution tables, percentages, cross-tabulation and Wilcoxon signed rank test. This enabled the researcher obtain quantitative information which is presented in tables and figures, analyzed in Table 3.3. The Wilcoxon signed rank test was used to establish the relationship between women access to land and their food security status while also determining the level of the relationship. This was achieved by comparing the female respondents farm sizes and their food security status to that of male respondents' farm sizes and their food security status. The aim was to detect differences between men and women access to land and how that influenced their food security status by calculating the differences between their ranks.

To support the quantitative results and to get in-depth information which was difficult to quantify, information got from key informants and focus group discussions, were analyzed qualitatively. The data was first transcribed verbatim from the tape recordings onto a computer. Then analyzed using a coding process based on specific themes. According to (Kawulich, n.d.) coding is an action that involves organizing and reorganizing data into categories that enables the researcher to identify relationships between and among categories. She further explains that, patterns, themes and

relationships between themes are then identified. The themes were subjected to categorization, interpretation and explanation based on major variables and concepts in a suitable form. This is then followed by verifying the interpretations through triangulation. Triangulation is the use of at least three different pieces of data (data collection method or sources) from three different points of view as Miles and Huberman (1994) suggests as one of the means of data analysis. Direct quotations and catchy phrases from respondents deemed necessary were included to represent diverse views and to emphasize perspectives so as to enhance understanding of the implication of large-scale commercial agriculture and its related outcomes.

Table 3.3: Data Collection Tools, Research Objectives, Processes of Analysis and Presentation

SN	Research Objectives	Data Collection Tools	Data Analysis and Presentation
1.	To find out the relationship between access to land and the food security of rural women in Savelugu Municipal	• Questionnaire • Key informant • Interviews • Focus group discussion	• Descriptive statistics (frequencies, and percentages) • Tables and figures • Direct quotations • Wilcoxin signed rank test
2.	To find out the effects of the mango out-grower scheme of ITFC on rural women access to	• Questionnaire • Key informant	• Direct quotations

	land and their food security in Savelugu Municipal.	• Interviews • Focus group discussion	• Catchy phrases
3.	To find out the opportunities that large-scale commercial agriculture offers to rural women to improve their food security in Savelugu Municipal	• Questionnaire • Key informant Interviews • Focus group discussion	• Direct quotations, narrations

CHAPTER FOUR

RESULTS AND DISCUSSION

4.1 Introduction

This chapter includes findings from the analysis made from the survey, focus group discussions and key informant interviews. The chapter starts with description of the demographic characteristics of respondents. Attributes such as age, gender, marital status, level of education, household size, farm size among others. These characteristics give a description of respondents and how their personal characteristics influence key parameters of the research. This was done using frequency and percentage distributions and cross tabulations.

This is followed by the presentation of results, interpretation and discussion based on the study objectives. This is presented qualitatively using narrations and direct quotations from study respondents. Where necessary aids such as tables and graphs are used to give a pictorial representation of the data presented. Data collected were also analyzed on SPSS 23.0 (The Statistical Package for the Social Sciences) with Wilcoxon Signed Ranks Test. Wilcoxon Signed Rank Test is used to test the significance of the difference in scores obtained from female respondents' farm sizes and their food security status and comparing it to male respondents' farm sizes and their food security status. In the present research, the significance of the difference between score averages were tested at 0.001 significance level. The perceptions of respondent about the opportunities ITFC offers to rural women are represented and discussed under key themes related to the objectives/questions of the study.

As discussed in the methodology chapter (chapter 3), the findings and analysis in this chapter are based on quantitative and qualitative data collected through plural methods. Quantitative data were collected from a sample of 185 individuals by administering a survey questionnaire through a survey, 2 institutional respondents (key-informants) through in-depth interviews and also 60 outgrowers constituting 6 separate focus group discussions. The analysis offered in this chapter are therefore based on the data collected from the respondents although focus is much more centered on the key findings that are important in the understanding of women access to land and their food security in relation to large-scale commercial agriculture. SPSS software version 23.0 and Excel statistical package were used to present the analysis. Analysis and findings are discussed in relation to the context provided by the literature so as to make inferences and validations. This is important because it enables the comparisons of the results of the study to similar studies on the subject of women access to land and their food security and also large-scale commercial agriculture.

4.2 Demographic Characteristics of Respondents

This section presents demographic characteristics of the survey participants. Attributes such as age, gender, marital status, level of education, household size, farm size among others are described within the context of the study. These characteristics give a description of respondents and how their personal and household characteristics influence key parameters of the research. This part is presented using narrative explanations and accompanied by tables and charts.

4.2.1 Age of Respondents

The age distribution of the respondents is an expansive one, ranging from 19 to 91. Table 4.1 shows a greater portion of the respondents were within the youthful age bracket. The majority of respondents were within the category of 35-44 representing 30.3% of respondents. This was followed by the age categories of 45-54 and 25-34 representing 23.2% and 22.2% respectively. Respondents who were over 55 years also represented 22.2% of total respondents and finally the age category (18-24) with the least number of respondents represented 2.2% of total respondents. Different age categories (old and young) may experience the effects of large-scale farming differently therefore the need to include a broader age range to make the study more inclusive. It is clear from the descriptive survey in Table 4.1 that, the majority of the respondents (75.7%) belong to the middle-aged category often referred to as the productive working age group. This attribute implies that, a greater number of people in the area are involved in working and contributing to production. However, the female respondents constituted the majority (38.3%) working age group while 37.1% was recorded for male respondents under the same category. This supports the stated fact by Mahoi, 2015 that women make up a large portion of the economically active population engaged in agriculture, both as farmers and as farm workers and play a crucial role in ensuring household food security. Ghana Statistical Service (2014) in its Analytical Report of the District, attribute the low percentage for male respondents to mortality and also migration.

Table 4.1 Age of respondents

Age category	Frequency	Percentage(%)
18-24	4	2.2
25-34	41	22.2
35-44	56	30.3
45-54	43	23.2
over 55	41	22.2
Total	185	100

Source: Field survey, 2018

4.2.2 Gender and marital status of respondent

In the Dagbon customary land tenure system of the study area, marital status is one of the key determinants of granting women access to land. Women in married unions are more likely to have access to land for cultivating and gathering common resources from their matrimonial homes than single, divorced or widowed women (Kuusaana, Kidido, & Halidu-Adam , 2013). Out of the 84.7% of respondents that reported to be married, 38.3% of that number were female. Women are considered less favorable heirs to especially economic resources such as land and so divorced, widowed and single women are less likely to have access to land as compared to their married counterparts. A total of 9.6% of widowed respondents were recorded out of which 9.1% were women. Also, recorded were single and divorced respondents representing 1% and 4.2% respectively. Despite marriage being a key determinant for women access to land, many variations still exist. For instance, all respondents agreed that, in the case of polygamy, the first wife has

the tendency to enjoy more land access than the junior wives because she is responsible for much of the households provisioning needs in order to show seniority.

Table 4.2 Cross tabulation of the Gender and Marital status of the respondent

		Married	Single	Divorced	Widowed	Total
Gender of respondent	Male	86 (46.4%)	7(3.7%)	1(0.5%)	1(0.5%)	95(51.4%)
	Female	71(38.3%)	1(0.5%)	1(0.5%)	17(9.1%)	90(48.6%)
Total		157(84.7%)	8(4.2%)	2(1%)	18(9.6%)	185(100%)

Source: Field survey, 2018

4.2.3 Gender and Educational level of respondents

The results of the study in Table 4.3 revealed a low attainment of education by respondents. Majority (71.8%) of respondents have no formal education with the females recording a rather low (41.6%) as compared to the males (30.2%). 20% was recorded for respondents who have had basic education with the females recording another low of 4.8% of the total. The study also recorded 5.4% of respondents having secondary education with women constituting 1.6% of the total while 2.1% of respondents having tertiary education with no female respondent recorded for this category. This implies that, more females than males are likely to have no formal education. While males are likely to have basic education and continue to the tertiary level although with less encouraging numbers, women are less likely to have basic education and those who do are less likely to proceed to the secondary or tertiary level. Human capital which formal education

provides to an individual is needed for people to achieve positive outcomes. Thus, skills, education and knowledge development enable people to follow different livelihood strategies and achieve their livelihood objectives. The lower levels of education of female respondents means that they have limited means of finding good income earning opportunities and remain entrenched in poverty thereby increasing their risk of food insecurity (WFP, 2012).

Table 4.3 Cross tabulation of Gender and Educational level of respondents

		No formal education	Basic	Secondary	Tertiary	Other	Total
Gender of respondent	Male	56(30.2%)	28(15.1%)	7(3.7%)	4(2.1%)	0(0%)	95(51.4%)
	Female	77(41.6%)	9(4.8%)	3(1.6%)	0(0%)	1(0.5%)	90(48.6%)
Total		133(71.8%)	37(20%)	10(5.4%)	4(2.1%)	1(0.5%)	185(100%)

Source: Field survey, 2018

4.2.4 Gender of Head of Household

Aside income, education and household size, one of the main determinants of food security is the sex of the household head (Ndakaza et al., 2016). The study recorded 68 household heads from the survey. Out of this number 85.2% were male and 14.7% were female, which reflects the district data of high male household heads than female household heads. This implies that more men are likely to be household heads than

women. The WFP (2012) food security and vulnerability analysis of the Northern region reports that, female headed households are more likely to have inadequate food consumption and be poor than male headed households. They attribute this to the lack of access to large farms by women which restricts their ability to feed their households from their own production (WFP, 2012). Whereas male headed households are more likely to have adequate food consumption because they have access to larger tracts of land.

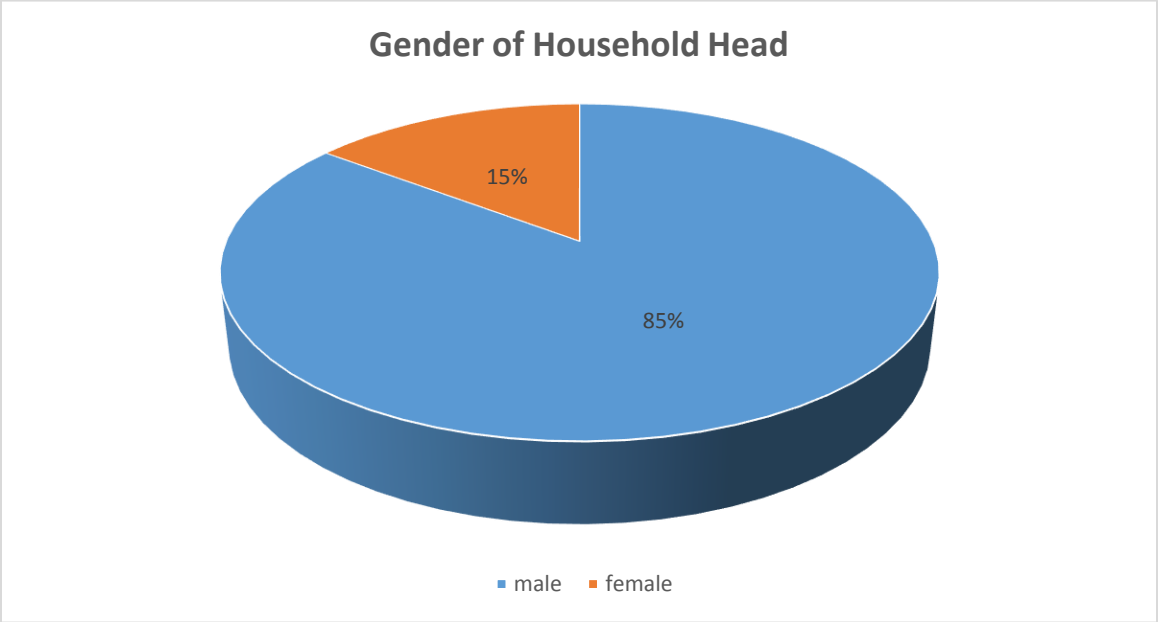

Figure 4.1 Gender of Head of Household

Source: Field survey,2018

4.2.5 Respondents Household Size

Table 4.3 presents statistics on household size of respondents. The largest households have membership of between 10 and 47 people and constitute 68.6% of the households. This was followed by households with membership of between 7-9 (25.4%), 4-6 (4.3%) and then 1-3 (1.6%). Although the average household size was approximately 3.6 representing half of the districts average, households had generally larger membership, a situation that could be attributed to polygyny and external family settlement

arrangements as against small farm land sizes recorded in Table 4.5. Household size for this study is represented by the sum of members residing in a home together and eating from the same pot at the time of the research. Having a large household size can could mean more mouths to feed and also more people to spend money on in terms of education and healthcare thus putting pressure on household resources and it could also mean more farm hands for increased household food production and diversified income sources from members.

Table 4.4 Household Size of Respondents

HH size	Frequency	Percentage(%)
1-3	3	1.6
4-6	8	4.3
7-9	47	25.4
10 and above	127	68.6
Total	185	100

Source: Field survey,2018

4.2.6 Residential Status and Farm size of Respondents

Two residential types were recorded in the survey; native and migrants. Although the study recorded farm sizes between 5 -25 acres representing 44.4% and 42% for natives and migrants respectively, majority of respondents were recorded to have farm sizes in the category of 1-4 representing 55.4% for natives and 57.8% for migrants. This implies that more than half of the respondents had small farm sizes and the situation could be worse for migrants and other minority groups such as women. Having small farm sizes

can have implications on choice of crops cultivated, gender dynamics and relations and also household food security.

Table 4.5 Cross tabulation of Residential Status and Farm Size Distribution of Respondents

		Farm size distribution						
		1-4	5-8	9-12	13-16	17-20	21 and above	Total
Residential status of respondent	Native	92(55.4%)	36(21.7%)	23(13.7%)	8(4.8%)	5(3%)	2(1.2%)	166(89.7%)
	Migrant	11(57.8%)	3(15.8%)	3(15.8%)	0	1(5.2)	1(5.2%)	19(10.2%)

Source: Field Survey,2018

4.2.7 Gender and Farm Size Distribution of Respondents

Literature has revealed that the Northern region, where the Savelugu Municipality is located, has a greater gender disparity in land access in Ghana(Daley et al., 2013). This is in tandem with the study and Table 4.5 reveals that, female respondents had access to farm sizes between 1-4 acres representing 85.5% of total females for the study. The study also recorded 14.5% for females with farm acreage between 5-25 acres as compared to their male counterparts who recorded 72.6%. Only 27.4% of males in the survey reported

to have farm sizes between 1-4 acres. The study further revealed that, men farms are on average over 3 times larger than women's (2.9 acres for women as compared to 8.5 acres for men), which means that, not only do women have fewer farms but they have smaller farms too as compared to men.

Table 4.6 Cross tabulation of Gender and Farm Size Distribution of Respondents

		Farm size distribution (acres)						
		1-4	5-8	9-12	13-16	17-20	21 and above	Total
Gender of respondent	Male	26(27.4%)	30(31.5%)	23(24.2%)	7(7.4%)	6(6.3%)	3(3.2%)	95(51.4%)
	Female	77(85.5%)	9(10%)	3(3.3%)	1(1.1%)	0	0	90(48.6%)
							Total	185(100%)

Source: Field Survey,2018

4.2.8 Gender and Income Sources of Respondents

Majority of the respondents has farming as their main occupation. A distribution of major income sources of respondents captured by the study shows that, almost all (99.5%) the respondents gained their income from the sale of produce and a few (20%) gained income from the sale of animals most of whom were male farmers. 49.7% of respondents cited their income from non-farm sources such as trading, white color job, artisanship and other categories. Although non-farm income did not constitute the major income sources

for most respondents, the study reveals that more women than men are into occupational diversification such as trading, agro-processing and farm labor. However, the findings indicated that, no female respondent was recorded to have a white color job. This implies that men are more likely than women to gain formal employment and are most likely to earn higher or stable incomes. This situation can be attributed to the low level of educational advancement revealed in Table 4.3.

4.2.9 Crops Produced by Respondents

The study found maize, groundnut and rice as the major food crops cultivated by respondents but mostly on subsistence level. Although cash crops such as cotton, soybeans and mango were recorded, their cultivation was very minimal. In addition to these crops were vegetables such as tomatoes, pepper and then yam, cassava and millet. The district is located in the Savanna woodland which receives an annual rainfall which is considered enough for a single farming season. The study revealed that women mostly cultivated crops considered "women crop" such as groundnut and vegetables which tends to supplement a family's diet whereas men concentrated on the cultivation of maize, rice and cash crops which tend to have a high market value.

4.3 Relationship Between Access to Land and Food Security of Rural Women

The first objective of the study is to find out the relationship between access to land and the food security of rural women in the Savelugu Municipality. The key question was, what relationship exist between having access to land and the food security status of women. To answer this question, the study obtained information from respondents on the

various modes of accessing land by males and females in their community. The study further examined the factors that limit, favor or promote rural women access to land. The study also examines the food security status of respondents and then explores it further in relation to access to land and other key indicators of interest to the study.

4.3.1 The Importance of Land

Participants in the FGDs held across the study area spoke about the importance of land to their livelihood strategies. Both men and women espoused this view of land. The women in particular said many interesting things about the importance of land to the food security of themselves and their children. Speaking to this issue, a woman said that;

> *"Saying that it is important to us, (the land) in this community is an understatement, first, we build houses on it and live in it and we also cultivate crops on it to become food for us and our children to eat and also we rear animals too" (Female OMOA Member in a FGD at Nabogu,11th July,2018)*

Another woman in Nakpanzo agreed by saying that;

> *"As for us in the rural areas we have nothing apart from farming. So, all our lives and our children depend on our lands every day. That is where we get our food and we are able to get money from the sale of some of our crops" (Female OMOA Member in a FGD at Nakpanzo,11th July,2018*)

A male respondent in the same FGD also agreed by saying that;

> *"I think we benefit a lot from our lands. It's a shield that protects us from all sought of disgrace. No matter what the situation maybe you will at least get*

something from the land to survive" (Male OMOA Member in a FGD at Nakpanzo,11th July,2018)

To emphasize the importance of land, Dittoh (2002) reveals that land is the most important socio-cultural and economic resource in most parts of Ghana especially for the northern region where 90% of the people depend on land for their livelihood (Dittoh, 2002). The responses from the respondents without any shred of doubt show proof of the importance of land to rural women. It can be deduced from their responses that, women mainly rely on land for crop farming, harvest of common resources such as fruit trees, fuel wood and water that supports their agrarian livelihoods and also serves as a means for livestock grazing.

4.3.2: Gendered Land Ownership and Access

According to all the respondents in the FGDs, all land in Dagbon generally belongs to the paramount chief Yaa Naa the overlord of the Dagbon State. In a focus group discussion at Nyoglo a male FGD participant mentioned that;

"He owns the land and decides what to do with it. but he can't be at Yendi and oversee all his land and subjects so that is why he has chiefs in all the villages that belongs to him so that they can take care of his land for him" (Male OMOA Member in a FGD at Nyoglo,14th July,2018)

As a centralized state, the overlord of Dagbon is the Ya- Naa under who are a number of divisional chiefs, the village chiefs who are next in line and then followed by the sub chiefs in that hierarchical order. They are all tasked to manage portions of Dagbon lands assigned to them (Joseph A Yaro, 2012). Deville (2007) as seen in Sagre & Abubakari

(2013) outlines of first occupancy, community/membership, rights obtained through working as labour (for migrants especially) and continuous cultivation of a piece of land, status, age, gender among others as the factors that may lead to people having access to customary land in West Africa. The findings of the study corroborate the factors outlined by Deville (2007). A male FGD participant reported that;

> *"we all grew up to see our grandfather cultivating those fields. Then when he was no more it became my father's property and when he too was no more, you know for us Dagombas where ever you are known to cultivate for years, the land you own the chief is aware and the chief also knows that where you are farming is yours. even when it gets to a time the chief has got a need for the land, he has to call you to inform you of his intentions to use the land. we all have our boundaries; we don't get into each other fields" (Male OMOA Member in a FGD at Nyoglo,14th July,2018*)

Two other male respondents were quoted as saying;

> *"As a man when you take over your fathers' fields it is the same way you will hand it over to your children. When the boys become of age, you have to give them a portion of your land to start doing small small so that they can start their own family. I also give small small portions to my wives so that they can also do their vegetables. When you are no more than the children can take over your farm completely" (Male OMOA Member in a FGD at Gushie,13th July,2018*)
>
> *"Some men traveled from their villages to come here in search for farm labor. So after working for a while and find that they can live in this community, they ask the chief for land to build and to farm. The chief cannot refuse because he wants*

his village to grow" (Male OMOA Member in a FGD at Nakpanzo,13th July,2018)

This presupposes that, inherent biases exist and some people are granted preferences over others. However, whatever the circumstance maybe, the vulnerable population such as women and migrants are the disadvantaged (Yaro, 2016). The study therefore needed to obtain information from the respondents' perspectives on the different modes of male and female access to land and their consequences. A total of 94.1% of respondents agreed that there are different modes of accessing land by men and women in their communities. Those who disagreed were only 5.6% of total respondents. Figure 4.2 shows the different modes of accessing land and the gendered nature of it. The study revealed that, whereas men were more likely to have access to land through secure modes same could not be said for women.

The results suggest that women greatest (49.8%) mode of accessing land is based on her marital status, thus through their husbands. Unlike married women, unmarried women seldom have access to land. Followed by borrowing (25.6%) which is also done through a male relative on behalf of the woman and also through family lands gotten through fathers, brothers, sons and other male relatives. It therefore suggests that a woman's access to land is tied to her male relatives and as a result she may only enjoy secondary rights which is not secured. Also, 2.3% of respondents indicated that women had access to land through inheritance and 1 respondent each representing 0.3% indicated that women had access to land through purchase and gifts. From the survey,29.8% and 28.6% of respondents attributed men access to land through family land and inheritance respectively.

The results from the survey also reveals that, 20.2% of respondents attributed men access to land through freehold and 19% through borrowing. Also, less than 3% of the respondents responded to lease, gift and marital status as modes through which men had access to land. This suggests that, while majority of men gain access to land through secure modes women are more likely to have access to land through insecure or weak modes which have implications on their food security status. An increasing body of research points to that connection which further translates to other facets of their lives such as their household food security status, less influence over household decisions on types of crops to grow on the land, food purchasing decisions, bargaining and decision-making power and spending income on the next generation.

A growing body of evidence from a variety of settings around the world, illustrates the positive correlation between women access to land and food security (Sraboni, Malapit, Quisumbing, & Ahmed, 2014), thus showing the pivotal role women play in attaining food security. Crowley (2001) adds that, when women have access to land even small plots, their risk of improvishment is minimized and the physical wellbeing and prospects of their children is improved. However, under customary systems such as the Dagbon land tenure system, as the study reveals, women access to land through marriage, inheritance, family and borrowing are generally tied to male relations rendering women's access more tenuous. This limits women potential and can lead to food insecurity of not only the women but their households.

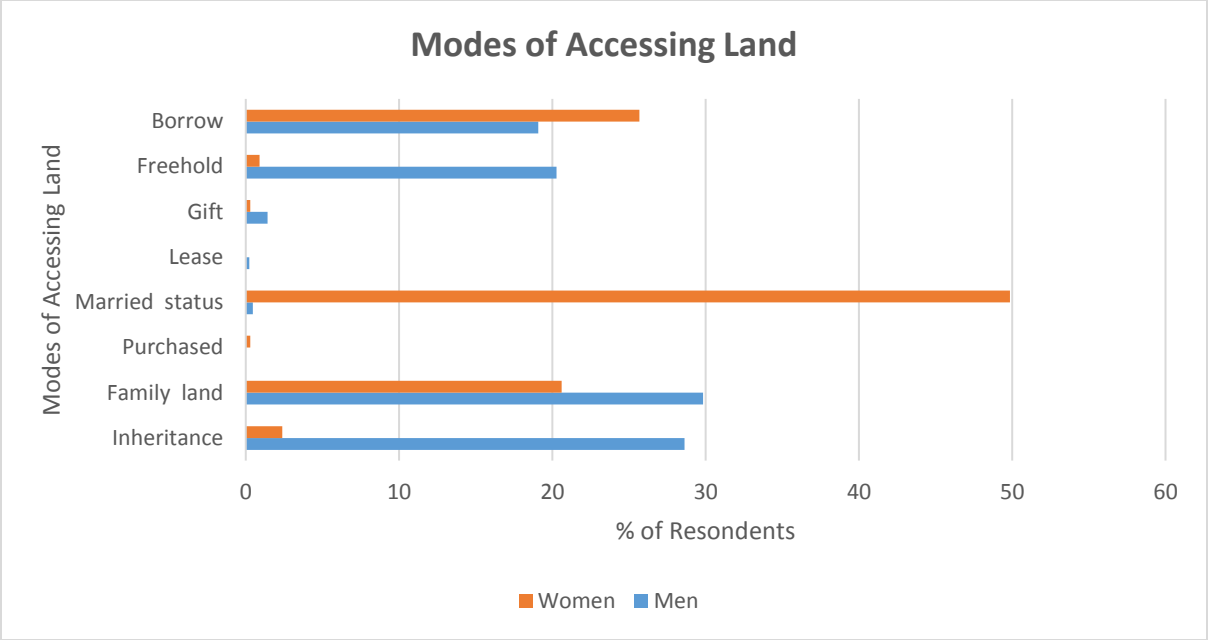

Figure 4.2 Different Modes of Accessing Land by Men and Women

Source: Field Survey,2018

4.3.2 Challenges of Access to Land by Women and Men

Respondents assessed the modes of land access available to men and to women in relation to how easy or difficult they perceived it. A higher proportion of respondents constituting 68.4% agreed that the modes available to women are not easy (43.7%) and very difficult (24.7%). This was in contrast with statistics recorded for men in which case a major proportion of 97.7% was recorded for easy (44.4%) and very easy (33.3%).

The statistics from Figure 4.3 implies that the major modes through which women access land; marital status, borrowing and family land is difficult for them and these difficulties have the potential to inhibit women access to land and consequently lead to food insecurity. Men are significantly more likely to have access to land than women because of the difficulty in women accessing land. In the midst of the difficulty, literature has

revealed that, when access is granted it is usually smaller and of poorer quality than that of men (Daley et al., 2013; Nadasen, 2018). To affirm this assertion, a male respondent in a FGD said that;

> *"I decide on the portion to give my wife. Maize is important to a Dagomba household so we sometimes give an acre or half an acre to our wives to cultivate their vegetables and then we dedicate our fields to the cultivation of maize. If the woman thinks she is capable is managing 2 or more acres then we have to borrow from someone who is not cultivating his field" (Male OMOA Member in a FGD at Dipale,13th July,2018*)

The male relative thus decides on the plot to give to the woman and this limits her decision-making power on types of crops to grow on the land, limits her decision on produce and the income or profits accrued from sale of produce. As a result of this difficulty women face in accessing land, they are more likely to use the land to satisfy their roles as household agricultural producers and household caregivers. The study revealed that women mostly cultivated crops such as groundnut and vegetables which tends to supplement a family's diet whereas men concentrated on the cultivation of maize, rice and cash crops which tend to have a high market value. A female respondent in a FGD in Gushie, in expressing her frustration said that;

> *"If your husband doesn't give you land to farm your groundnuts where will you get it? Unless you go and borrow someone else for a small portion. You can't go yourself, your husband has to go and borrow that land for you. It is difficult because you have to find a farmer who is not cultivating his plot. Some people*

agree and others don't" (Female OMOA Member in a FGD at Nabogo,11th July,2018)

Another female FGD participant explained that;

"we are many (referring to wives) so he cannot give us much of his land while the male children are also growing. So the one acre I have, I cultivate groundnut on half an acre and use the other half for maize. As for the maize we can sell it bowl by bowl on market days when we are hard up to buy groundnuts and other vegetables to prepare soup for us and our children to eat. But for the groundnut we don't sell it. It's for home consumption and we also use it for soup when we have social gatherings. Outdooring, funerals, enskinment" (Female OMOA Member in a FGD at Nyoglo,14th July,2018)

At Bunglung, a female FGD participant recounted her ordeal;

"there was a time my husband borrowed someone's land for me. The person waited until I had prepared the land ready for planting and he came and told me that he has changed his mind and that he wanted the plot back. It became a big issue and we even went to the chief to resolve it but eventually because he was an elderly man I was told to let the matter go. We have seen a lot of this happening to women in this community. Some people will never ask you again for their plots you borrowed but for others, once they have seen that you have made so much investments on the land then they will come for it" (Female OMOA Member in a FGD at Bunglung,14th July,2018)

Increased agriculture productivity and production can lead to the food security of women. Unfortunately, because of the difficulty in land access, women are less likely to optimally use the land because of the constant awareness of the risk of losing the land, thus they lack the incentives to invest in improvements of the land and are also less likely to access financial and government programs that offer credit, agricultural technology, inputs and extension services for agricultural productivity and production.

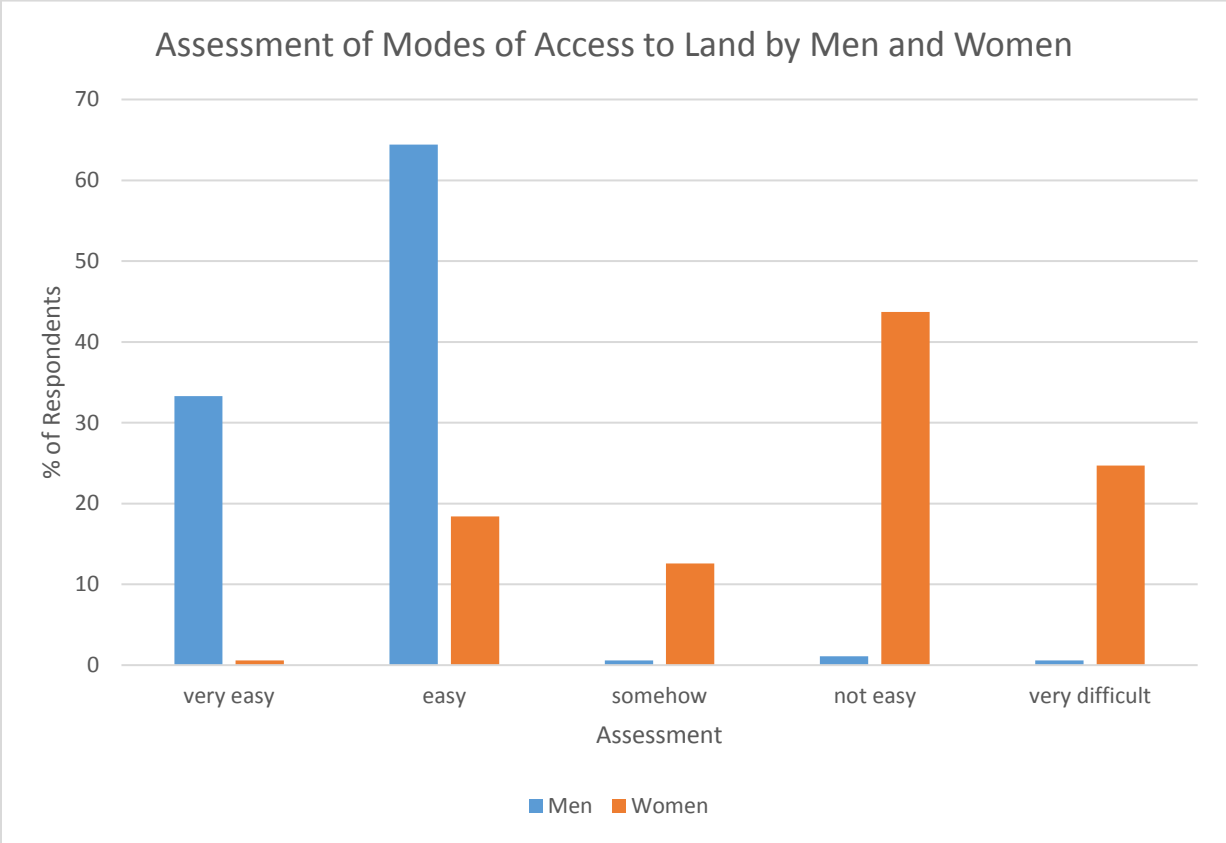

Figure 4.3 Assessment of Modes of Access to Land by Men and Women

Source: Field survey,2018

4.3.3 Land Use Rights Available to Women

It is worth noting that the mode through which an individual accesses land influences his or her use rights. The study revealed that, the use rights of women generally extends to

farming, as a greater proportion representing 36.4% of respondents agreed to this. The rights are usually granted to women by their husbands, fathers or other male relations on the basis that, they cultivate non-staples such as groundnuts, vegetables, beans and rice. Women tend to produce crops used for soup ingredients, minor meals and special diets in accordance with their traditional provisioning responsibilities. A female respondent in the FGD confirmed that;

> *"Our husbands demarcate small portions of his fields for us so that we can also be doing our small vegetables which can support the compound" (Female OMOA Member in a FGD at Dipale,13th July,2018*)

Another female respondent adds that;

> *"even if he doesn't give you a portion of his fields he will go out and borrow from his friend so that you can do your small okra and other leafy vegetables and intercrop it with your groundnut. If he goes round and doesn't get some to borrow he will allow you to plant some leafy vegetable along the edges of his farm or inside the maize" (Female OMOA Member in a FGD at Bunglung,13th July,2018*)

According to Kameri-mbote (2005) because women traditionally do not own land, their best claim is usufruct rights tied to the nature of the relationship between them and their male counterparts either as husbands, brothers, fathers, sons or other male relatives. As a result, women are usually entitled to the mere use of the land on insecure basis as such rights could be truncated at any time as it is dependent on the whims of such male benefactors.

35.5% and 26.1% of respondents also agreed that use rights extend to the gathering of wild fruits and fuel wood respectively. Traditionally, common resources such as trees, fruits, nuts, fuel wood and other commons on particular lands belong to specific holders and women of such families and households are assigned use rights. While men hold the titles to the land, women control the gathering and use of the common resources. In three separate accounts, female respondents of FGDs confirmed that;

> *"You can go to your husband's farm and pick the shea nuts. No one comes there unless his wives and his children. And everybody is aware of this and respects that. Even if the wife doesn't want it, he has other female relations whom he will ask to go and pick… Until he himself asks someone outside his household to go and pick no one can go and pick it" (Female OMOA Member in a FGD at Nyoglo,14th July,2018*)

> *"Because of the benefits of the shea tree and the dawadawa trees the men don't cut it. They leave it because they know how important it is to us… We all benefit from it and so we all protect it" (Female OMOA Member in a FGD at Dipale,13th July,2018*)

> *"The fuel wood is no longer there as it used to. But we still go and get some from the dry branches of the shea and dawadawa trees in our farms and our husbands farms. You can't go for fuel wood from the farm of a different household, the women will chase you or their husband will report you to your husband, it's an*

offence, because when you do that what do you want the other women to rely on?" (Female OMOA Member in a FGD at Bunglung,12th July,2018)

It is also observed from Table 4.7 that, 1.3% of respondents agreed that women use rights extends to building. Participants who agreed to this, attributed this use rights to widows but were also quick to add that this was a rare occurrence. Another use rights available to women was access to game which represented 0.6% of respondents. A female FGD participant confirmed this when she said that;

"sometimes you can get lucky… they are not there as they use to. They have all run into the bush but sometimes our children get rats and they bring it home for us to cook" (Female OMOA Member in a FGD at Nakpanzo,11th July,2018)

Table 4.7 Land Use Rights Available to Women

Use Rights	Frequency	Percentage (%)
Farming	170	36.4
Building	6	1.3
Picking wild fruits	166	35.5
Gathering fuel wood	122	26.1
Access to game (Hunting)	3	0.6
Total	467	100

Source: Field survey,2018

4.3.4 Barriers to Women Access to Land

Most of the respondents (85%) were of the feeling that women had limited access to land as compared to men. The few (14.9%) including women who held a contrary view argued that, a male who is the head or potential head of the family has the responsibility to farm and produce food and shelter for his household where as women, married or unmarried are expected to be fed and housed by their husbands, fathers, sons or other male relatives and therefore had no need for land other than for farming non-staple and the harvest of common resources such as the shea and dawadawa fruit and firewood. In response to the open-ended questions in the survey on whether women had limited access to land as compared to men, a male respondent disagreed by saying that;

> *"So all she has to do is to marry… her husband will definitely get her some of his fields to farm her vegetables" (Male respondent in a survey at Dipale,8th July,2018*)

A female respondent also in support of this claim said;

> *"times have changed. This is not like our parents' time. Now the men know that we can support them in the household so they always give portions of their land to their wives to also farm" (Female respondent in a survey at Nabogu,4th July,2018)*

A male respondent also in disagreement of the claim that women have limited access to land as compared to men said in the survey that;

> *"How is this possible when now the women are even racing us? They even want to farm more than us. If we don't get serious that will happen very soon" (Male respondent in a survey at Gushie,7th July,2018*)

It was discovered from the study that, women limited access to land is linked to barriers such as customs and traditions, religion, commercial land acquisition and land scarcity. Responses from respondents revealed that customs and tradition was ranked highest (33.3%) as barrier to women access to land. It is also seen in Table 4.8 that; religion is the second major barrier to women access to land representing a total of 23.4%. This was followed by commercial land acquisition 22.2% and then land scarcity 21.1%. Other respondents held contrary views. 10.6% of respondents did not consider customs and tradition as a barrier to women access to land. 27.8% and 29.8% were recorded for religion and commercial land acquisition respectively as no barriers to women access to land and also 31.8% recorded for land scarcity as no barrier.

Table 4.8 Barriers to Women Access to Land

Barriers to women access to land	Frequency(Yes)	Percentage(%)	Frequency(No)	Percentage(%)
Custom and Tradition	147	33.3	27	10.6
Religion	103	23.4	71	27.8
Commercial Land Acquisition	98	22.2	76	29.8
Land Scarcity	93	21.1	81	31.8
Total	441	100	225	100

Source: Field survey,2018

It was necessary to find out the existing modes, barriers to and difficulty in women access to land and their implications on the food security; food availability, accessibility, utilization and stability for women. The study revealed that inherent cultural and religious norms and practices coupled with commercial land acquisition (the operations of ITFC) limits women access to productive resources such as land. Women can expect to have access to at best temporary use of plots of land from their husbands or other male relations, while unmarried women seldom have access to land and widows tend to lose access to land unless they have male children. Those who are fortunate to have access are therefore relegated to smaller plots and marginal lands. For example, the study revealed that men land holding in the study areas was on average 3 times that of women. These inequalities faced by women have significant implications on their food security and consequently the food security of their households.

Landesa (2012) in its issue brief reports that, where women have direct control over assets such as land and income, it increases their decision-making power and status resulting in positive nutritional impacts for them and their families. The existence of these barriers to women access to land means that women face various forms of tenure insecurity which perhaps affect the yields of women and also limits their access to common resources. Having secure access to land and other land-based resources is pivotal to women achieving food security.

4.3.5 Food Security Status of women

The study recorded two food security statuses for the study's respondents; high food security and low food security. The results from Table 4.9 shows that, a significant proportion 54.1% of respondents reported to be highly food secure while 45.9% were under low food security status. The results further reveals that whereas men were likely to be highly food secured 58.9% same could not be said for women who were most likely to have a low food security 51.1%. This means that, men are more likely to achieve high food security than women. A growing body of evidence illustrates that, women having access to land especially a secure access can increase their agricultural productivity and production which has a strong link to them achieving food security (Nadasen, 2018). It was therefore necessary for the study to draw a relationship between women access to land and their food security in a culture of unequal gender relations.

Men have a more secured access to land and what it means is that, they have incentives to invest in improvements in the land thus, they have optimal use of the land because there is no fear of losing it. They also have more opportunities to financial services and

government programs such as extension services. This can lead to their increased agricultural production for consumption or for sale to earn income permitting the purchase of more and better-quality food. Women on the other hand have insecure access to land as revealed by the study and as a result do not have access to the same opportunities available to men. Their access is tied to their relationship to a male relative and they are at a constant risk of losing it in the case of marriage, divorce, death or separation. Because of the risk of losing the land they have access to, they lack incentives to invest in the improvements of the land, they miss opportunities or do not qualify to access credit services and government programs whose beneficiaries are usually people with secure access to land, resulting in lower agricultural production thus less food for consumption and low or no income to purchase more and better quality food leading to low food security (Ministry of Gender, 2015).

However, having access to natural resources such as the shea nut, dawadawa, fuel wood can enhance the food security of the women (Tsikata & Yaro, 2011b) . The shea and dawadawa fruit serve as food and can be consumed by the women. The processing of the shea nut to obtain the butter and the dawadawa seed into the dawadawa condiments can also be consumed as food or sold to earn income to purchase more and better quality food leading to high food security (Tsikata & Yaro, 2011b). Fuel wood is also used as source of fuel to process the shea butter and the dawadawa and can be sold by the women to earn income. An increasing body of research points out that granted women have access to plots as small as one-tenth of an acre, they are more likely to achieve food security because they usually dedicate their plots to the cultivation of vegetables that can supplement their diet therefore achieving food security (Landesa, 2012).

Table 4.9 A Cross Tabulation of the Food Security Status and the Gender of Respondents

		High food security	Percentage(%)	Low food security	Percentage(%)
Gender of respondent	Male	56	58.9	39	41.1
	Female	44	48.8	46	51.1
Total		100	54.1	85	45.9

Source: Field Survey;2018

While ITFC is widely lauded for operating a business model that provides a "win win" solution to large-scale farming; the appreciated alternative to large-scale commercial agriculture, the results from the Wilcoxon Signed Ranks Test illustrated in Table 4.10 reveals that, there is a statistically significant difference between men and women access to land and food security in the study area (Z= -6.037, p<.000). The significant levels of low food security recorded among women is therefore attributed to reduced access to land and other common resources such as economic trees, fuel wood and game. Responses from respondents' further give meaning and backing to the results from the Wilcoxon test.

Table 4.10 Results of Wilcoxon Signed Ranks Test

Test Group		N	Mean Rank	Sum of Ranks	Z	P
Food security status - Do women have limited access to land compared to men	Negative Ranks	14[a]	42.00	588.00		
	Positive Ranks	69[b]	42.00	2898.00	-6.037[b]	.000
	Ties	91[c]				
	Total	174				

a. Food security status < Do women have limited access to land compared to men

b. Food security status > Do women have limited access to land compared to men

c. Food security status = Do women have limited access to land compared to men

4.4 The Effects of the Mango Outgrower Scheme of ITFC on Women Access to Land and their Food Security

This study found that the outgrower scheme of ITFC had more negative effects on the food security of women than positive effects. Less discussed but equally deserving is the business model operated by a large-scale farming company such as ITFC. Hall & Osorio, 2014 in their report asserts that, for rural communities to achieve positive outcomes from agricultural investments, it will depend on factors such as the type and level of inclusiveness the business model offers and the extent to which social and gender equity issues are considered. This objective therefore sought to find out the effects of the Mango Outgrower Scheme of ITFC on women access to land and their food security, necessitated by the increasing number of negative impacts of agricultural investments such as displacement of small holder farmers, loss of livelihoods, heightened gender and

social inequalities, environmental degradation and the negative spillover effects for household food security (Daley et al., 2013) recorded in operational communities in the country.

According to the present manager of ITFC, under the company's outgrower scheme, farmers retain full "control" of their land while providing their own labor to prevent land alienation. The study however revealed that in practice, the terms of the contract limited farmers control over their land. Respondents revealed that, they had to cut down all trees from the farms they used for their subsistence crops to make way for the mango farming. This move the company says was a pest and disease control mechanism. This is what respondents revealed in FGDs;

> *"As for the trees we cut a lot. Our wives were not happy but there was nothing we could do. Now I regret that decision but I can't reverse it" (Male OMOA member in a FGD at Bunglung,12th July,2018)*

Another male FGD participant had this to say;

> *"We cut down uncountable numbers of the shea trees and dawadawa trees which are very important to our households. We were told we had to cut them all so we did, now we don't have mangoes neither do we have shea trees nor dawadawa" (Male OMOA member in a FGD at Bunglung,12th July,2018)*

4.4.1 Effects on Actively Cultivated Lands in the Area

The study further revealed actively cultivated lands formed the majority (75.9%) of fields converted to mango farms by outgrowers. This was followed by fallowed fields (19.3%) and then bush lands (4.8%). One FGD participant narrates in frustration;

> *it was our existing farm lands that we used for the mango trees and we left some for our own crops. It wasn't really fallow fields or bush lands that were converted to the mango farms. It was lands we were farming on and so we stopped farming there then we planted the mango trees there. So the farms are still ours just that instead of food crops we cultivate mango on it. No one's land was given to us. It was a place we were farming already (Male OMOA member in a FGD at Nyoglo,14th July,2018)*

All respondents from both the survey and FGDs affirmed that all these categories of land previously served home to common resources such as economic tress (shea and dawadawa trees), shrubs, firewood and game. Authors such as Cotula, Toulmin, & Quan (2006), Meinzen-Dick, Quisumbing, Doss, & Theis (2019) and Tsikata & Yaro (2014) have all cited in their works that, these resources which are important sources of food security whether consumed or sold, serve as an important supplement to rural livelihoods especially for women who are often tasked with the responsibility of sourcing them to complement their household provisioning needs. All the respondents in the survey and FGDs attested to have observed a contraction of commons and they attributed this to clearing them to make way for the mango farms which has a potential to deepen the

poverty and food insecurity status of households. In the words of a female respondent during the FGD at Dipale where ITFCs plantation is located;

> *"When we pick the shea nuts we can't process it to sell, only for home consumption. It's not there again. Those who are able to pick and sell have to go far into the bush even that one they don't process it. it's too small and they would rather just sell it. I'm old and I can't go far into the bush so I just pick what is on my farm" (Female OMOA member in a FGD at Dipale,12th July,2018)*

Since these resources play crucial roles in household provisioning, the study gathered from female respondents that, women are left with no option than to travel further kilometers twice as much or more, usually on day-to-day basis in other to source them because they could no longer be sourced within reasonable reach. The study reveals that at Dipale where ITFCs 160 hectares' nucleus farm is located, women suffered adversely from the loss of their husbands' farms to ITFC and the gross failure of the outgrower scheme. Aside the visible reduction in the availability of shea, dawadawa, fuel wood and game they were also faced with loss of land as their husbands converted their own cultivated fields to mango farms and either took away or reduced the size of their farms they previously allowed them access to, intensifying the inequalities women already face. In relation to this, a male FGD participant said that;

> *"so even now because the size of our farms have reduced we can't even give portions to our wives to farm and the shea nuts they used to pick too is no longer there" (Male OMOA memberin a FGD at Gushie,13th July,2018)*

Another participant in a FGD said;

> *"what can we say than that it didn't help us in anyway. We have one-one of the trees still on the farms so some of us have converted our mango farms to*

cultivating our food but some are still waiting for the company to say something" (Male OMOA member respondent in a FGD at Nakanpzo,11th July,2018)

One other participant also said;

"some of our husbands have gone back to farming food crops on it but we cannot get the shea and dawadawa that used to help us again" (Female OMOA member in a FGD at Nakanpzo,11th July,2018)

In the Northern region, the farming system is characterized by the cultivation of food crops. Large farms have previously not existed in the region (Yaro and Tsikata,2015) therefore ITFC's intention not to displace domestic food production by restricting mango farms to 1 acre per farmer was a plausible idea. However, ASEAN in their 2018 guidelines on promoting responsible investment in food agriculture and forestry stipulates that, where land is used for non-food crops or to produce food mainly for export, it can pose a challenge for local food security unless benefits in terms of boost in incomes can be used to purchase foods locally (ASEAN, 2018). From the respondents point of view however, their mango farms did not produce the expected yields enough to boost their incomes. They only lamented and some expressed regret in participating in the scheme because the incomes they earned were nothing close to what they earned from their subsistence crops and at the same time they lost their common resources. The Manager in an interview recounted the operations of the company;

ITFC's mango outgrower scheme was seen as a potential opportunity for small-holder farmers to take part in an agribusiness venture that could boost their incomes. Having a secure access to land was the basic prerequisite for becoming an outgrower. Once a group of 10 acquire a continuous plot of 10 acres thus 1 acre per farmer, the company will test it for suitability for mango production, making access to the scheme open to all and gender neutral (ITFC Manager in an interview at ITFC office in Gushie,6th June,2019)

He further stated that;

"we didn't limit the registration to only household heads. Once a person (male or female) was able to meet the basic condition of having access to one acre, he or she could become an outgrower. So in one household more than one person could register and it was acceptable" (ITFC Manager in an interview at ITFC office in Gushie,6th June,2019)

However, this did not yield the intended results as the study recorded low participation from women.

Table 4.11 Outgrower Gender Composition of Study Respondents and their Relatives

Number of Outgrowers	Male respondent		Female respondent	
	F	P (%)	F	P (%)
Respondent Outgrowers	64	67.4%	19	21.1%
Outgrowers male relatives	25	26.3%	55	61.2%
Outgrowers female relative	6	6.5%	5	5.5%

Source: Field Survey;2018

The results from the field survey revealed in Table 4.10 that, a total of 67.4% of male respondents are ITFC's outgrowers as compared to a rather low of 21.1% female outgrowers. Also, the study recorded respectively 26.3% and 61.2% for male and female respondents, whose male relatives were outgrowers and for female relatives 6.5% and 5.5% respectively, for both male and female respondents. This is a clear indication that women involvement as outgrowers is substantially lower than men with Osorio & Gallina, 2018 hinting that women made up only 12% of the total ITFC outgrower population. Respondents attributed women low participation as outgrowers to the discriminatory land tenure system and also ITFC requiring a down payment of 1 bag of maize which women could not offer. Although ITFC had unintended to exclude women from being independent outgrowers (Tsikata & Yaro, 2014), the study found out that the outgrower model had inherent exclusionary tendencies which only aggravated or perpetuated the existing socio-economic inequalities in the operational communities.

Confirming the findings from (Tsikata & Yaro, 2014), respondents agreed that their mango farms required heavy labor demands, care and attention causing a constrain in time and energy needed for their food crops. Female respondents reported that, although they were unable to participate as outgrowers, they were integrated into the schemes by their husbands as unpaid family labor with its own implications. A female and male respondent reported sadly that;

> *"I can never forget It... we used to carry a bucket of water in each hand to water all the trees, then we will collect all the leaves and gather it under the trees, it was a lot of work. I even had a miscarriage because I was pregnant at the time and the work was difficult" (Female respondent in a survey at Gushie,7th July,2018)*

> *"I promised my wife that it will make our lives better, because I couldn't imagine the yield we will get. Because of that she was even doing the work more than me because I had to also work on my maize farms" (Male OMOA member in a FGD at Bunglung, 12th July,2018)*

This put women more in a disadvantaged position as it compounded to their existing productive and reproductive responsibilities. They served as unpaid labor on both their husbands food crop farms and mango farms, their own food crop farms, while still engaged in their household provisioning and reproductive roles. Female outgrowers reported worse situations as they had to solely take care of the labor demands of their mango farms because unlike their male counterparts they had no control over family labor and women typically had limited resources to hire labor (Tsikata & Yaro, 2014).

The findings of this study on the effects of ITFC outgrower model on women access to land and their food security are consistent with Buserup's theory of agricultural intensification, gender and rural development theories, an early advocate for gender in development. The study found out that, ITFC did not give much attention to the differentiated needs, time use and labor burdens of men and women, but rather integrated them into stages of the projects cycle as one unit.

The study further revealed that, the "inclusive business model" operated by ITFC did not automatically produce gender equitable results and even led to perpetuating existing gender inequalities, poverty and food insecurity, leaving both partners as "losers" in the venture or "winners and losers". Buserup and other theorists of gender perspective of development the likes of Julia A. Behrman, Ruth Meinzen-Dick, Agnes R. Quisumbing, Yaro, and Dzodzi Tsikata therefore advocate the need for investors to be aware of the different rights, responsibilities and opportunities men and women have so as to integrate them in each cycle of the project differently in order to ensure a "win win" for all.

ITFC like many other land investments in rural areas starts operations with promises of creating rural employment opportunities for both men and women. True to their promises, ITFC employed both men and women across the different components; outgrowers, plantation, pack house and management/technical staff of its operations. However, Daley et al., 2013; Osorio & Gallina, 2018; Tsikata & Yaro, 2014 in their separate studies of the gender dimension of waged employment of ITFC (a little over ten years since its establishment] reports a gendered segmentation of employment opportunities offered by the company. The authors revealed that, much of salaried work such as zonal managers, field assistants and administrative staff which are permanent and

secured jobs and relatively highly paid are male dominated while seasonal waged work which are usually low paid and insecure jobs are typically characterized by women thus evidence of stark disparities existing between women and men in terms of employment. Twenty years after its establishment, ITFC is experiencing many technical challenges which have slowed down its business. For example, according to The Manager, the company has to source mangoes from mango farmers in Somanya in the Easthern region in order to keep processing for the market. This is clear indication that the quantity of mangoes from the company's own plantation is not enough and the initial plan of the company to have reliable source of mangoes by investing in the mango outgrower scheme did not yield the intended benefits. He again said there are instances they operate below the capacity of the processing plant. As a result of these challenges, the company had to cut down the number of employees and does not employ new permanent staff. The employment situation of the company have been affected significantly over the years leaving behind a deepened disparity existing between women and men in terms of employment.

Confirming this finding, The Manager explained that, the company currently works with a skeletal staff at the nucleus farm and pack house. ITFC has 25 permanent workers at the nucleus farm, out of which, only 2 are women doing grafting at the nursery. He further explained that the need to lay off workers was necessitated by the cash flow difficulties the company has faced over the years. He added that;

> *"I can never forget It... we used to carry a bucket of water in each hand to water all the trees, then we will collect all the leaves and gather it under the trees, it was a lot of work. I even had a miscarriage because I was pregnant at the time*

and the work was difficult" (Female respondent in a survey at Gushie, 7th July,2018)

"Right from to management to laborers everyone was affected. The company was going through some trying times. After receiving 5 years of technical advice from the field assistants the famers could now be on their own and so the field assistants were the first to be laid off coupled with the existing cash flow difficulties… It was disappointing for us and to the farmers as well, because by the fifth year when the farmers were expecting to harvest, the mangoes did not bear fruits. Just a few harvested and so because of the initial high expectations, some farmers started to lose interest. And we also had made an investment in the farmers and hoped that by the fifth year when they start to harvest they will pay back the loan, unfortunately for most of the farmers this didn't happen" (Manager of ITFC in an interview at ITFC office in Gushie, 6th June,2019)

The manager revealed that, the company is presently working with 5 or less permanent staff at the factory but they are all male and also employs seasonal workers made up of 90% to 95% female. The clear gender division of labor at the nucleus farm and at the pack house is driven by the stereotyped assumption that, men are more suited for heavy and highly skilled tasks while women are suited for tasks requiring attention to detail, patience and care and does not require much skill training to do (Osorio & Gallina, 2018). In the words of The Manager;

"you know, the nature of mango plantation operations is involving, as a manager you can't ask a lady to use a pickaxe... And how can you ask a man to hold a knife to cut mangoes. Like the shapes and size, you will get...(laughing). But for a woman when you teach her to do it a certain way, because she is already used to cutting with a knife, you don't have to teach her how to do it all the time" (Manager of ITFC in an interview at ITFC office in Gushie, 6th June,2019)

The gender segmentation of work at ITFC has had implications for women earnings, job security and lower chances for skills upgrading and promotion. Although earlier studies observed stark gender disparities in the access of employment opportunities at ITFC, this study further reveals that, when the company faced cash flow and technical difficulties and a general slowdown in its business operations, more female than male workers, working as permanent and seasonal workers lost their jobs. While the company maybe practicing an "all-inclusive business model", women are still prone to be more disadvantaged than men in terms of access to and quality of waged employment opportunities ITFC may offer.

4.5 Opportunities ITFC Offers to Rural Women to Improve their Food Security

This section analyses findings of the third objective of the study which is: to find out the opportunities that large-scale commercial agriculture offers to rural women to improve their food security in Savelugu Municipal. In describing the potential outcomes of large-scale land acquisition, the "win win" and "critical"/ "win loose" discourses come to play. Government and chiefs are often motivated by the potential of large-scale commercial

agriculture to provide their people with jobs, improved technology and increased food production. These deals are often times irresistible on paper however in practice they are characterized by what they promise and do not deliver. This objective therefore seeks to find out using the perceptions of respondents and the company, the opportunities ITFC has offered especially to rural women to improve their food security. To achieve this, it is useful to assess and match the outcomes and potential outcomes; benefits of ITFC's operations voiced by respondents and from literature, viewed with a gender lens.

4.5.1 Direct Opportunities to Rural Women Participation as Outgrowers

ITFC started relatively small with a nucleus plantation of 160 hectares and 50 smallholder outgrowers cultivating 1acre (0.42ha) each (Gent, 2008). The former Manager in an interview revealed that;

> *"we had to increase this number because the news of our work spread fast around the communities we were working in. we initially started small in order to showcase, so that interested farmers could sign up after buying the idea of tree crop plantation as an economic venture. Eventually we decided to expand" (Former Manager of ITFC in an interview at his home in Gurugu, 10th June,2018)*

Although the proportions of women outgrowers remain low, comparatively ITFC has been able to sign up more women to their scheme than other mango producer groups in the country (Daley et al 2013; Osorio & Gallina, 2018).

4.5.2 Improvements in Income of Rural Women

It was revealed from an interview with the past Manager of ITFC that, the few women that were signed as outgrowers enjoyed full and equal benefits the scheme offers to their male counterparts and this was confirmed by female outgrower respondents. These benefits include, interest free loans provided by ITFC in the form of inputs and technical services, flexible loan repayment terms and a ready market for mangoes. Seen as a good venture, there were projected potential increase in incomes of outgrowers which meant income to support other income generating activities. Daley writes that, an estimate on the income gains to outgrowers suggested that, by the fourteenth year of growing mangoes, farmers could earn as much as USD 2000 as annual net income compared to the USD 300 average local farm income. For women these estimates do not only mean an increased income but empowerment gains such as greater influence in decision making within the household and the wider community. Respondents reported to have exercised a certain degree of control over how such income is spent, household expenditure and the crops to cultivate within their first year of harvest.

However, this was short lived as the scheme was undermined by poor yields. An increased income also means a likely improvement in the food security status of women as they can purchase additional food or use the income to supplement other income generating activities such as cultivation of other crops, trading or agro processing.

Empirical evidence points to the different ways women spend their income which is in line with responses from female respondents. For example, literature reveals that increasing resources controlled by women promotes agricultural productivity which contributes to poverty reduction and enhance food security.

Critics of the outgrower scheme have often argued that, the idea of contract farming is hinged on households considered as one unit controlled by a male household head, who usually signs the contract (J. Behrman et al., 2011; Osorio & Gallina, 2018). This notion is highly gender biased because households are constituted of diverse array of actors who do not act as a unit as perceived in the use of resources because the individuals do not have the same preferences and may use resources differently (J. Behrman et al., 2011). Realizing the limitations of their business model, the gender disparities in the local tenure system and to avoid the risk of only men signing onto the scheme after a few years of operation. The former manager recounted how this was done;

> *"ITFC decided that registration onto the scheme was done on an individual basis and not the household level. Every individual was eligible once they met the basic requirements to be an outgrower. This encouraged multiple members of a single household to sign onto the scheme" (Former Manager of ITFC in an interview at his home in Gurugu, 10th June,2018)*

And as survey respondents confirmed, there were situations where a husband and wife, son and mother, daughter in-law and mother in-laws, brothers and sisters were all outgrowers from a single household signed on to the scheme. It also provided an opportunity for women to join the scheme. Speaking to this, a female FGD participant admitted that;

> *"we the women even though we were few but we dedicated more time and attention to our mango farms than our husbands did. we were excited to be part of it with our husbands…we wanted it to do very well because people were watching us" (Female OMOA member in a FGD at Gushie,13th July,2018)*

Although the decision by ITFC still has not yielded much needed results as there are much more male outgrowers then female, for the few female outgrowers the study recorded, it meant that, they received adequate financial compensation for being outgrowers. Thus they enjoyed the full benefits that being an outgrower had to offer. This is much rewarding than being rolled into the scheme as unpaid family labor on their husbands or other male relatives mango farms which have far reaching consequences.

Respondents reported that generally their yields were indeed low, however on the few occasions they harvested, some of them sold the mangoes to the company and also on the local market. Two female respondents recounted that;

> *"on two occasions I got two basins of mangoes from my farm which I sold on the local market with the permission of the company, to earn some money. I can't remember how much the money was but it wasn't small" (Female OMOA member in a FGD at Nabogo,11th July,2018)*
>
> *"we still have some of the trees, but they don't fruit in quantities that can be sold to the company. Sometimes we get quantities that can be sold on the local market. Other times the quantity is small so we just eat it at home and give some to our family and friends" (Female OMOA member in a FGD at Gushie,13th July,2018)*

4.5.3 Opportunity to Influence Decision-making

Every ITFC mango outgrower is an automatic member of the Organic Mango Outgrowers Association (OMOA]. The 21.1% of female outgrowers recorded represented equally on OMOA as members. The independent association was formed and mandated to help improve the earning capacity and welfare of its members without

any gender discriminatory norms through negotiations on prices and other issues of concern to outgrowers with management of ITFC. More generally, OMOA is a platform which offers female outgrowers the opportunity to influence decision-making by projecting their views and interests, neutralizing inherent gender biases and also being able to hold partners accountable to agreements embedded in their contract. Being able to make decisions that affect their lives is a great opportunity for women empowerment. This has a potential to translate into different quarters of their lives both in the household and in the community and also a means to empower other women. This is all the more important as it offers men a need to give women opportunities to take part in making decisions at community and household levels.

4.5.4 Increased Food Production

Aside land, financial and labor resources are usually key constraints hindering female participation in any form of agribusiness venture. In the case of ITFC, outgrowers were provided with an interest free loan in the form of inputs (seeds, water), technical and advisory services with payment terms clearly spelt out in the contract with all partners in agreement. This appealed to the women because this meant they will have access to what was difficult or otherwise unobtainable (land). Research has revealed that those able to straddle farming as outgrowers and their own subsistence farms report the best levels of food security (Hall et al., 2017). The diversification can bring about combined benefits to the farmer of what they earn on the mango fields as outgrowers and what they earn on subsistence crops as smallholders. For women especially, this is particularly a key income source that can complement their household reproductive obligations while also

providing for them a source of independence and empowerment (Hall et al., 2017). Such kind of farmers are more likely to experience better livelihood and food security outcomes. To confirm this, the study revealed that, 57.8% of male respondents who recorded a high food security were ITFC outgrowers. Though encouraging, same could not be said for female outgrowers as 47.3% achieved high food security status opposed to the majority (52.6%) that recorded low food security. This only tells that; women are more likely to be straddled with other constraints such as labor as earlier mentioned even when some services are provided for them.

4.5.5 Transfer of Useful Agricultural Technology, Inputs and Techniques

The provision of inputs and technical advisory services by the company to the outgrowers has possible transfer spillovers to farmers own subsistence crop production and that of other relatives, increasing productivity of rural households. 73.6% of total female outgrowers confirmed that being outgrowers had facilitated their access to agricultural related inputs (organic fertilizer, water, high quality seeds (groundnut] and farm tools) for their own subsistence crop production and also provided them opportunity to learn new techniques such as techniques of water conservation, preparation of manure and techniques of mango farming for their own food production. A total of 63.1% of female outgrowers further confirmed that being ITFC outgrowers has provided opportunities for them to access new agricultural technologies such as better fertilizer application technologies and use of farm preparation tools for their own food production.

4.5.6 Direct Opportunities to Females in ITFC Host Communities

For most governments and chiefs, the main incentive to give out their lands to investors for commercial farming, is its ability or promise to offer employment opportunities to their people most especially the affected population. This was good news for the chiefs of ITFC operational communities especially because their communities were straddled with endemic poverty, entrenched gender inequalities, poor social development (Tsikata & Yaro, 2014), high illiteracy and formal employment opportunities did not exist. Accounts of respondents during the FGDs indicated that, during the company's negotiation process with the chiefs, promises of waged employment onto the company's plantation, processing and packaging unit were made by the company to the chiefs for both permanent and seasonal employment. ITFC Operational communities were to be given priority especially Dipale where some farmers were displaced and economic trees and shrubs were cleared to make way for the company's mango plantation.

The manager of the company revealed that, the company have been able to fulfil its promise of employment to an extent albeit a lot of challenges it has faced over the years of its operations. Aside offering employment to both male and female farmers as outgrowers, the company offers employment slit across the plantation, processing and packaging unit often giving priority to people from ITFC operational areas provided they qualify for the position. The Manager reiterated that;

> *"everything about the company was to alleviate poverty around the operational areas and so where there is employment opportunity we prioritize our operational areas. We wanted to curb the seasonal migration of the people from the rural*

north to the urban south to become head potters kayaye" (The Manager in an interview at ITFC office in Gushie, 6th June,2019)

In 2012 women constituted 42% of the total staff of ITFC majority of whom were engaged yearly as seasonal workers at the plantation and mostly at the pack house involved in tasks ranging from grafting at the nursery to cutting drying and packaging of mangoes. Although the company had laid off some of its workers, the exact employment disaggregation data was not readily available at the time of this research, but what was however revealed by the Manager was that, 2 women worked on permanent basis at the nursery currently and 90%- 95% of seasonal workers employed at the pack house were women. Also, the number of seasonal workers employed every year depends on whether or not the company will operate full capacity. ITFC further offers special attention to pregnant and lactating mothers such as offering them maternity leave whether employed as permanent or seasonal workers, switching to less labor intensive activities and also offering them to take more frequent breaks (Osorio & Gallina, 2018) a measure instituted by the company to take care of women's specific labor conditions.

4.5.7 Benefiting from ITFC's Corporate Social Responsibility

On account of Corporate social responsibility, this is what the manager had to say;

We try to give whatever little support we can give. We started a project called Children to School Project (CTSP) under which we established a scholarship scheme at Dipala "the world bank of ITFC" for brilliant but needy students. Some students who benefited from the scholarship scheme are now teachers and nurses who help their community. It's still ongoing but on the low side. Another

component of the CTSP was a school feeding program, spearheaded by the wife of the Dutch investor and every month water was supplied to the schools. The school at Gushie received a computer lab support through the CTSP in other to help improve the ICT skills of the students. At Dipale, Tuunayili, Gushei and Tigla, bungalows were built for the teachers to help resolve their accommodation problems. Outside the CTSP program, we built dam walls in order to retain water at the dugout to use it till the next rainy season for farmers to water their crops and also for domestic use. We pump water every Tuesday and Friday at Gushie into overhead tanks so that the people can have easy access to water. The Dutch investor is passionate about the people here so it was all about how he will be able to be of help (The Manager in an interview at ITFC office in Gushie,6th June,2019)

A female FGD participant in an account of the benefits of ITFC's operations said that;

"they took all outgrowers to Tamale to watch a football game in the Tamale sports stadium during the CAN 2008, they told us it was in appreciation of our hard work as outgrowers, and I'm part of the well performing outgrowers who were taken to Accra to go and watch the Ghana match, I will never forget the experience I had" (Female OMOA member in a FGD at Gushie,13th July,2018)

The corporate social responsibility activities seem to be directed towards supporting women in their reproductive roles whereas more direct project benefits such as permanent and better paid employment opportunities and participation in the outgrower scheme

seem to target men than women. however, the hidden benefits that ease women of their reproductive burdens should not be underestimated.

The chapter focused on the findings from the analysis made from the survey, focus group discussions and key informant interviews. The results presented in the chapter are based on the study's objectives of finding out the relationship between access to land and the food security of rural women, the effects of the mango out-grower scheme of ITFC on rural women access to land and their food security and the opportunities that large-scale commercial agriculture offers to rural women to improve their food security.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter consists of a summary of what each of the four chapters covered by giving a brief overview of each chapter. This is then followed by the conclusions and recommendations made. The purpose of the study was to find out the extent large-scale land acquisitions affect women access to land and their food security in the context of the Dagomba customary land governance system.

Three specific questions were asked to obtain information on the relationship between access to land and the food security of rural women, the effects of the mango out-grower scheme of ITFC on rural women's access to land and their food security and also the opportunities large-scale commercial agriculture offer to the food security of rural women in Savelugu Municipal. This information was obtained through a broad survey conducted on 185 respondents and 60 OMOA members constituting 6 separate focus group discussions in 6 different ITFC operational communities. To enhance understanding on the main issues of the study, literature was reviewed on land and its significance in Ghana, land governance regimes in Ghana, land relations and gender inequalities, the concept of largescale land acquisition, large-scale land acquisition in Ghana, large-scale commercial agriculture in the Northern region, largescale commercial farming and food security in the Northern region, models of agricultural commercialization in Ghana and the Integrated Tamale Fruit Company (ITFC) and its business model.

Data from the survey was analyzed quantitatively using SPSS version 23.0 and responses from key informant interviews and focus group discussions were analyzed by grouping the responses under specific themes related to the objectives of the study. The results interpretation and discussion was done using tables, graphs and also narrations and quotations from the study's respondents. The researcher achieved this while still relating it to the context of literature.

5.2 Summary of Key Findings and Conclusion

The study finds that, under the Dagbon customary land tenure system, land remains primarily in men's power and dominance with women ascribed secondary rights and on insecure terms. This puts women in a precarious position as they play critical roles in household production and provisioning which are hardly secondary and require resources, especially land, to support their agrarian livelihoods. Women are left with smaller and fewer fields which supports the cultivation of women crops to satisfy their household productive roles. Even though women are engaged in the harvesting and processing of common resources to supplement household food security, the study recorded high levels of food insecurity among women as compared to men. The results from the Wilcoxon signed rank test revealed a significant difference in men and women access to land and their food security status. The test proved that there is a strong relationship between women having access to land and achieving food security.

While the outgrower scheme led to reduction in actively cultivated fields, it also led to a visible contraction of common resources such as fruit trees and fuel wood. Women are

now forced to travel farther in search for commons while being faced with the challenge of reduced quantity compared to what they used to get.

Also, the scheme further constrained time available to women who served as unpaid labor on both their husbands food crop farms and mango farms, their own food crop farms while still engaged in their household provisioning and reproductive roles. Women are experiencing a compound effect of the outgrower scheme more as compared to men because the "inclusive business model" did not give much attention to the differentiated needs, time use and labor burdens of men and women, but rather integrated them into stages of the projects cycle as one unit.

The study further finds that outgrowers and their family members were generally aggrieved and disappointed for participating in ITFCs outgrower scheme because the mangoes did not yield as was expected, compared to their foregone alternative (subsistence farming). Outgrowers recorded no or low sales hence no or low incomes. Although employment opportunities were created for women on the company's own plantation, processing and packaging unit, management and technical staff and also as outgrowers, they were mostly seasonal waged work which were lowly paid and highly insecure jobs showing evidence of stark gender inequalities.

ITFC is experiencing its fair share of challenges resulting from the disappointing outcomes from the outgrower scheme. The company is yet to recoup the benefits from the investments made on outgrowers as most of them are yet to pay of the interest free loan given to them by the company. The cash flow challenges have led the company to layoff an appreciable number of its workers. The initial idea of sourcing mangoes from its outgrowers has also clearly failed because the mangoes were low yielding and some

got destroyed by dry season bush fires and so the company travels as far as Somanya in the Eastern region to buy mangoes for processing.

A critical livelihood source of the rural women in ITFC operational areas was clearly disrupted without any form of compensation paid to the women for their loss. The company has not made efforts to find solutions to revive the mango outgrower scheme in its operational areas but rather has sought alternative sources for the mangoes and this raise concerns on the sustainability of large-scale commercial farming the government is promoting as a solution to food security and a source of employment especially in rural areas.

Findings related to the opportunities ITFC offered to improve the food security of rural women in the Savelugu Municiality revealed that, female outgrowers in their first year of harvest, earned income from the sale of their mangoes which translated to empowering them to exercise greater control over how the money was to be spent on household expenditure and the decision of crops to cultivate. Although short lived, ITFC contributed to enhancing the food security of the women by providing for them a source of independence and empowerment.

Other opportunities women enjoyed came as a result of the corporate social responsibility activities of ITFC such as school feeding and scholarship schemes for their children, construction of staff bungalows and construction of dam walls. Although they didn't come as direct benefit to women they supported their productive and reproductive roles in the household.

The study concludes that ITFC's land acquisition and its out-grower scheme, contributed in perpetuating pre-existing gender inequalities in access to land in the study areas

because even though it was their husbands farm lands, fallow fields and common resources that were lost, they were the most hard hit as these were their major sources of livelihood, income as well as their food security.

5.3 Recommendations

Based on the theoretical framework and the findings of this study, three recommendations are made. The recommendations proffered are related to Gender inclusive land deals, Transparent and accountable contracts and Protection of biodiversity.

To ensure that investment projects generate real positive benefits to rural women, then the Lands Commission can ensure that before, during and after the process of land acquisition by commercial land investors women are involved in consultations and negotiations. This can be achieved if the Lands Commission make gender certification an additional requirement before permits are granted to commercial agriculture investors. They can supervise to ensure that investors obtain genuine and free consent from women to ensure gender inclusiveness in land deals.

Contracts should clearly state and define agreements on for example social responsibility, compensation packages and how the investments will improve the status of women. Contracts should include opportunities for periodic cost-benefit analysis in order to ensure that (potential) challenges are detected and resolved and also benefits optimized.

Host communities should demand for innovative and sustainable agricultural practices from investors so that biodiversity is protected. This is to ensure that common resources

such as fruit trees, fuelwood, water and game are not lost and are in a significant quantum to support rural agrarian livelihoods.

REFERENCES

Acheampong, E., & Campion, B. B. (2014a). The effects of biofuel feedstock production on farmers' livelihoods in Ghana: The case of Jatropha curcas. *Sustainability (Switzerland)*, *6*(7), 4587–4607. https://doi.org/10.3390/su6074587

Acheampong, E., & Campion, B. B. (2014b). The Effects of Biofuel Feedstock Production on Farmers' Livelihoods in Ghana: The Case of Jatropha curcas, 4587–4607. https://doi.org/10.3390/su6074587

Apusigah, A. A. (2008). The Gendered Politics of Farm Household Production and the Shaping of Women ' s Livelihoods in Northern Ghana.

ASEAN. (2018). THE ASEAN GUIDELINES ON PROMOTING RESPONSIBLE INVESTMENT IN FOOD , AGRICULTRE AND FORESTRY, *Draft 3*.

Ayelazuno, J. A. (2017a). Land Use Policy Water and land investment in the " overseas " 1 of Northern Ghana : The land question , agrarian change , and development implications ☆, (January), 1–14. https://doi.org/10.1016/j.landusepol.2017.06.027

Ayelazuno, J. A. (2017b). Land Use Policy Water and land investment in the " overseas " 1 of Northern Ghana : The land question , agrarian change , and development implications ☆, (June), 1–14. https://doi.org/10.1016/j.landusepol.2017.06.027

Ayelazuno, J. A. (2018). Land Use Policy Land governance for extractivism and capitalist farming in Africa : An, (June).

Balestri, S., & Beretta, S. (2015). *Poverty Eradication : Access to Land , Access to Food*.

Behrman, J. A., Meinzen-dick, R., & Quisumbing, A. R. (2014). An Interpretation of Large-Scale Land Deals Using Boserup ' s Theories of Agricultural Intensification

, Gender and Rural Development, 189–202. https://doi.org/10.1007/978-94-017-8678-2

Behrman, J., Meinzen-dick, R., & Quisumbing, A. (2011). The Gender Implications of Large-Scale Land Deals, (January).

Behrman, J., Meinzen-Dick, R., & Quisumbing, A. (2012). The gender implications of large-scale land deals. *Journal of Peasant Studies*, *39*(1), 49–79. https://doi.org/10.1080/03066150.2011.652621

Bickel, G., & Cook, J. (2000). Guide to Measuring Household Food Security Revised 2000.

Boamah, F. (2013). Imageries of the contested concepts "land grabbing" and "land transactions": Implications for biofuels investments in Ghana. *Geoforum*, *54*(January 2013), 324–334. https://doi.org/10.1016/j.geoforum.2013.10.009

Boserup, E. (n.d.). The conditions of agricultural growth, 1–108.

Bugri, J. T. (2012). Final Report : Improving Land Sector Governance in, (February).

Cotula, L. (2007). *Changes in " customary " land tenure systems in Africa Edited by Lorenzo Cotula Changes in " customary " land tenure systems in Africa Edited by Lorenzo Cotula*.

Cotula, L. (2014). *Investment contracts and sustainable development How to make contracts for fairer and more*.

Cotula, L., Oya, C., & Codjoe, E. A. (2014). Testing Claims about Large Land Deals in Africa : Findings from a Multi- The Journal of Development Studies Testing Claims about Large Land Deals in Africa : Findings from a Multi-Country Study, (April). https://doi.org/10.1080/00220388.2014.901501

Cotula, L., Oya, C., Codjoe, E. A., Eid, A., Kakraba-Ampeh, M., Keeley, J., … Rizzo, M. (2014). Testing Claims about Large Land Deals in Africa: Findings from a Multi-Country Study. *Journal of Development Studies*, *50*(7), 903–925. https://doi.org/10.1080/00220388.2014.901501

Cotula, L., Oya, C., Codjoe, E. A., Kakraba-ampeh, M., Keeley, J., Kidewa, A. L., … Rizzo, M. (2014). The Journal of Development Studies Testing Claims about Large Land Deals in Africa : Findings from a Multi-Country Study, (July), 37–41. https://doi.org/10.1080/00220388.2014.901501

Cotula, L., Toulmin, C., & Hesse, C. (2004). Land Tenure and Administration in Africa: Lessons of Experience and Emerging Issues. *Environment*, 50.

Cotula, L., Toulmin, C., & Quan, J. (2006). *Better land access for the rural poor and challenges ahead Better land access for the rural poor and challenges ahead*.

Cotula, L., Vermeulen, S., Leonard, R., & Keeley, J. (2009). *Land grab or development opportunity ? international land deals in Africa Land grab or development opportunity ?*

Creswell, J. (2009). Research Design. *Journal of Chemical Information and Modeling*, *53*(9), 1689–1699. https://doi.org/10.1017/CBO9781107415324.004

Dako-gyeke, M., & Owusu, P. (2013). A Qualitative Study Exploring Factors Contributing to Gender Inequality in Rural Ghana, (November). https://doi.org/10.5901/mjss.2013.v4n1p481

Daley, E. (2011). *Gendered impacts of commercial pressures on land*. *Commercial Pressures on Land Initiative*.

Daley, E., Osorio, M., & Clara_Mi_Young_Park. (2013). *The Gender and Equity*

Implications of Land-Related Investments on Land Access and Labour and Income-Generating Opportunities: A Case Study of Selected Agricultural Investments in Lao PDR. Retrieved from http://www.fao.org/docrep/017/aq293e/aq293e.pdf

Dell, J., Odorico, P. D., & Cristina, M. (2017). The Tragedy of the Grabbed Commons : Coercion and Dispossession in the Global Land Rush, *92*, 1–12. https://doi.org/10.1016/j.worlddev.2016.11.005

Dittoh, S. (n.d.). LAND TENURE, TRADITIONAL INSTITUTIONS AND SUSTAINABLE DEVELOPMENT IN NORTHERN GHANA WITHIN THE CONTEXT OF THE NATIONAL LAND , POLICY, 61–71.

Doss, C., Summerfield, G., & Tsikata, D. (2014). Land, Gender, and Food Security. *Feminist Economics*, *20*(1), 1–23. https://doi.org/10.1080/13545701.2014.895021

FAO. (n.d.). The Approach - Facing the Challenge.

FAO. (2012). Gender Inequalities in Rural Employment in Ghana An Overview Gender Inequalities in Rural Employment in Ghana An Overview.

FAO. (2015). Socio-economic context and role of agriculture, *717*(March).

German, L., Schoneveld, G. C., & Mwangi, E. (2011). *Contemporary processes of large- scale land acquisition by investors*.

Ghana Statistical Service. (2014). Savelugu-Nanton District, 70.

Ghana Statistical Service. (2015). Ghana Poverty Mapping Report.

GRAIN. (2008). The 2008 land grab for food and financial security. *Africa*, (October), 11. https://doi.org/30 June 2009

Hall, R. (2011). Land Grabbing in Southern Africa : The Many Faces of the Investor

Rush The Many Faces of the Investor Rush in Southern Africa : Towards a Typology of Commercial Land Deals, (June 2011). https://doi.org/10.1080/03056244.2011.582753

Hall, R., & Osorio, M. (2014). AGRICULTURAL INVESTMENT , GENDER AND LAND IN AFRICA : TOWARDS INCLUSIVE EQUITABLE AND SOCIALLY RESPONSIBLE INVESTMENT CONFERENCE REPORT 2014.

Hall, R., Scoones, I. A. N., & Tsikata, D. (2015). The Contexts & Consequences of Africa's Land Rush.

Hall, R., Scoones, I., & Tsikata, D. (2017). Plantations, outgrowers and commercial farming in Africa: agricultural commercialisation and implications for agrarian change. *Journal of Peasant Studies*, *44*(3). https://doi.org/10.1080/03066150.2016.1263187

ICLEI. (2015). From MDGs to SDGs : What are the Sustainable Development Goals ? What came of the UN Sustainable, (01), 1–4.

Isreal, G. D. (2003). Determining Sample Size.

Jayne, T. S., Chamberlin, J., & Headey, D. D. (2014). Land pressures , the evolution of farming systems , and development strategies in Africa : A synthesis. *Food Policy*, *48*, 1–17. https://doi.org/10.1016/j.foodpol.2014.05.014

Kameri-mbote, P. (2005). THE LAND HAS ITS OWNERS ! GENDER ISSUES IN LAND TENURE UNDER CUSTOMARY LAW, *2005*(1970), 1–19.

Kasanga, K., & Kotey, N. A. (2001). Land Management in Ghana : Building on Tradition and Modernity.

Kawulich, B. b. (n.d.). DataAnalysisTechniquesinQualitativeResearch-Kawulich.pdf.

Kuusaana, E. D., Kidido, J. K., & Halidu-Adam Eniam. (2013). Customary Land Ownership and Gender Disparity Evidence from the Wa Municipality of Ghana, *10*(1), 63–80.

Landesa. (2012). Land Rights and Food Security, (March).

Maha-Atma, S. P. (2014). Customary land tenure practices and land markets in Ghana: *College of Architecture and Planning*, 172.

Mahoi, I. (2015). AN ASSESSMENT ON GENDER EQUITY AND LAND OWNERSHIP, AND IT'S IMPACT ON FOOD SECURITY IN SIERRA LEONE.

Medie, P., & Darkwah, A. (2017). Interrogating Large Scale Land Acquisition and Its Implication on Women in Sub-Saharan Africa : A Case Study of Ghana Akosua K . Darkwah Maame Gyekye-Jandoh, (August).

Meinzen-Dick, R., Quisumbing, A., Doss, C., & Theis, S. (2019). Women's land rights as a pathway to poverty reduction: Framework and review of available evidence. *Agricultural Systems*, *172*. https://doi.org/10.1016/j.agsy.2017.10.009

Migotto, M., Davis, B., Carletto, G., Beegle, K., Working, E. S. A., No, P., & Davis, B. (2005). Measuring Food Security Using Respondents ' Perception of Food Consumption Adequacy Measuring Food Security Using Respondents ' Perception of, (05).

Ministry of Gender, Children and Social Protection (2015). National Gender Policy. https://mgcs.gov.gh

Nadasen, N. (2012). Agenda Empowering women for gender equity. Rural women ' s access to land in sub-Saharan Africa and implications for meeting the Millennium

Development Goals. *0950*(May). https://doi.org/10.1080/10130950.2012.674231

Nadasen, N. (2018). Rural women's access to land in sub-Saharan Africa and implications for meeting the Millennium Development Goals. *Agenda*, *26*(1), 41–53. https://doi.org/10.1080/10130950.2012.674231

Namubiru-Mwaura, E. (2014). Land tenure and gender: approaches and challenges for strengthening rural women's land rights. *Women' s Voice, Agency, & Participation Research Series*, (6), 32. Retrieved from http://documents.worldbank.org/curated/en/309091468153867580/pdf/927600NWP0Wome00Box385358B00PUBLIC0.pdf

Ndakaza J. N, J. K. M., Ndengo M., H. F., & Gasheja C., H. Jean de D. (2016). Modeling Key Determinants of the Household Food Security in the Household Food Security in Rwanda : Probit Regression Approach, (October). International Journal of Mathematics and Physical Sciences Research ISSN 2348-5736 (Online) Vol. 4, Issue 2, pp: (85-94), Month: October 2016 - March 2017, Available at: www.researchpublish.com

Nnadi, Chikaire, Osuagwu, Ihenacho, & Egwuonwu. (2012). Mobilizing Women for Food Security , Poverty Reduction and Rural Development in Nigeria : The Role of Land Tenure Rights. *2*(June), 90–101. https://dx.doi.org/10.13140/RG.2.2.30063.89764

Nyantakyi-Frimpong, H., & Bezner Kerr, R. (2017). Land grabbing, social differentiation, intensified migration and food security in northern Ghana. *Journal of Peasant Studies*, *44*(2), 421–444. https://doi.org/10.1080/03066150.2016.1228629

Nyantakyi-frimpong, H., Kerr, R. B., Nyantakyi-frimpong, H., & Kerr, R. B. (2016). Land grabbing , social differentiation , intensified migration and food security in northern Ghana, (December). https://doi.org/10.1080/03066150.2016.1228629

Odeny, M. (2013). Improving Access to Land and strengthening Women's land rights in Africa. https://web.law.columbia.edu/sites/default/files/microsites/gender-sexuality/odeny_improving_access_to_land_in_africa.pdf

Osei, R. (2008). Integrated Tamale Fruit Company : Organic Mangoes Improving Livelihoods for the Poor Integrated Tamale Fruit Company : http://www.value-chains.org/dyn/bds/docs/736/Ghana_ITFC%20FINAL.pdf

Osorio, M., & Gallina, A. (2018). Gender Opportunities and Constraints in Land-Related Agricultural Investments Gender Opportunities and Constraints in Land-Related Agricultural Investments Synthesis Report. Retrieved from www.fao.org/publications

Owino, A., Wesonga, R., & Nabugoomu, F. (2014). Determining Food Insecurity : An Application of the Rasch Model with Household Survey Data in Uganda. https://doi.org/10.1155/2014/121269

Quan, J. F., & Geoffrey, P. (2008). Secure Land Rights for All. Secure Land Rights for All GLTN contributes to the implementation. GLTN (p. 47). Retrieved from www. unhabitat.org.

Quisumbing, A. R., & Meinzen-Dick, R. (2001). Empowering Women to Achieve Food Security. Empowering Women to Achieve Food Security, 2020 FOCUS. Retrieved from https://doi.org/10.1016/S0070-4571(08)10025-5

Sagre, B., & Abubakari, A. (2013). Ownership and Access to Land in Urban Mamprugu, Northern Ghana , *2*(2), 1–14. Retrieved from http://ijsk.org/uploads/3/1/1/7/3117743/development_studies_1.pdf

Schoneveld, George C. (2013). The Governance of Large-Scale Farmland Investments in Sub-Saharan Africa: A Comparative Analysis of the Challenges for Sustainability, 1–317. Retrieved from https://mail.google.com/mail/u/0/%5Cnpapers2://publication/uuid/22A09031-ECD2-45D3-8A80-503E67773C73

Senu, S. (2017). Esda Sustainable Development Workshop Series 29, (June).

Sraboni, E., Malapit, H. J., Quisumbing, A. R., & Ahmed, A. U. (2014). Women's Empowerment in Agriculture: What Role for Food Security in Bangladesh? *World Development*, *61*, 11–52. https://doi.org/10.1016/j.worlddev.2014.03.025

Toulmin, C. (2005). Securing Land and Property Rights in sub-Saharan Africa: the Role of Local Institutions (1), 27–54. https://doi.org/10.1016/j.landusepol.2008.07.006

Tsikata, D. (2015). The Social Relations of Agraian Change. IIED Working Paper. IIED, London. http://pubs.iied.org/17278IIED

Tsikata, D., & Yaro, J. a. (2011). Land Market Liberalization and Trans-National Commercial Land Deals in Ghana since 1990s. *International Conference on Global Land Grabbing, 6-8 April 2011*, (April), 1–34. https://www.future-agricultures.org/wp-content/uploads/pdf-archive/Dzodzi%20Tsikata%20and%20Joseph%20Yaro.pdf

Tsikata, D., & Yaro, J. A. (2014). When a Good Business Model is Not Enough : Land

Transactions and Gendered Livelihood Prospects in Rural Ghana, (November 2014), 37–41. https://doi.org/10.1080/13545701.2013.866261

UN Women. (2014). World Survey on the Role of Women in Development 2014: Gender Equality and Sustainable Development. United Nations (Vol. I). https://doi.org/10.4324/9781315686455

UNDP. (2019). Background of the Sustainable Development Goals _ UNDP.

WFP. (2012). Comprehensive Food Security & Vulnerability Analysis Ghana 2012 Focus on Northern Ghana. https://documents.wfp.org/stellent/groups/public/documents/ena/wfp257009.pdf?iframe

Williams, T. O., Gyampoh, B., Kizito, F., & Namara, R. (2012). Water Implications of Large-scale land acquisitions in Ghana. Water Alternatives, 5(2), 243–265. https://pdfs.semanticscholar.org/589e/75d10276abbc44ec3834a6ae657bd0686e91.pdf

Yaro, Joseph A. (2012). Re-inventing Traditional Land Tenure in the Era of Land Commoditization : Some Consequences in periurban Northern Ghana. Geografiska Annaler Series B Human Geography 94(4):351-368 https://dx.doi.org/10.2307/233608312

Yaro, J. A. (2016). Customary Tenure Systems Under Siege : Contemporary Access to Land in Northern Ghana, (April 2010). https://doi.org/10.1007/s10708-009-9301-x

Yaro, J. A., K, J., & Torvikey, G. D. (2017). Forum : Land and Agricultural Commercialisation in Africa. Agricultural Commercialisation Models, Agrarian Dynamics and Local Development in Ghana, *44*(3), 538–554.

https://doi.org/10.1080/03066150.2016.1259222

Yeboah, E., & Shaw, D. (2015). Customary Land Tenure Practices in Ghana : Examining the Relationship with Land-use Planning Delivery, (August). https://doi.org/10.3828/idpr.2013.3

Yin, R. K. (2006). Case Study Research: Design and Methods. Applied Social Research Methods series. Thousand Oaks, London: Sage Publications. 5: 25. http://www.sciepub.com/reference/204159

Zoysa, R. De. (2013). The Implications of Large Scale Land Acquisition on Small Landholder's Food Security. Development Planning Unit, Working Paper No. 156. https://www.ucl.ac.uk/bartlett/development/sites/bartlett/files/migrated-files/WP156_0.pdf

APPENDICES

Appendix 1: Data Collection Instruments

Appendix 1.1: Questionnaire for the study

QUESTIONNAIRE

UNIVERSITY FOR DEVELOPMENT STUDIES

DEPARTMENT OF AGRICULTURAL EXTENSION, RURAL DEVELOPMENT AND GENDER STUDIES

This interview guide seeks to collect information on Women's access to land and the implications for their income, food security as well as their general wellbeing and their children. The information will be used to write a dissertation as partial fulfilment of the conditions for the award of MPhil Innovation Communication. Information given is confidential and interviewees will remain anonymous, and their identity will not be revealed unless with their permission. **THANK YOU.**

INSTRUCTIONS: Please indicate your answer to closed questions by ticking **[√]** in the parentheses next to it. Write brief and precise answers to open ended questions in the spaces provided.

A. REFERENCE INFORMATION

Enumerators

Name……

Date of interview……

Contact of respondent……

B. SOCIO-DEMOGRAPHIC INFORMATION OF RESPONDENTS

1. Age……

2. Gender (1) Male [ ] (2) Female [ ]

3. Community……

4. Marital status (1) Married [ ] (2) Single[ ] (3) Divorced[ ] (4) Widowed[ ] (5)cohabitation[ ]

5. Level of education: No formal education [ ] Basic education[ ] Secondary[ ] Tertiary[ ] Others specify……

6. Are you head of the household? (1) Yes [ ] (2) No[ ]

7. What is your total household size?…….

8. Number of household dependents?.....

9. Residential status of respondent. (1) Native [ ] (2) Migrant[ ] (3) non-resident farmer[ ] (4)other specify……[ ]

10. Farm size in acres……

11. Occupation .....?

12. Income source? Farm income

    (1) Sale of produce [ ] (2) Sale of animals[ ]

13. Non-farm income

    (1) Trading [ ] (2) White color job[ ] (3) Artisan[ ] (4) Remittance (5) Farm labor[ ] (6)Other specify……[ ]

14. What crops do you produce? (1) Maize[ ] (2)Rice[ ] (3)Soybeans[ ] (4)vegetables (5)mango (6)others specify……..

C. CUSTOMARY LAND TENURE AND WOMEN ACCESS TO LAND

15. Is there difference in modes of accessing land by men and women in this community?

(1) Yes [ ] (2) No [ ]. If Yes, continue with Q16. And if No, Skip to Q26

16. If **Yes,** what are the modes available to men?

(1) Inheritance [ ] (2) Family land (3) Purchased [ ] (4) Married status [ ] (5) Lease [ ] (6) Gift [ ] (7) Free hold [ ](8) Other specify……[ ]

17. What are the modes available to women?

(1) Inheritance [ ] (2) Family land (3) Purchased [ ] (4) Married status[ ] (5) Lease [ ] (6) Gift [ ] (7) Free hold[ ] (8) Other specify……

18. In your own views, how do you assess men mode of accessing land in this community?

(1) Very easily [ ] (2) Easy [ ] (3) Somehow[ ] (4)Not easy [ ] (5)Very difficult [ ]

19. How do you assess women mode of accessing land in this community?

(1) Very easily [ ] (2) Easy[ ] (3) Somehow[ ] (4) Not easy[ ] (5) Very difficult[ ]

20. What use rights are women entitled to if she has access to land through the modes available in 17 above?

(1) Farming [ ] (2) Building[ ] (3) Picking of wild fruits(shea nut ,dawadawa)[ ] (4) Gathering fuel wood [ ] (5)Access to game(hunting)[ ](6) Other specify……

21. Do you think that women have limited access to land compared to men in this community?

(1) Yes [ ] (2) No[ ]

22. If Yes, what do you think could be the barriers for women (daughter/single, married, widowed, divorced). If Yes, rank them and if No, skip to Q23

Rank them in order 1= high barrier, 2=moderate barrier, 3=low barrier

1.Custom and Tradition [ ]

2.Religion [ ]

3.Commercial land acquisition [ ]

4.Land scarcity [ ]

5.Other specify……

23. If answer is No, please explain…….....

……

……

……

Do you agree that customary land laws discriminate against women from accessing land and its associated resources?

(1) Agree [ ] (2) Disagree [ ] (3) Somehow [ ] (4) Not at all[ ]

24. What is the current trend in women's access to land in your community?

(1) Improved [ ] (2) Somehow [ ] (3) Unimproved [ ] (4) Worse[ ]

25. What are your major economic activities?

Rank them in order 1= highest 2=high 3=moderate 4=low 5=lowest

(1) Crop farming [ ] (2)Livestock rearing [ ](3)Trading[ ] (4)Agro-processing[ ] (5) Others specify……[ ]

26. How did you get access to land?

(1) Inheritance [ ] (2) Family land [ ](3) Purchased [ ] (4) Married status [ ] (5) Lease [ ] (6) Gift [ ] (7) Free hold [ ] (8)Other specify…….[ ]

27. How secured is your access to that land?

(1) Secured [ ] (2)Insecure [ ] (3) Very insecure[ ]

28. Which of these factors can lead to your security/insecurity? Please tick all applicable

Customary	
Land taken away from you	
Commodification	
Litigation	
Divorce	
Migration/settlement	
Widowed	

Title deeds	
Registration	
Family support	

29. How many acres do you have access to?…….acres

30. How will you describe the nature of land usually given to women?

(1) Sandy-loam [ ] (2) Sandy-clayey [ ] (3) Gravel[ ] (4) Flooded[ ]

31. What crops do you produce on that land ?

1……. 5……

2……. 6……....

3……. 7……

4……. 8……

32. Who decides the type of crop you produce?

(1) Wife [ ] (2) Husband [ ] (3) Jointly [ ] (4) Family [ ] (5) Other specify…….....[ ]

33. Do you have control over your produce from the farm? Yes [ ]/No [ ]

Explain

……

……

……

……

34. Who decides on wealth accrued from sale of your produce?

(1) Wife [ ] (2)Husband [ ] (3)Jointly [ ] (4)Family [ ] (5)Other specify…….[ ]

35. What commons do you have access to on the farm?

(1) Economic tress [ ] (2) Water[ ] (3) Fuel wood[ ] (4) Game/ Hunt [ ] (5) Other specify……

36. How will you rate the following activities contribution to your annual farm income?

Activity	**Very high**	**High**	**Low**	**Very low**	**None**
Food crop					
Livestock rearing					
Farm labor					
Agro-Processing (shea butter, dawadawa, etc)					
Others, specify					

37. Which one is the highest contributor to your annual expenditure on food (direct consumption/purchase)?

Activity	**Very high**	**High**	**Low**	**Very low**	**None**
Food crop					
Livestock rearing					
Farm labor					
Agro-Processing (shea butter, dawadawa)					
Others specify					

38. What is your average income from the following activities?

Activity	**Monthly income**	**Annual income**
Food crops		
Livestock rearing		
Agro processing(shea butter, dawadawa)		
Other specify		

D. LARGE-SCALE FARMING AND WOMEN'S ACCESS TO LAND

39. Are you an outgrower of ITFC?

(1) Yes [ ] (2) No[ ]

If No, skip **to – 57**

40. If yes, how many acres is your mango farm……

41. From whom did you acquire the land?

(1) Community chief [ ] (2) family[ ] (3) husband[ ] (4) friend[ ] (5)other specify……..[ ]

42. What was the mode of acquisition?

(1) Inheritance [ ] (2) Family land (3) Purchased [ ] (4) Married status[ ] (5) Lease [ ] (6) Gift [ ] (7) Free hold[ ] (8) Other specify…….[ ]

43. How will you categorize the land before you used it for mango farming?

(1) Bush (but arable) [ ] (2) Fallowed[ ] (3) Cultivated land [ ] (4) Degraded land[ ]

44. Did you have access to the land before using it for mango cultivation?

(1) Yes [ ] (2) No [ ]

45. If yes, what user rights were you entitled to on the land?

(1) Farming [ ] (2) Building[ ] (3)Picking of wild fruits(shea nut ,dawadawa)[ ] (4)Gathering fuel wood[ ](5)Access to game[ ](6) Specify other……[ ]

46. What user rights are you entitled to on the land now?

(1) Farming [ ] (2) Building[ ] (3) Picking of wild fruits(shea nut ,dawadawa)[ ] (4)Gathering fuel wood[ ](5)Access to game[ ](6) Specify other……[ ]

47. Has your mango farming affected access to commons resources on the land?

(1) Yes [ ] (2) No[ ]

48. If yes, explain?

……

……

……

……

49. At what level?

(1) Highly Affected [ ] (2) Moderately Affected [ ] (3) Affected [ ] (4) Not at all[ ]

Has being an ITFC mango outgrower:

50. Facilitated access to agriculture-related inputs for your own food production?

(1)Yes [ ] (2) No[ ]

51. If yes, indicate these inputs.

(1) Organic fertilizers [ ] (2) Water [ ] (3) Inorganic fertilizers[ ] (4) High quality seeds[ ] (5) Pesticides[ ] (6) Other specify ..... [ ]

52. Provided an opportunity for you to learn new techniques of agriculture for your own food production?

(1) Yes [ ] (2) No[ ]

53. If yes, which type of techniques/farming methods have been learned?

(1) New farm preparation methods [ ] (2) Preparation of organic fertilizers[ ] (3)Techniques for food conservation [ ] (4) Techniques for water conservation [ ] (5) Other……[ ]

54. Provided an opportunity for you to access or use new agricultural technology for your own food production?

(1) Yes [ ] (2) No[ ]

55. If yes, which types of technologies can be accessed more easily?

(1) New farm preparation tools [ ] (2) Better fertilizer application technologies [ ] (3) Access to tractors for farm use [ ] (4) Technologies for food conservation [ ] (5) Technologies for water conservation [ ] (6) Other specify…… [ ]

56. Is any of your House Hold Member(HHM) an ITFC mango outgrower?

(1) Yes [ ] (2) No [ ]

57. What is your relationship with that HHM?

(1) Husband [ ] (2) Wife[ ] (3) Son[ ] (4) Father in-law [ ] (5) Mother in-law[ ] (6) Other Specify……[ ]

58. Did you have access to the land before it was used as a mango farm?

(1)Yes [ ](2) No [ ]

59. If yes, what use rights were you entitled to on the land before it was used for mango farming?

(1) Farming [ ] (2) Building[ ] (3) Picking of wild fruits(shea nut ,dawadawa)[ ] (4)Gathering fuel wood[ ](5)Access to game[ ](6) Other Specify…….[ ]

60. What use rights do you have on the land now?

(1) Farming [ ] (2) Building[ ] (3) Picking of wild fruits(shea nut ,dawadawa)[ ] (4)Gathering fuel wood[ ](5)Access to game[ ](6) Specify other…….[ ]

61. Have you lost any land as a result of ITFC's operations?

(1) Yes [ ] (2) No[ ]

62. How many acres have you lost as a result of the mango farm?.....……acres

63. Has the mango farm affected your prospects of finding commons resources on that land?

(1) Yes[ ] (2) No[ ]

64. If yes, explain

……

……

……

……

65. At what level?

(1) Highly affected [ ] (2) moderately affected [ ] (3) affected [ ] (4) not at all[ ]

66. Has your family member being an ITFC outgrower facilitated his/her access to agriculture-related inputs for his/her own food production?

(1) Yes [ ] (2) No[ ]

67. If yes, indicate these inputs.

(1) Organic fertilizers [ ] (2) Water [ ] (3) Inorganic fertilizers[ ] (4) High quality seeds[ ] (5) Pesticides[ ] (6) Other specify ..... [ ]

68. Provided an opportunity for him/her to learn new techniques of agriculture for his/her own food production?

(1) Yes [ ] (2) No[ ]

69. If yes, which types of techniques have been learned?

(1) New farm preparation methods [ ] (2) Preparation of organic fertilizers[ ] (3)Techniques for food conservation [ ] (4) Techniques for water conservation [ ] (5) Other……..[ ]

70. Provided an opportunity for him/her to access or use new agricultural technology for his/her own food production?

(1) Yes [ ] (2) No[ ]

71. If yes, which types of technologies can be accessed more easily?

(1) New farm preparation tools [ ] (2) Better fertilizer application technologies [ ] (3) Access to tractors for farm use [ ] (4) Technologies for food conservation [ ] (5) Technologies for water conservation[ ] (6) Other specify…….. [ ]

72. **Before** the introduction of the mango outgrower scheme by ITFC, what were your major livelihood activities?

Rank them in order 1= highest 2=high 3=moderate 4=low 5=lowest

(1) Crop farming [ ] (2)Livestock rearing [ ](3)Trading[ ] (4)Agro-processing[ ] (5) Others specify……[ ]

73. How will you rate the contribution of mango farming to your annual income?

(1) Very high [ ] (2) high [ ] (3) low [ ] (4) very low[ ] (5) none [ ]

74. How will you rate the contribution of mango farming to your annual expenditure?

(1) Very high [ ] (2) high [ ] (3) low [ ] (4) very low[ ] (5) none [ ]

75. What is your average monthly income from mango farming?……. GHC

76. What is your average annual income from mango farming?…….. GHC

77. How many persons in your household are employed in jobs created by ITFC?.....

Relationship	Age	Type of employment	Daily wage/ monthly salary

78. What is the nature of their employment?

(1) Temporary [ ] (2) Permanent [ ] (3) Part-time[ ] (4) Other specify

E. MEASUREMENT OF FOOD SECURITY

79. During the last 12 months, was there a time when you didn't have food and didn't have money to get more?

(1) Often true [ ] (2) Sometimes true [ ] (3) Never true[ ] (4)Don't know[ ]

80. Was there a time in the last twelve months you were unable to afford balanced and nutritious food?

(1) Almost every month [ ] (2) Some months but not every month[ ](3) only one or two months[ ] (4) DK [ ]

81. Was there a time you had to cut the size of your meals or skip meals because there wasn't enough money for food?

(1) Yes [ ] (2) No [ ]

82. If yes, how often did this happen?

(1) Almost every month [ ](2) Some months but not every month[ ]

(3)Only 1 or 2 months[ ] (4) DK[ ]

83. Did you ever eat less than you should because there wasn't enough money to buy food in the last twelve months?

(1) Yes [ ] (2) No[ ] (3) DK[ ]

84. Were you ever hungry but didn't eat because you couldn't afford enough food in the last twelve months?

(1) Yes [ ] (2) No [ ] (3) DK

Appendix 1.2: Focus group discussion guide for OMOA members

FOCUS GROUP DISCUSSION GUIDE FOR MANGO OUTGROWERS

This interview guide seeks to collect information on Women's access to land and the implications for their income, food security as well as their general wellbeing and their children. The information will be used to write a dissertation as partial fulfilment of the conditions for the award of MPhil Innovation Communication. Information given is confidential and interviewees will remain anonymous, and your identity will not be revealed unless with your permission. **THANK YOU**

A. Importance of Land

- Is land important to you? If yes, why? If not, why not?
- How is land important to: the quantity of food you get? the quality of food? the income you get? how well-fed you and your children would be?
- Other uses aside farming?

B. Access to land in general and before ITFC Acquisition

- How do you get access to land? (farming,building,etc…)
- What are the processes of land acquisition in this area?
- Which stakeholders are involved (corporations, chiefs, landlords, government, farmers, peasants, etc)
- How does your access to land support your livelihoods? Positive and negative (farming, sheanuts-picking, fetching wood, etc.)

C. Access to land after ITFC Acquisition

- Are there changes to your access or ownership after ITFC acquisition? (if so, what are the changes?)
- Is ITFC still operational in this community?

- How does this change affect your source of livelihood?
- What alternative livelihood sources do you engage in?
- How has ITFC land acquisition affected your access to forest, water and other common resources?

D. Impact of these changes on women's subordination or disempowerment

- In your view, how has ITFC land acquisition affected women access to; land for agriculture, common resources, food, balanced and nutritious food?

E. Corporate social responsibility

- Are there benefits to the community from the project? If yes, what are they?
- Mention any problems arising from the project.
- Mention what you would like the project to do for your community

Appendix 1.3: Interview guide for the key-informants of the study

INTERVIEW GUIDE FOR THE COMPANY'S REPRESENTATIVE

This interview guide seeks to collect information on Women's access to land and the implications for their income, food security as well as their general wellbeing and their children. The information will be used to write a dissertation as partial fulfilment of the conditions for the award of MPhil Innovation Communication. Information given is confidential and interviewees will remain anonymous, and your identity will not be revealed unless with your permission. **THANK YOU.**

A. General land acquisition process

1. When did the company first acquire land in this district and why was this district chosen?
2. How did you acquire the land and for how long and under what conditions?
3. Do you have branches outside the district?
4. How much land has been used for cultivation in this district?
5. What are the names of ITFC operational communities?
6. How much land has been acquired?
7. What was the land used for before it was acquired?
8. Did the project displace some people? If so, which people and how were they resettled?
9. What are your roles and responsibilities?

10. Do you have issues of community corporation?
11. Have you ever faced litigation issues?

B. Company's operations

1. What has the company planted and harvested in this district over these years?
2. What is the nature of the contract between the company and the outgrowers?
3. What are the names of the communities where the outgrowers are located?
4. How many outgrowers does the company have and what is their gender composition?
5. Has the project have any effect on forest, water and other common resources?

C. Labor and income

1. How many men and women from the district have gained temporary or permanent employment in the company?
2. What kind of work do they do and how much are they paid?
3. How many migrant workers (men and women) have gained temporary or permanent employment in the company?
4. What kind of work do they do and how much are they paid?
5. Are there any indirect employment benefits as a result of the project for men and women? What are they?

6. How would you describe the benefits of the outgrower scheme to?
    - The company
    - The outgrower
    - The household
    - The community
7. Mention any problems arising from the project