

**COMPARATIVE ANALYSIS OF GENDER ACCESSIBILITY TO
PRODUCTIVE RESOURCES IN GINGER PRODUCTION FOR POVERTY
ALLEVIATION IN KADUNA STATE, NIGERIA**

BY

**Hannatu Ohunene YUSUF
(PhD /AGRIC / 6103 / 2009-10)**

**A THESIS SUBMITTED TO THE SCHOOL OF POSTGRADUATE STUDIES
AHMADU BELLO UNIVERSITY, ZARIA, IN PARTIAL FULFILMENT OF
THE REQUIREMENTS FOR THE AWARD OF DOCTOR OF PHILOSOPHY
DEGREE IN AGRICULTURAL EXTENSION AND RURAL SOCIOLOGY**

**DEPARTMENT OF AGRICULTURAL ECONOMICS AND RURAL
SOCIOLOGY, FACULTY OF AGRICULTURE, AHMADU BELLO
UNIVERSITY, ZARIA, KADUNA STATE, NIGERIA.**

FEBRUARY, 2016

DECLARATION

I hereby declare that this thesis titled **Comparative analysis of gender accessibility to productive resources in ginger production for poverty alleviation in Kaduna State, Nigeria** has been written by me and it is a record of my own research work. No part of this thesis was presented in any previous application for another degree or diploma in this or any other institution. All borrowed ideas have been duly acknowledged by means of references.

Yusuf Hannatu Ohunene

Date

CERTIFICATION

This thesis titled **Comparative analysis of gender accessibility to productive resources in ginger production for poverty alleviation in Kaduna State Nigeria** by Hannatu Ohunene **YUSUF**, meets the regulations governing the award of the Degree of Doctor of philosophy in Agricultural Extension and Rural Sociology of the Ahmadu Bello University, Zaria, and is approved for its contribution to knowledge and literary presentation.

Prof D. F. Omokore
Chairman, Supervisory Committee

Date

Prof M. O. Akinola
Member, Supervisory Committee

Date

Prof Z. Abdulsalam
Member, Supervisory Committee

Date

Prof Z. Abdulsalam
Head of Department of Agric. Economics
And Rural Sociology

Date

Prof K. Bala
Dean of Postgraduate School
Ahmadu Bello University, Zaria.

Date

DEDICATION

This work is dedicated to my children and the entire family for their understanding and cooperation in the course of my research study. May Allah bless you all (Amin).

ACKNOWLEDGEMENTS

My profound gratitude goes to the Almighty Allah (Subhannahu Wa Ta'ala), The Merciful, Beneficent and helper of all mankind, for His abundant love, assistance and protection for seeing me through this programme successfully. I specially wish to express my deep appreciation and sincere gratitude to my supervisors namely: Prof. D.F Omokore, Prof. M. O. Akinola and Prof. Z. Abdulsalam and for giving assistance, close supervision, constructive criticisms, suggestion and pieces of advice that have aided the completion of this work.

My heartfelt gratitude and appreciation go to my dear husband Prof. D.D. Yusuf for his love, sacrifice and understanding; You are a darling. I also express my sincere gratitude to my parents Prof. A.R. and Hajiya H. Saliu for all the wonderful things they have done for me, right from my childhood till now. Both of you are really what parents should be, thank you for your support, concern and prayers. My warm appreciations are due to my children, brothers, sisters and every other members of the family. May Allah in His infinite mercy continue to protect you all. My sincere gratitude also goes to Dr. O. Yusuf for his wonderful contributions and concern for this work, you are truly a brother to me. Thank you very much and God bless you.

The concern and words of encouragement from Prof D. F. Omokore, Prof M.O. Akinola, Prof Z. Abdulsalam and all staff of Department of Agricultural Economics and Rural Sociology, Ahmadu Bello University, Zaria are highly appreciated. May Almighty Allah bless you all. I appreciate my colleagues and all those who contributed to this work one way or the other; thank you all and God bless.

My profound appreciation goes to the university Board of Research, Ahmadu Bello University, Zaria for giving me in-service training and with financial support. I am grateful.

Above all, I give thanks to Allah, The Almighty and The wise. May His peace and blessings be upon His Noble prophet Muhammed (SAW). His household, companions and followers (Amin).

TABLE OF CONTENTS

CONTENTS	Page
Title Page.....	i
Declaration.....	ii
Certification.....	iii
Dedication.....	iv
Acknowledgements.....	v
Table of Contents.....	vii
List of Tables	xii
List of Figures.....	xv
List of Abbreviations	xvi
Abstract.....	xvii
List of Appendix.....	150
CHAPTER ONE.....	1
INTRODUCTION.....	1
1.1 Background to the Study.....	1
1.2 Problem Statement.....	4
1.3 Objectives of the Study.....	6
1.4 Justification of the Study.....	6
1.5 Hypotheses of the Study.....	8
CHAPTER TWO.....	9
LITERATURE REVIEW.....	9
2.1 Socio-economic Characteristics of Farmers.....	9
2.2 Ginger Production in Nigeria.....	11
2.3 Concept of Accessibility.....	13
2.4 Concept of Gender	14
2.5 Gender Accessibility to Productive Resources.....	15

2.6	Agricultural Productive Resources.....	17
2.6.1	Land	18
2.6.2	Farm labour.....	19
2.6.3	Education.....	19
2.6.4	Information and extension.....	20
2.6.5	Financial resources.....	21
2.6.6	Technology.....	22
2.7	Factors Influencing Accessibility to Productive Resources.....	22
2.8	Effects of Accessibility to Productive Resources on Farmers Level of Living.....	25
2.9	Concept of Poverty	27
2.10	Perspectives on Poverty.....	30
2.10.1	The individualistic perspective	30
2.10.1.1	<i>Individual deficiencies perspective</i>	31
2.10.1.2	<i>Cultural perspective of Poverty</i>	32
2.10.2	Structural perspectives of poverty.....	34
2.10.2.1	<i>Structure of Economic, Political, and Social Discrimination perspective</i>	35
2.10.2.2	<i>Cumulative and Cyclical Interdependencies Perspective</i>	36
2.11.	Poverty Status in Nigeria	40
2.12.	Poverty and Gender Relations.....	42
2.13.	Measurement of Poverty.....	44
CHAPTER THREE		50
3.1.	Theoretical Framework.....	50
3.2.	Theory of Evolution.....	51
3.3.	Modernization Theory	52
3.4.	Dependency Theory.....	54
3.5.	Conflict Theory.....	55
3.5.1.	Women in development.....	59
3.5.2	Gender and development.....	63
3.6	Conceptual Frame Work.....	65
3.6.1.	Conceptual Model.....	66

CHAPTER FOUR	69
METHODOLOGY	69
4.1. General Description of the Study Area.....	69
4.2. Sampling Technique and Sample Size.....	74
4.3. Method of Data Collection.....	75
4.4. Analytical Techniques.....	76
4.4.1. Descriptive Statistics.....	76
4.4.2. Regression Model.....	77
4.4.3. Foster, Greer, and Thorbecke Model.....	78
4.4.4. Logit Model	79
4.4.5. Chi Square.....	80
4.5. Definition and Measurement of Variables	80
4.5.1. Independent Variables.....	80
4.5.2. Dependent Variable	82
4.5.3. Test of Hypotheses.....	83
CHAPTER FIVE	84
RESULTS AND DISCUSSION.....	84
5.1. Socio economic characteristics of ginger farmers.....	84
5.1.1. Age distribution of ginger farmers.....	84
5.1.2. Educational status of ginger farmers.....	85
5.1.3. Household size of ginger farmers.....	86
5.1.4. Income of ginger farmers	88
5.1.5. Farming experience in ginger production.....	89
5.1.6. Farm size.....	90
5.1.7. Extension contacts.....	91
5.1.8. Agricultural training	93
5.1.9. Membership of cooperatives.....	94
5.1.10. Types of occupations	95
5.2. Level of Gender Accessibility to Resources for Ginger Production.....	97
5.2.1. Test of Hypothesis i.....	103
5.3. Sources and Quantities of Resources Accessed by farmers.....	104

5.3.1	Land.....	104
5.3.2	Credit.....	105
5.3.3	Seeds.....	108
5.3.4	Fertilizer.....	110
5.3.5	Agrochemicals.....	113
5.3.6	Labour.....	116
5.3.7	Quantity of ginger produced.....	118
5.4	Factors Influencing Gender Accessibility to Resources	119
5.4.1	Factors Influencing Gender Accessibility to Labour Resource.....	119
5.4.2	Factors Influencing Gender Accessibility to Land Resource.....	122
5.4.3	Factors Influencing Gender Accessibility to Seed Resource.....	125
5.4.4	Factors Influencing Gender Accessibility to Fertilizer Resource.....	127
5.4.5	Factors Influencing Gender Accessibility to Agrochemical Resource.....	130
5.4.6	Test of Hypothesis ii.....	131
5.5	Farmers' Perception of Poverty.....	132
5.5.1	Farmers' perception on the consequences of poverty.....	136
5.6	Poverty Status.....	138
5.6.1	Poverty status of ginger farmers.....	138
5.6.2	Effect of accessibility to resources on the poverty status of ginger farmers...	141
5.6.3	Test of Hypothesis iii.....	142
5.6.4	Farmers monthly per capita expenditure	143
5.6.5	Factors influencing household expenditure.....	143
5.6.6	Respondents' acquired assets	145
5.7.	Constraints encountered by ginger farmers.....	147
 CHAPTER SIX		
	SUMMARY, CONCLUSION AND RECOMMENDATIONS.....	150
6.1	Summary.....	150

6.2 Conclusion.....	152
6.3 Recommendations.....	153
6.4 Contribution to Knowledge.....	155
REFERENCES.....	157

LIST OF TABLES

Contents	Page
Table 1: Major Producers of ginger in the world.....	12
Table 2: Poverty Level of Nigerians (1970-2010).....	42
Table 3: Distribution of Farmers in selected LGAs.....	74
Table 5.1: Age distribution of the ginger farmers.....	85
Table 5.2: Distribution of ginger farmers based on educational level.....	86
Table 5.3: Distribution of ginger farmers based on household size.....	87
Table 5.4: Distribution of ginger farmers based on income.....	88
Table 5.5: Distribution of ginger farmers based on farming experience.....	90
Table 5.6: Distribution of ginger farmers based on farm size and mode of acquisition.....	91
Table 5.7: Distribution of ginger farmers based on extension contacts.....	93
Table 5.8: Distribution of farmers based on source of training.....	94
Table 5.9: Distribution of ginger farmers according to membership of cooperative society.....	95
Table 5.10: Distribution of ginger farmers based on types of occupation.....	96
Table 5.11: Level of gender accessibility to productive resources.....	100
Table 5.12: Chi Square result based on the perception of ginger farmers on accessibility to resources.....	102
Table 5.13: t-Test result based on the difference in accessibility to resources among male and female farmers.....	104
Table 5.14: Distribution of ginger farmers based on the sources of credit.....	107
Table 5.15: Distribution of ginger farmers based on amount of credit received.....	108
Table 5.16: Distribution of the ginger farmers based on the of sources of fertilizer	111
Table 5.17: Distribution of ginger farmer based on the sources of agrochemical.....	115

Table 5.18: Distribution of ginger farmers based on access agrochemical.....	116
Table 5.19: Distribution of ginger farmers based on type of labour used.....	116
Table 5.20: Distribution of ginger farmers based on the quantity of yield obtained...	119
Table 5.21: Factors influencing gender accessibility to labour resource.....	122
Table 5.22: Factors influencing gender accessibility to land resource.....	125
Table 5.23: Factors influencing gender accessibility to seed resource.....	127
Table 5.24: Factors influencing gender accessibility to fertilizer resource.....	129
Table 5.25: Factors influencing gender accessibility to agrochemical resource.....	131
Table 5.26: Male farmers perception of poverty.....	135
Table 5.27: Female farmers perception of poverty.....	135
Table 5.28: Chi square result based on the perception of ginger farmers on poverty...	136
Table 5.29: Perception of male farmers on the consequences of poverty.....	137
Table 5.30: Perception of female farmers on the consequences of poverty.....	137
Table5.31: Chi square result based on the perception of ginger farmers on consequences of poverty.....	138
Table 5.32: Effect of accessibility to resources on the poverty status of male farmers	141
Table 5.33: Effect of accessibility to resources on the poverty status of female Farmers.....	142
Table 5.34: Distribution of famers based on monthly per capita expenditure.....	143
Table 5.35: Factors influencing household expenditure.....	145
Table 5.36: Distribution of the ginger farmers based on assets acquired.....	147
Table 5.37: Constraints encountered by Ginger Farmers.....	149

LIST OF FIGURES

Figure	Page
Figure 1: The vicious circle of poverty.....	37
Figure 2: A gender-aware approach.....	38
Figure 3: Conceptual model of accessibility to productive resources in alleviating poverty among ginger farmers	68
Figure 4: Map of Kaduna State Showing the Study Area.....	73
Figure 5: Distribution of farmers based on their accessibility to land.....	105
Figure 6: Distribution of farmers based on their accessibility to credit.....	106
Figure 7: Distribution of farmers based on accessibility to improved seeds.....	109
Figure 8: Distribution of farmers based on sources of seeds	109
Figure 9: Distributions of farmers based on quantity of seed accessed.....	110
Figure 10: Distributions of farmers based on access to fertilizer.....	111
Figure 11: Distribution of farmers based on quantity of fertilizer accessed.....	112
Figure 12: Distribution of male farmers on whether fertilizer is expensive.....	113
Figure 13: Distribution of female farmers on whether fertilizer is expensive.....	113
Figure 14: Distribution of male farmers based on access to agrochemical.....	114
Figure 15: Distribution of female farmers based on access to agrochemical.....	114
Figure 16: Distribution of farmers based on quantity of agrochemical accessed.....	115
Figure 17: Activities of male and female farmers in ginger production.....	118
Figure 18: Poverty Profile of male farmers.....	140
Figure 19: Poverty Profile of female farmers	140

ABBREVIATIONS AND ACRONYMS

- CBN: Cost of basic needs
- CSO: Central Statistical Office
- DAC: Development Assistance Committee
- FAO: Food and Agriculture Organization
- FEI: Food energy intake
- FGT: Foster, Greer, and Thorbecke
- GAD: Gender and Development
- IFAD: International Fund for Agricultural Development
- ILO: International labour organization
- KADP: Kaduna Agricultural Development Project
- MDG: Millennium Development Goals
- NAERLS: National Agricultural Extension and Research Liaison Services
- NGO: Non- Governmental Organisation
- NRCRI: National Root Crop Research Institute
- UNDP: United Nations Development Programme
- UNIFEM: United Nations Development Fund for Women
- UNPF: United Nations Population Fund
- WID: Women in Development
- WHO: World Health Organization

ABSTRACT

The broad objective of this study is to comparatively analyze gender accessibility to productive resources in ginger production for alleviating poverty in Kaduna State. Reconnaissance survey was conducted with the assistance of extension workers. A sample of 129 male and 121 female farmers were selected to give a total of 250 ginger farmers randomly selected from Kachia, Kagarko and Jaba LGAs. Primary data were obtained by the use of structured questionnaire that was administered to ginger farmers. Descriptive statistics, Regression model, Foster, Greer, Thorbecke and Logit models were used to analyze the data. The result showed the mean farm size of 2.7 and 1.79 ha were cultivated by the male and female farmers respectively. It was further discovered that about 58% of the male farmers had no contact with extension agents; likewise 73% of the female farmers had no contacts. The average farm income from ginger of the male was ₦190,415 while, income of the female farmers was ₦93,147. The average score of 3.8 obtained for men and 1.43 obtained for women in terms of their access to land indicates that women do not have access to land as men. The factors that had significant influence on gender accessibility to land resource in the study area were household size, income, cooperative association and access to credit. Result on farmers' perception of poverty, showed the mean score of 4.1 indicating farmers' agreement with the assertion that poverty is a state where by poor people are not regarded. The poverty incidence as shown by the headcount index was 40% for the males headed households while it was 68% among the female headed households. The logit result shows that accessibility to productive resources has effects on the poverty status of the farmers significantly at $P < 0.01$. Based on this, the null hypothesis which states gender accessibility to productive resources has no significant effects on the poverty status of ginger farmers was therefore rejected and the alternative hypothesis accepted. Cost of production and provision of credit facilities are the major challenges indicated by the farmers. Prices of ginger are discouraging and make ginger farming less attractive. Access to extension services is lacking in the study area, lack of good road and high cost of transportation prevents farmers from carrying their produce on time. It was recommended that extension services should be improved in the area especially to the ginger farmers to enhance their productivity which was found to be lower than the expected yield of the varieties being planted in the area. It is recommended that ginger farmers should be encouraged to organize themselves into viable groups so as facilitate the farmers' access to resources. Most of the ginger production constraints encountered by farmers will easily be over come through group efforts rather than individual effort.

CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

Everywhere around the world, agricultural production is central to the overall well-being of the populace. This is why different countries place high premium on

agriculture and strive to develop and protect the sector, thereby guaranteeing the sustainable food supply. In Nigeria, where over 75% of the population, mostly rural dwellers, are involved in agricultural activities, yet accounting for less than 5% of the foreign exchange earnings, the sector remaining largely subsistent and underdeveloped (Omotesho *et al.*, 2007).

The importance of agriculture cannot be over-emphasized as productive agriculture offers many benefits: food for domestic consumption, raw materials for agro-allied industries, employment that generates income, which in turn encourages other industrial, commercial service and export markets for foreign exchange earnings. Nigeria is endowed with flowing rivers with varieties of fishes, flora and a vast rich forest belt, fertile and cultivable arable land running into millions of hectares across different regions for livestock breeding and crop cultivations (Omotesho *et al.*, 2007).

Food and Agriculture Organisation (2008) record shows India produce 420,000; China 285,000; Indonesia 177,000 while Nigeria produced 138,000 tons of ginger. Among the crops predominantly cultivated for decades in Southern Kaduna is ginger and is one of the most economically beneficial crops in southern part of Kaduna state. Ginger (*Zingiber officinale R.*) cultivation in Nigeria dates back to 1927 and it is believed to have Asian origin. Ginger was introduced to Africa and the Caribbean by the colonial masters; and it is now cultivated throughout the humid tropics (KADP, 2000). Ginger is produced in six States of the federation of Nigeria, namely: Kaduna, Nasarawa, Benue, Niger and Gombe with Kaduna as the major producer. Ginger is a commodity that is highly valued in international markets for its aroma, pungency, high oleoresin oil content and also consumed as medicine, or spice. Nigeria produces and export good quality ginger; and contains less fiber which is generally preferred by Western

countries. Ginger is a cash crop that can alleviate poverty among the farmers if they are provided with the necessary productive resources.

Poverty alleviation in rural areas is significantly related to farmer's increased access to productive resources (Adereti, 2005). Improving access of small-scale farmers to productive resources is one of the best mechanisms for ensuring sustainable human development. Thus, efforts to build social capital among rural farmers are necessary for sustainable production through provision of facilitating resources (Flora, 2001). Improving the access of rural farmers to productive resources such as land, water and finance can play a significant role in enhancing farmers' productivity, food security, poverty reduction and sustainable development.

Generally, women play a crucial role in farming and it is estimated that about 60 percent of agricultural production activities are carried out by women in the continent of Africa. Women combine domestic works with subsistence farming, including fishing, processing and sales of agricultural produce. Nigerian women are largely engaged in many sectors of the economy. Women have been found to contribute 60 percent of labour force and produce 80 percent of food. A major concern is the fact that despite women's enormous contributions to agricultural production, their access to needed farm resources has been very low (Rahman, 2008). A body of empirical evidences from many different countries shows that female farmers are just as efficient as their male counterparts, but they have fewer resources, produce less resulting in low income.

As Nigeria faces the challenges of developing her agricultural communities, one of the most important areas of concern is the integration of women in agricultural development process (Koyenikan, 2010). By focusing on gender differences in resource

allocations, gender analysis attempts to highlight the differences between men and women in terms of opportunities, incentives and constraints. Access to resources is one of the elements of women's empowerment and a base for the attainment of the Millennium Development Goals (MDGs). Many international conferences have been held to improve rural women's equitable access to and control of land and other resources. The 4th World Congress of Rural Women, held in South Africa in 2007, reiterated the need to provide full and equal access for rural women to productive resources, including the right to inheritance and ownership of land, credit/capital, appropriate technologies, markets and information (Shahnaj, 2008).

Gender studies have proven to be an essential variable for analyzing the roles, responsibilities, constraints, opportunities and benefits in agriculture (Koyenikan, 2010). Gender gap is manifest in agriculture and this include among others, access to and control of resources (Danso *et al.*, 2004). Productive resources such as land, modern inputs, technology, education and financial services are a critical determinant of agricultural productivity (FAO, 2011). The lack of access to resources/inputs is an obstacle to agricultural growth in Africa. Thus, the central focus of this study is on gender differences in access to resources and the differential impact on the lives of men and women farmers.

1.2 Problem Statement

Agriculture can be practiced for either subsistence or commercial purposes and majority of the rural farmers in developing countries have limited access to agricultural resources particularly in Africa. People in rural areas rely heavily on their environment for most of their needs and are affected by the deterioration in the quality and quantity of these resources accessed (Taimi, 2003; Muruviwa, 2011). Ginger is widely cultivated as cash

crop in Nigeria; it was a major export crop up till the onset of petroleum exploration. High production of ginger from Kaduna State made Nigeria one of world producer of ginger, although export has declined (KADP, 2000).

Michael (2011) stated that ginger producers in Kaduna had problem of accessibility to productive resources and output was low. Rahman (2006) carried out a study in Kaduna State in which he observed that in order to encourage capacity building of farmers, their access to productive resources needs to be improved. Access to resources is essential to improving agricultural productivity of both men and women farmers. Improving productivity will depend to a great extent on ensuring that women farmers, as well as men farmers, have sufficient access to production inputs and support services. In essence, productive resources, is a key factor in eradicating hunger and alleviating rural poverty.

The incidence of poverty in Nigeria has always been high. However the severity varies over time. Among the apparent implication of poverty is a stagnant agricultural production and unemployment (Yusuf, 2000). All these combined increased the incidence and depth of poverty in the country. On a global level, Nigeria is ranked as one of the world's poorest countries by the Human Development Index. To date, the incidence of poverty is still pervasive and significantly high. That people are still poor today despite the global efforts, which started in 1948 to eradicate poverty, is an indication that there are obstacles which need tackling (Yusuf, 2000). It was reported by Phillip *et al.* (2005) that, in general reference to incidence of poverty in Kaduna State was pegged at 70%, however there is no further disaggregation of this information along sex lines. The report acknowledged the fact that women farmers may not have

had equal access to productive resources and that there is need for special support for women farmers.

There is dearth of gender disaggregated research and documentation data on ginger production and there has not been much study on poverty status of ginger farmers in the Northern Guinea Savanna of Nigeria in general and Kaduna State in particular. It is, therefore necessary to assess gender accessibility to resources among ginger farmers in Kaduna State; to establish benchmark for developing strategy for promoting gender equity in the accessibility to resources, involving ginger farmers in the area. This becomes imperative to conduct this research which answered the following research questions:

- i. What are the socio- economic characteristics of the male and female ginger farmers in the study area ?
- ii. What are the levels of gender accessibility to productive resources?
- iii. What are the sources and quantities of resources accessed by ginger farmers for ginger production?
- iv. What are the factors influencing gender accessibility to productive resources?
- v. What are the ginger farmers' perceptions of poverty?
- vi. Does gender accessibility to productive resources affects the poverty status of the ginger farmers?
- vii. What are the constraints confronting ginger farmers in the study area?

1.3 Objectives of the Study

It is in recognition of the importance of gender disaggregated data as well as the implications for subsequent agricultural development interventions that this study sets to achieve the following objectives. The broad objective is to comparatively analyze

gender accessibility to productive resources in ginger production for alleviating poverty in Kaduna State.

The specific objectives are to:

- i. describe the socio economic characteristics of the male and female ginger farmers in the study area;
- ii. determine the level of gender accessibility to productive resources in the study area;
- iii. identify the sources and quantities of resources accessed by the ginger farmers for ginger production;
- iv. determine factors influencing gender accessibility to productive resources;
- v. assess the ginger farmers' perception of poverty;
- vi. examine the effects of accessibility to resources on the poverty status of the ginger farmers and
- vii. elicit information on the constraints confronting ginger farmers in the study area.

1.4 Justification for the Study

Advancing the quality of life through development projects is a complex process involving many institutions and sectors. Development process requires that productive policies be adopted, rural development programs established and resources are made available. Research and development experiences have shown the importance of considering the gender of farm people in efforts to understand their behavior and improve the conditions of those in poverty (Ahearn, 2010). The central focus of the study is on gender accessibility to productive resources and the differential impact on the lives of men and women; to this end, this study would contribute to the existing data on gender-based information.

There are few or scanty literatures on comparative analysis of ginger producer's accessibility to productive resources in the study area. Hence, any research on gender analysis on ginger farmers is of great value. Thus, this study provided valuable information which would help to examine gender-based differences in access to resources to achieve sustainable agricultural production in the study area and Kaduna State in general.

Information from this study would go a long way to fill the gap of dearth of information on poverty status of ginger producers. This study also attempt to provide detailed empirical findings on the accessibility to productive resources and poverty status of ginger farmers in the study area. Furthermore, it is also hoped that information on both qualitative and quantitative obtained from this study would be a source of secondary data for researchers in the area of poverty with particular reference to gender studies. Subsequently, this research provides information that enlightens policy makers about the obstacles to farmer's productivity in the study area. Result obtained from this study would help in the formulation of appropriate gender responsive policies and projects to address the needs of poor men and women with a view of alleviating poverty.

1.5 Hypotheses

The hypotheses for the study are as follows:

- i. There is no significant difference in accessibility to productive resources among the male and female ginger farmers.
- ii. Socio economic and institutional factors have no significant influence on gender accessibility to productive resources.
- iii. Gender accessibility to productive resources has no significant effects on the poverty status of ginger farmers.

CHAPTER TWO

LITERATURE REVIEW

The purpose of this review was to summarize related studies carried out within and outside Nigeria that have relevance to this study. The review was presented under the following headings:

2.1 Empirical Studies on Socio-economic Characteristics of Farmers

Socio-economic characteristics focuses on identifying the capacity of individuals based on their characteristics such as, education, wealth, health status, access to credit, access to information and technology, formal and informal capital and political power. The socio-economic characteristics of farmers are mainly concerned with the social, economic and political aspects of farmers in any given society (Adger, 1999). The variations of these factors are responsible for the variations in socioeconomic characteristics of farmers usually found in studies. Thus, this section centers on review of general socio-economic characteristics of farmers from previous studies.

The socio- economic characteristics of farmers in a study carried out by Sabo (2006) shows that 52% of the farmers were within 31 and 40 years while those within 41 to 50 years of age were 28%. Olaleye *et al.*(2009) revealed that majority of the sampled farmers in their study were within the productive age of between 21 and 50 years, while only 8.6% of them were above 50 years old. Similarly, in the study of Ya aische *et al.* (2009) majority of the farmers fell within the age of 21-50 years, while about 40% of them were above 50 years of age. The level of formal education attained by an individual goes a long way in shaping his personality, attitude to life and adoption of improved practices. The educational levels of the respondents in the study of Sabo (2009) indicated that most of the respondents were “fairly” educated. In a similar vein,

Azadeh *et al.* (2009) observed that, when farmers were asked to report their highest level of education, approximately 37% of farmers had an elementary education and 8% had high school diploma and post high school education. Similarly, in the study of Ya aische *et al.* (2009) 48% of the respondents obtained secondary school education while, Olaleye *et al.* (2009) revealed that 65% of the farmers in their study did not have formal education especially the women.

In terms of years of experience, findings have shown that farmers have high farming experience. Sabo (2006) research finding for example, shows that the farmers had many years of practical experience on farming from 16 to 20 years. Similarly, reports of Ya aische (2009) and Mohammed (2011) shows that majority (40%) of the farmer had farming experience of 11 – 15 years while (17%) had farming experience of 16 -20 years. A lot of studies have shown the marital status of most farmers, to be married or widowed. Sabo (2006), study revealed that 90% of the respondents were married. Similarly, Olaleye *et al.* (2009) and Ya aische *et al.* (2009) revealed that majority of the farmers were married and they are responsible for their families.

According to Oladeebo (2003), large family size characterized a developing countries including Nigeria. He reported 85% of the sampled respondents household size ranged between 6 and 10 persons. In another study by Mahabub and Jaim (2011) the average family size of male farmers' household was found to be 6 while it was 5 for the female farmers. Although, they observed that the family size of both female and male farmers' household was of not much difference. This implies that the farmers will have to be responsible for the feeding, sheltering education, health care and other living expenses of their dependents.

2.2 Ginger Production in Nigeria

Ginger (*Zingiber officinale* Rosc.) is a plant of ancient cultivation and is presumed to have had an Asiatic origin; country of origin is not known with certainty. Ginger is a tropical monocotyledons herbaceous plant with leafy shoots and the plant resembles the common alligator pepper, which is often grown as a compound crop. The rhizome is thick, hard and palmate branch of about 15-25mm in diameter. The production of ginger in Nigeria started since 1927 and its cultivation started around Kwoi, Kubacha, Kafanchan and Kagarko areas of southern Kaduna State and around the neighbouring parts of Plateau State (KADP, 2000).

Ginger is grown as cash crop in Nigeria, mostly in the southern part of Kaduna State (Northern Nigeria) for export. Ginger requires a mean annual rainfall of 1,000mm that is well distributed over a period of six months. The crop requires supplementary irrigation where the rainfall is less than 800mm. Ginger may be grown at altitudes ranging from 0-800 meter above sea levels (Asumugha, 2002). There are two major varieties of ginger grown in Nigeria which differ in the colour of their rhizomes namely, the reddish and yellow varieties. The yellow variety appears to be widely planted than the reddish variety. According to Chukwu and Emehuite (2003), the various cultivars available include UG1 and UG2. The UG1 (locally called *Tafin giwa* meaning elephant's foot type) gives a higher yield than UG2 (*Yatsun biri* meaning monkey's finger type).

Nigeria produces an average of 50,000 metric tons of fresh weight ginger per annum and about 10% of the produce is consumed locally as fresh ginger while the remaining 90% is dried for both local consumption and export. Ezeagu (2006) also reported that about 20% of the dried ginger is consumed locally for various uses and about 80% is

exported. In the world market, the major five exporting countries have been China, Nigeria, India, Jamaica, and Brazil (Asumugha, 2002). Nigerian ginger is known to produce the highest quality essential oil mainly oleoresin. Among the spices (pepper, ginger, onions, and chilies), ginger is the only one that is grown on a commercial scale for export. In 2008, U.S. imports from Nigeria products such as rubber, cocoa, coffee and ginger constituted over \$70 million of U.S. imports from Nigeria (Food and Agricultural Organization, 2012).

Table 2.1: Major Producers of ginger in the world

Rank	Countries	Production (MT)
1	India	703,000
2	China	425,000
3	Nepal	255,208
4	Nigeria	156,000
5	Thailand	150,000
6	Indonesia	113,851
7	Bangladesh	72,084
8	Japan	55,000
9	Cameroon	41,000
10	Taiwan	37,500

Source: FAO (2012)

Traditionally, ginger is used in Nigeria for both medicinal and culinary purposes as well as in confectionery industry. When chewed, ginger stimulates the flow of saliva and when inhaled it tends to keep the nostrils open. Ginger is employed in treating colic to relax the condition of the throat against tonsillitis and indigestion. It is one of the earliest plants used as spices in food, in children's sweets and sauces. Locally, ginger rhizome is used in preparation of seasoned grilled meat (*suya*) as well as some local drinks like "*Kunu*" (NRCRI, 2004). Ginger in powdered form is used as a stimulant in tea, corn pap and some house wives use ginger powder in soup and stews in some parts

of Nigeria. Ginger is also used in brewing ginger wines, ginger beer, ginger ale, ginger bread, pudding biscuits and other beverages, as well as confectionaries. Dried ginger is used in spices industries, pharmaceutical and perfumery industries (Asummugha *et al.*, 2003).

2.3 Literature Review on Concept of Accessibility

Accessibility is the degree to which products, devices or services are available to as many people as possible. Accessibility is also viewed as the opportunity or right to experience or make use of resources (whether they have disabilities or not). In the context of agriculture, accessibility refers to the ability of farmers to reach or have the resources they need in order to meet their needs (European commission, 2003). Men and women, poor and rich, rural and urban, farmers and fishermen, need to have physical access to locations and facilities where they can avail over the goods, information and services required.

International labour organization (2003) defined accessibility as the ability and the level of difficulties people encountered to reach facilities and locations to use or obtain goods, information or services. ILO (2003) further states; the needs of people can be broadly grouped in three broad categories. First, those associated with basic needs such as water supply, energy and food security. Secondly, those associated with the social welfare aspects of life such as health and education. Thirdly, those associated with the economic welfare of rural life including agriculture, livestock, trading and cottage industries. The lack of access, limits the opportunities people have to improve and sustain their social and economic well-being. Improving access and reducing poverty are correlated; lack of access is perceived as one of the main underlying factors of poverty, particularly in rural areas. According to European commission (2003)

accessibility aims to foster growth, employment and social cohesion. This is because accessibility benefits everybody; it strengthens and promotes an active participation of people in economic and social life.

2.4 Understanding Concept of Gender

Gender is defined as a social construction and codification of the differences between the sexes and social relationship between women and men. The word gender does not look at the situation of women alone but the conditions of, and relationship between, men and women as well as how these relationships are structured along gender lines (Brettel and Sargent, 1993). Gender issues relate to all aspects of women's and men's lives, their different opportunities, access to resources and needs (CSO, 1997). Thus gender is not natural or divine but is culturally constructed and it permeates all levels of society. It can therefore be deconstructed, reconstructed and transformed by society. Gender roles, relations and identity are socially constructed through the process of socialization. Gender is therefore an inclusive concept which not only entails what men and women do in society and how they relate socially but also embraces cultural ideas about "maleness" and "femaleness" and the structural inequalities which emanate from those differences (Commonwealth, 1995 and Stolen, 1991).

Over the past years there have been major shifts in conceptual language which have led to a growing practice of using the term gender as a substitution for the word woman. Gender does not refer to women or men as is usually misconceived. On the contrary, the concept of gender refers to the relationship between men and women, the ways in which the roles of men and women are socially constructed and to the cultural interpretations of the biological differences between men and women (Suda, 2002). Gender roles are shaped by ideological, religious, ethnic, economic and cultural factors and these are key

determinant of the distribution of responsibilities and resources between men and women. Being socially determined, this distribution can be changed through conscious social action, including public policy (FAO, 2011).

The subject of gender is an increasingly important component of rural development policies all over the world. Gender enhancement requires policy measures to improve the conditions of both female and male farmers. At the same time, raising social awareness of people about the symptoms, causes and consequences of oppressive economic, cultural and religious practices is necessary for changing traditional gender roles and mindsets (Acharya, 2003).

2.5 Gender Accessibility to Productive Resources

Access is the right or opportunity to use, manage or control a particular resource. Resources may be economic (e.g. land and credit), political (e.g. participation in local government and community decision-making) and social (e.g. education and training). Productive resources are key factors in eradicating hunger and rural poverty. This has been restated in the framework of international commitments at World Food Summit (FAO, 2011). Access to resources is essential to improving agricultural productivity of both men and women farmers. Improving productivity will depend to a great extent on ensuring that women farmers, as well as men farmers have sufficient access to production inputs and support services. While both men and women smallholders lack sufficient access to agricultural resources, women generally have less access to resources than men.

In developing countries, women are represented in agriculture, producing up to 70% of foodstuffs in Sub-Saharan Africa, 50-60% in Asia, 46% in the Caribbean and 31% in

the Middle East (Daniel, 2009). There is an increased realization by government, donors and communities that, no meaningful development can take place unless women are granted access to all resources particularly in agriculture. Excluding women in rural development programmes underutilizes over half of the potential human capital. Years ago land was seen as a common property resource in many African societies, now there is an increasing shift to individual ownership resulting from the process of modernization and commercialisation. While this change is taking place it is observed that women farmers are being limited in having access to or ownership of land and other productive resources although they continue to do most of the farm work. Resources are the key considerations for rural livelihoods. Rural households negotiate their livelihoods by obtaining access to land, labour, capital, knowledge and market, which leads to enhanced and sustained family well-being (Valdivia and Gilles, 2001).

Access to resources is one of the elements of women's empowerment and a base for the attainment of the Millennium Development Goals (MDGs). Many international conferences have been held to improve rural women's equitable access to and control of land in recent years. The 4th World Congress of Rural Women, held in South Africa in 2007, reiterated the need to provide full and equal access for rural women to productive resources, including the right to inheritance and ownership of land and other property, credit/capital, appropriate technologies, markets and information (Shahnaj, 2008). The study of Shahnaj (2008) showed women's access to extension services and training, technologies, formal or informal institutions, land and inputs for production was limited. For instance, the respondents (87%) received a limited amount of credit from NGOs, co-operatives, money lenders and relatives, with a high rate of interest. The women were almost always excluded from loans from commercial banks because of lack of land ownership. The respondents reported that their access to institutional loans

was further restricted by their lack of education, confinement to household activities, lack of familiarity with loan providers and restrictions on their mobility. Almost half of the respondents (44%) had no opportunity to receive services from different extension agencies. As a result, they lack modern avenues of knowledge and information, new technologies and opportunities for training to increase their farm productivity and income (Shahnaj, 2008).

2.6 Agricultural Productive Resources

According to the World Bank (2002) agriculture is a source of livelihood for an estimated 86 percent of rural people. Agricultural sector productivity has contributed greatly to economic growth and the reduction of poverty. In the rural areas, agriculture has the capacity to reduce poverty by harnessing the productive capacity of the rural people's assets such as land, labour and providing opportunities of employment will enhance rural economic growth. Agriculture can be practiced for either subsistence or commercial purposes and the poor people with limited resources practicing agriculture is mainly for subsistence or consumption purposes.

It is estimated that for years to come the majority of the population living in developing countries will continue to be rural. To achieve, the target of poverty reduction set by the international community for the year 2015 will require particular emphasis on rural areas. People in rural areas rely heavily on their environment for most of their needs (the availability of natural and physical capital such as land, water, air, biological resources, livestock, irrigation canals, buildings and environmental services have made it possible for agriculture to be practiced) and are affected by the deterioration in the quality and quantity of these resources (Muruviwa, 2011).

Majority of the rural farmers have limited access to services such as health, agricultural services and good roads (Taimi, 2003). Endowed with a huge expanse of arable land, beneficent climate, streams, lakes, forests and grassland, Nigeria has a great potential to become the food basket of the West African sub-region (FAO, 2003). Despite this, the country is yet to achieve food self-sufficiency and poverty is on the increase. The World Bank's Development Report 2000-2001, highlights poverty in Nigeria and states that, the primary reason for being in poverty was the high cost of agricultural inputs; this was followed by lack of capital to expand agricultural business (Competitive Commercial Agriculture in Sub-Saharan Africa, 2007). According to Bhatta (2001) improving small scale farmers access to productive resources is one of the best mechanisms for ensuring sustainable human development. If the necessary attention is paid to agriculture and the needed investment made to develop the sector and its potentials fully harnessed, it will provide and guarantee amongst other things: alternative source of foreign exchange, poverty alleviation and place the economy on the path of recovering (The Guardian, 2009).

2.6.1 Land

Land is the most important household asset for households that depend on agriculture for their livelihoods. Access to land is a basic requirement for farming and control over land is synonymous with wealth, status and power in many areas. Strengthening farmer's access to, and control over land is an important means of raising their status and influence within households and communities (Allendorf, 2007). The evidence illustrating gender inequalities in access to land is overwhelming. Women across all developing regions are consistently less likely to own or operate land; they are less likely to have access to rented land, and the land they do have access to, are often of poorer quality and in smaller plots. Women represent on the average 5 percent of

agricultural land holders in the countries of North Africa and West Asia, sub-Saharan Africa on average of 15 percent and 30 percent in countries such as Botswana, Cape Verde and Malawi. In addition to being more likely to hold land, men also typically control larger land holdings than women (FAO, 2010f).

2.6.2 Farm labour

Labour availability depends on the amount of family labour that a household can mobilize and the amount of labour that can be hired in local labour markets (Behrman *et al.*, 2004). Female farmers may receive help from male relatives, but only after the men have taken care of their own plots. The fact that female farmers typically farm smaller plots may not compensate for the lower availability of family labour, consequently women cultivate smaller plots and achieve lower yields (Gilbert *et al.*, 2002). For example, among small-scale maize farmers in Malawi, females own less land but still use about 10 percent less total labour per hectare than their male counterparts and much of that labour is supplied by children. Depending on cultural norms, some farming activities, such as ploughing and spraying rely on access to male labour; without which women farmers suffers delays in their farms which may lead to low output (Takane, 2008). Holden *et al.* (2001) was also of the same view that female farmers in Ethiopia, where cultural norms require that ploughing be undertaken by men also obtained low yields because they have limited access to male labour.

2.6.3 Education

Human capital is a major factor in determining the opportunities available to individuals in societies and is closely linked to the productive capacity of households, their economic and social well-being. The level of human capital available in a household is strongly correlated with measures such as agricultural productivity, household income

and nutritional outcomes, all of which ultimately affect household welfare and economic growth (World Bank, 2007a).

Human capital accumulation is one asset category for which gender gap has clearly narrowed in recent decades, although progress has been uneven across regions. Significant gains have been made in primary school enrolment rates for girls and the difference between boys and girls has narrowed. Of the 106 countries committed to MDG 3 on gender parity in access to education, 83 had met the target by 2005. The education gender gap both in levels of enrolment and attainment remains widest in Sub-Saharan Africa and Southern Asia (World Bank, 2007b).

2.6.4 Information and extension

Good and timely information on new technologies is essential for farmers when deciding whether or not to adopt innovations. Public extension services remain the key source of information on new technologies for farmers in most developing countries. Extension services encompass the wide range of services provided by experts in the areas of agriculture, agribusiness and health to improve productivity and the overall wellbeing of rural populations. The provision of agricultural extension can lead to significant yield increase. Yet, extension provision in developing economies remains low for both women and men, and women tend to make less use than men of extension services. Women tend to have lower levels of education than men, which may limit their active participation in training that uses a lot of written material. Time constraints and cultural reservations may hinder women from participating in extension activities, such as field days, outside their village or within mixed groups (Meinzen-Dick *et al.* 2010). In social contexts where meetings between women and men from outside the

family nucleus are restricted, lack of female extension agents effectively bars women from participating (Doss and Morris, 2001).

2.6.5 Financial resources

Financial resources such as savings, credit and insurance provide opportunities for improving agricultural output, food security and economic vitality at the household, community and national levels. Many studies have shown that improving farmer's direct access to financial resources leads to higher investments in human capital in the form of children's health, nutrition and education. Farmers who are unable to cover their short-term expenses or who want to purchase more productive resources must rely on either credit markets or other credit sources. Without access to credit, farmers may be unable to bear the risks and up-front cost associated with the innovations and investment necessary to enhance their productivity, income and well-being.

Legal barriers and cultural norms sometimes bar women from holding bank accounts or entering into financial contracts in their own right. Women generally have less control over the types of fixed assets that are usually necessary as collateral for loans (Fletschner, 2009). The gender gap in access to credit is confirmed by evidences where the share of female-headed households that use credit is 9 percent smaller than the share of male-headed households (Dolan, 2004). Ellis *et al.* (2006) also observed that in Uganda, nearly all female headed households reported a desire to expand agricultural activities but lacked the money to purchase land and inputs such as seeds, fertilizer, pesticides, or to hire labour.

2.6.6 Technology

Access to new technology is crucial in maintaining and improving agricultural productivity. Gender gaps exist for a wide range of agricultural technologies, including machines, improved plant varieties, animal breeds, fertilizers, pest control measures and management techniques. The use of purchased inputs depends on the availability of complementary assets such as land, credit, education and labour, all of which tend to be more constrained for female-headed households than for male-headed households (Blackden *et al.*, 2006). Activity such as agriculture, working capital is required for purchasing inputs such as fertilizers and improved seeds; however, as discussed above, women face more obstacles relative to men in their access to credit (FAO, 2011).

Modern farming equipment such as tractors and tillers are not commonly available to farmer, especially in sub-Saharan Africa. The share of farmers using mechanical equipment and tools is quite low in all countries, but it is significantly lower for female farmers. In a more recent study of productivity differences by gender in a rice irrigation scheme in Central Benin, Kinkinginhoun-Médagbé *et al.* (2010) noted that equipment such as motor cultivators used for ploughing and transport were managed by groups, but women's groups were unable to start ploughing until the drivers had completed work on men's fields. Furthermore, lack of access to transportation technology often limits the mobility of women and their capacity to transport crops to market.

2.7. Factors Influencing Accessibility to Productive Resources

According to FAO report (2011) factors affecting accessibility to resources are rooted, to a great extent, in: gender-blind development policies, discriminatory legislation, traditions and attitudes, lack of access to decision-making, low literacy rates, discriminatory laws and practices regarding property rights, inheritance,

patriarchal control, marriage, access to financial services and information, lack of adequate social services (such as daycare, schools and health centers) in rural communities, membership in rural organizations, training and extension, and marketing services.

The study of Khalid (2003) indicated factors such as levels of income, gender, age, number of years of formal education, credit and awareness were found to influence individual chances in accessing productive resources. An increasing number of African farmers are finding themselves with insufficient land to feed their families, or worse still, no land at all. Traditionally, in Oromo culture, women had access to land only through marriage, and a widow's land is still the property of the husband (Addis *et al.*, 2001). A critical issue for smallholder agriculture throughout Africa is the shortage of good quality farm land. The increasing population pressures and fragmentation of holdings have sharply reduced cultivated area per person.

Historically, men gained access to land as lineage members, but in the majority of cases, women gained access as wives; in few cases, women inherited land as lineage daughters. Both men and women farmers are generally better off when they have the right to land. In Kenya and Nigeria for instance, a higher percentage of Male Headed Households and Female Headed Households obtained land through inheritance and purchase (Saito *et al.*, 1994). In some cases, legislation has affirmed women's basic right to land but customary practices and laws limit women's land rights. For instance, in many places in Africa: under customary law women were given access to communal or family land (although women often would be deprived of this access through divorce or widowhood). With the introduction of legislation

regulating ownership of land, title to land is generally given to the male head of household (FAO, 2011).

Credit availability increases the ability to invest and improve access to other productive inputs for improving farm productivity and returns. The high price of fertilizer and agro-chemical supplies (implies the need for more cash) and the non-availability of loans (as much as required) from the bank and informal credit sources are among the major factors influencing accessibility to productive resources (Addis *et al.*, 2001). Land is usually required as collateral for loans; lack of land title restricts the type of crops that may be grown. For instance, in Ghana only landowners are allowed to cultivate tree crops, such as cocoa, which can be important sources of cash income. This is a serious obstacle to improving women's agricultural productivity, as without credit women farmers are unable to buy inputs such as seeds, fertilizers, and improved technologies, or to hire labor (FAO, 2011).

The research finding of Khalid (2003) showed that, education plays a key role in sustainable human development and contributes to the empowerment of individuals and groups to improve the quality of their lives and years of formal education was significant because, it determines ones chances to accessibility of resources. Awareness on productive resources had a positive significant relationship with accessibility, implying that farmers who are aware of the availability of resources have better chances than those who are not aware. In another study by Kashuliza *et al.* (1998) pointed out that gender, the level of education and awareness of farmers on available credit facilities are important factors in determining accessibility to productive resources.

Members in rural organizations such as cooperatives, agricultural producers' organizations and farmers' associations are important. These organizations represent the interests of their members in relation to government, project management and development, policy makers and planners at different levels. Restricting female farmers' access to membership and leadership positions in these organizations by law or customs, their access to resources and their ability to make their views known to policy makers and planners is also restricted (FAO, 2011). Access to resources is sine qua non to improving agricultural productivity. Without secure land rights, farmers have little or no access to credit or the benefits of membership in rural organizations which are often conduits of agricultural inputs and services. Moreover, with no stake in the land or assurance of access to it, farmers have few incentives to engage in sustainable agricultural practices or to consider the long-term environmental impact of the exploitation of the land (FAO, 2011).

2.8 Effects of Accessibility to Productive Resources on Farmers Level of Living

Agriculture is underperforming in many developing countries for a number of reasons. Among these is the fact that farmers lack the resources and opportunities they need to make the most productive use of their time. Women are farmers, workers and entrepreneurs, but almost everywhere they encountered more constraints than men in accessing productive resources, markets and services. This “gender gap” hinders their productivity, reduces their contributions to agricultural sector and the achievement of broader economic and social development goals. Closing the gender gap in agriculture would produce significant gains for the society by increasing agricultural productivity, reducing poverty and hunger and promoting economic growth. Governments and donors have made major commitments aimed at revitalizing agriculture in developing regions,

but their efforts in agriculture will yield better results more quickly if they maximize the productive potential of women by promoting gender equality (FAO, 2011).

Research survey confirms that qualitative and quantitative resources in agriculture can improve agricultural productivity, with important additional benefits through raising the incomes of farmers, increasing the availability of food and reducing food prices. Closing the gap on agricultural land held by women could increase yields on their land to the levels achieved by men. This would imply an increase in production of 20–30 percent and increases at the national level proportionate to the amount of land controlled. This implies that countries where women control proportionately more land could achieve the greatest potential gains (FAO, 2011). Increasing farmer's access to land as well as complementary inputs would generate broader socio-economic benefits; increased production would also imply increased food availability and reductions in undernourishment. When women have more influence over economic decisions, they allocate more income to food, health, education, children's clothing and children's nutrition (Smith *et al.*, 2003).

Credit enables farmers to acquire more and efficient productive assets and hence contributes to the increase in productivity and incomes, thereby contributes to poverty alleviation (Khalid, 2003). More recent evidence from Malawi confirms that increasing farmers access to credit increases total household expenditures on food and improves the long term food security of children (Hazarika and Guha-Khasnobis, 2008). Poverty alleviation in rural areas is significantly related to increased access to productive resources. Improved gender equality in access to productive resources not only improve nutrition, health and education outcomes, but can also have a long-lasting impact on

economic growth by raising the level of human capital in societies (Adereti, 2005).

According to FAO (2011) giving women the same access as men to agricultural resources could increase production on women's farms in developing countries by 20 to 30 percent. This could raise total agricultural production in developing countries by 2.5 to 4 percent, which could in turn reduce the number of hungry people in the world. The potential gains would vary by region depending on how many women are engaged in agriculture, how much production or land they control. These have positive implications for immediate well-being as well as long-run human capital formation and economic growth.

2.9 A Review on the Concept of Poverty

Poverty may not be adequately defined for others to appreciate because it is a multifaceted phenomenon. Poverty defies objective definition because of its multi-dimensional nature. There is no universally accepted definition of poverty but World Bank defined Poverty as the inability to attain a minimum standard of living (Bankole *et al.*, 2008). According to Yusuf (2000) poverty cannot be defined simply in terms of lacking access to sufficient food. It is also closely associated with a person's lack of access to productive assets, services and markets. Without access to these, it is unlikely that production and income earning capacities can be improved on a sustainable basis. Thus, "poverty refers to forms of economic, social and psychological deprivation among people.

Poverty is related to food insecurity, access to assets, services and markets: income-earning opportunities; and the organisational and institutional means for achieving those ends (Ahmed, 2004). According to Sen (2001) poverty is a complex, multifaceted

concept that requires a clear analysis in all its many dimensions. The poor generally lack a number of elements such as access to land, health, justice, credit and other productive resources such as a voice in institutions and access to opportunities. Sen (2001) further explores the social, political and economic factors relating to economic inequality and poverty and concluded that a redistribution of resources, wealth, assets, and the ownership of the means of production can significantly reduce the incidence of poverty.

Generally, analysts tend to distinguish between relative poverty and absolute poverty. Absolute poverty is considered to be a situation where individuals or households are unable to meet their basic needs - food, shelter or clothing. In addition, they are unable to meet survival needs such as education, health care and self-determination leading to feelings of wide range of wants that cannot be easily quantified such as powerlessness, vulnerability and social exclusion (Obamiro *et al.*, 2003). According to Yusuf (2000) absolute poverty means misery linked to an insufficient resource base, lack of income, and high risk of failure. Absolute poverty relates to the inability to provide for physical subsistence to the extent of being incapable of protecting human dignity. In this respect, poverty is in terms of the distribution of the population based on a minimum subsistence income level. A person is therefore said to be living in poverty if he falls below such standard. This includes meeting the needs of food, clothing, shelter, portable water, health services, basic-education, public transportation and work. The inability of an individual to achieve these basic necessities of life subject him to poverty.

The relative poverty refers to the individual's or group's position in the hierarchies of class or inequalities, a dimension that is not captured by absolute poverty. Obamiro *et al.* (2003) is also of the view that relative poverty, concerns individual deprivation

measured relative to others in the society. When individuals cannot access goods and services enjoyed by fellow citizens it is unacceptable and is deemed to be a life threatening condition. Relative poverty holds that a person is poor if he has significantly less income and material wealth than the average person in his set community. In this sense, poverty is said to exist when the resources of the family or individual are inadequate to provide acceptable standard of living (Yusuf, 2000).

Subjective poverty is based on the responses of individuals on their perception of their economic position, access to resources or well-being. Subjective poverty is associated not only with insufficient income or consumption but also with insufficient outcomes with respect to health, nutrition, and literacy, and with deficient social relations, insecurity, and low self-esteem and powerlessness. Subjective poverty is based on individual opinions of what constitutes “minimally adequate” or “enough to get by.” As such, a subjective poverty measure requires individual perceptions of poverty (Geeta and John, 2004). Graff (2006) and Thomas (2002) maintain that an individual, who is unable to participate in activities that are customary or widely accepted in her/his society, would experience poverty.

People are poverty- stricken when their income, even if adequate for survival, falls behind that of the grade or categories which the community regards as acceptable. Worldwide, about 852 million men, women, children are chronically hungry due to extreme poverty; while up to 2 billion people lack food security intermittently due to varying degree of poverty (FAO, 2003). More than two-thirds of Nigerian people are poor, despite living in a country with vast potential wealth. Rural poverty is a very important issue in Nigeria that needs redress as over 90% of agricultural production is from the rural farming households with little access to productive resources (Obamiro *et*

al., 2003). Therefore, poverty in its narrow definition can be understood as a reflection of the inability of individuals, households or entire communities to command sufficient resources to satisfy a socially acceptable minimum standard of living.

2.10 Perspectives on Poverty

Poverty reduction is at the core of development policy-making and a key commitment of the international community. Poverty in developing countries is predominantly a rural phenomenon. Reducing poverty levels in the third world is still the most difficult development issue facing the international community (Muruviwa, 2011). Development efforts have been made and are being embarked upon by countries; the poor are targeted, and yet poverty remains a critical area of development concern. The IFAD Rural Poverty Report (2001) states that, of the 1.2 billion human beings who live in extreme poverty about three quarters live in rural areas. According to Khan (2001), the causes of rural poverty are complex, diverse and multi-dimensional. Aspects such as culture, climate, gender, markets and public policy are among the things contributing to rural poverty.

As there are different definitions and measurements of poverty, so also are different perspectives of poverty. According to Bradshaw (2006), the perspectives fall into two broad categories: the Individualistic and Structural perspectives of poverty.

2.10.1 The individualistic perspective

The individualistic perspective such as individual deficiencies and cultural perspectives sees poverty as the result of individual factors. In essence, most of these explanations focus on the people in poverty themselves.

2.10.1.1 *Individual deficiencies perspective*

The individualistic perspective explains poverty as a result of the attributes that are inherent in the individual; this includes the character of the person as well as his or her personal abilities in life such as intelligence. That is to say, people are poor in life because of their inability to compete with others for resources. As a result of this, they end up being caught up in poverty. Some people are born with the character of being lazy and as a result of that, they are not willing to participate meaningfully in life and depend on others for assistance in life (Rainwater, 1970). Gans (1995) and Islam (2005) states that the individualistic perspective explain poverty in terms of the behaviour and attitudes of the poor, and that, people are poor as a result of the fact that they do not work hard, lack of ambition or an inner motivation to work are among the causes of poverty.

The belief in individualism places much emphasis on individual's hard work and responsibility to acquire basic needs, including food, shelter and health care services. Rank (2004) also states that talent, virtue and hard work can lead to success and that individual poverty is an individual failing due to lack of motivation. The core premise of this perspective on the conditions leading to poverty is that, individuals seek to maximize their own well-being by making choices and investments. This implies that those who do not succeed must face the fact that they themselves are responsible for their failure (Asen, 2002).

However, this perspective has its own share of limitations in the sense that behaviors and attitudes alone cannot account for poverty. Individual's ways of life may be affected by external factors that can plunge him/her into poverty. The idea of blaming the person for his or her own poverty based on morality is considered as an ideology and is not applicable in helping to shape the discourse on poverty in this study. Also the

perspective is criticised on the basis that, people who might appear to have inherited the characteristics associated with poverty do not themselves become poor (Rank, 2004; Bourgois, 2001; Ahmad, 2001).

2.10.1.2 *Cultural perspective of Poverty*

The cultural perspective of poverty explains how poverty is created and maintained among some groups. According to this perspective, as observed by Lewis (1998), poverty is a specific syndrome that, manifest in some situations such as the absence of voluntary or state support and a stable family. The low income populations tend to cause development of cultural poverty against the dominant ideology of capitalism and accumulation. It was further stated that the poor realise that they have a marginal position within a capitalist society that is characterised by individualism, which prevents them from any chance or prospect for upward mobility and success. In order for the poor to survive, they must develop their own culture, institutions and agencies because the larger society tends to ignore or bypass them (Lewis, 1998). Lewis further argues that, poor people have a way of life or reflects a subculture that characterized attitudes, values and individual personality portraying fatalism, helplessness, dependency and inferiority.

This perspective suggests that culture of poverty is a subculture of poor people in ghettos, poor regions, where they develop a shared set of beliefs, values and norms for their behavior that are separate from the culture of the main society. Once the culture of poverty has come into existence it tends to perpetuate itself. The perspective presupposes that the poor has unique patterns of behaviour and priorities of values that distinguish them and these unique characteristics always cause them to be trapped by poverty. That is, a set of values are transmitted intergenerational through the process of

socialization and have become the sub cultural determinants of the lower socio-economic status of the poor. This leads to a cycle of poverty, and is only a few who are able to get out of the poverty cycle (Bradshaw, 2006).

The use of cultural perspective in explaining poverty is very important in development because, it helps in knowing how culture influences development. The importance of this is that, it gives an understanding of how poverty can be tackled by changing the value system and motivations in a given society, such as gender access to resources. Accordingly, people are poor because their values are embedded in personality traits which were acquired through the process of socialization. In order to tackle poverty in such an environment, there is the need to change the entire values of the people and incorporate into them, new set of values and motivations (Rank, 2004).

Critics of this perspective have pointed out flaws and the ways in which it has been interpreted and applied to society. The cultural perspective of poverty assumes that culture itself is relatively fixed and unchanging, that once a population exists within the culture of poverty, no amount of intervention in terms of poverty alleviation will change the cultural attitudes and behaviors held by members of that population. Thus, public assistance to the poor, in the form of welfare or other direct assistance, cannot eliminate poverty, since poverty is inherent in the culture of the poor. Following this reasoning, the cultural perspective of poverty shifts the blame for poverty from social and economic conditions to the poor themselves. Critics have attempted to show that real world data do not fit Lewis' model. Bourgois (2001) and Ahmad (2001) states that, individuals are not necessarily to be blame because they are victims of their dysfunctional subculture or culture. For instance, in most developing countries, there is

a patriarchal system of social setting. In this tradition, men hold the sovereign power to control households and society as a whole, while women are ascribed to a lower hierarchy compared to men. The deprivation of women socially, legally and politically aggravates their positions and they are subordinated in the society. Thus, the lack of women's equal participation in economic activities hampers their development process.

Similarly, Rank (2004) noted that capital/resources can have major effects on an individual's risk of poverty or success. He further indicated that capital/resources significantly affects people's earning, and consequently lack of capital/resources can place an individual at risk for poverty. Individuals with greater capital/ resources are more likely to be competitive in the labor market than those who lack resources. In spite of the usefulness of this perspective, it also has some flaws in the sense that the application of the model was only limited to developing countries. Lewis (1998) asserts that poverty is mostly likely to be found in developing economies. This assumption does not hold since poverty is also prevalent in developed countries as well. Poverty is a global phenomenon and therefore, it is not limited to Third World or developing countries alone but also some developed countries are still battling with the issue of poverty.

2.10.2 Structural perspectives of poverty

The structural perspectives, such as political-economic distortions, cumulative and cyclical, examine how certain arrangements in the society are responsible for consistent poverty among some groups. From the structural perspective, the poor manifest certain patterns of behavior which are not internally generated as a result of their unique values but their actions are influenced by external factors as a result of their occupying an unfavourable position in a restrictive social structure. For instance, economic growth,

labour market opportunities, educational facilities in a country provides a framework in which the standards of living as well as the social relations of people are always created and recreated. The structures that are inherent in the society including the organisation of social relations such as race, gender, class and power determines the fate of people. In other words, Poverty is a result of the social system (Robertson, 1983).

2.10.2.1 *Structure of economic, political, and social discrimination perspective*

This perspective does not consider the individual to be the source of their own poverty situation, but the economic, political, and social system, which makes people to have limited opportunities and resources with which to achieve income and improved well-being. Bradshaw (2006) stated that, people are poor because they have limited resources, as well as limited access to opportunities compared to the wealthy. The social system is structured such that it favours some group to succeed and limits other group access to resources.

In essence, the economic system is structured in such a way that poor people fall behind regardless of how competent they may be. This is particularly true of rural farmers (both female and male) who are noted to be competent and hard working to make ends meet. Despite this, farmers experience difficulties in accessing productive resources such as loan and fertilizer. These and related economic system has created increasingly difficult problems for those who want to work. A parallel barrier also exists with the political system in which the interests and participation of the poor is either impossible or is deceptive (Quigley, 2003). Ensuring equal access of men and women to agricultural resources, services and opportunities for employment would boost agricultural production, food security, economic growth and the well-being of families,

communities and countries. Social structures which are flawed should be radically transformed and a redistribution of resources, wealth, assets, the ownership of the means of production can significantly reduce the incidence of poverty (Bradshaw, 2006).

2.10.2.2 *Cumulative and cyclical interdependencies perspective*

Cumulative and cyclical interdependencies builds on components of each of the other perspectives discussed above. This has its origin in the work of Myrdal (1957), who developed “interlocking, cyclical interdependence within a process of cumulative causation” used to explain economic underdevelopment. This tends to look at the individual and their community as caught in a spiral of opportunity and problems and that, once problems dominate, it closes other opportunities and create a cumulative set of problems that makes any effective response nearly impossible (Bradshaw, 2000). The cyclical explanation explicitly looks at individual situations, the vicious circle of poverty starts with (A) a poor person cannot pay for adequate supply of food, (B) is physically weak, (C) cannot work efficiently, (D) unable to earn much money and (E) remain poor. The circle (A) starts all over again with a situation where the person does not have money to get nutritious food (B). This process goes on and on as depicted below.

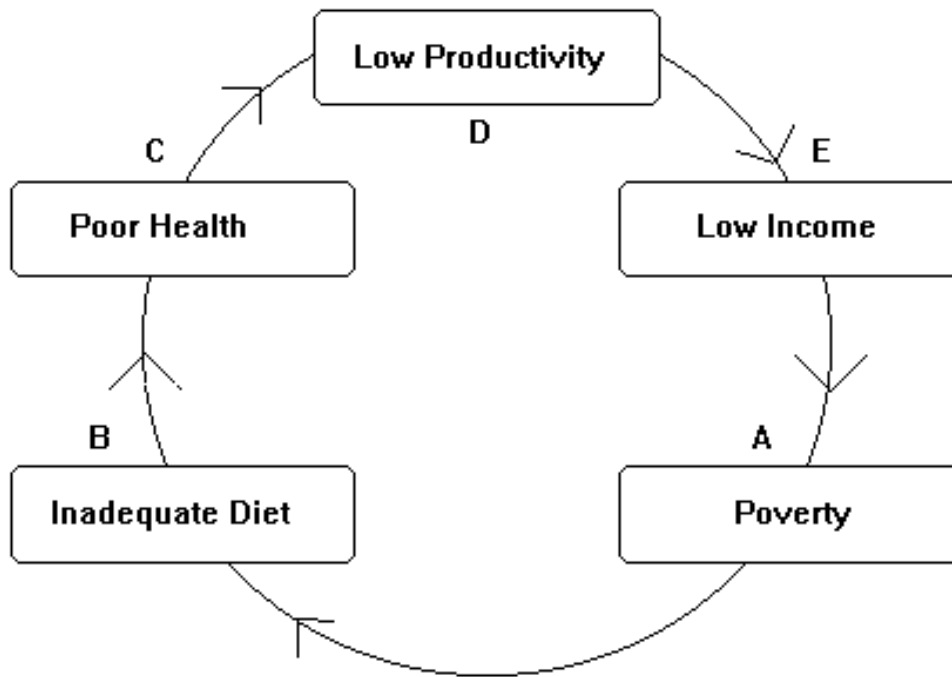


Figure 1: The vicious circle of poverty (source; Barke and O'Hare, 1991)

Thus, the interdependence of factors creating poverty actually accelerates once a cycle of decline is started. For example, at the individual level, lack of productive resources leads to low productivity of farmers. The lack of employment leads to lack of consumption and spending due to inadequate incomes and savings, which means that individuals can not invest, which leads to health problems and the inability to afford preventive medicine, good diet, and a healthy living are reasons the poor fall further behind. People who lack ample income fail to invest in their children's education, the children learn in poor quality schools and they fall further behind (Bradshaw, 2006).

There have been some criticisms raised against the model above. For example, Eriksson and Carlberg (1995) argued that, the model is inadequate for the explanation of poverty and underdevelopment. The model does not explain why the person is poor or what the cause of their poverty is. Social conditions are not taken into account and the vicious circle of poverty does not tell one anything about how an individual or a country can

break out of the circle. Thus, this study finds the vicious cycle inadequate in accounting for gender poverty. This means that, there are other factors affecting low productivity than poor health and inadequate diet. The factors believed to be the causes of poverty are not as simple as the model implies. The factors behind the situation of poverty the individual is in, is on a higher level than what the model suggests. In order to find the causes of poverty, one must study poverty in a much broader perspective, therefore the need to modify the model to gender-aware approach.

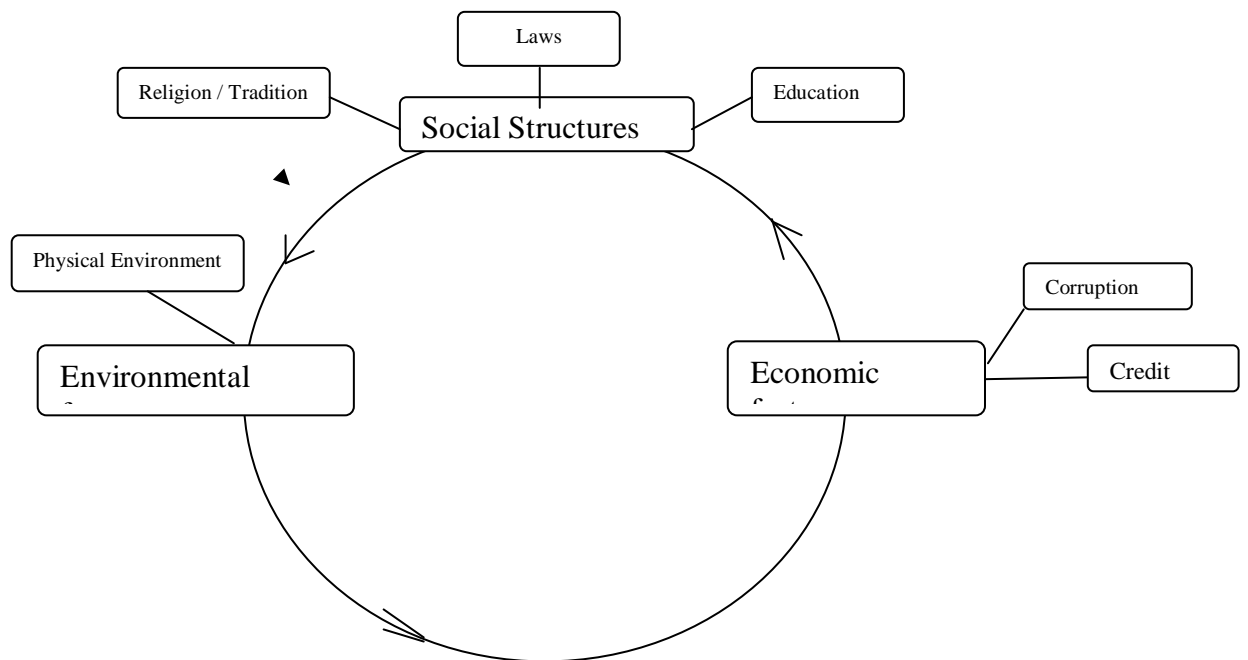


Figure 2: A gender-aware approach. Adapted from Eriksson and Carlberg (1995)

Religion and tradition puts women subordinate to men in societies where, women have low status in society and she is not often allowed to decide on matters. In poor societies, women are supposed to do work outside her home as well as inside her home to contribute to the family's income. The fact that women are considered to be less worthy than men makes their opportunities in life much more limited than for men. The laws in Nigeria constitute equal rights between men and women as citizens of the country.

However, traditions are so strong; it becomes very hard for women to exercise their rights. The social structures set the norms of behaviour in a society. Nigeria is a patriarchal society where the social structures give women a low status and thereby influence the accessibility of resources which are unevenly spread. Women have less access than men to resources such as money, land and education (Eriksson and Carlberg, 1995).

Lack of education also has an important effect on farmer's life, particularly women. There is a causal relationship between education and poverty. Poor people are sometimes unable to satisfy basic needs such as education. The lack of education diminishes individual and national capabilities, hence perpetrating poverty. Therefore, Formal education of good quality widens the horizons of the poor, increases their opportunities for future employment, and help to achieve upward social and economic mobility; as such, it breaks different aspects of the cycle of poverty.

Many farmers in the rural areas are self-employed and earn their money either from selling goods they have bought or goods which they have produced themselves. Farmers need credit, and it is a major problem for farmers to get access to credit. Corruption is another economic factor and largely affects the poor, who are mostly smallholder farmers. Babatunde and Boluwade (2004), noted that one major problem of farmers is high cost and unavailability of fertilizer which made government to subsidize the product. Only a small portion of the government's subsidized fertilizer meant for smallholder farmers actually reaches the poor. The rest of the fertilizer is sold in the market at prices that the smallholder farmers cannot afford. As a result, corruption weakens the environment and prevents individuals from overcoming poverty.

The physical environment in rural areas is not satisfactory for the rural dwellers. Most of the roads in the rural areas are not motorable for ease of transporting agricultural goods. Sanitation, water supply and sewage are other problems in these areas which increases the risks of diseases and ill health. The deplorable nature of rural areas could probably make farmers spend a lot of extra expenditure for medical costs and hospital bills. To overcome poverty and gender equality, it is not enough to take action on only one specific place in the circle because of its complex web of factors. For example if credit alone is provided, the aim of alleviating farmers out of poverty would not be fulfilled. Credit by itself is not enough to break the vicious circle of poverty, other factors are also as important as credit. To put in resources and actions in all the three groups of factors presented, is a start on the way towards getting families out of poverty. The causes and outcomes of poverty are complex and multidimensional, they encompass aspects of economic, social and political and religious institutions. Poverty, then, is not merely a function of material conditions but also reflects the role of institutions.

2.11. Poverty Status in Nigeria

Nigeria is blessed with many natural resources like bauxites, gold, tin, coal, petroleum, tin, forest, water and land. Poverty level in the country still contradicts the country's immense wealth as over 70% of the people wallow in absolute poverty with no food, clothing or shelter (Obayelu, 2005). The country has the largest mangrove forest in Africa and the third largest in the world, covering a total of 1000km² along the West Atlantic Coast of Africa between Badagry and Calabar (Ekeke, 2003). In year 2002, the United Nations Development Programme (UNDP) ranked Nigeria as the 26th poorest nation in the world (The Guardian, 2002; Dike, 2002). In the midst of plenty, and till today, the country has not found her ways back in successfully reducing poverty.

The poverty incidence in Nigeria increased from 67% in 1996 to 75% of the population in 2004 (FOS 2004). Furthermore, the distribution of poverty by occupational category indicates that 67.4% of the poor in Nigeria were in agriculture. In Nigeria, nearly 75% of the country's populations live in rural areas where poverty has been on the increase. Of the total rural population, 65% are directly or indirectly linked with agricultural sector. The incidence of poverty which was 63.3% in rural areas was 42.3% in urban in 2004. Consequently, poverty in Nigeria is regarded as a rural phenomenon. The Human Development Index (HDI) of UNDP (2005) placed Nigeria 142nd among 174 countries in 1997 and she dropped to 146th position in 1998 putting her among the forty poorest countries.

Poverty is one of the most serious problems in Nigeria. Despite various efforts of Governments from independence to date, poverty among the people of Nigeria has been on the increase. Statistical data (Table 2.2) available indicates that in 1970, the poverty level in Nigeria covers about 19% of the population, and by 1980 it grew to 27.2%. In 1985, the poverty level was 46.3% and it dropped to 42.7% in 1992. In 1996, the federal office of statistics estimated the poverty level in Nigeria at alarming rate of 65.6% (Ajayi *et al.*, 2008).

Table 2.2: Poverty Level of Nigerians (1970-2010)

Year	Poverty level (% of population)	Population in poverty	Estimated total population (millions)
1970	19	12.7	66.8
1980	27.2	20.9	77
1985	46.3	37.8	81.6
1992	42.7	39.3	91.5
1996	65.6	67.1	102.3
2002	54.2	59.7	110
2004	57.8	75.2	130.2
2010	69.0	112.5	163

Source: NBS (2012)

As noted by Omotola (2008) and UNDP (2010), Nigeria is richly endowed and the country's wealth potentials manifest in the forms of natural, geographical, and socioeconomic factors. With these resources, Nigeria should rank among the richest countries of the world. This is a very tragic situation when one considers the over \$300 billion in oil and gas revenue Nigeria has had since independence.

2.12. Poverty and Gender Relations

This section sheds light on the relationship between gender inequality and poverty. Gender research with particular relevance to poverty is that, which has concentrated on 'women's empowerment'. Since the early 1990s, the term 'empowerment' has become widespread within the gender and development lexicon, particularly those relating to poverty reduction. One of the most common objectives is to enhance women's capacity to make choices, which is often envisaged as best achieved through raising their access to resources. Poverty results from limited or no access to basic infrastructure and services, and is exacerbated by people's lack of access to productive resources such as land, credit, and also the lack of other resources needed for sustainable livelihoods (UNDP, 1995; UNIFEM, 2000).

Poverty can be structural/chronic or transient and historically, women have carried a heavier burden of both forms of poverty. Structural poverty is rooted in socio-economic, political and cultural institutions and is experienced over the long term and is often transferred intergenerational. A typical example is provided by the majority of rural populations in developing countries with little or no access to land and other productive resources, facing chronic underemployment. Gendered dimensions of structural poverty are often rooted in a legal and cultural framework which denies women access to productive resources. In contrast, transient poverty is due to cyclical or temporary factors and is experienced over shorter periods of time. Typical examples include poverty induced by macro-economic policy shifts such as those experienced under economic reform programmes, natural disasters, cyclical unemployment and inflation. It is important to note that structural and transient poverty often co-exist and is not mutually exclusive (Ni lüfer, 2010).

Women are more vulnerable to chronic poverty because of gender inequalities in the distribution of income, access to productive inputs such as credit; command over property, control over earned income, as well as gender bias in labour markets. Resource allocation is often gender-biased within households as well as in state and market institutions. It is often stated that labour is poor people's most abundant asset, but women do not always have full control over their own labour or the income they earn. Men may forbid their wives from working outside the household making it harder for women to *transform* their capabilities into incomes or well-being (Kabeer, 1996). Women often carry the heaviest burden of transient poverty by virtue of their reproductive roles and household division of labour. Economic reforms have intensified women's workloads by increasing their participation in formal and informal labour markets.

Women often assume the responsibility of ‘making ends meet’ and they do so by taking on several jobs, in both the formal and informal economic sectors, simultaneously. In short, women have assumed the ‘safety net/cushion’ role under harsh socio-economic adjustments. While gender inequalities may likely lead to poverty of families, communities and nations from one generation to the next, they also have an impact on growth performance and therefore have direct and indirect consequences on poverty and poverty reduction. In many developing countries, especially the patriarchal societies, men and women do not enjoy equal rights. Enjoyment of opportunities and allocation of resources are based on gender. Gender inequality is generally manifested in unequal rights for women on access to basic social services, unequal opportunities for participation in political and economic decision-making, nationally and at the household level; unequal rights for equal work, and higher poverty rates (Ni lüfer, 2010).

2.13 Measurement of Poverty

Measurement of poverty is usually by income or expenditure per capita, to show the level of deprivation. According to Nolan and Whelan (1996) the absolute thresholds are defined on the basis of the amount of money needed to secure a minimum standard of living). Conversely, relative income measures set the threshold at a certain percentage of median or mean income (usually 50 or 60%), assuming that those falling below such threshold are unlikely to be able to fully participate in the life of the society (Aloysius and Paul, 2008). Similarly, World Bank stated that level of poverty is measured in terms of basic consumption needs or income required to satisfy those needs (May, 2000).

May *et al.* (2000), was of the view that poverty should be measured in different ways. On one hand objective social indicators such as income levels, consumption expenditures, and housing standards, together with subjective indicators, such as

attitudes, needs and perception of social conditions, can be used to determine levels of poverty and inequality. In other words, factors such as health, welfare and human rights are determinants of well-being, whereas the availability of shelter, health care, education facilities and income are factors that define access to those determinants of well-being.

It can be argued, that the inclusion of further indicators of well-being, such as low achievement in education and a severe minimised health standards, as well as people's vulnerability, voicelessness and powerlessness are necessary to measure all facets of poverty as it is experienced by poor people. This is underlined by the understanding that poverty is a reflection of 'pronounced deprivation of well-being. However, the societal and individual understanding of a socially acceptable minimum standard of living, as well as indicators of well-being, differ from country to country and is not a static definition.

According to Ben (2000) one approach of measuring poverty is to measure the standard of living by establishing a poverty line that delineates the poor from the non-poor. There are several methods for estimating the poverty line under the absolute poverty approach. The most popular are the food energy intake (FEI) approach and the cost of basic needs (CBN) approach. The FEI involves fitting a regression of the cost of a basket of commodities consumed by each household (food expenditure) on the calorie equivalent implied by the basket (calorie consumption). The estimated coefficients are then applied to the calorie requirements to derive the poverty line. The method automatically includes an allowance for non-food basic needs consumption. The advantage of this method lies in its non-reliance on the need for price data, which can be very problematic in most developing countries.

The CBN approach considers poverty as a lack of command over basic consumption needs, and the poverty line as the cost of those needs. The CBN method suggested by Ravallion and Bidani (1994) involves setting the basic food basket, using the nutritional requirements. The composition would need to reflect local basket of foods and the observed diets of the poor people, and then cost the baskets at local prices to get the food poverty line. Both methods (EFI and CBN) are anchored on estimating the cost or attaining a predetermined level of food energy or calorie intake. Another method takes a portion of mean income as the poverty line. Once the basic measurement is determined, it is necessary to express overall poverty in a single index; the most common of these is the head-count ratio, which is the proportion of the population that is poor. This ratio has been criticized as being more concerned with the numbers of the poor than the severity of poverty; that is, it treats all the poor equally, whereas not all the poor are equally poor (Ben, 2000).

One set of measures that have been found to be appropriate are those proposed by Foster, Greer, and Thorbecke (1984). Researchers such as Ben (2000), Ibrahim and Umar (2008) and Segun (2010), have used the Foster, Greer, and Thorbecke (FGT) model in their study of poverty in Nigeria. The FGT measure was based on a single mathematical formula as follows:

$$P_{\alpha} = \frac{1}{n} \sum_{i=1}^q \left(\frac{z - y_i}{z} \right)^{\alpha} \dots\dots\dots(1)$$

Where; α = the FGT parameter, which takes the values 0, 1 and 2. If $\alpha = 0$, it gives the Headcount Ratio (Poverty incidence), describing the proportion of the population that falls below the poverty line. If $\alpha = 1$ it gives the normalized poverty gap. This index gives a good measure of the extent or intensity of poverty as it reflects the distance the

poor are from the poverty line. When $\alpha = 2$ in FGT, it indicates the Poverty Severity Index. This index has the advantage of reflecting the degree of inequality among the poor, in the sense that the greater the inequality of distribution among the poor, the higher is P_2 .

n = the total number of individual in reference population.

q = the number of individuals below poverty line.

z = the poverty line.

y_i = the per capita income/expenditure of households.

However, Oriola (2009) acknowledges that income is an inadequate measurement of welfare. This is because many forms of deprivation that poor people experienced are not captured by income. Sen (1983) is also of the view that, studies of poverty should focus on people's functioning and capabilities rather than on narrow income or consumption based indices of poverty as propounded by earlier researchers and institutions like the World Bank. The incorporation of non-monetary aspects, such as powerlessness and isolation, vulnerability to a sudden dramatic decrease in consumption levels, ill-health and physical weakness, social inferiority, and humiliation are significant in their own right and are also essential analytical components for the understanding of poverty.

Development Assistance Committee (DAC) (2001) reports that poverty encompasses different dimensions of deprivation that relate to human capabilities, including consumption and food security, health, education, rights, voice, security, dignity, and decent work. Similarly, Segun (2010), states that measuring poverty is a matter of identifying the essential causes of poverty in a given society. Is it widespread and affects the majority of the population or is it locally concentrated? What are its roots? Is it a traditional syndrome or does it result from economic and technological changes?

What are its main features? And who are the poor in terms of some essential characteristics? This overall information on poverty syndrome is the key element for adopting measurement instruments that seem the most appropriate to a specific context in terms of social reality and data gathering possibilities.

Alkire (2002) is also of the view that, poverty is no longer confined to the lack of the ability of individuals/households to command sufficient resources to satisfy their basic needs nor considered as a mere economic and monetary dimension, but rather increasingly considered as human deprivation in various life domains. This deprivation from the multidimensional perspective includes both quantitative and qualitative measures such as the joy of choices, opportunities and others which are most basic to human development and can paint quite different pictures of the poverty situation in any given country. In conclusion, poverty has been viewed by different scholars as multi-dimensional and caused by many different factors. In simpler terms, it depicts the deprivation of individuals and households of the essential basic needs of life.

It was noted from this section that, to avert poverty and its consequences, rural people should have access to capital assets that allow them to engage in livelihood activities to improve their well-being or status of living. Conclusively, people's assets and capabilities influence their poverty in the short- and long-term, including their ability to withstand economic and other shocks. As further articulated by UNPFA (2002), People's health, education, gender relations and degree of social inclusions all promote or diminish the prevalence of poverty. Escaping poverty depends on improving personal capacities and increasing access to a variety of resources, institutions and support

mechanisms which if fully utilized would be able to eradicate or minimise poverty. This study adopts the relative approach in measuring poverty.

CHAPTER THREE

THEORETICAL FRAMEWORK

This chapter focuses on the theoretical framework for the study. Research works have multiple perspectives to it and one cannot focus on all the viewpoints simultaneously. There is the need to put forth a logical structure that the research will follow by setting down the broad areas that will be covered. This is called the framework of the research. The research framework, essentially, helps the researcher retain a sharp focus on the work. For any topic to be researched, there are certain theories associated with it. These theories are generalized observations or well-established theories propounded by earlier researchers.

3.1 Theoretical Framework

A research framework based on theory is called a theoretical framework and consists of interrelated coherent sets of ideas and models. It establishes the vantage point or perspective through which the researcher views the problem. According to Adedoyin and Adeokun (2004) theoretical framework means a broad system of explanation or structure that is used for supporting a finding of any research work. Thus, theoretical framework is a compilation of thoughts and theories on a research problem. It provides a particular perspective or lens, through which to examine a problem.

Basically, human societies are not static but dynamic in nature. As societies develop (changes), it involves the reorganization and reorientation of entire economic and social systems. In addition to improvements in incomes and output, development typically involves changes in institutional, social, and administrative structures and, in many cases, even customs and beliefs (Todaro, 2012). Development is understood as a social condition within a nation, in which the needs of its population are satisfied by the

rational and sustainable use of natural resources. This general definition of development includes the specification that social groups have access to organizations, resources, basic services such as education, housing, health and nutrition. There are several theories that have been used to explain development such as Evolutionary, Modernization, Dependency and Conflict theories.

3.2 Theory of Evolution

Socio cultural evolution can be defined as the process by which structural reorganization is affected through time, eventually producing a form or structure which is qualitatively different from the ancestral form (Korotayev, 2004). Theory of socio cultural evolution explains the differences between societies, positing that different societies have reached different stages of development. Evolutionary theory typically provides models for understanding the relationship between technologies, social structure or the values of a society. Scholars such as Auguste Comte, Herbert Spencer, Charles Darwin and Lewis Morgan, stated that societies started out in a *primitive* state and gradually become more *civilized* over time, and equated the culture and technology of Western civilization with progress (Korotayev, 2004).

Socio cultural evolutionism formalizes social thinking along scientific lines. Both Spencer and Comte view the society as a kind of organism subject to the process of growth—from simplicity to complexity, from chaos to order, from generalization to specialization, from flexibility to organization, this growth is in fact social progress: each newer and more-evolved society is seen to be better (Sztompka, 2002). Auguste Comte, formulated the law of three stages: human development progresses from the **theological stage**, in which nature was mythically conceived and man sought the explanation of natural phenomena from supernatural beings, through **metaphysical**

stage in which nature was conceived of as a result of obscure forces and man sought the explanation of natural phenomena from them until the final **positive stage** in which all abstract and obscure forces are discarded, and natural phenomena are explained by their constant relationship. This progress is produced through the development of human mind, and increasing application of thought, reasoning and logic to the understanding of the world (Robertson, 1983). For Comte, it was the science-valuing society that was the highest, most developed type of human organization (Sztompka, 2002).

Herbert Spencer differentiated between two phases of development as regards societies' internal regulation: the primitive military and "industrial" societies. The primitive military society has the goal of conquest and defense, is centralized, economically self-sufficient, and collectively put the good of a group over the good of an individual, uses compulsion, force and repression, rewards loyalty, obedience and discipline. The industrial society, in contrast, has a goal of production and trade, is decentralized, interconnected with other societies via economic relations, works through voluntary cooperation and individual self-restraint, treats the good of individual as of the highest value, regulates the social life via voluntary relations; and values initiative, independence and innovation. The transition process from the military to industrial society is the outcome of steady evolutionary processes within the society (Sztompka, 2002).

3.3 Modernization Theory

Modernization theory is used to analyze the way modernization processes in societies take place. The earliest principles of modernization theory can be derived from the idea of progress, which stated that people can develop and change their society themselves. This theory also states that technological advancements and economic changes can lead

to changes in moral and cultural values. Scientists from various research disciplines have contributed to modernization theory. [David Apter](#), who did research on the political system and history of democracy; [Seymour Martin Lipset](#), who argued that economic development leads to social changes which tend to lead to democracy; [David McClelland](#), who approached modernization from the psychological side with his motivations theory; and [Talcott Parsons and smelser](#) used pattern variables to compare backwardness to modernity (Giovanni, 2012).

According to Parsons and Smelser (1956) modern societies have the particular feature of social structural differentiation; a clear definition of functions and political roles. Modernization theory observes traditions and pre-existing institutions of primitive societies as obstacles to modern economic growth. Modernization which is forced from outside upon a society might induce violent and radical change, but modernization theorists consider this as generally worthy. Levy (1967) maintains; modernization is a homogenizing process, in this sense, modernization produces tendencies toward convergence among societies. For example, as time goes on, societies will increasingly resemble one another because the patterns of modernization are such that the more highly modernized societies become, the more they resemble one another. In addition, modernization is an irreversible process, once started modernization cannot be stopped. In other words, once; third world countries come into contact with the West, they will not be able to resist the impetus toward modernization (Tipps,1976).

Modernization theory was under heavy criticism at the end of the 60s. Criticisms of the theory include the following: First, development is not necessarily unidirectional. Second, the modernization perspective only shows one possible model of development. The favored example is the development pattern in the United States (killing, 1984).

Thirdly, modernization theory regards the need to eliminate traditional values. Third World countries do not have homogeneous set of traditional values; their value systems are highly heterogeneous. Critics point to traditional societies being destroyed and slipping away to a modern form of poverty without ever gaining the promised advantages of modernization (Redfield, 1965).

3.4 Dependency Theory

Dependency theory starts from the notion that resources flow from the '[periphery](#)' of poor and [underdeveloped](#) states to the '[core](#)' of wealthy countries, which leads to accumulation of wealth in the rich states at the expense of the poor states. Contrary to [modernization theory](#), dependency theory states that not all societies progressed through similar [stages of development](#). Primitive states have unique features, structures and institutions of their own and are the weaker with regard to the world [market economy](#), while the developed nations have never been in this follower position in the past. Dependency theorists argued that underdeveloped countries remain economically vulnerable unless they reduce their connectedness to the world market (Redfield, 1965).

Dependency theorist further states that developed nations will try to maintain this statu-quo and try to counter attempts by developing nations to reduce the influence of developed nations. This means that [poverty](#) of developing nations is not the result of the disintegration of these countries in the [world system](#), but because of the way in which they are integrated into this system. Among the main authors of dependency theory are; Andre Gunder Frank, and Samir Amin (Prebisch, 1950).

Critics of the dependency theory have focused on the fact that this theory does not provide exhaustive empirical evidence to support its conclusions. Furthermore, this

theoretical position uses highly abstract levels of analysis. Another point of critique is that the dependency theory considers ties with transnational corporations as being only detrimental to countries, when actually these links can be used as a means of transference of technology. In this sense, it is important to note that the United States was also a colony, and this country had the capacity to break the vicious cycle of underdevelopment (Santos, 1971).

Dependency theory is also criticised that, the benefits of growth do not automatically trickle down to the poor as this depends on several factors such as the type of growth and the nature of redistributive and public expenditure policies that are in place. Those who are able to benefit from growth are the ones who have access to health care services, education and social protection. For instance, in order for people to get into the labor market and escape poverty, they have to be healthy. Therefore, social protection and social services have to be made available to disadvantaged groups to help them make use of the available opportunities and make poverty alleviation sustainable. There is wide agreement that economic development based on development theories failed to bring about the much hoped for rapid growth and the alleviation of the impoverished rural subsistence sectors (Pico and Teorias, 1995).

3.5 Conflict Theory

Conflict theory emphasizes the social, political, or material inequality of a social group. Conflict theory draws attention to power differentials, such as class conflict. Conflict theory is most commonly associated with Karl Marx. Karl Marx was aware that most of the people living in capitalist societies did not see how the system shaped the entire operation of the society. For instance, acquiring private property, or the right to pass that property on to one's children is seen to be natural, many members in capitalistic

societies see the rich as having earned their wealth through hard work and education, while seeing the poor as lacking in skill and initiative. The various institutions of society such as the legal and political system are instruments of ruling class domination and serve to further its interests. Karl Marx posited that this type of relationship would inevitably produce internal tensions leading to destruction. In general, Marx wanted the proletarians to rise up against the capitalist and overthrow the capitalist system (Martin, 1998).

Marx believed that western society developed through four main epochs; primitive communism, ancient society, feudal society and capitalist society. Primitive communism is represented by the societies of pre-history and provides the only example of the classless society. From then, all societies are divided into two major classes; master and slaves in ancient society, lords and serfs in feudal society and capitalist and wage labourers in capitalist society. Conflict theory emphasizes the role of coercion and power in producing social order. Karl Marx, who saw society as fragmented into groups that compete for social and economic resources. Social order is maintained by domination, with power in the hands of those with the greatest political, economic, and social resources.

According to conflict theory, inequality exists because those in control of a disproportionate share of society's resources actively defend their advantages. The masses are not bound to society by their shared values, but by coercion at the hands of those in power. Groups and individuals advance their own interests, struggling over control of societal resources. Conflict theory paid great attention to inequality that exists: racial, gender, religious, political and economic. The constant competition between groups forms the basis for the ever-changing nature of society. Conflict

theorists generally see social change as abrupt, even revolutionary, rather than incremental (Anderson, and Taylor, 2009).

One of the results of conflict between people with competing interests and resources is the creation of a social structure. Social structure refers to the relatively fixed institutions and norms of society that heavily influence, consciously or not, peoples' everyday behavior (illustration: cases where women find it difficult to get bank loan reflects the fact that social structure dictates who gets to grant loan, how, when, and to whom). However, control over the social structure is largely in the hands of the elite (wealthy), who generally oppose the interests of the non-elite (Mills, 1956).

As civilizations undergo change from agrarian rural groups into industrialized, modern societies, a social hierarchy emerges that effectively creates distinct classes based on wealth, gender, power and prestige (Ferrante, 2005). Also in line with the conflict theory is feminism ideology, which also contended that women's experiences of, inequality, poverty and oppression are located within capitalism, patriarchy and class. A major consequence of this domination is the exploitation of women by men. By subordinating women, men gain greater economic, political and social power and thus believe that, the solution to gender inequality is by changing the system (Ritzer and Goodmen 2003; Tischler, 2006 and Schaefer, 2006).

According to Turner (2003) feminism worked within conflict-theory, analyzing gender inequalities as yet another form of conflict-producing stratification. It sought to explain why women have experienced discrimination, and how this discrimination has placed them in disadvantaged positions in the society. Feminism began as an organized movement in the latter half of the 19th century and its focus was on, equal contract

rights, property rights for women and opposition to the ownership of married women (and their children) by their husbands. By the end of the 19th century, feminist activism concentrated primarily on gaining political power, particularly the inclusion of women in suffrage (voting rights). Thus, Feminism focuses on analyzing gender inequality and the promotion of women's rights, interests, and issues (Richard and Hartwick, 2003).

The history of feminism consisted of three “waves”; First wave, second wave and third wave. First-wave feminism is generally associated with the women’s suffrage movements of the late nineteenth and early twentieth centuries. First-wave feminism was characterized by a focus on officially mandated inequalities between men and women, such as the legal barring of women from voting, property rights, employment and equal rights in marriage. “First-wave” feminist like Mary Wollstonecraft and Susan Anthony were influential for their focus on how women’s lack of legal rights contributed to their social demotion, exclusion, and suffering (Messer, 2002). Second-wave feminism is associated with the women’s liberation movements of the 1960s and 1970s.

Second-wave feminists began concentrating on less “official” barriers to gender equality, addressing issues like sexuality, reproductive rights, women’s roles and labor in the home, and patriarchal culture. “Second-wave” theorists like Betty Friedan and Andrea Dworkin were prominent for their focus on women’s sexuality, reproduction, and the social consequences of living in a patriarchal culture (Echols, 1989). Third-wave feminism is generally associated with feminist politics and movements that began in the 1980s. Third-wave feminism emerged out of a critique of the politics of the second wave.

Feminists like Judith Butler and Gayatri Spivak are significant for critiquing the idea of a universal experience of womanhood and that second wave had over-generalized the experiences of white, middle-class, heterosexual women and ignored (and even suppressed) the viewpoints of women of color, the poor, and women from the non-Western world. Third-wave feminism focuses on issues of racism, homophobia, and Eurocentrism as part of their feminist agenda (Freedman, 2003). According to Richard and Hartwick (2003) feminism, explains how gender development, poverty and the inequality that exists in the society can be changed in two forms. These are: Women in Development (WID) and Gender and Development (GAD).

3.5.1 Women in Development (WID)

The first important statement about the position of women in development was made by Boserup (1970) who criticised the idea that modernization, expressed as economic efficiency and modern planning, would emancipate women in the Third World. Boserup further argued that, to the contrary, modernization process, supervised by colonial authorities, with Western notions of the sexual division of labor, had placed new technologies under the control of men. This arrangement marginalized women, reducing their status and undercutting their power and income (Richard and Hartwick, 2003). Rathgeber (1990) observed that, Boserup's work defined a new arena of policymaking and countries that are major donors of development assistance took steps to promote the integration of women into the development process. Furthermore, it produced a new phenomenon, which was first termed "women in development".

As a result of pressure from feminist movements, virtually every development organization established programs to improve the economic and social position of women. Essentially, the key idea was to bring women full force into the development

process, to increase women's participation and improve their share in resources, employment, and income in an attempt to effect dramatic improvements in living conditions (Mueller, 1987). Moser (1993) distinguished two variants within the WID that reflect changes in the policies of the Western development agencies: The Equity and Efficiency approach.

Equity approach: World Health Organisation (WHO) defined gender equity as fairness and justice in the distribution of benefits and responsibilities between women and men or individual's access to, and control over resources (Razavi and Miller, 1995). In other words, gender equity appears to be one of the many building blocks on the path to achieve gender equality. The equity approach therefore advocates equal distribution of the benefits of development between men and women (WHO, 2001). Many studies, particularly in Sub-Saharan Africa, look at the resulting deficiencies in women's access to inputs and conclude that there are significant differences in productivity that occur as a result of asymmetrical access to factors of production. There is evidence on analyses of household surveys that gender inequity in access to productive assets such as land, fertilizer, seeds and credit reduces the productivity of female producers (Blackden and Bhanu, 1999; Klasen, 2005; Quisumbing, 2003; World Bank, 2001). Reducing inequities in human and physical capital between male and female farmers in Sub-Saharan Africa is estimated to have the potential to increase agricultural productivity by 10 to 20 percent (Quisumbing, 2003). Gender inequity is a significant and direct factor in the determination of productivity and output.

As Buvinic (1986) points out, equity also questions the inequalities between women and men in a broader context. The equity model is concerned with the inequality between women and men, both in private and public spheres of life and across socio-economic

groups. In order to reduce the inequalities between women and men, the equity approach demands economic and political autonomy for women. Moreover, this approach considers women not only in their reproductive role, but also in their productive role.

Efficiency approach: Efficiency approach emergence coincided with the rising popularity of neo-classical economic model. In order to better understand the rationales behind the efficiency approach, it is necessary to mention some basic assumptions of neo-classical economics (also referred to as 'neo-liberalism'). The starting-point of the neo-classical economic theory is that there is a given amount of resources in the world, and economics as a tool is used to determine the best allocation of these scarce resources. According to this approach, people behave rationally using a kind of cost benefit calculus to maximize their own interests. When people act in their best self-interest, it results in the most efficient use of resources for the economy as a whole. Supply and demand together determine the allocation of resources, and at the aggregate level, this occurs through markets. Capitalism is argued to be the most efficient economic system. The functioning of free markets guarantees a self-equilibrating economy with a long-run sustainable growth. Therefore, the government should intervene only where there is an imperfect competition (Sparr, 1994).

The efficiency approach regards women as an unused or underutilized asset for development. Thus, efficiency approach ensures that development is made more 'efficient' and 'effective' through women's economic contribution. Women have systematically weaker access to credit markets than men, partly because they command fewer resources to begin with and hence have little to offer in the way of collateral and also partly because there is direct discrimination against women in credit markets

(Duflo, 2006). Women's disproportionate lack of education with its consequences in low productivity, as well as for the nutrition and health of their families has adverse effects on the economy at large. Increase in opportunities for women lead to improvements in human development outcomes, poverty reduction, and substantial gains will be achieved with the contribution of both sexes. If women do not share fully in the development process, the broad objectives of development will not be attained (Moser, 1993). This approach, as already mentioned above, assumes that any improvement in the economic situation of women would automatically lead to advancements in other spheres of their lives.

The efficiency approach focuses mainly on economic growth, and considers women simply as an input factor for the economy. Therefore, it limits the concept of development solely to economic growth. As such, it fails to understand development as a multidimensional phenomenon not only economic, but also social and cultural aspect (Moser, 1993). The efficiency approach is also criticised for defining economies only in terms of marketed goods and services, and focusing only on women's productive role. Rathgeber (1990), criticised WID as non-confrontational and put its main emphasis on the question "how women could be better 'integrated' into ongoing development initiatives", and without challenging the existing structures in which the sources of women's subordination and oppression are embedded.

Women in Development (WID) was also criticized because it focused exclusively on the productive aspects of women's work", and ignored the reproductive aspects of their lives. Similarly, Young (1993), points out to the following weaknesses in the WID approach: First, the WID ignored the 'gender' aspects of issues, and assumed that women can become sole agents of their destiny, without any corresponding change in or

reaction from men. Young further argues that the unequal balance of responsibilities, work and value was seen perfectly 'natural' if not God given, and therefore unchangeable. Despite these shortcomings, the main achievement of the WID approach was that women became visible in development theory and practice.

3.5.2 Gender and Development (GAD)

Gender and Development (GAD) approach identified the social construction of production and reproduction as the basis of women's oppression and have focused attention on the social relations of gender, questioning the validity of roles that have been ascribed to both women and men in different societies (Rathgeber, 1990). They are also of the view that the alleviation or eradication of poverty cannot be answered by 'top-down', 'one-off', non-participatory approaches; that WID (which tend to focus on women only, and as a homogeneous constituency) need to be replaced by GAD. It offers an analysis of poverty; with the understanding that gender is a dynamic and diverse social construct that varies by culture and encompasses both men and women (Reddock, 2000; Malaba, 2006; Chant, 2003; Kabeer, 2003; Godoy, 2005; Jaquette and Staudt, 2006).

Whitehead (1979) quoted by Østergaard (1992) points out that gender relations are "not necessarily nor obviously harmonious and non-conflicting", and they often take the form of "male dominance and female subordination." Gender relations closely correlate with the socio-economic and political distribution of power as well as the distribution of resources, wealth, and work. Gender and development perspective does not lead only to the design of intervention and affirmative action strategies to ensure that women are better integrated into ongoing development efforts. It leads, inevitably, to a fundamental reexamination of social structures and institutions and, ultimately, to the loss of power

of entrenched elites, which will affect some women as well as men. It demands a degree of commitment to structural change and power shifts (Rathgeber, 1990).

The GAD shifted the discussions in women and development discourse from 'women' to 'gender'. It puts an emphasis on power relations between women and men, and their relative positions in socio-economic and political structures. GAD examines how unequal power relations between men and women prevent women from accessing both material and non-material resources. They urged an institutional change within socio-economic and political structures in order to eliminate the gender inequalities, and to strengthen the position of women. An important focus in the GAD perspective is on the empowerment of women which emphasizes their capacity to participate actively and meaningfully in challenging the marginalization of women (Connelly *et al.*, 2000).

A key component of the entire approach was the desire to make national development planning and programming more responsive to the needs of men and women and thus will be effective in poverty alleviation. However, El-Bushra (2000) criticized GAD and argues that it is not clear what the concept of gender is all about. She argues that different individuals and agencies differ radically in their interpretation and implementation of the concept. Similarly, Arnfred (2001), points to the confusion in the terminology, and argues that "the term 'gender' is used as a neutral term, referring to both women and men." Furthermore, Arnfred stated that, despite its good intentions of politicizing women's issues in development, the GAD concept seems to have had the opposite effect.

One important quality of gender and development concept (GAD), is that it shifts the focus from 'women' to 'gender' in that it looks at women and men in their relative positions within the socio-economic, political, and cultural structures. It urges for a gender-sensitive transformation of these structures. This study adopt the conflict theory, particularly the gender and development approach as the most suitable for gender development and in alleviating poverty.

3.6 Conceptual Frame Work

Conceptual framework represents concepts that are assembled by virtue of their relevance to a common theme. The conceptual framework embodies the specific direction by which the research was undertaken. In addition to that, it is an idea or set of ideas emanating from theoretical framework discussed above. This study used the gender and development concept (GAD) as the most suitable, since GAD examines the unequal power relations between men and women.

The importance of gender accessibility to resources in transforming and alleviating rural poverty becomes necessary in increasing productivity. Productive resources are the basic stepping stones, or building blocks, upon which farmers are able to undertake production and engage in labour markets. Livelihoods in the rural areas are built around the availability of essential resources as land, water and vegetation. For agriculture to be successful in rural areas, it is not only the availability of land and water, but also the use of machinery, such as tractors, ploughs and irrigation schemes which renders the good use of arable land.

Availability of land and human labour alone is not enough to fully venture into farming enterprise, but with the inclusion of financial capital which also ensures the

development and acquisition of physical assets, such as machinery and farming equipment that can be used as production tools. Scoones (2000) also reports that financial capital refers to stocks of money to which the household has access. This is likely to be in the form of savings or in the form of loans. GAD urged that changes within socio-economic and political structures can eliminate gender inequalities.

Therefore this study seeks to find out gender accessibility to resources in the study area. Gender accessibility to resources is very important in agriculture and rural development of any society. Improving the access of rural farmers to productive resources such as land, water and finance can play a significant role in enhancing farmers' productivity, food security, and poverty alleviation. In addition, access by farmers' to agricultural services such as credit and extension services can enables them to manage their challenges in agriculture on a sustainable basis. In other words, rural farmers in Nigeria and other African countries can overcome rural poverty through the implementation of effective gender equality strategies.

3.6.1 Conceptual Model

A model is a construct that shows relationships existing among variables. These relationships are depicted schematically or mathematically (Asika, 2001). The conceptual model describes the relationship between specific variables identified in the study. It also outlines the input, process and output of the whole investigation. The conceptual model summarizes the dependent and independent variables in the research and the relation between them. The conceptual model for this study (presented in figure 3) is to provide an effective background against which conclusion and the relationships predicted among the variables in the present investigation could be empirically verified.

In this model, the relationship starts from socio-economic variables and institutional factors. The socio-economic variables comprise of age, level of education, household size; the institutional variables are extension contact, membership of groups and amount of credit received. These variables affect the dependent variable (gender accessibility to productive resources; such as land, seeds, labour, fertilizer, agrochemicals). Similarly, the expected outcome of gender accessibility to productive resources on farmers were; increased income, increased output level and increased level of living of the ginger farmers and subsequently alleviating poverty in the study area.

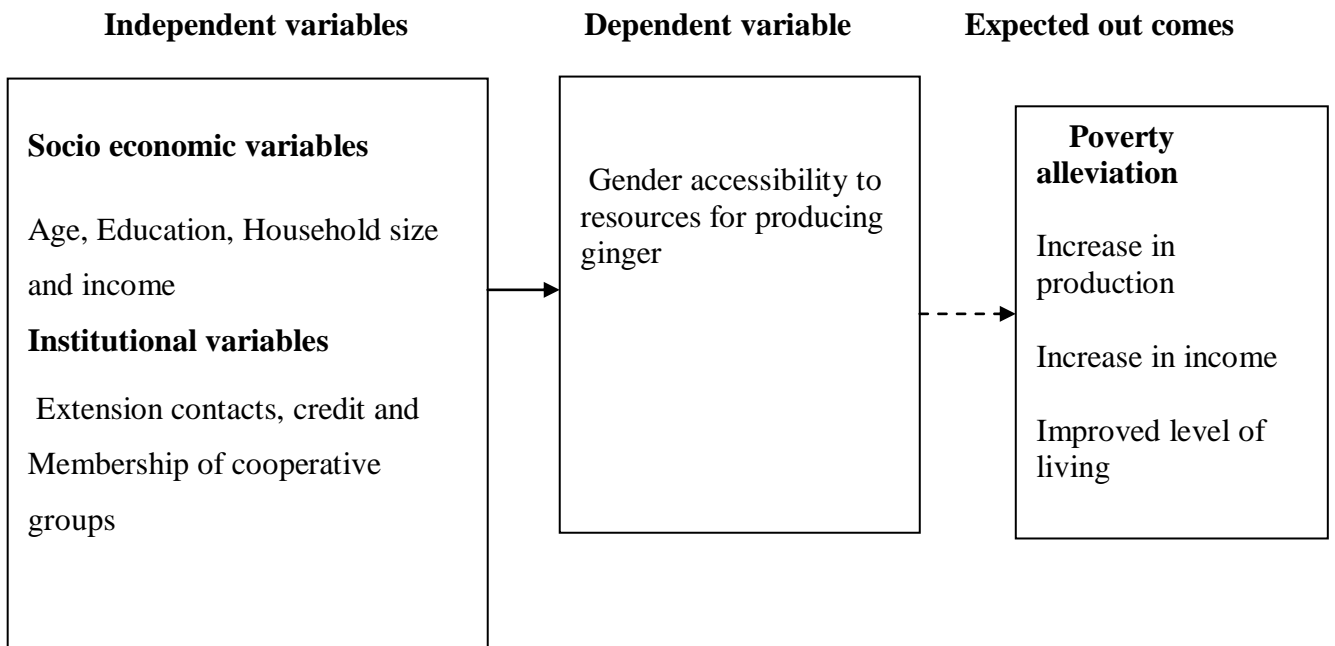


Figure 3: Conceptual model of gender accessibility to productive resources in alleviating poverty among ginger farmers

CHAPTER FOUR

METHODOLOGY

This chapter focuses on the study area, sampling procedures, method of data collection, definitions and measurement of variables and the procedures used in analyzing the data.

4.1. General Description of the Study Area

Kaduna State is the successor to the old Northern Region of Nigeria, which had its capital at Kaduna. Kaduna was created on 27th May, 1976 out of the former Northern region by the then regime of Late General Murtala Mohammed. Kaduna State is located at the center of Northern Nigeria. It has a political significance as the former administrative headquarters of the North during the colonial era. The State shares boundaries with Niger State to the West, Zamfara, Katsina and Kano States to the North, Bauchi and Plateau States to the East, FCT Abuja and Nassarawa State to the South. Kaduna State occupies 68,000 square kilometres (about 7 per cent of the total land mass of Nigeria) and it is the fourth largest State by area after Niger, Borno and Taraba States (Kaduna State government, 2012).

Kaduna State occupies almost the entire mid-central portion of the Northern part of Nigeria, an altitude of 500–1000m above sea level and annual average of 1,272mm of rain. The relative humidity is constantly below 40 degrees except in few wet months when it goes up to an average of 60 degrees. The duration of dry season in the state is between 5-7 months, which starts from late October to May (World Bank, 2008a). Kaduna is the third most populous State after Kano and Lagos States. The population of Kaduna State in 2015 (projected from National population census figure, 2006) is 7, 596, 285 people with an annual growth rate of about 3%. Its population comprises Hausa, Fulani, Gbagyi, Adara, Ham, Atyap, Bajjuu and Agworok ethnic communities.

The State has 23 Local Government Areas namely; Birni-Gwari, Chikun, Giwa, Igabi, Ikara, Jaba, Jema'a, Kachia, Kaduna North, Kaduna South, Kagarko, Kajuru, Kaura, Kauru, Kubau, Kudan, Lere, Makarfi, Sabon-Gari, Sanga, Soba, Zango-Kataf and Zaria. Kaduna State provides the meeting point of the earliest histories of Nigeria; it is the home of Nok which gave its name to the oldest culture of Nigeria- the Nok culture (<http://www.kadunastate.gov.ng/kad.html>, 2011).

Agriculture is the main stay of the economy of Kaduna state with about 80% of the people actively engaged in farming. The state is well suited for the production of cash and arable crops. The crops are; cotton, groundnuts, tobacco, maize, yam, beans, guinea corn, millet, ginger, rice, cassava, sugarcane, shea nuts, cowpea, mango, cocoyam, cassava, timber, banana, soya bean, corn, onions, sorghum and potatoes. The major cash crops are ginger and cotton which the state has a comparative advantage in as it is the leading producer in the country. During the dry season, a considerable number of people in the state engage in irrigation farming along rivers and near dams, mainly growing vegetables. Another major occupation of the people is animal rearing and poultry farming. The animals reared include cattle, sheep, goats and pigs (World Bank, 2008a).

In the Northern part of the State, the soil is good for production of large quantities of cotton for which Soba, Makarfi, Kudan, Ikara, Kubau, Kauru and Lere LGAs are known for. Yam and maize have successfully been producing high yields with the use of fertilizer, especially in Igabi, Giwa and Birnin Gwari LGAs. In the well-watered Southern part, the rich darker soils are used for cultivating ginger. Ginger the most economically beneficial crop is a very important cash crop in Kaduna and is grown on a commercial scale for export. Also grown in the area are cereals, cassava, rice and acha (Kaduna State Government, 2008). There are good stands of hard tropical trees such as

mahogany and raffia palm bushes. Much of the woody shrubs in the Northern parts have been felled for fuel wood. Due to the annual bush fires during the long dry season, the grass straw traditionally used for roofing in the rural areas is becoming scarce. State and local governments are embarking on improving the vegetation cover in the state by planting fast-growing and drought-resistant trees in large plantations, called Forest Reserves (<http://www.kadunastate.gov.ng/kad.html>, 2011).

Southern Kaduna where this study was carried out is situated within the central high plains of Northern Nigeria. It is located between longitude 5° and 7° east. Southern Kaduna is made up of about 12 local government areas which include: Jemaá, Jaba, Kaura, Kuru, Zango-Kataf, Kagarko, Kachia, Sanga, Kajuru, Chikun, Kaduna-South and Lere. Diverse ethnic groups constitute these local Governments areas and the major ones include Bajju, Ham, Oegworok, Atyap, Gbagyi, Gwong, Ninzom, Akulu, Takad, Sholio, Adara and Numana (<http://www.kadunastate.gov.ng/kad.html>, 2013).

Economically, the main income and major occupation of the Southern Kaduna people are farming, hunting and trading. Although of the three, agriculture dominates the occupation practiced by the people, thereby making food and cash crops to flourish and in abundance. Amongst these are rich trees notably: the shea-butter, locust bean, silk-cotton, and mahogany. Also varieties of maize are abound used as food crop and also for industrial use. It is also used for animal feeds and can be harvested all year around. According to KADP (2004) majority of the farmers in Southern Kaduna produce ginger either as a sole crop or in mixed cropping. Ginger got to Nigeria in 1927 and its cultivation started around Kwoi, Kubacha, Kafanchan and Kagarko areas of Southern Kaduna State where it is being cultivated in commercial level. Other crops include Guinea corn cassava, sesame seed, and acha ([kadunastate.gov.ng/kad.](http://www.kadunastate.gov.ng/kad/), 2011).

Traditionally, the Southern Kaduna people dwelled in distinctive houses, built through communal effort. The house is spacious and oval in shape from the ground plan. The roof is not peaked in the centre, but somewhat symmetrical from all angles and slopes downwards. Southern Kaduna has varieties of traditional festivals which serve as means of appreciating and preservation of the ancient traditions. These include the, Tuk Ham day, Ikulu day, Bajju day, Batadon Day, Sholio Day. Kagoro ethnic groups, for example, observe Afan festival (Kagoro day) first January of each year to celebrate its people and culture. In any Kagoro day (January 1), there are a lot of cultural displays: dancing, costumes and art. This event attracts people from different parts of the country especially the sons and daughters Kagoro, as well as very dignified chiefs in Nigeria (<http://www.kadunastate.gov.ng/kad.html>, 2011).

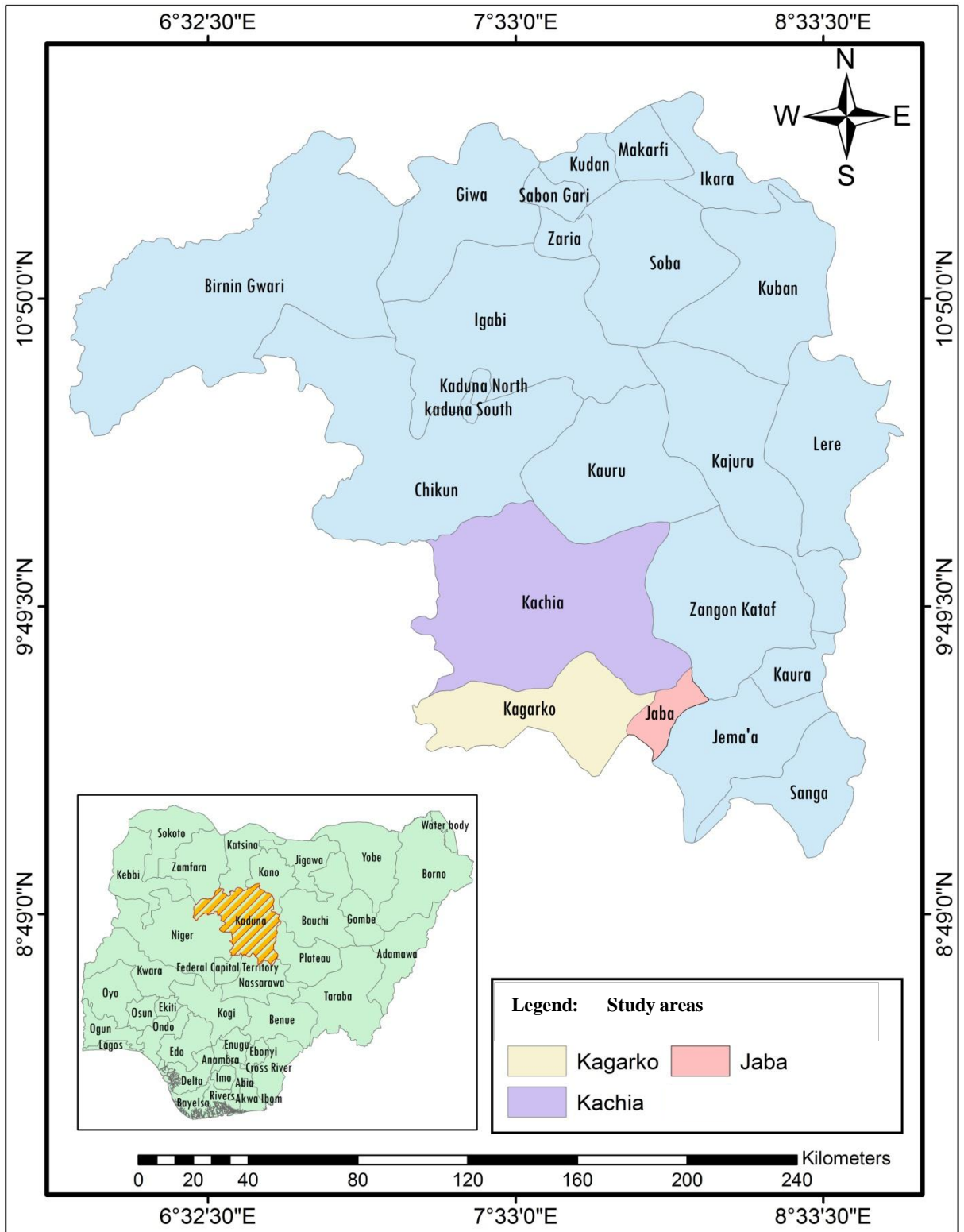


Figure 4: Map of Kaduna State Showing the Study Area

4.2 Sampling Technique and Sample Size

In an empirical investigation it is impossible to collect information from the whole population. Therefore, inferences were made based on information derived from a representative sample of the population. The selection of a sample from the population is commonly used in researches because of limitations of covering the whole population. For this study, multistage sampling technique was used to select the farmers. The first stage involved purposive selection of three LGAs. In this regard, Kachia, Kagarko and Jaba LGAs were purposively selected for this study, due to the high level of ginger production in these places. In the second stage, random selection of three villages from Kachia, Kagarko and Jaba LGAs was done.

Table 3.1: Distribution of Farmers in selected Local Government Areas

Selected LGAs	Villages	No of male farmers	Sample size male	No of female farmers	Sample size female
Kachia	i. Assako	130	20	116	17
	ii. Yarbung 1	68	10	78	11
	iii. Gidan tagwai	95	14	82	12
Jaba	i. Nok	136	20	109	16
	ii. Kurmin Jatau	86	13	80	12
	iii. Fai	138	21	176	26
Kagarko	i. Kenyi	83	12	69	10
	ii. Kurmin dangana	65	10	56	8
	iii. Katugal	59	9	60	9
Total	9	860	129	826	121

Source: Reconnaissance survey

In Kachia LGA, Assako, Yarbung 1 and Gidan tagwai were selected. Nok, Kurmin Jatau and Fai were selected from Jaba LGA, while Kenyi, Kurmi dangana and Katugal were also selected from Kagarko LGA to give a total of nine villages. In the third stage, list of farmers obtained from ADP served as the frame, sample of ginger farmers was drawn randomly from the frame, thereby giving each farmer an equal chance of being selected. Random sampling (balloting method) of 15% of female and 15% of male ginger farmers from each of the nine villages was done. A total of 250 (comprising 129 male and 121 female) ginger farmers were randomly selected for this study.

4.3 Method of Data Collection

Primary data were used in this study. The primary data were obtained by the use of structured questionnaire administered to ginger farmers with the assistance of enumerators. Questionnaires are one of the major tools of research survey. In constructing the questionnaire, attention was paid to ensure clarity and ease of understanding all questions. A pilot survey was conducted which helped to refine difficult and vague questions. The purpose of this survey was to gather information on various aspects of the study, to test the content validity of the questionnaire.

The questionnaire was divided into six sections. Section A brought out information on the demographic and institutional characteristics of ginger farmers (such as age, sex, marital status, family size, household income (₦), years of schooling, years of experience in ginger production and farmers' cooperative membership) while Section B elicited information on level of gender accessibility to productive resources such as fertilizer, seeds, land and agrochemicals. Section C provides information on the quantities of productive resources accessed. Section D deals with information on factors influencing gender accessibility to resources. Section E concentrated on farmers'

perception of poverty in the study area. Information on effects of gender accessibility to productive resources on the poverty status of ginger farmers was the main focus of section F. Section G capture constraints of farmers accessibility to productive resources in the study area. Data collected covers 2013/2014 farming season.

4.4 Analytical Techniques

The following tools of analyses were employed to achieve the objectives of this study:

4.4.1. Descriptive Statistics

Descriptive statistics such as percentages, frequency distribution, and mean were used to organize, summarize and analyze the data to achieve objectives (i), (ii), (iii), (v) and (vii). Likert-type scale was used to measures the degree or intensity of agreement by the respondents to a statement (used to determine farmers’ perceptions). In the questionnaire, farmers were asked to indicate the extent of their agreement on statements using a 5-point Likert scale of Strongly Agreed (SA), Agreed (AG), Undecided (U), Disagreed (DA) and Strongly Disagreed (SD). Weight of 5, 4, 3, 2 and 1 was assigned. For each indicator a weighted mean was obtained as follows:

$$WM = \frac{[(fSA * 5) + (fAG * 4) + (fU * 3) + (fDA * 2) + (fSD * 1)]}{N} \dots\dots\dots(2)$$

Where:

WM= Weighted mean

f = Frequency

Values 5, 4, 3, 2, 1 = Attached weights

SA, AG, U, DA & SD = Perceptions of strongly agree, agree, undecided/ neutral, disagree and strongly disagree

N = Sample size

Adopting Bagheri (2010) perception analysis, the mean(s) for all indicators were then categorized as follows;

The mean(s) 1.00-1.49 = Strongly Disagree (SD),

1.50-2.49 = Disagree (DA),

2.50-3.49 = Undecided/Neutral (U/N),

3.50-4.49 = Agree (AG) and

4.50-5.00 = Strongly Agree (SA).

4.4.2 Regression Model

Objective (iv) was achieved by using the multiple regression model. For this study, Y; which is accessibility to resources (labour, land, fertilizer, seed and agrochemicals) was measured in quantities.

$$Y = \alpha_0 + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \beta_4X_4 + \beta_5X_5 + \beta_6X_6 + \beta_7X_7 + U \dots \dots \dots (3)$$

Where:

- Y = Accessibility to resources (labour, land, fertilizer, seed and agrochemicals accessed in quantities)
- X₁ = Age (years)
- X₂ = Level of education (years)
- X₃ = household size (number of people)
- X₄ = Income (amount of money from ginger) (₦)
- X₅ = Extension contacts (number of times)
- X₆ = Membership of a cooperative (yes or no)
- X₇ = Credit (amount of credit received) (₦)
- U = Error term
- α₀ = Constant term
- β₁₋₇ = Regression coefficients.

4.4.3 Foster, Greer, and Thorbecke (FGT) Model

The Foster, Greer, and Thorbecke weighted poverty index was used for the quantitative poverty assessment. The *P-alpha* measures, in analyzing poverty relate to different dimensions of the indices of poverty P_0 , P_1 , and P_2 and were used for head count, depth, and severity of poverty. The three measures are all based on a single formula, but each index puts different weights on the degree to which a household or individual falls below the poverty line. This model was used to achieve part of objective (vi) of this study. The model is specified as:

$$P_\alpha = \frac{1}{n} \sum_{i=1}^q \left(\frac{z - y_i}{z} \right)^\alpha \dots\dots\dots(4)$$

Where;

p_α = FGT parameter, and takes on value 0, 1, 2

n = total number of households

q = the number of poor households whose expenditure are below poverty line

z = denotes the poverty line

y_i = the per expenditure of the household

If $\alpha = 0$, it indicates the Headcount Ratio (Poverty incidence) describing the proportion of the population that falls below the poverty line.

If $\alpha = 1$ it gives the normalized poverty gap. This index gives a good measure of the extent or intensity of poverty as it reflects the distance the poor are from the poverty line.

When $\alpha = 2$ in FGT, it gives the Poverty Severity Index. This index has the advantage of reflecting the degree of inequality among the poor, in the sense that the greater the inequality of distribution among the poor, the higher is P_2 .

Poverty line: The poverty line defines the minimum level of income required for living. This study used per capita expenditure of the respondent. The poverty line that was used in this study is two-third of mean expenditure per adult equivalent. Household expenditure is considered as an adequate measure of household welfare in developing countries due to frequent fluctuation in exchange rate (*Bogale et al., 2005*). The adult equivalent scale used is generated from the Organisation for Economic Cooperation and Development (OECD) and adopted as follows:

$$\text{Exp} = \text{Exp}/n^{0.7}$$

Where;

Exp = Total household expenditure

N = Household size

0.7 = exponential formation representing adults in a particular household.

Respondents whose mean per capita expenditure is equal or greater than 2/3 are non-poor, while the respondent whose per capita expenditure is less than 2/3 is considered to be poor.

4.4.4 Logit Model

Logit was used to examine the effect of accessibility to resources on the poverty status of ginger farmers in the study area. This model was used to achieve part of objective (vi) of this study

$$Y = \alpha_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + U \dots\dots\dots(5)$$

Where:

- Y = Poverty status of the farmers; 1= poor and 0= non poor
- X₁ = Labour availability (number of people)
- X₂ = Land (accessibility to/ ownership of land)
- X₃ = Seeds (access to seeds)
- X₄ = Fertilizer (access to fertilizer)
- X₅ = Agrochemicals (access to agrochemicals)
- U = Error term
- α₀ = Constant term
- β₁₋₅ = Regression coefficients.

4.4.5 Chi Square

Chi square was used to analyse part of objectives ii and v

The formula is expression as follows:

$$X^2 = \frac{\sum (O - E)^2}{E}$$

X^2 =chi-square;

\sum_i =Summation;

O = Observed data;

E = Expected data

Expected data was calculated using the formula:

$$E = C_T \times R_T / G_T$$

Where, E = expected data

C_T =Column total

R_T = Row total

G_T = Grand total

Decision rule: For this study, if $p \leq 0.01$ is significant at 1%, $p < 0.02-0.05$ is significant at 5% and $p < 0.06 - 0.10$ is significant at 10%,

4.5 Definition and Measurement of Variables

4.5.1 Independent variables

a. Independent variables used in this study were: age, level of education, household size, income, extension contact, amount of credit received and membership of an organization.

i. **Age:** The length of time that a respondent has lived. It is expected that ginger farmers whose ages are within 18-50 years on the average would be economically active in ginger production, provided they have access to productive resources. Studies have shown that age has a significant influence on the ability of individuals to go about their daily activities in order to earn income with which they cater for their family basic

needs. Thus, this can result in poverty reduction. Age was measured in years as reported by the farmers during the survey.

ii. Education: The level of formal education attained by an individual goes a long way in shaping his/her personality, attitude to life and to enable them acquire adequate knowledge about new innovations. Education is expected to enable ginger farmers to have access to diversity of information in respect to ginger production. Education is expected to be positively related to accessibility to productive resources. Education was measured by the total number of years of schooling.

iii. Household size: This refers to the total number of people in the household which includes children, husband and dependants who reside within the same household. The impact of large household size is such that it reduces the per capita expenditure of the family thereby aggravating poverty in the household. Even though household size tends to reduce per capita expenditure, it can also be enhanced when members in the household are working or meaningfully engaged, thereby supplementing the household income. It is expected that large household size would significantly be positive to ginger production. This was measured by the total number of people in the households.

iv. Average Annual Income from ginger enterprise: Both economic and other sets of factors influence households' choices on how to make a living, including the distribution of productive resources. Income is a determinant of household expenditure since it serves as the budget constraints to the amount that can be spent within a period. Studies have shown that accessibility to productive resources can increase farmer's income. Thus higher income generated from ginger farming can significantly change

farmer's life positively. For this study, income was measured by the total income made from ginger enterprise.

v. Extension contact: This is identified as a significant determinant factor in enhancing productivity. This is because extension education enhances farmer's access to technological learning and improved production inputs that will lead to increased productivity. Extension contact was measured by the total number of times a farmer was visited in connection with ginger farming.

vi. Membership of a cooperative group: Membership of a cooperative group is mostly found to be significant in increasing productivity. This is because it enhances farmer's access to credit, fertilizer, chemicals and improved seeds. This was measured by asking the farmers the number of cooperative groups a farmer belongs to and how the cooperative help the farmers.

vii. Amount of credit received: This refers to the total amount of money given to farmers. This was measured by the total amount of money borrowed from formal and informal sources for ginger production.

4.5.2 Dependent variable

The dependent variable in the study is gender accessibility to resources. In this study, access means the ability of the farmers to get resources such as labour, land, fertilizer, seed and agrochemicals. Accessibility to resources was measured in number or physical quantities of land, ginger rhizome seeds, fertilizer and labour used by the ginger farmers.

4.5.3 Test of hypotheses

The t-statistic was used to test hypothesis (i), hypothesis (ii) was tested using Regression and Logit was used to test hypothesis (iii).

The specific expression used to determine the t-statistic is as follows:

$$t = \frac{\bar{X}_1 - \bar{X}_2}{\sqrt{\frac{S_1^2}{n_1} + \frac{S_2^2}{n_2}}} \dots\dots\dots(6)$$

Where:

t= calculated t value

\bar{X}_1 = mean value of production resources accessed (women farmers)

\bar{X}_2 = mean value of production resources accessed (men farmers)

S_1 = standard deviation of production resources accessed (women farmers)

S_2 = standard deviation of production resources accessed (men farmers)

n_1 = sample size of farmers (women)

n_2 = sample size of farmers (men)

Decision rule: For this study, if t calculated is higher than tabulated t value, the null hypotheses was rejected and the alternative accepted.

CHAPTER FIVE

RESULTS AND DISCUSSION

5.1 Socio economic Characteristics of the Ginger Farmers

The first objective of the study was to describe the socioeconomic characteristics of the ginger farmers studied. The purpose of investigating the farmers' characteristics was to provide valuable information on them. The socioeconomic variables were: age, educational level, household size, income, farm size, farming experience, extension contacts and membership of cooperatives.

5.1.1 Age distribution of ginger farmers

The result of the study presented in Table 5.1 indicates that 36% of the male farmers fell within the age group of 41 – 50 years and about 41 % of female farmers belonged to this age group. However the percentage of male farmers in the age bracket of 51-70 tends to be higher than the females. The mean age of male farmer was about 51 years while that of female farmer was 47 years. This shows that women in ginger farming are younger than men. Implication of these findings is that large proportions of the farmers were adults who are advanced in age and youth who can adequately be regarded as active, agile, and physically disposed to farming activities are not involved in ginger production. The reasons why youth are not involved could be due to the non-attractive nature of farming activities in the rural areas and the pursuit of white collar jobs in the urban areas. This result collaborates with Asumugha *et al.*(2009) that non-farm earnings are have become important especially for the rural youths and the educated in detriment to agriculture.

Olaye *et al.* (2009) and Ya aishe *et al.* (2009) in separate studies found that majority of the sampled farmers were within the productive age of between 21 and 50 years. Some

studies have found that age has a positive effect on productivity (Gul *et al.*, 2009). Also, a study by Agbongiarhuoyi *et al.* (2013) reveals that age, in correlation with farming experience, has a significant influence on the decision making process of farmers with respect to risk aversion, adoption of improved agricultural technologies and other production-related decisions. Age has been found to determine how active and productive the head of the household would be. Age has also been found to affect the rate of household adoption of innovations, which in turn, affects household productivity and livelihood improvement strategies (Akpoko, 2004).

Table 5.1: Age distribution of the ginger farmers

Variable	Male		Female	
	Frequency	Percentage	Frequency	Percentage
Age				
21-30	4	3.1	5	4.1
31-40	32	24.8	36	29.8
41-50	47	36.4	49	40.5
51-60	27	21.0	19	15.7
61-70	17	13.0	12	9.9
Greater than 70	2	1.6	0	0
Mean	51		47	
Total	129	100	121	100

5.1.2 Educational level

Majority of the ginger farmers in the study area had one form of education or another. The result of this study revealed that 44% of the male farmers and 43% of the female farmers completed primary school (Table 5.2). The educational levels of the farmers in the study indicated that most of them were educated. This result showed there is a great potential for adoption of innovations and easy access of information. Najafi (2003) noted that educational attainment is very important because it could lead to awareness

of the advantages of modern farming techniques. Furthermore, formal education attained by an individual goes a long way in shaping his/her personality, attitude to life and access to resources. Similarly, in the study of Ya aishe *et al.* (2009) 48% of the respondents obtained secondary school education.

The result of this study is contrary to the study of Olaleye *et al.* (2009) that majority of the rural dwellers had low education and did not have formal education especially the women. The level of education helps farmers to use production information efficiently and education is believed to influence the use of improved technologies in agriculture and, hence, farm productivity and which could reduce the level of poverty (Amaza *et al.*, 2009). Education also affects the level of exposure to new ideas and managerial capacity in production and how to adopt and integrate innovations into household's survival strategies.

Table 5.2: Distribution of ginger farmers based on educational level

Variable	Male		Female	
	Frequency	Percentage	Frequency	Percentage
No formal education	15	11.6	29	24.0
Primary education	57	44.2	52	43.0
Secondary education	50	38.8	37	30.5
Tertiary education	7	5.4	3	2.5
Total	129	100	121	100

5.1.3 Household size

In this study, 35% of the male household size was between 1-5 persons and 57% had between 6-10 persons; with a mean household size of 8 persons. However, the female farmers' household size was found to be lower than the male farmers with 38% of the

female farmers having between 6-10 persons and 61% of the female farmers had household size of 1-5 persons. These implies that the farmers will have to be responsible for the feeding, sheltering, education, health care and other living expenses of their dependants. These expenses could account for low saving at the end of every harvest season.

The significance of household size in agriculture however, suggest the availability of labour for farm production, the total area cultivated to different crops, the amount of farm produce retained for domestic consumption, and the marketable surplus are all determined by the size of the farm household. However, the number of people in households cannot be used to justify the potential for farm labour, because factors such as health and age can affect labour. Mohammed (2011) research findings showed the average family size of the respondents to be 8 persons. Oladebo (2003), states that large family size characterized developing countries including Nigeria. He reported that 85% of the sampled respondents in a study conducted in Osun State are having family size ranging between 6 and 10. In another study by Mahabub and Jaim (2011), average family size of male farmers' household was found to be 5 persons while it was 4 persons for the female farmers.

Table 5.3: Distribution of ginger farmers based on household size

Variable	Male		Female	
	Frequency	Percentage	Frequency	Percentage
1-5	46	35.7	74	61.8
6-10	74	57.4	46	37.8
11-15	9	6.9	1	0.8
Mean	8		7	
Total	129	100	121	100

5.1.4 Income of farmers

The average farm income from ginger of the male farmers was ₦190,415 while for the female farmers was ₦93,147 as presented in Table 5.4. The minimum and maximum income obtained for the male farmers were ₦25,380 and ₦475,000 respectively. The highest annual income for the female farmers was ₦120,000 with the least income of ₦16,400. The average non-farm income obtained by male farmers was ₦28,696 while female farmers earned ₦31,680. The estimated coefficient of variation obtained for the two groups showed that there is great variability in the income earned by the farmers. The result indicates male farmers earn more income compared to the female farmers. On a general note, the income earned by the farmers in the study area is low compared to the minimum wage of ₦18,000 obtained by civil servants in Nigeria. This low minimum wage of the respondents can transcend to poor level of living.

Table 5.4: Distribution of ginger farmers based on farm and non-farm income

Farm income (₦)/Annum	Male 129	Female 121
Mean	190415.80	93147.93
Minimum	25380.00	16400.00
Maximum	475000.00	120000.00
Std. Dev.	174331.50	97174.36
Coeff. Variation	91.55	104.32
Non-farm income		
(₦)/Annum		
Number of respondents	79	81
Mean	28696.20	31680.25
Minimum	5000	10000
Maximum	500000	400000
Std. Dev.	69014.93	58441.16
Coeff. Variation	240.50	184.47

5.1.5 Farming experience in ginger production

Farming experience is an important factor in agriculture. Result of this study showed that 43% of the male and 39% of female farmers had farming experience ranging from 11 – 20 years. Farming experience of the male ginger farmers ranging from 21- 40 years was higher than the female farmers as shown in Table 5.5. The average farming experience for the male and female farmers were 18 and 16 years respectively. This shows that the farmers had considerable experience in ginger farming which could influence their productivity.

The significant of farming experience in agricultural production cannot be over-emphasized; because it determines farmers' ability to make effective farm management decisions. Other research findings have shown farmers to have high farming experience; Sabo (2009) and Mohammed (2011), research findings for example, showed that the farmers had many years of practical experience on farming ranging from 16 to 20 years. The effect of farming experience on production may be positive or negative. Generally, it would appear that up to a certain number of years, farming experience would have a positive effect; after that, the effect may become negative. The negative effect may be derived from aging or refusal to accept change from old and familiar farm practices.

Table 5.5: Distribution of ginger farmers based on farming experience

Variable	Male		Female	
	Frequency	Percentage	Frequency	Percentage
Farming experience (years)				
1-10	23	17.8	35	28.9
11-20	56	43.4	48	39.6
21-30	43	33.3	30	24.8
31-40	7	5.4	8	6.6
Mean	18		16	
Total	129	100	121	100

5.1.6 Farm size

In agriculture, land is considered to be the most important factor of production. Result from this study revealed 48% of male farmers cultivate the range of 1.1-2.0 hectares of land with a mean size of 2.7. This result does not conform with Amaza *et al.* (2009) who found out that about 97% of male farmers cultivate hectares of land within the range of 1 – 10 hectares with a mean size of – 3.4 ha. Forty-four percent (44%) of the female farmers cultivates the range of 0.1 –1.0 and 35% cultivates between 1.1-2.0 hectares of land with a mean size of 1.79. The reasons female farmers’ farm size is less than the males in this study, might include female farmer’s inability to have access to land and probably due to the traditional setting that vested land ownership exclusively on males, which allows only males to inherit land. On a general note, this result indicates the farmers to be small scale farmers based on Ojuekaiye’s (2001) classification of small-scale farms to be between 0.1 – 5.9 hectares.

Furthermore, results presented in Table 5.6 show the typology of land tenure practiced in the study area. The commonest type of land tenure was ownership by inheritance

from family accounting for 76% for the male farmers and 86% for the female farmers. Individual purchase of land was 15% for the male while 5% for the females farmers. Rented/leased land accounts for 7% for male and female farmers respectively. Since majority of the farmers uses family land in the study area, there could be fragmentation of land as a response to an increased number of family members. This result clearly showed inheritance to be the major mode of land acquisition in the area, which may discourage farm mechanization due to land fragmentation.

Table 5.6: Distribution of ginger farmers based on farm size and mode of acquisition

Variables	Male		Female	
	Frequency	Percentage	Frequency	Percentage
Farm size (ha)				
0.1-1.0	31	24.0	54	44.6
1.1-2.0	62	48.1	43	35.5
2.1-3.0	28	21.7	20	16.5
Greater than 3	8	6.2	4	3.3
Mean	2.7			1.79
Mode of land acquisition				
Individual	20	15.5	7	5.8
Family	99	76.7	105	86.8
Rented	10	7.8	9	7.4
Total	129	100	121	100

5.1.7 Extension contacts

The result revealed that 58% of the male ginger farmers had no contact with extension agents; likewise 73% of the female ginger farmers had no contacts too with extension agents. Results in Table 5.7 indicate that more male farmers (20%) had extension contacts between 3-4 times, while only 11% of female farmers had extension contact

between 3-4 times. This study revealed that extension contact was low in the area; many of the ginger farmers had never received an agent on their farms. Consequently, extension training and information on ginger farming were received by only few farmers which may result in inefficient use of technologies, leading to low yield.

The reason for low extension contacts is probably due to the increasingly low extension-farmer ratio in the country. Nigeria has elaborate agricultural research and extension system, far reaching innovations that are capable of boosting farmer's agricultural production and Nigeria's economic development (Oladele, 2004). Unfortunately, most of these innovations do not reach the farmers and this has been attributed to lack of effective agricultural information dissemination machinery. Extension services encompass the wide range of services provided by experts (in the areas of agriculture, agribusiness and health) and are designed to improve productivity and the overall wellbeing of people.

Extension provision remains low for both women and men ginger farmers, and women tend to make less use of extension services than their male counterpart. Women tend to have lower levels of education than men, which may limit their active participation in training that uses a lot of written material. Time constraints and cultural reservations may hinder women from participating in extension activities, such as field days, outside their village or within mixed groups (Meinzen-Dick *et al.* 2010). In social contexts where meetings between women and men from outside the family nucleus are restricted, a lack of female extension agents effectively bars women from participating (Doss and Morris, 2001).

Table 5.7: Distribution of farmers according to extension contact

Variable	Male		Female	
	Frequency	Percentage	Frequency	Percentage
Number of Extension Contacts				
No contact	75	58.1	89	73.6
1-2	17	13.2	12	9.9
3-4	27	20.9	14	11.6
5-6	10	7.8	6	4.9
Average	4			4
Total	129	100	121	100

5.1.8 Agricultural training

It will be very difficult to increase yield and productivity without any proper training or awareness for the farmers. About 42% of the men reported to have received training, 58% did not. About 31% of the female respondents received training, while 69% did not. The major sources of training in the area are Extension agents, NGO and information from fellow farmers (Table 5.8) The reason why extension workers do not visit the respondents could not be far from the fact, that they lack facilities such as transport, inputs to demonstrate to farmers and insufficient of extension personnel. The resultant effect of this is felt by the farmers in that, the little available resources will be underutilized due to lack of advice on optimum use. Training is an important tool for acquiring knowledge about any technology, farming practices, marketing, farming accounting and record keeping. Training could be used to increase the farmer's level of skill with regards to cultivation and production practices, or processing and marketing aspects.

Table 5.8: Distribution of farmers based on source of training

Access to training	Male		Female	
	Frequency	Percentage	Frequency	Percentage
Yes	54	41.86	37	30.6
No	75	58.14	84	69.4
Total	129	100	131	100
Source of training	Male		Female	
Extension agents	22	40.7	17	45.9
NGO	14	25.9	9	24.3
Other farmers	52	96.3	34	91.9

***Multiple responses**

5.1.9 Membership of cooperatives

The result in Table 5.9 shows 80.6% of male and 87% of female farmers not belonging to cooperative societies, while 19% of male and 12% of female farmers are members of a cooperative society. This shows that most of the ginger farmers in the study area do not enjoy the assumed benefits accrued to cooperative societies through pooling of resources together for a better expansion and effective management of resources. Membership of cooperative society is important because, it represents the interests of their members in relation to information sharing, exchange of ideas, experiences and interaction with other farmers which is an avenue through which innovation diffusion can occur. Idrisa *et al.* (2007) found membership of cooperative enable farmers to acquire more farm inputs.

Table 5.9: Distribution of ginger farmers based on membership of cooperative society

Variable	Male		Female	
	Frequency	Percentage	Frequency	Percentage
Membership of cooperative society				
No	104	80.6	106	87.6
Yes	25	19.4	15	12.4
Total	129	100	121	100

5.1.10 Types of occupations

In sub-Saharan Africa, it is common for some farm household to engage in other non-farm occupations to complement their earnings from farming. The result shows that majority of the ginger farmers are primarily into farming. Farming was found to be the most important occupation of the household heads (80% of men and 68% of women) in the area. Farmers that have farming as their main occupation tend to have a higher probability of not being poor, provided the farmers had access to all the required productive resources. On the other hand, the probability of being poor will be high because of the small size of farm land cultivated by farmers, scarcity and escalating prices of agricultural inputs and high cost of farm labour (as evident in this study) can result into farmers low yield. Consequently, in the event of crop failure or low yields from crops, farm households are likely to be faced with the problem of food insecurity arising from unavailability or limited access to sufficient food and cash. Implication of this finding is that, the dependence of farm families on farming as the predominant occupation may have negative effect on the farmers.

In a situation where farmers have capital constraints due to low income from farming, there is likely hood of farmers to rely heavily on family labor and insufficient use of

inputs to carry out farming operations. As practiced in many rural areas in Nigeria, the households in the area had diversified income-generating activities for additional income and food security. In this study, non-farming occupations of household heads were identified to be civil service job which was the second most important occupation in the study area.

Differences were observed between the male and female farmers in terms of their employment status. It was observed that 15% of the male farmers were civil servants and about 2% are traders. However, 10% of female farmers were traders and 19% are civil servants. Other economic activities the farmers engaged in are tailoring and carpentry. The implication of this finding is that the diversification of income source by the farming household heads can help to reduce the risk associated with income from a single source especially a very risky enterprise such as agriculture. These findings compared favourably with those of Adejobi (2004), Ajakaiye (2001) and Omonona (2000) that non-farm earnings are gradually becoming important, especially for the youths and the educated.

Table 5.10: Distribution of ginger farmers based on types of occupation

Variable	Male		Female	
	Frequency	Percentage	Frequency	Percentage
Major occupation				
Farming	104	80.6	83	68.6
Trading	2	1.6	13	10.7
Civil servant	20	15.5	23	19.0
Craftwork	3	2.3	2	1.7
Total	129	100	121	100

5.2 Level of Gender Accessibility to Resources for Ginger Production

The second objective of this study was to elicit information concerning the level of gender accessibility to resources. The resources are; land, labour, fertilizer, seeds credit and agro-chemicals for their farming activities. In order to measure the level of respondent's access to resource, Likert type scale was used. The results presented in Table 5.11 showed the level of gender accessibility to productive resources; it showed that there were disparities in the level of accessibility to resources between men and women who engaged in ginger production in the study area.

The average score of 3.8 obtained for male farmers is an indication of supporting the statement of men and women farmers having equal access to land, while female farmers strongly disagreed (1.43) to the statement. Majority of the female farmers agreed that women do not have access to land as men due to financial and mode of land acquisition. Women rarely own land in Nigeria, despite their heavy involvement in agriculture. Ogunlela *et al.* (2009) reported that lack of access to land remains a major constraint for women farmers in Africa and in countries where ownership and inheritance laws have been reformed in favour of women, in practice women do not necessarily have equal access to land as local customs act as barrier. Since majority of the female farmers disagree with this statement and the score of 1.43 implied that female farmers do not have equal access to land compared with male farmers who engaged in ginger production.

Further interaction with the farmers revealed, the farmers perceived land ownership increase their status. This result showed that property rights to land affect economic condition of the household which can translate to poverty reduction. According to World Bank (2003), land property rights affect economic growth in a number of ways.

First, secure property rights will increase the incentives of households and individuals to invest, and often will also provide them with better credit access. Secondly, in unmechanized agriculture, the operational distribution of land affects output, implying that a highly unequal land distribution will reduce productivity. Secure land tenure also facilitates the transfer of land through rentals and sales. Without secure rights, landowners are less willing to rent out their land; this may impede rural dwellers ability and willingness to engage in non-agricultural employment or rural-urban migration.

Result presented in Table 5.11 revealed the score of 1.67 indicating female farmers disagreed with the statement of men and women farmers having equal access to fertilizer input. Male farmers also strongly disagreed (mean score of 1.40) that men and women farmers had access to fertilizer for ginger production. Reasons such as high cost of fertilizer, unavailability made the farmers (both male and female) to have low accessibility. In terms of improved seeds, female farmers do not agree that men and women had equal access to improved ginger seeds; based on the mean score obtained from the scale (1.76) which is less than 3 indicating disagreement with this statement. On the other hand, the male farmers were undecided (mean score of 3.41) in respect to the statement on men and women farmers having equal access to improved seeds.

The female farmers agreed with the statement; men and women farmers had equal access to agro-chemicals for ginger production (4.02). The perception obtained from the male farmers was the same with that of the female farmers. The male farmers agreed that there are no disparities in terms of accessibility to agro-chemicals used for ginger production between men and women farmers who engaged in ginger production. The mean scores obtained from both farmers is an indication that farmers had access to agro-chemicals for ginger production.

Labour is very important in agricultural production, the responses obtained from the female farmers showed they disagreed to the statement that; men and women farmers had equal access to labour (2.41). The female farmers mentioned labour to be expensive to hire and lack funds to hire adequate labour. Among the male farmers, score of 4.07 signifies agreement to the statement; of men and women farmers having equal access to labour. In traditional settings men is the head of households this could enhance their access to family labour which could influence their perception in agreeing that men had access to labour.

In terms of accessibility to credit use in ginger production, both the male and female farmers disagree with this statement. The mean score of 2.26 and 2.33 obtained from the scale indicate that both male and female farmers do not agree to the statement on men and women having access to credit. This result revealed the farmers lack credit and availability of credit is an important factor in production. Ekong (2003) asserts that credit is a very strong factor that is needed to acquire or develop any enterprise; its availability could determine the extent of production capacity. Therefore, lack of credit facility will have a negative effect on productivity.

Table 5.11: Distribution of ginger farmers based on level of gender accessibility to productive resources

Male	SA	A	U	D	SD	W.T	M.S
Men and women have equal access to land	70	384	12	26	2	494	3.83
Men and women have equal access to fertilizer	0	4	0	88	88	180	1.40
Men and women have equal access to seeds	175	212	0	24	29	440	3.41
Men and women have equal access to agro chemical	65	448	0	2	3	518	4.02
Men and women have equal access to labour	95	420	3	6	1	525	4.07
Men and women have equal access to credit	15	96	18	132	30	291	2.26
Female	SA	A	U	D	SD	WT	MS
Men and women have equal access to land	15	28	6	32	93	174	1.43
Men and women have equal access to fertilizer	0	4	0	156	42	202	1.67
Men and women have equal access to seeds	0	12	0	166	35	213	1.76
Men and women have equal access to agro chemical	70	404	0	12	0	486	4.02
Men and women have equal access to labour	10	92	0	190	0	410	2.41
Men and women have equal access to credit	40	64	12	146	20	282	2.33

SA=Strongly agreed, A= Agreed, U= Undecided, D=Disagreed, SD= Strongly disagreed, WT= Weighted total, MS= Mean score

Chi square statistic was also used to confirm statistical difference on perception statements on gender accessibility to productive resources. The Pearson Chi-Square explains the direction of relationship between the perception statements while Phi and Cramer's V are both tests of the strength of association. The result in table 5.12 revealed Chi-Square $\chi(1)$ to be = 7.333, $p = 0.042$. This implies that there is significant association between gender and their perception that men and women have equal access to land resources at 5% level of probability. This means that there is direct relationship

between male and female perception on accessibility to productive resources and the strength of association between the variables is strong (0.74).

Perception on land ownership increasing farmers social status was found to be significant ($\chi(2) = 12.000, p = 0.045$) at 5% level of probability. This shows that there is significant association. This implies that there is direct relationship between male and female perception on accessibility to productive resources and the strength of association between the variables is strong (0.83). The Pearson Chi-Square $\chi(7)$ was also found to be significant ($4.123, p = 0.024$). This implies that there is significant association between gender and their perception that men and women have equal access to labour at 5% level of probability. This implies that there is direct relationship between male and female perception on accessibility to productive resources and the strength of association between the variables is strong (0.61).

Chi-Square $\chi(8)$ was = 12.389, $p = 0.0216$. This means that there is significant association between gender and their perception that Men and women have equal access to credit at 5% level of probability. This implies that there is direct relationship between male and female perception on accessibility to productive resources and the strength of association between the variables is strong (0.77). While perception statements on men and women have equal access to fertilizer, men and women have equal access to seeds, men and women have equal access to agrochemical were statistically not significant.

Table 5.12: Chi square result based on the perception of ginger farmers on accessibility to resources

	Value	Df	Asymp. Sig. (2-sided)
Men and women have equal access to land $\chi(1)$			
Pearson Chi-Square	7.333 ^a	9	0.042
Likelihood Ratio	10.044	9	0.034
Linear-by-Linear Association	1.364	1	0.024
Nominal by Nominal	Phi	0.74	0.042**
	Cramer's V	0.74	0.042**
Land ownership increase your social status $\chi(2)$			
Pearson Chi-Square	12.000 ^a	12	0.045
Likelihood Ratio	16.636	12	0.016
Linear-by-Linear Association	2.511	1	0.011
Nominal by Nominal	Phi	0.83	0.045**
	Cramer's V	0.83	0.045**
Men and women have equal access to fertilizer $\chi(3)$			
Pearson Chi-Square	5.143 ^a	6	0.526
Likelihood Ratio	7.075	6	0.314
Linear-by-Linear Association	.035	1	0.852
Nominal by Nominal	Phi	0.526	0.526
	Cramer's V	0.526	0.526
Men and women have equal access to seeds $\chi(4)$			
Pearson Chi-Square	14.000 ^a	12	0.301
Likelihood Ratio	19.408	12	0.079
Linear-by-Linear Association	2.588	1	0.108
Nominal by Nominal	Phi	1.000	0.301
	Cramer's V	1.000	0.301
Men and women have equal access to agrochemical $\chi(5)$			
Pearson Chi-Square	11.000 ^a	10	0.358
Likelihood Ratio	14.909	10	0.135
Linear-by-Linear Association	.097	1	0.756
Nominal by Nominal	Phi	.886	0.358
	Cramer's V	.886	0.358

Men and women have equal access to labour $\chi(6)$

Pearson Chi-Square	4.123a	9	0.342
Likelihood Ratio	11.021	9	0.027
Linear-by-Linear Association	1.364	1	0.024
Nominal by Nominal	Phi	0.61	0.024**
	Cramer's V	0.61	0.024**

Men and women have equal access to credit $\chi(7)$

Pearson Chi-Square	12.389a	12	0.0414
Likelihood Ratio	16.636	12	0.016
Linear-by-Linear Association	2.511	1	0.0113
Nominal by Nominal	Phi	0.77	0.0216**
	Cramer's V	0.77	0.0216**

5.2.1 Test of Hypothesis

Hypothesis i: It was hypothesized that there was no significant difference in accessibility to productive resources among the male and female farmers. The result in Table 5.13 indicates a significant difference in accessibility to productive resources among the male and female farmers. The t value obtained for the resources such as land (4.64), fertilizer (4.28), seed (4.17) and labour (3.23) revealed that there is significant difference at 5% level in accessibility to productive resources among the male and female farmers. Based on this finding the null hypothesis which states that there is no significant difference in accessibility to productive resources among the male and female farmers was therefore rejected and the alternative hypothesis accepted.

Table 5.13: t- test result showing the difference in accessibility to productive resources among the male and female ginger farmers.

Resources	Mean	Standard deviation	Observation	t-value	t-critical two tail
Land					
Male	0.74	0.40	129	4.64	1.97**
Female	0.52	0.35	121		
Fertilizer					
Male	489.38	387.68	129	4.28	1.97**
Female	315.27	219.50	121		
Seed					
Male	2644.65	549.31	129	4.17	1.97**
Female	1608.49	459.52	121		
Agrochemical					
Male	6.73	9.89	129	1.94	1.97
Female	4.76	4.91	121		
Labour					
Male	112.89	54.31	129	3.23	1.97**
Female	92.18	45.52	121		

** p<0.05

5.3 Sources and Quantities of Resources Accessed by farmers

The third objective was to describe the major sources of resources accessed by the respondents in the study area, as well as the adequacy of the resources. The resources are land, seeds, fertilizer, agro-chemicals and labour.

5.3.1 Land

Land is the most important asset for the farmers since a farming family's income/livelihood depends mainly on land. The study showed that, male farmers had more access to land as compared to the female farmers. As shown in figure 5, majority (97%) of male farmers had access to land; about 3% do not have access to land. On the other hand, more than half (60%) of female farmers do not have access to land. Those that had access to land among female farmers constituted 40% percent. This indicates that access to land is a limiting factor against female farmers in the study area. According to Kajoba (2002) in countries where ownership and inheritance laws have

been reformed in favour of women, in practice women do not necessarily have more rights to land, as local customs act as barriers. Land is a basic source of livelihood; providing employment, the key factor in agricultural activities, and a major determinant of a farmer's access to other productive resources and services. Farmer's right to land is a critical factor in social status, economic well-being and empowerment. Limited access to land by women could be attributed to land tenure system which is strictly by inheritance.

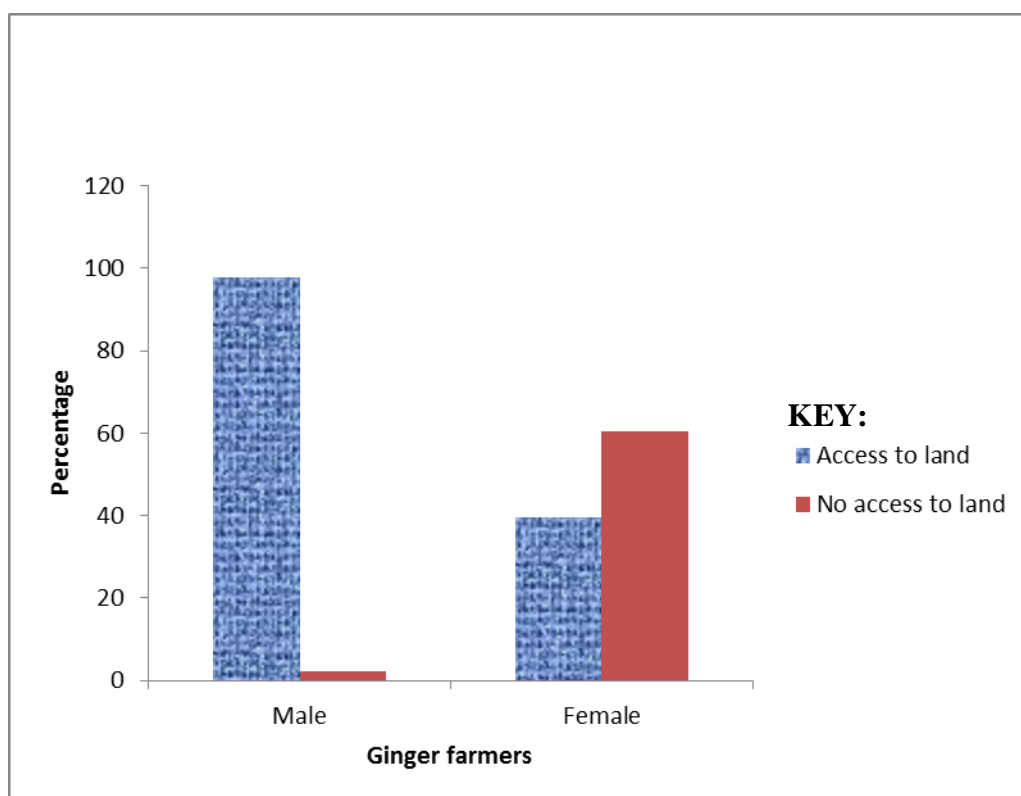


Figure 5: Distribution of farmers based on their accessibility to land

5.3.2 Credit

Farmers require credit for farming activities, adequate and timely access to credit can go a long way in bringing farmers out of poverty. Access to credit was a problem in the study area as 51% of the male and 40% of the female farmers reportedly had access to

credit. It was found that accessibility to credit facilities for both male and female farmers was low, but worse for the female farmers, where 59% had no access to credit as shown in figure 6 below.

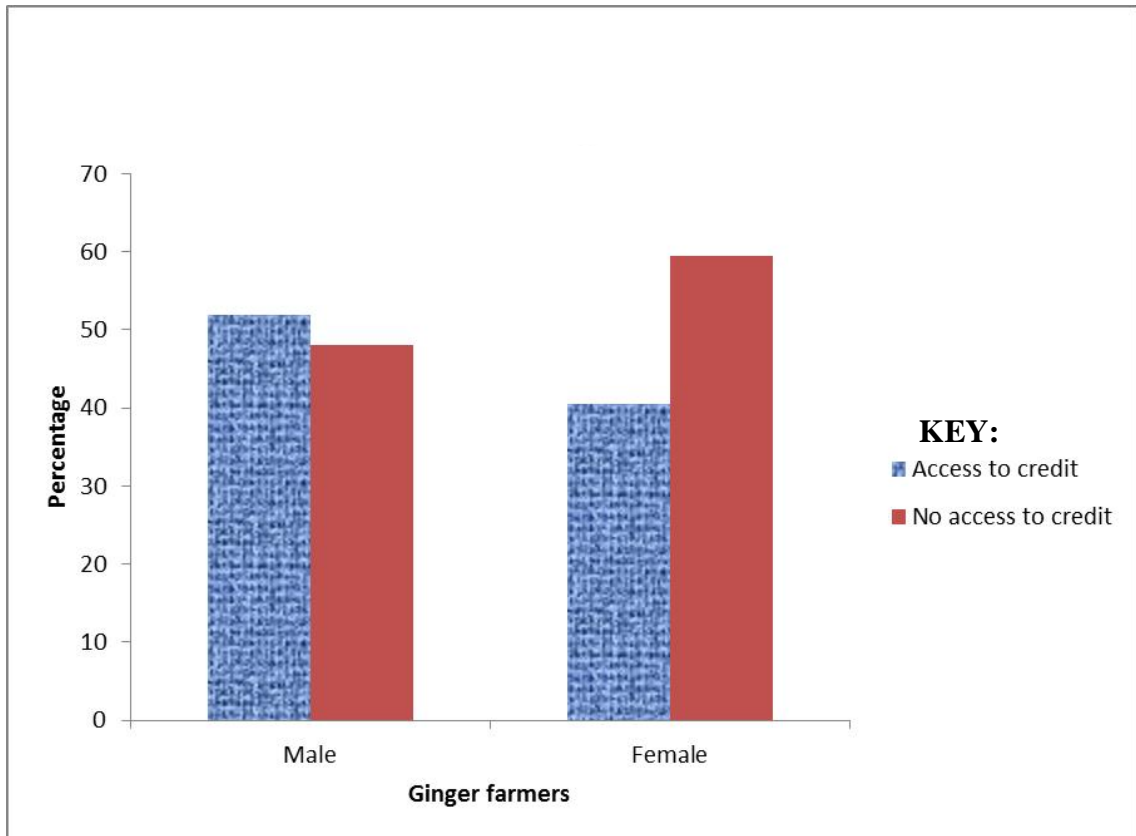


Figure 6: Distribution of farmers based on their accessibility to credit

Five percent of the male and 3% of female farmers source credit from the banks. Large proportion of the farmers' sources of credit was personal savings (Table 5.14). Money lenders happened to be the source of credit to 38% of the male farmers while 73% of the female farmers sourced their credit from money lenders too. Friends and relatives were the sources of credit to 56% of the male farmers while 95% of the female farmers reported to have access to similar sources of credit. This result showed personal savings, friends and relatives to be the major source of credit to both male and female farmers in the study area.

Access to credit is likely to encourage ginger farmers continuation of ginger production. All the ginger farmers reported a desire to expand their farming activities. They cited the lack of access to credit as one of the most prominent barriers to agriculture. Since personal savings, friends and relatives are the major sources of credit; the credit obtained by the farmers might be small and not really have a positive impact. The gender gap in accessing credit from banks is due to women's lack of access to land. Land is usually required as collateral for loans, this is a serious obstacle to improving women's agricultural productivity. Without credit women farmers are unable to buy inputs such as seeds, fertilizers, and improved technologies, or to hire labor (FAO, 2011). The gender gap in access to credit is also confirmed by other studies. Dolan (2004) and Fabiyi *et al.* (2007) in their studies also noted the limited access to credit by the farmers' especially female farmers.

Table 5.14: Distribution of ginger farmers based on their sources of credit

Source of credit	Male		Female	
	Frequency	Percentage	Frequency	Percentage
Personal saving	118	91.5	120	99.2
Friends/relatives	73	56.6	116	95.9
Banks	7	5.4	4	3.3
Money lender	50	38.8	89	73.6

* Multiple responses

The distribution of farmers by the amount of credit received shown in Table 5.15, revealed 57% and 76% received between ₦10000- ₦20000 for male and female farmers respectively. While, 11% male and 4% female farmers received between ₦40001- ₦60000. This result implied the amount of credit received by ginger farmers is inadequate and might not be enough to meet up the needs of the farmers. Credit enables farmers to acquire more and efficient productive assets and hence the increase in

productivity and incomes and thereby contributes to poverty alleviation (Khalid, 2003). Evidence from Malawi confirms that increasing farmers access to credit increases total household expenditures on food and improves the long term food security of children (Hazarika and Guha-Khasnobis, 2008).

Table 5.15: Distribution of farmers based on amount of credit received

Amount of credit received (₦)	Male		Female	
	Frequency	Percentage	Frequency	Percentage
₦10000- ₦20000	74	57.4	92	76.0
₦ 20001- ₦ 40000	40	31.0	23	19.0
₦ 40001- ₦ 60000	15	11.6	6	4.9
Total	129	100	121	100

5.3.3 Seeds: Access to improved ginger seeds was found to be low among farmers. Eighty percent of male farmers and 76 % of female farmers had no access to improved seeds (figure 7). The major source of seeds in the area was previous harvest. It was found out that 64% of male farmers make use of previous seeds from their farms and 83% (figure 8) of the female farmers also use previous seeds from their farms. Only 33% of male farmers and about 13% of female farmers acquire seeds from open markets.

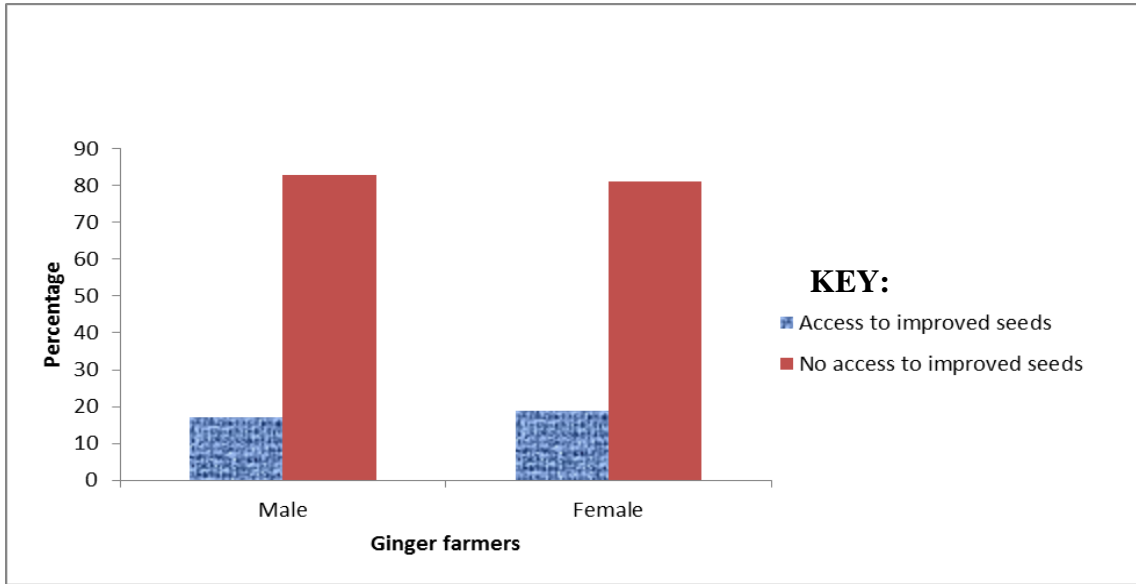


Figure 7: Distribution of farmers based on access to improved seeds

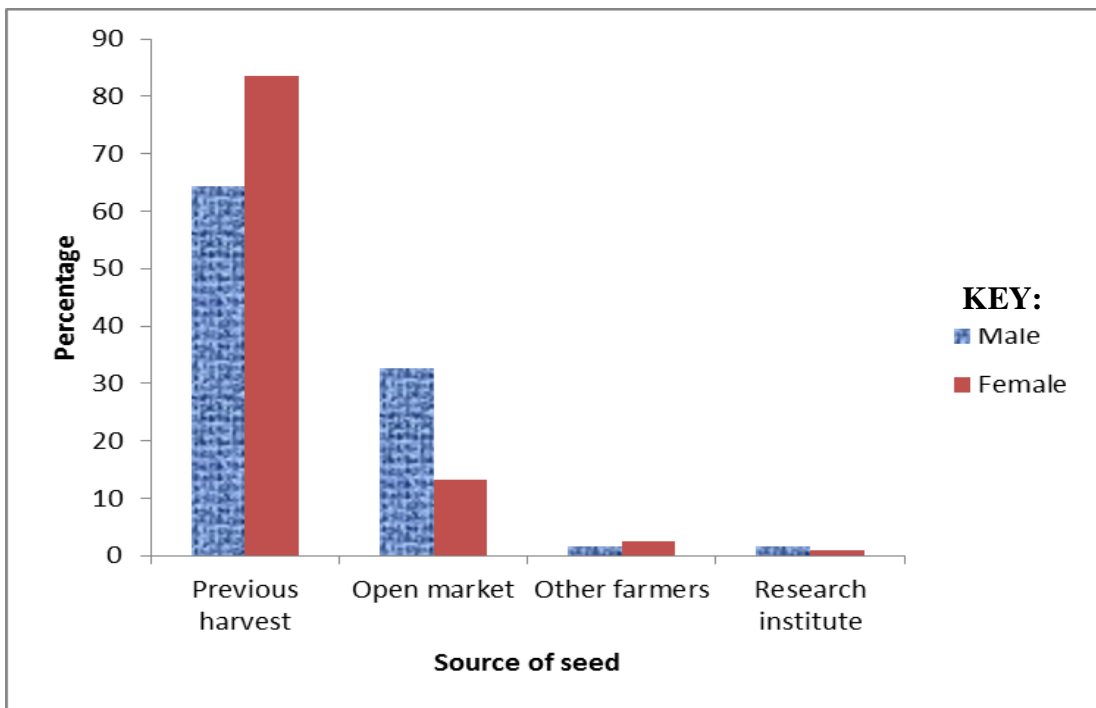


Figure 8: Distribution of farmers based on sources of seeds

Quantity of seeds accessed

The quantity of ginger seeds acquired for planting was found to vary among the male and female farmers. Sixty percent (60%) of the male farmers acquire 2000kg and above, while none of the female farmers could afford this quantity. As shown in figure 9, the maximum quantity of seeds the female farmers could afford was between 1001-1500kg, which is low when compared to the male farmers. The explainable reason for this result is the fact that the females had less accessibility to credit and the amount received was inadequate. In addition to that, the female farmers reported seeds to be expensive. The quantity of seeds use in the study area does not meet the recommended quantity of 250,000 kg of rhizome seed required for plant per hectare.

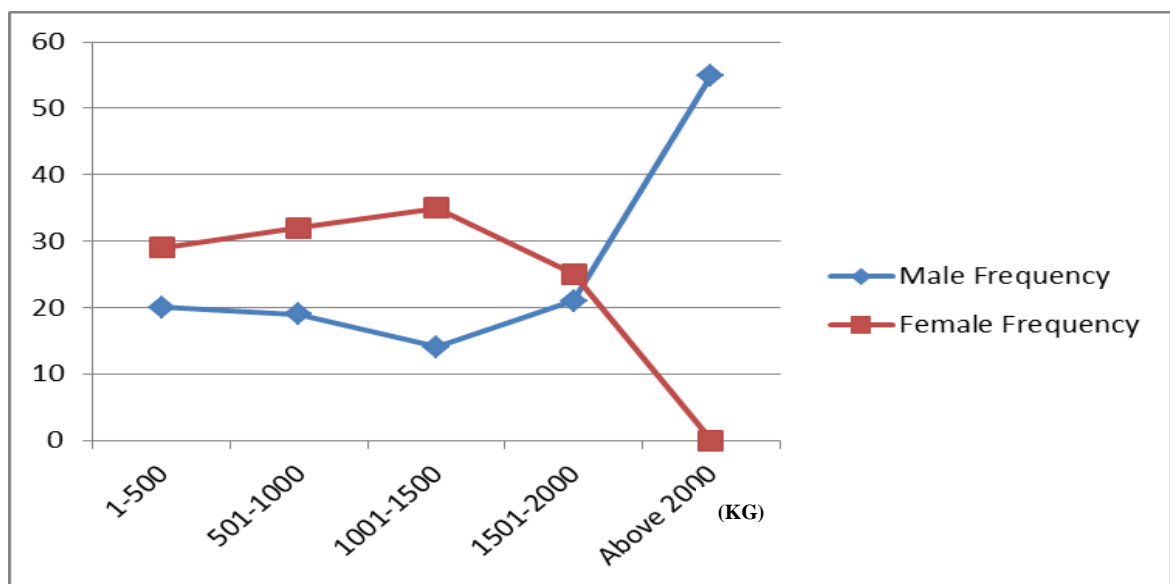


Figure 9: Distributions of ginger farmers based on the quantity of seed accessed

5.3.4 Fertilizer

Fertilizer plays an important role in increasing the soil nutrient level which is essential for optimum productivity. In case of access to fertilizer and usage; all the male (129) farmers had access to fertilizer at all times. However, 69% of the female farmers had

access, while 31% did not (figure 10). The major source of fertilizer in the area was open market. It was found out that all the farmers acquire fertilizer from open markets compared to only 19% and 24% of the male and female farmers who sometimes source fertilizer from the government.

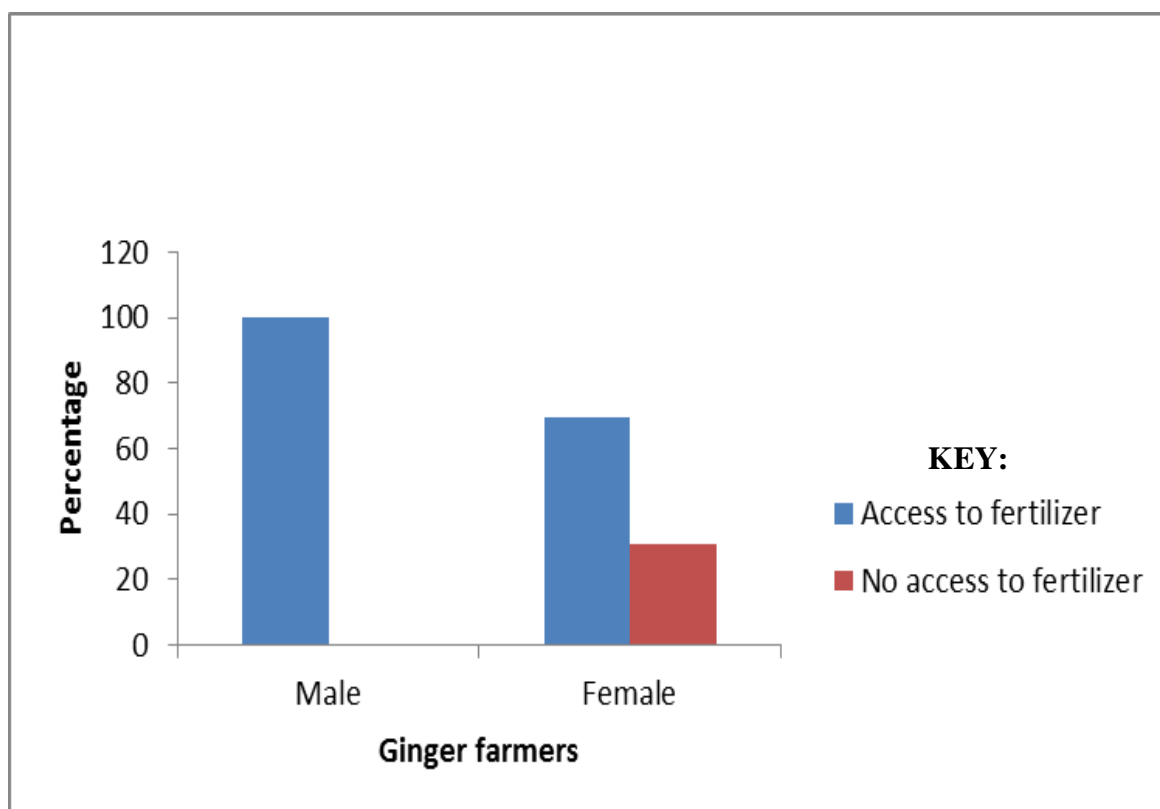


Figure 10: Distribution of farmers based on their access to fertilizer

Table 5.16: Distribution of ginger farmers based on their sources of fertilizer

Source of fertilizer	Male		Female	
	Frequency	Percentage	Frequency	Percentage
Open market	129	100	121	100
Government	25	19.4	20	16.5

*Multiple responses

The quantity of fertilizer acquired for use was found to vary among the male and female farmers. Forty three percent (43%) and 35% of the male and female farmers acquire between 101-150kg. As shown in figure (11) below, the maximum quantities of fertilizer the female farmers had access to was between 50-200kg, while some of the male farmers were able to access 251kg and above. Generally, it was found that fertilizer is expensive as shown in Figure 12, where virtually all the farmers reported fertilizer to be expensive. Fertilizer use was low when compared with NAERLS recommendation of 400kg/ha.

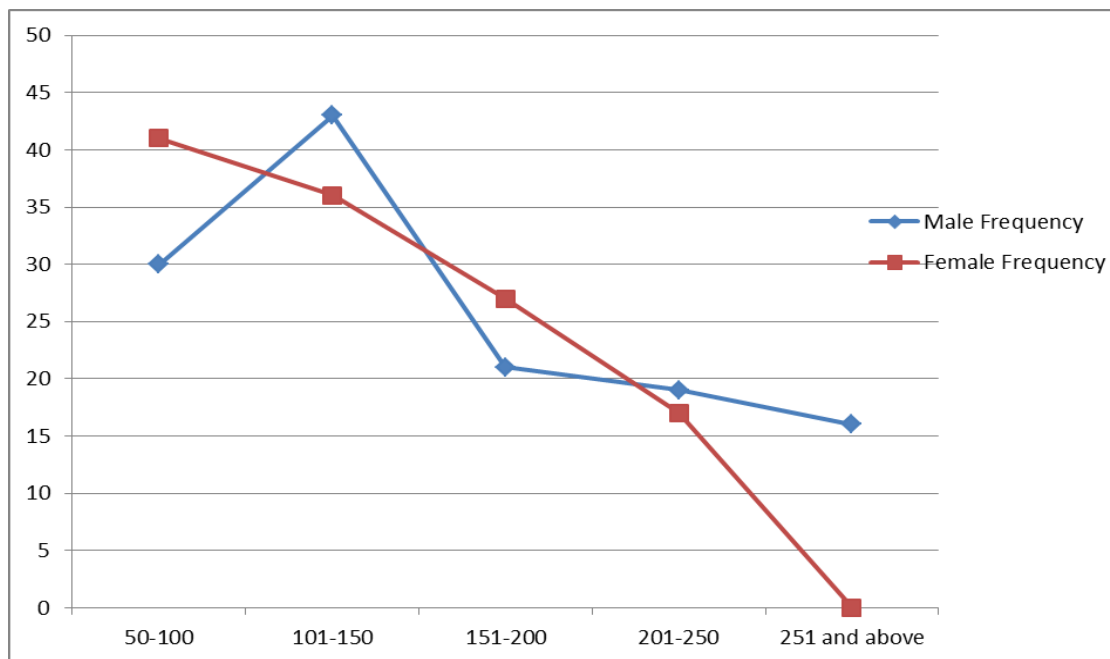


Figure 11: Distribution of ginger farmers based on the quantity of fertilizer used

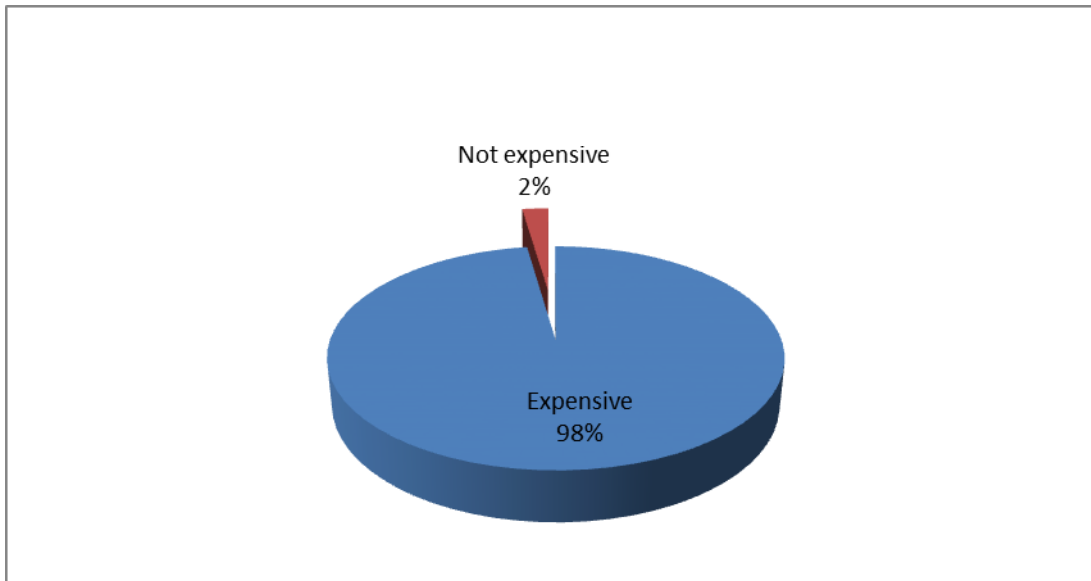


Figure 12: Distribution of male ginger farmers on whether fertilizer is expensive

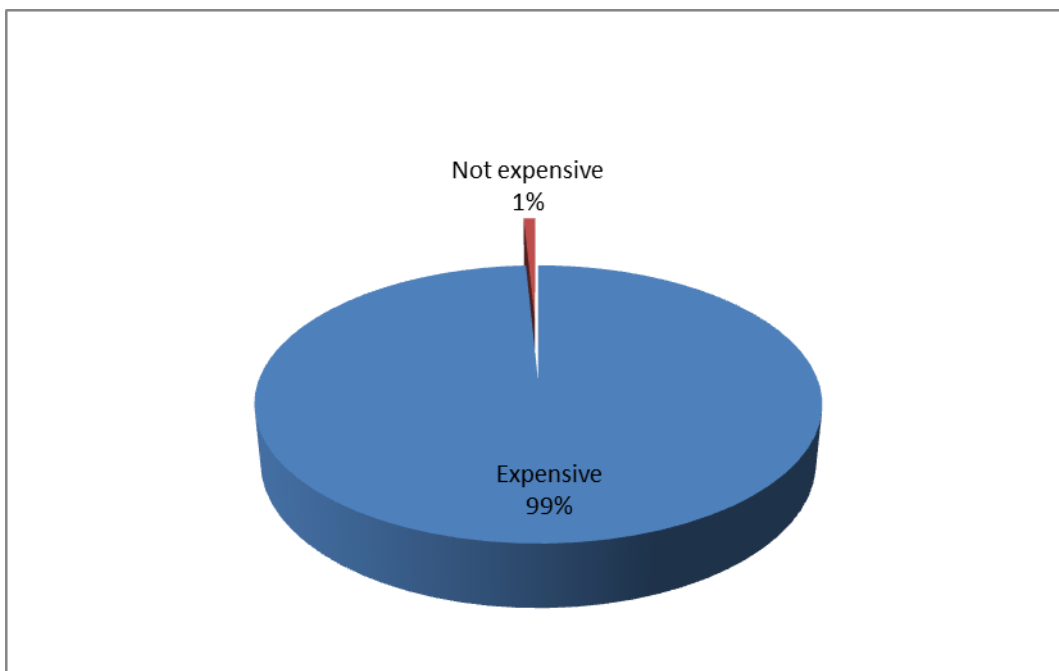


Figure 13: Distribution of female ginger farmers based on whether fertilizer is expensive

5.3.5 Agrochemical

Access to agrochemical and usage in the study area was high. Farmers in the study area use agrochemical to protect their crop from the attack of pests and diseases. Majority of

the farmers had access to agrochemical at all times. However, 7% of the female and 3% of male farmers did not (Figure 14 and 15).

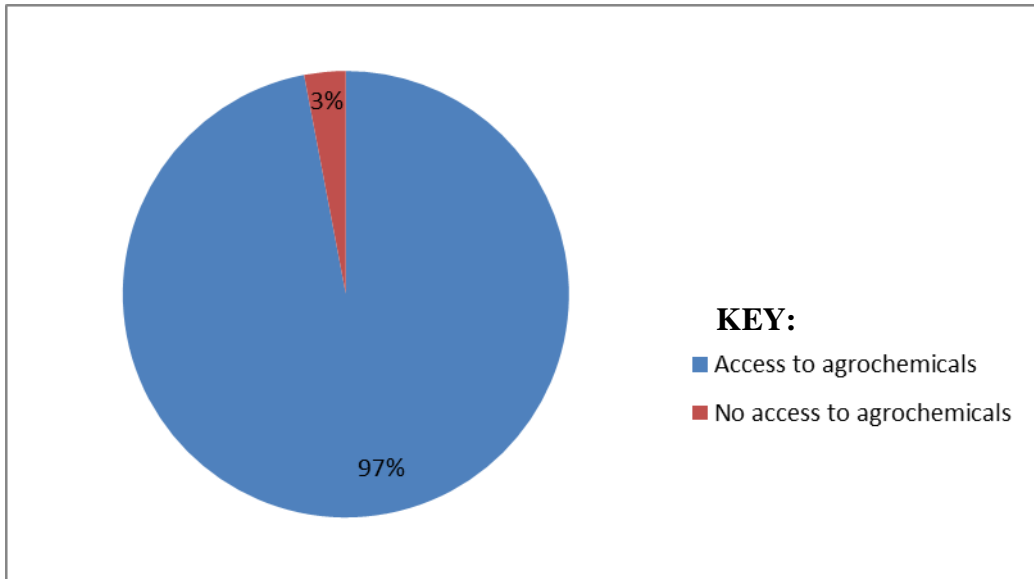


Figure 14: Distribution of male farmers based on access to agrochemical

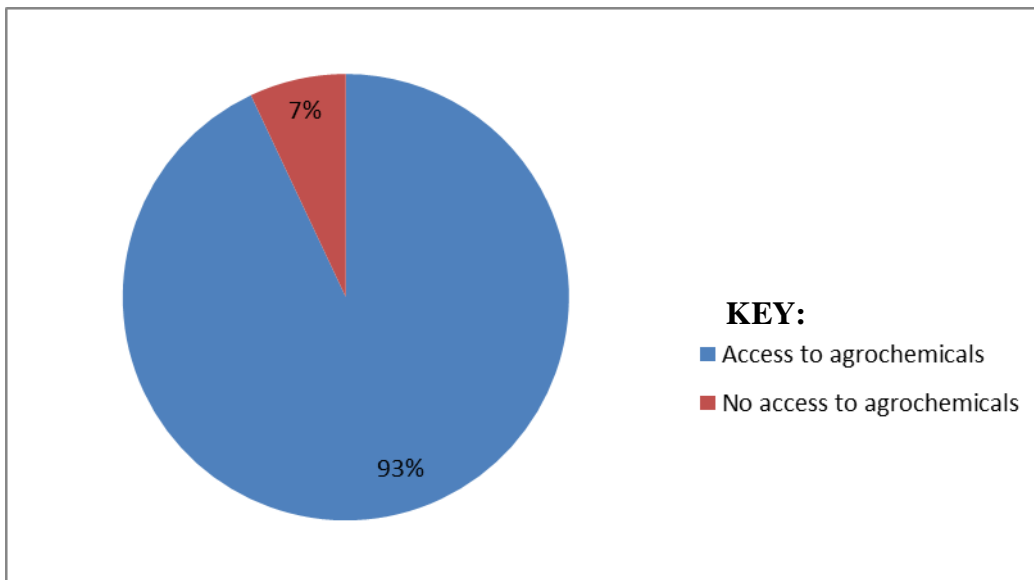


Figure 15: Distribution of female farmers based on access to agrochemical

The major source of agrochemical in the area was open market. It was found out that all the farmers acquire agrochemical from open market (Table 5.17). The quantity of

agrochemical bought for use was found to vary among the male and female farmers. Seventy seven percent (77%) male and 85% female farmers acquire between 1-4 liters. As shown in figure 16, the maximum quantity of agrochemical the farmers accessed was between 1-4 liters. Generally, it was found that agrochemical was not expensive as shown in Table 5.18, where virtually all the respondents reported agrochemical not to be expensive in the study area.

Table 5.17: Distribution of farmers based on the sources of agrochemical

Source of agro-chemical	Male		Female	
	Frequency	Percentage	Frequency	Percentage
Open market	129	100	121	100
KADP	11	8.5	5	4.1
Company	2	1.6	Nil	Nil

*Multiple responses

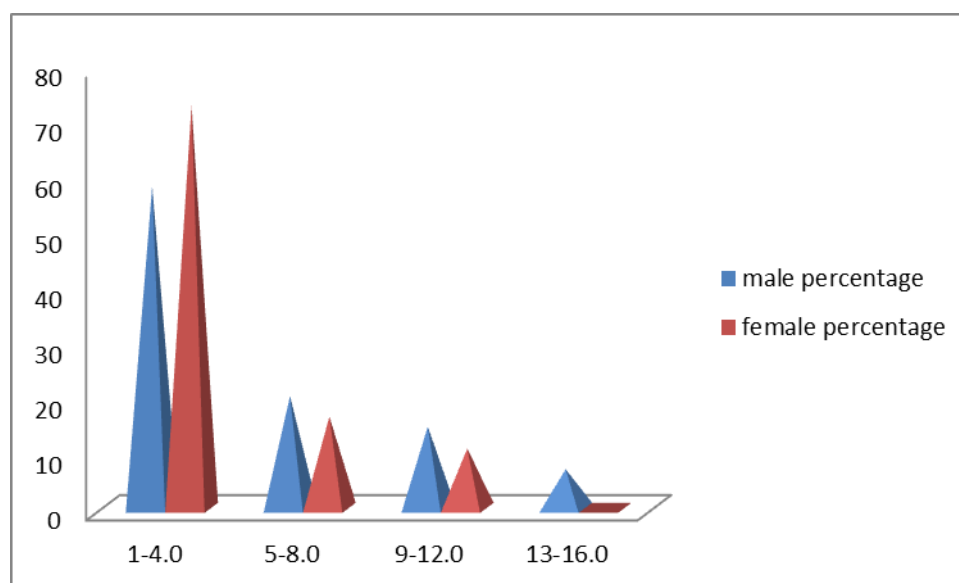


Figure 16: Distribution of ginger farmers based on the quantity of agro-chemicals used

Table 5.18: Distribution of ginger farmers based on whether agrochemical is expensive

Access to agro chemical	Male		Female	
	Frequency	Percentage	Frequency	Percentage
Yes	123	95.3	92	76.0
No	6	4.7	29	24.0
Total	129	100	121	100

5.3.6 Labour

Labour is an important factor in ginger production. This could be in the form of family labour or hired labour. The households in the study area depend primarily on its labor. It was found that, the male farmers use combined labour (76%) more than the female (61%) farmers (Table 5.19), who depend majorly on family labour. Echibiri and Mbanasor (2003) stated that, farmer's households are considered as the most important source of labour for small scale farmers. Anyaegbunam *et al.* (2010) opined that hired labour tends to be more productive than family labour because of the incentive of wages and proper supervision.

Table 5.19: Distribution of ginger farmers based on the type of labour used

Types of labour used	Male		Female	
	Frequency	Percentage	Frequency	Percentage
Family	129	100	121	100
Hired	53	41.08	31	25.61
Both	99	76.74	74	61.15

*Multiple responses

The male farmers labour input (land clearing, planting, weeding and fertilizer application and harvesting) was 217 man-days. Man-days of 196 were used for (land clearing, planting, weeding and fertilizer application and harvesting) by the female farmers. As shown in figure 17, the activities of male and female to ginger production was similar except for marketing. Processing is a major activity for women particularly washing, drying, bagging and storage. Also, carrying the produce from the field is a woman's activity though a few men sometimes assist them. It is, therefore, evident that women have to contribute their labor to almost all the activities. This suggests that women are constrained as their labor has to be divided up to perform various tasks such as household maintenance, child care for the sick and disabled, food and cash crop production, food preparation, fetching water and collecting firewood.

Although, both men and women play productive and reproductive roles in the study area; women in contrast to men must balance simultaneous limited time for each of these roles. Women's time and flexibility are, therefore, much more constrained than is the case with men. This situation concurs with Elson's (1991) assertion that women's labor is not infinitely elastic, a breaking point may be reached and women's capacity to produce and maintain human resources may collapse. Women reported that they collapse during peak periods of agricultural activity, especially during weeding and harvesting and processing of produce. This is a period when their hours of work double. The result in this study, conforms with Rahaman (2006) findings, that, both men and women participated fairly equally in land clearing, planting, fertilizer application and weeding activities.

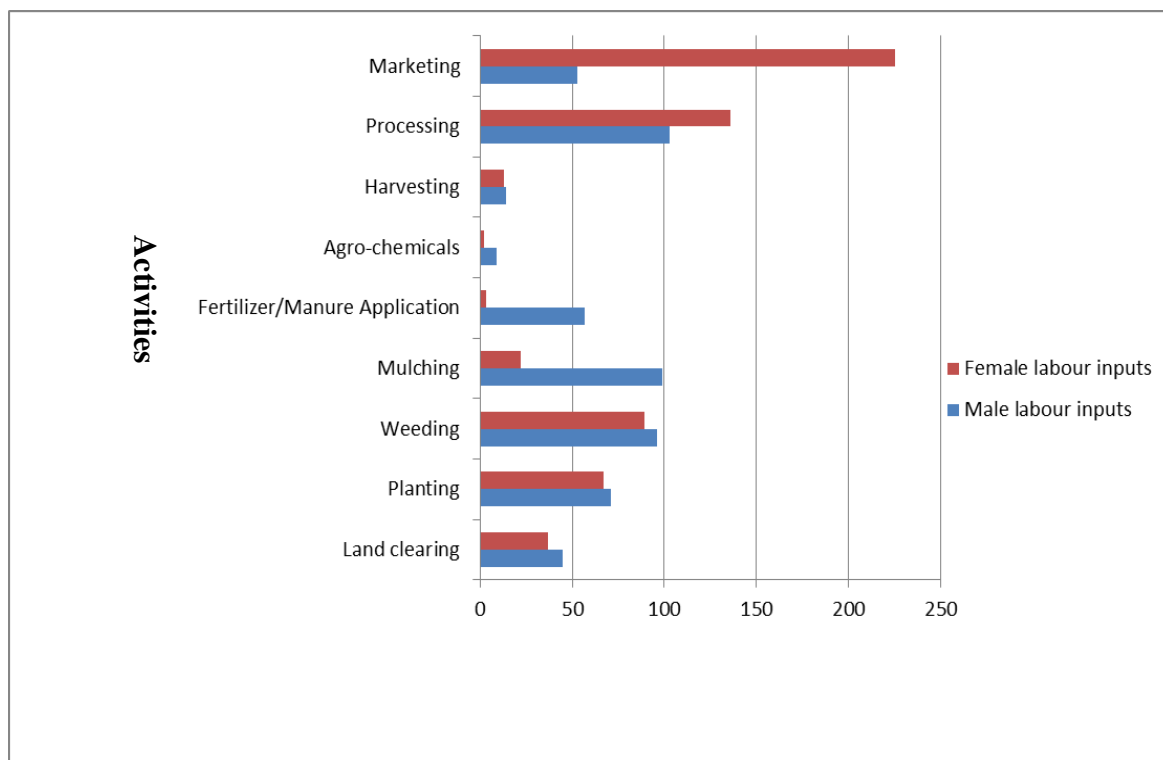


Figure 17: Activities of male and female farmers in ginger production

This study clearly shows that female farmers have low access and usage of resources in the study area. This is probably due to the fact that, they have less access to farm lands and it is expected that the inputs will equally be less. On a general observation, farmer's accessibility to inputs is mainly from the open market; the implication of these findings is that some of these inputs could be adulterated and likely affects the yield of farmers.

5.3.7 Quantity of ginger produced

It was found that 0.8% of male and female farmers had yields of above 4,000kg. Sixty two percent (62%) of the female farmers harvested between 2000-3000kg, while 52% of the male farmers harvested the same quantity. Forty-seven percent (47%) of the male farmers harvested between 3001-4000kg and 36% of the female farmers also harvested the same quantity. NAERLS (2004) gave the yield potential of the two common varieties of ginger as UGI 70 - 80 tons/ hectare and UGII 50 - 60 tons/ hectare.

Comparing the yield realised by the farmers (Table 5.20) with the potential of the crop, the yield realised by the farmers in the area was very low, implying that there is still room to increase ginger yields in the study area. The low output of ginger could be explained by the relatively less quantities of input used by the farmers.

Table 5.20: Distribution of ginger farmers based on the quantity of yield obtained

Yield harvested (kg)/ha	Male		Female	
	Frequency	Percentage	Frequency	Percentage
2000-3000	67	52.0	76	62.8
3001-4000	61	47.2	44	36.4
Above 4000	1	0.8	1	0.8
Total	129	100	121	100

5.4 Factors Influencing Gender Accessibility to Resources

The fourth objective of the study was to determine the factors influencing gender accessibility to resources. The purpose of this objective was to examine the influence of socioeconomic and institutional factors on access to resources. The productive resources are; labour, land, seeds, fertilizer and agrochemicals.

5.4.1 Factors influencing gender accessibility to labour resource

The result of the factors influencing gender accessibility to labour resource presented in Table 5.21, shows the adjusted R square to be 0.47 and 0.42 for male and female ginger farmers respectively. This implies that 47 and 42 percent in the variability of accessibility to labour resource in the study area was explained by the explanatory variables (age, education, household size, income, extension, membership of

cooperative and access to credit) specified in the model. The F- values of 57.4 and 49.7 were statistically significant at 1% level of probability and this indicates the joint significance of the specified variables on gender accessibility to labour resource in the study area. The factors that had significant influence on gender accessibility to labour resource in the study area were age, household size, income and extension contact.

The estimated coefficients of age for male (0.614) and female farmers (1.094) were found to be positive and significantly influence access to labour resource at 5 percent level of probability. This implies that increase in age to a certain extent would increase farmers' access to labour resource. Age has been found to determine how active and productive the head of the household would be. Age has also been found to affect the rate of household adoption of innovations, which in turn, affects household productivity and livelihood improvement strategies. Age was reported by Minot and Epprecht (2006) to be associated with accumulation of skills, more experience and accumulation of assets. This could enhance farmers' accessibility to labour resource.

The estimated coefficient of household size was positive and significant at 1 percent and 5 percent level of probability for male (0.325) and female (2.098) farmers respectively. This showed that household size influences farmers' accessibility to labour resource in ginger production. The significance of household size in agriculture hinges on the availability of labour for farm production. As the number of people in a household increases, a pool of family labour becomes available for production processes and also the total area cultivated to different crop enterprises. The amount of farm produce retained for domestic consumption and the marketable surplus are all determined by the size of the farm household. This finding is in line with Solomon (2008) who revealed

that household size statistically influences productive resources and other household activities.

The estimated coefficient of income (5.415E-5) was found to be positive and significantly influence access to labour resource among male farmers at 10 percent level of probability. The implication of this is that increase in income would increase male farmers' access to labour resource. Income provides the farmer with a means of expanding and improving his farm. Income also determines the ease with which he adopts new practices and technologies in his enterprise. However income was not significant among the female farmers. This finding does not agree with the *apriori* expectation, because income was expected to be significant for female farmers too considering the importance of income as a determinant factor of household expenditure.

The estimated coefficient of extension contact was positive and significant at 10 percent level of probability for male (5.519) and female (3.664) farmers respectively. This indicates that accessibility to labour resource increases when farmers had more contact with extension agent. Availability of extension could play an important role on information dissemination which could lead to awareness of resource availability, In terms of new labour saving devices. According to Obwona (2000), extension service is very essential to the improvement of farm productivity and efficiency among farmers. Similarly, Ayanwuyi *et al.* (2013) stated that agricultural extension services is identified to be relevant in rapid increase in agricultural production that aims to involve a shift from traditional based method to science based method which involves varieties of new practices.

Table 5.21: Factors influencing gender accessibility to labour resource

Variables	Male			Female		
	Coefficient	St. Error	t-value	Coefficient	St. error	t-value
Constant	63.014	35.850	1.758*	39.823	23.484	1.696*
Age	0.614	0.293	2.095**	1.094	0.469	2.331**
Education	5.510	4.707	1.171	.767	3.364	0.228
Household size	0.325	0.121	2.686***	2.098	0.885	2.371**
Income	5.415E-5	0.000	1.829*	-5.178E-5	.000	-1.096
Extension visit	5.519	3.317	1.664*	3.664	2.135	1.716*
Membership of cooperative	-3.413	13.076	-0.538	0.999	12.275	0.081
Access to credit	-7.114	13.221	-0.538	9.522	8.487	1.122
R-square		0.52			0.47	
R-square adjusted		0.47			0.42	
F-value		57.4***			49.7***	

*** P<0.01 ** P<0.05 *P<0.010

5.4.2 Factors influencing gender accessibility to land resource

Factors influencing gender accessibility to land resource presented in Table 5.22 indicates the adjusted R square of 0.53 and 0.19 for male and female ginger farmers respectively, implies that 53 and 19 percent in the variability in accessibility to land resource in the study area was explained by the explanatory variables (age, education, household size, income, extension contacts, membership of cooperative and access to credit) specified in the model. The F value of 75.4 and 54.6 were statistically significant at 1% probability level and this indicates the joint significance of the specified variables on gender accessibility to land resource in the study area. The factors that had significant influence on gender accessibility to land resource in the study area were

household size, income, cooperative association and access to credit. Age, level of education and extension contacts were not statistically significant.

The estimated coefficient of household size (0.020) was found to be positive and significantly influence access to land resource among male farmers at 10 percent level of probability. This showed that household size influences farmers' accessibility to land resource for ginger production. Among the female farmers, household size was found not to be significant. This implies that as household size increase, the male farmers will have to put in more effort in sourcing for more farm land and increase production to enable the farmers provide the needs of their families. The reason for the non-significance of this variable for the female farmers might include their inability to have access to land, probably due to the traditional setting that vested land ownership exclusively on males and also the typology of land tenure practiced in the study area.

The estimated coefficient of income was positive and significant at 1 percent and 5 percent level of probability for male (1.571E-6) and female (1.215E-6) farmers respectively. The implication of this is that increase in income would increase both male and female farmers' access to land resource. Income provides the farmer with a means of expanding farm size and improving his/her farm. It also determines the ease with which farmers adopts new practices and technologies in his enterprise.

Cooperative membership was significant at 1 percent level of probability for the male farmers and insignificant for the females. The positive coefficient (0.173) indicates that accessibility to land resource increase as a result of belonging to a cooperative society. The non-significance of membership of cooperative society among the female farmers

may be explained by the leadership's inability to source for agricultural assistance for its members to acquire land resource.

Access to credit (0.124) was found to be positive and significantly influence accessibility to land resource among the female farmers who engaged in ginger production at 10 percent level of probability and insignificant for the males. The implication of this is that increase in credit accessibility would enhance farmers' accessibility to land. This suggests that availability of credit is an important factor in resource accessibility among the ginger farmers. Ekong (2003) asserts that credit is a very strong factor that is needed to acquire or develop any enterprise; its availability could determine the extent of production capacity.

According to Tijani *et al* (2006), access to credit provides the farmer with a means of expanding and improving his farm. It also determines the ease with which he adopts new practices and technologies in his enterprise. Therefore, lack of credit facility will have a negative effect on profit efficiency. The study by Jordaan (2012) found that formal and informal credit has a positive relationship with efficiency among producers in Eksteenskuil, South Africa. Jordaan (2012) further reported that credit increases productivity and credit constraint decreases the efficiency of farmers by limiting the adoption of high yielding varieties and the acquisition of information needed for increased productivity.

Table 5.22: Factors influencing gender accessibility to land resource

Variables	Male			Female		
	Coefficient	St. Error	t-value	Coefficient	St. error	t-value
Constant	0.341	0.181	1.889*	0.248	0.166	1.495
Age	-0.001	0.003	-0.238	0.001	0.003	0.317
Education	-0.031	0.024	-1.304	-0.025	0.024	-1.054
Household size	0.020	0.011	1.825*	0.015	0.015	0.997
Income	1.571E-6	0.000	10.529***	1.215E-6	0.000	3.636***
Extension cont	0.020	0.017	1.169	0.021	0.018	1.152
Membership of cooperative	0.173	0.066	2.624***	-0.091	0.087	-1.053
Access to credit	-0.048	0.067	-0.723	0.124	0.060	2.059**
R-square		0.56			0.24	
R-square adjusted		0.53			0.19	
F-value		75.4***			54.6***	

*** P<0.01 ** P<0.05 * P<0.010

5.4.3 Factors Influencing Gender Accessibility to Seed Resource

The adjusted R square of 0.52 and 0.46 for male and female ginger farmers presented in Table 5.23 implies that 46 and 52 percent in the variability in accessibility to seed resource in the study area was explained by the explanatory variables (age, level of education, household size, income, extension contacts, membership of cooperative and access to credit) specified in the model. The F value of 64.6 and 37.9 were statistically significant at 1% probability level and this indicates the joint significance of the specified variables on gender accessibility to seed resource in the study area. The factors

that had significant influence on gender accessibility to seed resource were age, education and income.

The estimated coefficients of age for male (59.581) and female (39.219) were found to be positive and significantly influence access to seed resource at 1 percent level of probability respectively. This implies that increase in age to a certain extent would increase farmers' access to seed resource. Age has been found to determine how active and productive the head of the household would be. Age is also associated with skills enhancement (experience), accumulation of resources and extensive social capital that ought to contribute positively to well-being (Bashaasha *et al.*, 2006).

The coefficient of Education variable was found to be statistically significant at 1 percent level of probability for both male and female ginger farmers. This implies that as the level of education of ginger farmers increased, their accessibility to seed resource will also increase *ceteris paribus*. A plausible explanation for this is that higher educational level leads to high rate of adoption of improved technologies and techniques of production. Also, educated farmers are likely to be more successful in gathering information and understanding new practices.

Access to income (0.003) was found to be positive and significantly influence accessibility to seed resource among the male farmers who engaged in ginger production at 1 percent level of probability and insignificant for the females. This means that, increase in income would increase male farmers' access to seed. Surprisingly, it is expected the variable to be significant for the female farmers too. The reason given as to why this result is insignificant for the female farmers as against *apriori* expectation; is not too far from the fact that the female farmers had less

accessibility to income. The female farmers cannot afford to acquire seeds compared to the male farmers who on the other hand have the means and can also acquire larger quantities of seeds.

Table 5.23: Factors influencing gender accessibility to seed resource

Variables	Male			Female		
	Coefficient	St. error	t-value	Coefficient	St. error	t-value
Constant	-2082.653	1383.35	-1.506	-902.834	618.529	-1.460
Age	59.581	23.698	2.514***	39.219	12.361	3.173***
Education	181.637	68.465	2.653***	88.593	19.587	4.523***
Household size	90.683	85.612	1.059	65.633	55.267	1.188
Income	0.003	0.001	2.697***	0.003	0.007	0.428
Extension visit	-95.577	127.981	-0.747	-18.903	66.763	-0.283
Membership of cooperative	785.937	504.574	1.558	356.673	323.302	1.103
Access to credit	343.456	510.138	0.673	-311.866	223.540	-1.395
R-square		0.57			0.52	
R-square adjusted		0.52			0.46	
F-value		64.6***			37.9***	

*** P<0.01

5.4.4 Factors influencing gender accessibility to fertilizer resource

The factors influencing gender accessibility to fertilizer resource in the study area is presented in Table 5.24. The adjusted R square of 0.67 and 0.57 for male and female ginger farmers implies that 67 and 57 percent in the variability in accessibility to fertilizer resource in the study area was explained by the explanatory variables (age, education, household size, income, extension, membership of cooperative and access to credit) specified in the model. The F value of 96.7 and 79.5 were statistically significant at 1% probability level and this indicates the joint significance of the specified variables

on gender accessibility to fertilizer resource in the study area. The factors that had significant influence on gender accessibility to fertilizer resource were income, extension, cooperative membership and access to credit.

The estimated coefficient of income was positive and significant at 1 percent and 5 percent level of probability for male (0.0004) and female (8.652E-6) farmers respectively. This shows that; increase in income would increase both male and female farmers' access to fertilizer resource. Income provides the farmers with a means of expanding farm size and improving his farm and also determines the ease with which the farmer adopts new practices and technologies. Increased income of the farmer could reduce liquidity constraint thereby enhances farmers' accessibility to resources.

The estimated coefficient of extension contact was significant among the female farmers (0.656) and also positive and significantly (50.218) influence access to fertilizer resource among male farmers at 1 percent level of probability. This indicates that accessibility to fertilizer resource among farmers increased when farmers had more contact with extension agents. Availability of extension could play an important role on information dissemination which could lead to awareness of resource availability. According to Obwona (2000), extension service is very essential to the improvement of farm productivity and efficiency among farmers.

Cooperative membership was significant at 1 percent level of probability for the male farmers and insignificant for the female farmers. The positive coefficient (185.160) indicates that accessibility to fertilizer resource increase as a result of belonging to a cooperative society. The non-significance of this variable among female farmers may be

explained by the leadership's inability to source for agricultural assistance for its members to acquire fertilizer resource.

Access to credit was also found to be positive and significantly influence accessibility to fertilizer input resource among the male (259.314) and female (3.757) farmers at 1 percent level of probability respectively. The implication of this is that increase in credit accessibility would enhance farmers' accessibility to fertilizer. This suggests that availability of credit is an important factor in resource accessibility among the ginger farmers. Ekong (2003) asserts that credit is a very strong factor that is needed to acquire or develop any enterprise; its availability could determine the extent of production capacity.

Table 5.24: Factors influencing gender accessibility to fertilizer resource

Variables	Male			Female		
	Coefficient	St. Error	t-value	Coefficient	St. error	t-value
Constant	118.286	201.697	0.586	3.211	1.948	1.648
Age	1.618	3.455	0.468	-0.007	0.039	-0.180
Education	-41.148	26.483	-1.554	0.158	0.279	0.566
Household size	12.482	26.312	0.474	-0.044	0.174	-0.254
Income	0.0004	0.0019	2.938***	8.652E-6	0.000	2.208**
Extension visit	50.218	18.660	2.691***	0.656	0.210	3.120***
Membership of cooperative	185.160	73.569	2.517***	0.708	1.018	0.695
Access to credit	259.314	74.380	3.486***	3.757	0.705	5.332***
R-square		0.71			0.61	
R-square adjusted		0.67			0.57	
F-value		96.7***			79.5***	

*** P<0.0 1, ** P<0.0 5

5.4.5 Influencing gender accessibility to agrochemical resource

The adjusted R square of 0.21 and 0.21 for male and female ginger farmers implies that 21 percent in the variability in accessibility to agrochemical resource in the study area was explained by the explanatory variables (age, education, household size, income, extension, membership of cooperative and access to credit) specified in the model. The F value of 81.7 and 74.4 were statistically significant at 1% probability level and this indicates the joint significance of the specified variables on gender accessibility to agrochemical resource in the study area. The factors that had significant influence on gender accessibility to agrochemical resource were income and credit while others were not statistically significant.

The estimated coefficient of income was positive and significant at 1 percent and 5 percent level of probability for male (2.985E-5) and female (2.152E-5) farmers respectively. The implication of this is that increase in income would increase both male and female farmers' access to agrochemical resource. Income provides farmers with a means of expanding farm size and improving his/her farm. It also determines the ease with which he/she adopts new practices and technologies in his enterprise.

The estimated coefficient of access to credit was positive and significant for male (1.694) and female farmers (0.533) respectively. The implication of this is that increase in credit accessibility would enhance farmers' accessibility to agrochemical. This suggests that availability of credit is an important factor in resource accessibility among the ginger farmers. Tijani *et al* (2006), opined that access to credit provides the farmer with a means of expanding and improving his farm.

Table 5.25: Factors influencing gender accessibility to agrochemical resources

Variables	Male			Female		
	Coefficient	St. Error	t-value	Coefficient	St. error	t-value
Constant	-6.316	5.397	-1.170	-0.468	2.182	-0.215
Age	0.097	0.092	1.047	0.062	0.043	1.427
Education	0.047	0.709	0.067	-0.234	0.313	-0.748
Household size	0.301	0.334	0.900	0.057	0.194	0.294
Income	2.985E-5	0.000	6.697***	2.152E-5	0.000	4.916***
Extension visit	-0.154	0.499	-0.307	-0.056	0.239	-0.235
Membership of cooperative	1.747	1.969	0.888	-1.283	1.137	-1.128
Access to credit	1.694	0.1990	8.513***	0.533	0.078	6.833***
R-square		0.35			0.32	
R-square adjusted		0.21			0.21	
F-value		81.7***			74.4***	

*** = P<0.0 1

5.4.6 Test of Hypothesis:

Hypothesis ii:

It was hypothesized that Socio economic and institutional factors have no significant influence on gender accessibility to productive resources.

The null hypothesis which states that, socio economic and institutional factors have no significant influence on gender accessibility to productive resources in the study area was rejected based on the regression result presented in pages 119-131. The regression coefficient of factors such as age income, household size, education, membership of cooperative group and extension contacts were found to be positive and significant. This implies that socioeconomic and institutional factors influence gender accessibility to productive resources in the study area. The null hypothesis was therefore rejected and the alternative hypothesis accepted.

5.5. Farmers' Perception of Poverty

Objective v of this study is to assess the farmers' perception of poverty in the study area. The aim is to bring the realities of poor people's perspectives on poverty into focus such that would provide information to policy makers. The average scores of 4.06 and 4.09 obtained from both the male and female farmers in terms of their understanding of poverty indicate that, farmers agreed that poverty is a state where by poor people are not regarded. The mean scores of 4.31 for the male and 4.52 for the female farmers shows the male farmers agreed to the statement that poverty is the lack of money to take care of one's need, while the female farmers strongly agreed to the statement. This means that among the farmers poverty can be regarded as lack of money. The opinion of the farmers with respect to the meaning of poverty is similar to the definition given by Olayemi (1995) who viewed poverty as any household or individual with insufficient income or expenditure to acquire the basic necessities of life.

The average score of 4.44 indicates male ginger farmers in the study area, agreed that poverty is the inability to meet ones immediate problems and lack of employment. However, in respect to this statement; female ginger farmers strongly agreed (4.64) to the statement. Generally, one of the most common reasons for being poor is the inability to obtain an adequate return from one's labour. Household heads who are fully engaged in small scale agriculture and lack adequate resources tend to be poor while those in regulated sector whose wages are high; are the least poor (Bird and Shepherd, 2003).

Poverty was also perceived to exist when there is no food to eat in the morning, afternoon and evening. The mean scores of 4.80 obtained for both the male and female farmers indicates, they strongly agreed with the fact that poverty is a situation when

household have no access to food. The farmers agreed that poverty is a situation of constant begging and borrowing of money. In addition to that, the average score of 4.39 (male farmers) and 4.52 (female farmers) reflects the farmers perception of poverty to also include lack of infrastructure. Poverty is also lack of access to social and economic infrastructure such as education, health, portable water, good roads and sanitation.

The perception of the farmers about what poverty can be translated to; is similar to the definition provided in the past studies. Etim *et al.* (2009) viewed poverty as the level of deprivation that encompasses short falls or inadequacies in basic human needs, which prevent people from achieving internationally acceptable levels of wellbeing. The results in Table 5.24 showed that, the farmers strongly agree that lack of access to productive resources can lead to poverty. The average scores of 4.59 and 4.69 is an indication that farmers strongly agreed that access to productive resource has a role to play on poverty reduction. In other words, limited accessibility to productive resources would raise the incidence of poverty.

Access to productive resources such as land, labour, improved seed and source of credit for production could improve farmers' income thereby lead to poverty reduction. Without access to these, it is unlikely that production and income earning capacities can be improved on a sustainable basis. Similarly, Prakash (2003) opines that, poverty cannot be defined simply in terms of lacking access to sufficient food. It is also closely associated with a person's lack of access to productive assets, services and markets. Rural poverty is related to food insecurity, access to assets, services and markets, income-earning opportunities and the means for achieving those ends. The implication

is that limited access to productive resources would hinder farm operation which could lead to poverty.

The responses from the farmers indicate poverty to be complex, multifaceted and have no single universal accepted definition. This is in line with World Bank (2005) that, poverty is the inability to attain a minimal standard of living, measured in terms of basic consumption needs, income required for satisfying them or when persons failed to attain a level of wellbeing. Musa (2006) also found out in his study that, there were diverse perspectives and attributes by which the indigenous rural people distinguish and perceive poverty. Also highlighted in the World development report (2001), Sen emphasized poverty to be lack of voice, empowerment and good governance.

Table 5.26: Male farmers perception of poverty

Items	Weighted scores						M.S.
	SA	A	U	D	SD	WT	
Farmers' perception of the meaning of poverty							
Poverty is a state where by the poor are not regarded	195	284	30	14	2	525	4.06
It is the lack of money to take care of one's need	200	356	0	0	0	556	4.31
Poverty is the inability to meet ones immediate problems	295	276	0	2	0	573	4.44
Poverty is poor source of income	345	236	3	0	0	584	4.52
Poverty is lack of employment	365	224	0	0	0	589	4.56
Poverty is when there is no food to eat in the morning, afternoon and evening	540	72	6	2	0	620	4.80
Poverty is the situation of constant begging and borrowing of money	340	144	60	10	0	554	4.29
Poverty is lack of access to social and economic infrastructure such as education, health, portable water, good roads and sanitation	360	148	57	2	0	567	4.39
lack of productive resources can lead to poverty	395	192	6	0	0	593	4.59

Table 5.27: Female farmers perception of poverty

Items	Weighted scores						MS
	SA	A	U	D	SD	W.T	
Poverty is a state where by the poor are not regarded	265	180	27	18	5	495	4.09
It is the lack of money to take care of one's need	315	232	0	0	0	547	4.52
Poverty is the inability to meet ones immediate problems	395	164	3	0	0	562	4.64
Poverty is poor source of income	375	180	3	0	0	558	4.61
Poverty is lack of employment	415	152	0	0	0	567	4.69
Poverty is when there is no food to eat in the morning, afternoon and evening	505	72	0	4	0	581	4.80
Poverty is the situation of constant begging and borrowing of money	355	132	27	16	0	530	4.38
Poverty is lack of access to social and economic infrastructure such as education, health, portable water, good roads and sanitation	375	140	30	2	0	547	4.52
lack of productive resources can lead to poverty	445	108	15	0	0	568	4.69

Chi square statistic was also used to confirm statistical difference on perception statements on poverty. The result in table 5.28 revealed the Pearson Chi-Square which is $\chi = 5143$, $p = 0.528$. This implies that there is no significant association between gender and their perception on poverty. That is, both male and female ginger farmers equally had the same perception on poverty. Furthermore, the strength of association between the variables is strong (0.74).

Table 5.28: Chi square result based on the perception of ginger farmers on poverty

Perception of poverty	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	5.143 ^a	6	0.526
Likelihood Ratio	7.075	6	0.314
Linear-by-Linear Association	.035	1	0.852
Nominal by Nominal	Phi	0.74	0.528
	Cramer's V	0.74	0.528

5.5.1 Farmers' perception on the consequences of poverty

The results in Tables 5.29 and 5.30 below revealed the farmers perception on the consequences of poverty to be powerless and isolation. The mean scores of 4.33 and 4.26 indicate that farmers agreed the consequences of poverty to include powerless and isolation. Farmers also agree that poverty could results to vulnerability to a sudden dramatic decrease in consumption.

It was also agreed by the farmers as shown in Tables 5.29 and 5.30, that social inferiority and humiliation are all part of the consequences of poverty. These responses depict the farmers' agreement that the consequences of poverty are associated with various state of deprivation or transitory state of lack. Segun (2010) reported poverty to

be the by-product of economic inequalities that are sustained by any member in a given society. The lack of equal opportunities has created social margins where people are pushed to the economic edge. In a society where members are stratified by wealth and influence, those who live in poverty are perceived as deservingly powerless and ultimately abandoned to accept their crises.

Table 5.29: Perception of male farmers on the consequences of poverty

Items	Weighted scores						M.S.
	SA	A	U	D	SD	W.T	
Powerless and isolation	315	204	30	10	0	559	4.33
Vulnerability to a sudden dramatic decrease in consumption level	285	168	78	8	0	539	4.17
Ill-health and physical weakness	310	128	75	14	3	530	4.10
Social inferiority and humiliation	290	148	75	12	3	528	4.09

SA = Strongly agree A = Agree U= Undecided D = Disagree SD= Strongly disagree

Table 5.30: Perception of female farmers on the consequences of poverty

Items	Weighted scores						M.S.
	SA	A	U	D	SD	W.T	
Powerless and isolation	300	172	27	16	1	516	4.26
Vulnerability to a sudden dramatic decrease in consumption level	300	140	54	12	2	508	4.20
Ill-health and physical weakness	295	116	48	32	1	492	4.07
Social inferiority and humiliation	260	128	57	30	3	478	3.95

SA = Strongly agree, A = Agree, U= Undecided, D = Disagree, SD= Strongly disagree

Chi square statistic was also used to confirm statistical difference on perception statements on the consequences of poverty. The result in table 5.31 revealed the Pearson Chi-Square is significant $\chi = 5.433$, $p = 0.045$. This implies that there is statistically significant association between gender and their perception on consequences of poverty

at 5% level of probability. This implies that there is direct and strong (0.88) relationship between male and female perception on consequences of poverty.

Table 5.31: Chi square result based on the perception of ginger farmers on consequences of poverty

Consequences of poverty	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	5.433 ^a	4	0.526
Likelihood Ratio	7.075	4	0.314
Linear-by-Linear Association	.035	1	0.852
Nominal by Nominal	Phi	0.88	0.045**
	Cramer's V	0.88	0.045**

5.6. Poverty Status

The sixth objective of the study was to determine the poverty status of the ginger farmers in the study area. In addition to this, the relationship between accessibility to resources and the poverty status of the ginger farmers, monthly per capita expenditure, factors influencing household expenditure and items acquired were all done to further give an insight about the poverty status of the farmers.

5.6.1 Poverty status of the ginger farmers

Poverty line in this study was determined by using two thirds of the mean expenditure of the respondents to establish a poverty line of ₦1308.48 and ₦1187.93 for male and female ginger farmers respectively. Sixty percent (60%) of the male households and 32% of the female households were non-poor, 40% male and 68% of the female headed households were poor. Figures 18 and 19 depicts the poverty incidence, depth and severity to be 40, 24 and 16%, respectively among the male farmers and 68, 51 and 17%, respectively among the female farmers in the study area. In terms of depth of

poverty, the poor male farmers will need 24% increase in their per capita expenditure to reach the poverty line of ₦1308 while the poor female farmers will require about 51% increase in their per capita expenditure to reach the poverty line of ₦1187.

The result of this study revealed there were more poor households among the female farmers compared to the male farmers. This finding may be attributed to reasons such as; women are more vulnerable to poverty because of gender inequalities in the distribution of income, access to productive inputs such as credit; command over property, control over earned income, as well as gender bias in labour markets. Resource allocation is often gender-biased within households as well as in state and market institutions. It is often stated that labour is poor people's most abundant asset, but women do not always have full control over their own labour or the income they earn (Kabeer, 1996; UNIFEM, 2000). The result of this study is in consonance with Nüfer (2010) that, gendered dimensions of structural poverty are often rooted in a legal and cultural framework which denies women access to productive resources.

The reduction of poverty globally has been a major agenda since September, 2000 when the United Nations' member countries signed the Millennium declaration and set their commitments to achieve the Millennium Development Goals (MDGs). The 1st of the eight MDGs is to eradicate poverty and hunger with a target to halve the number of people living on less than one dollar a day. Rural poverty is associated with lack of access to productive resources, land in particular. The poorest men and women in general have little or no land, also socio-economic structures further reduce or inhibit access by women. The production of ginger is basically done in southern areas of Kaduna state and the importance of ginger to the economy of Nigeria cannot be overemphasized. Apart from the local consumption of ginger, it supplies raw materials

for industries internationally. Hence, the poverty situation among ginger farmers is of high importance to the economy of Nigeria. Since, a reduction in their poverty level could translate into a higher output of ginger through the availability of productive resources.

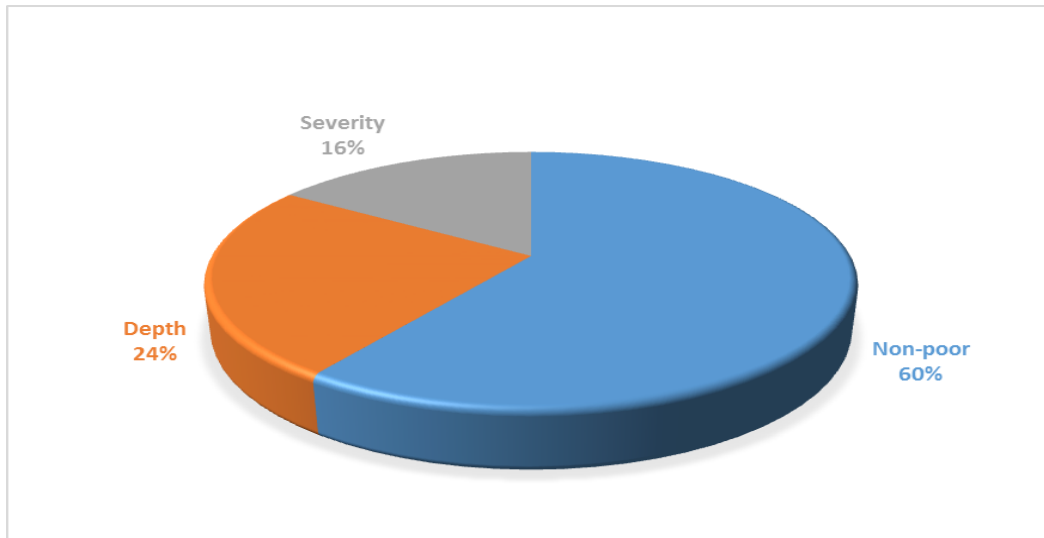


Figure 18: Poverty Profile of male ginger farmers

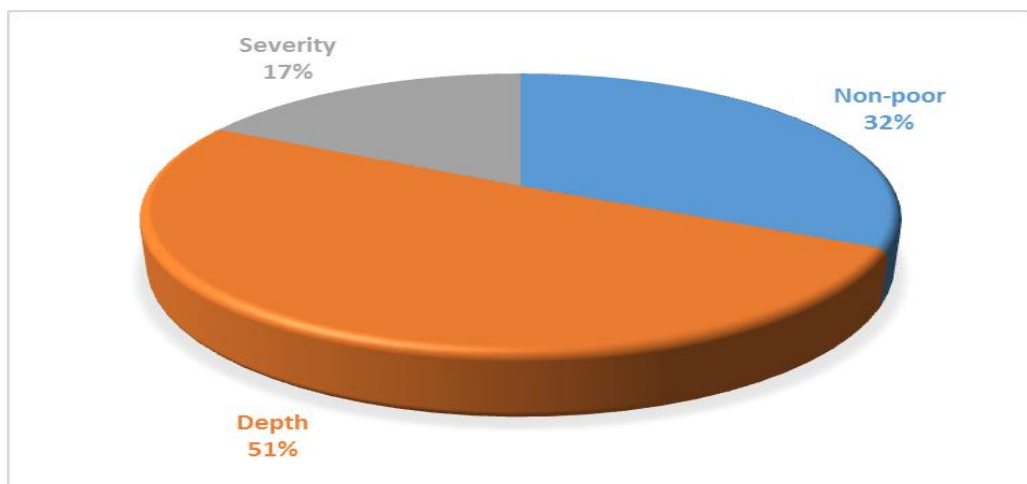


Figure 19: Poverty Profile of the female ginger farmers

5.6.2 The effect of gender accessibility to resources on the poverty status of ginger farmers

The Logit results as shown in Table 5.32 indicate effect of accessibility to productive resources on the poverty status of the farmers. Coefficients of land (-366.90) seed (-8.712) and agrochemical (-9.872) of the male ginger farmers were found to be statistically significant at 1% level of probability with a negative sign. However, coefficients of labour and fertilizer were found to be statistically non-significant. The negative sign of the significant variables implied; the more male farmers have access to these resources, the less exposure of the farmers to poverty. This is attributed to the fact that accessibility to these resources would likely increase the productivity of the farmers thereby alleviating their poverty status. Resources are the key considerations for rural livelihoods. Rural households negotiate their livelihoods by obtaining access to land, labour, capital, knowledge and market, which leads to enhanced and sustained family well-being (Valdivia and Gilles, 2001).

Table 5.32: Effect of gender accessibility to resources on the poverty status of male farmers

Variable	Coefficient	Standard Error	T-Value
Constant	-4.371	0.141	-31.001***
Labour	-32.865	43.853	-0.749
Land Size	-366.90	119.540	-3.069***
Seed	-8.712	0.295	-29.532***
Fertilizer	2.253	4.906	-0.459
Agrochemical	-9.872	3.135	-3.149***
Numbers of observation	129		
Log likelihood ratio test	63.259		
F-distribution	71.224		
R-square	0.58		

*** = P<0.0 1

Table 5.33 indicate coefficients of land (-473.94) labour (-1.265) and seed (-8.712) of the female farmers was found to be statistically significant with a negative sign. Statistically, the coefficient of agrochemicals and fertilizer were found not to be significant. The negative sign of land (-473.94) labour (-1.265) and seed (-8.712) indicates; the more female ginger farmers have access to these resources, the less exposure to poverty. This is attributed to the fact that accessibility to these resources would likely increase the productivity of the women, consequently leading to a decrease in the poverty status of the women. This finding corroborates with Adereti (2005) that Poverty alleviation in rural areas is significantly related to increased access to productive resources.

Table 5.33: Effect of gender accessibility to resources on the poverty status of female farmers

Variable	Coefficient	Standard Error	T-Value
Constant	-5.282	0.138	-38.275***
Labour	-1.265	0.251	-5.040***
Land Size	1.447	0.350	4.134***
Seed	-8.712	4.107	-2.121**
Fertilizer	-0.226	4.906	-0.046
Agrochemical	2.203	1.713	1.286
Numbers of observation	121		
Log likelihood ratio test	81.003		
F-distribution	91.412		
R-square	0.64		

*** = $P < 0.01$

5.6.3 Test of Hypothesis on gender accessibility to productive resources and its effects on the poverty status of ginger farmers (Hypothesis iii)

Hypothesis iii states that gender accessibility to productive resources has no significant effects on the poverty status of ginger farmers is rejected at $P < 0.01$ and $P < 0.05$ level of significance. The logit result on Tables 5.32 and 5.33 above shows that accessibility

to productive resources has effect on the poverty status of the farmers significantly. Based on this, the null hypothesis which states gender accessibility to productive resources has no significant effects on the poverty status of ginger farmers was therefore rejected and the alternative hypothesis accepted.

5.6.4 Farmers monthly per capita expenditure

Fifty two percent (52%) male ginger farmers and 71% female ginger farmers spent between ₦1000 and ₦2000, 36% male farmers against 25% female farmers spent between ₦2001 and ₦3000 while 4% male farmers spent between ₦40001 and ₦5000, while none of the female farmers spent this much. This showed that male ginger farmers are more comfortable than the female ginger farmers. The implication of this is that men earn better income thereby placed them at a better advantage than the women. This also suggests that the household's expenditure is low in the study area.

Table 5.34: Distribution of ginger farmers based on monthly per capita expenditure

Monthly expenditure (₦)	Male		Female	
	Frequency	Percentage	Frequency	Percentage
1000-2000	68	52.7	87	71.9
2001-3000	47	36.4	31	25.6
3001-4000	8	6.2	3	2.5
4001-5000	6	4.7	Nil	Nil
Total	129	100	121	100

5.6.5 Factors influencing household expenditure

The coefficient of income and household size were found to be significant and positively influence at 1% level of probability on male and female farmers household expenditure. The implication is that the higher the number of household members, the

higher the expenditure level. The disadvantage of household size will be greatest when members are not working. Education was found to be positive with the coefficient of 532.37 and significantly influence expenditure among male farmers. This was significant at 5 percent level of probability. The implication of this is that increase in education would increase male farmers' opportunity to jobs which will enhance their expenditure as well. Education is associated with skills enhancement (experience) that ought to contribute positively to their well-being. The coefficient of education was not significant among the female farmers.

The estimated coefficient of age (-73.157) was found to be negative and significant at 1 percent level of probability among the female ginger farmers. This reveals that the older the women are; the probability to spend less. Decrease in female farmers' age is likely to increase the loss of strength and weaken the women thereby not able to farm or easily source for income, which will affect the expenditure level of the women. Among the male farmers, coefficient of age was negative but not statistically significant. The estimated coefficient of marital status (821.72) was positive and significantly influences expenditure level of male ginger farmers. The implication of this is that married household heads would spend more, which could be as a result of large family size. Thus, education, household size, age and income of the head of the household, have implications for the welfare of households and their members. The R-square values were 0.41 and 0.42 for male and female ginger farmers respectively. These indicate that 41% and 42% of the variation in the dependent variables were explained by the independent variables included in the model.

Table 5.35: Factors influencing ginger farmers' household expenditure

Variable	Male			Female		
	Coefficient	Std. Error	t-value	Coefficient	Std. Error	t-value
Constant	4623.22	168.04	2.75***	8644.153	1141.82	7.57***
Education	532.37	205.66	2.59**	230.949	178.17	1.30
Household size	414.81	99.90	4.15***	472.897	102.03	4.63***
Marital status	821.72	463.43	1.77*	231.102	738.25	0.31
Age	-19.28	26.832	-0.72	-73.157	23.47	-3.12***
Secondary occupation	0.007	0.005	1.57	0.0045	0.004	1.01
Income	0.024	0.007	3.54***	0.036	0.018	2.05**
R ²	0.42			R ² adjusted	0.41	
Adjusted F-value	52.37***			F-value	50.20***	

*** = P<0.01 ** = P<0.05

5.6.6 Farmers' acquired assets

Results in Table 5.36 showed the farmers owned one assets or the other as a result of ginger production. More than half of the male (64%) and female (56%) ginger farmers had source of lightening. In the case of sources of cooking fuel, virtually all the farmers used firewood. The reliance on forest tree for fuel could further compound the problem of desertification and deforestation which could be hazardous to agricultural production in terms of erosion and lose of soil fertility with a negative implication on farmers output and income. Ninety three percent (93%) of the male and 91% of the female ginger farmers possessed mobile phone. The large number of farmers with mobile phone is an advantage to their activities in ginger production because it will enhance

their accessibility to information on ginger production and marketing. Possession of land was higher (64%) among the male ginger farmers while low percentage (7%) of the female farmers had land. This could be associated to the fact that these women are widows and could not save much to acquire land. FAO (2011) had similarly reported that in Africa, under customary law women were given access to communal or family land (although women often would be deprived of this access through divorce or widowhood).

Similarly, it was observed that large number of male farmers (98.45) possessed furniture. Possessions of household items such as kitchen utensils, detergents, pomade, toothpaste, kerosene were significantly noticed among the farmers. This revealed that ginger production among the two groups of farmers enhances their ability to purchase these items which revealed the status of their living condition, except for the non-possession of cars and houses among the farmers. This implied that, if farmers cultivate more land, have access to inputs, there is the likely hood of generating more income from ginger production; thus, improving the farmers living condition. Amoke *et al.* (2011) were also of the view that, the rural areas of most developing countries (Nigeria inclusive), nearly 75% of the country's populations live in rural areas; characterised with a state of human deprivation of many social needs especially incomes, clothing, housing, health care, education and sanitary facilities.

Table 5.36: Distribution of ginger farmers based on assets acquired

Assets	Male		Female	
	Frequency*	Percentage	Frequency*	Percentage
Firewood cooking	127	98.45	121	100
Source of lighting	83	64.34	68	56.2
Mobile phone	120	93.02	111	91.74
Possession of land	83	64.34	9	7.43
Bicycle	17	13.18	5	4.13
Motorcycle	87	67.44	60	49.59
Radio	87	67.44	27	22.31
Kitchen utensils	125	96.89	117	96.69
Furniture	127	98.45	6	4.95
Kerosene	121	93.79	115	95.04
Detergent	127	98.45	116	95.88
Pomades	127	98.45	116	95.88
Toothpaste	128	99.22	118	97.52
Transportation	127	98.45	116	95.88

* Multiple responses

5.7 Constraints encountered by ginger farmers in the study area

Cost of production

It was observed that 96% of male and 100% of female ginger farmers had the problem of high cost of production. Purchasing farm inputs such as seeds and fertilizers are being limited by a lack of capital, or by the lack of access to credit facilities that would enable farmers to use more of these inputs. Family labour was mainly used in the study area and during the planting period, there is usually acute shortage of labour. The demand for labour is normally high and expensive at the time of; land clearing, ridging, weeding and harvesting periods. Accordingly, ginger production is laborious without the use of modern tools.

Pricing

Sixty-four percent (64%) and 72% of male and female farmers respectively reported poor market price. Marketing of ginger is associated with low prices during the period of glut. Low prices during the period of glut lead to a reduction in levels of cultivation in the following planting season. In addition, the farmers are not able to dry and keep the produce for long, so they sell at a giveaway price. This is similar to Awerji (2014) and Ayuba (2007) that prices for agricultural produce were found to fluctuate.

Inadequate storage facilities

Farmers lacked improved storage technology as reported by 55% of male and 54% of female farmers. The time interval between harvesting (storage) and subsequent use of planting material is about 4 - 5 months. Usually, the price of ginger is higher during the planting time and as a result, farmers would prefer to store immediately after harvest and sell later to reap the dividend of high price. Due to the absence of improved storage facilities or technologies, this dream is however unrealized and are therefore, forced to sell the produce immediately after harvest when the prices are low. As a result, the middlemen who buy produce from farmers have to offer low prices.

Provision of extension services

The primary role of the provision of extension services is to provide technical information about production technologies and predict weather information to farmers. Ninety eight percent (98%) of male farmers and about 100% of female farmers indicates lack of extension services as a problem in the area. Extension services provide the linkage between researchers, policy makers and farmers, so access to extension is vital to generate information in increasing productivity. This supports the view given by the

FAO and IFAD (2005) that the extension delivery system is inefficient, and as a result is not effective in the delivery of extension services in rural areas.

Transportation

The feeder roads in most cases are poor and impassable especially during the wet season. Sixty-two percent (62%) of male and 63% of female ginger farmers indicates transportation as a problem in the area. The lack of good road and high cost of transportation prevents farmers from carrying their produce on time.

Improved technologies

Farmers complained of lack of improved technologies for ginger processing. Ginger is harvested manually; cutting and peeling are also done manually. There is need for improved technologies for these activities.

Table 5.37: Distribution of ginger farmers based on constraints encountered

Constraints	Male		Female	
	Frequency	Percentage	Frequency	Percentage
High cost of production	125	96.9	121	100
Lack of credit	90	69.8	120	93.0
Low price/fluctuation	83	64.3	94	72.9
Problem of transportation	80	62	82	63.6
Poor storage facility	72	55.8	70	54.3
Poor extension services	127	98.4	121	100
Inadequate improved technologies	77	59.7	111	91.7

*Multiple responses

CHAPTER SIX

SUMMARY, CONCLUSION AND RECOMMENDATIONS

6.1 Summary

Kaduna State is known for ginger production. A total of 250 ginger farmers were randomly selected from Kachia, Kagarko and Jaba LGAs. Primary data was used in this study. The primary data was obtained by the use of structured questionnaire that was administered to ginger farmers. Descriptive statistics, Regression, FGT and Logit models were used to achieve the stated objectives of this study.

The result of the study shows that the mean age of male farmers was 51 years while that of female farmers was 47 years. The result of this study revealed that 5% and about 2% had post-secondary education for both male and female farmers respectively. The average farming experience was 18 years for the male and 16 years for the female farmers. The result further revealed the mean size of 2.7 hectares to be cultivated by the male and a mean size of 1.79 cultivated by the female farmers. Extension contact was very low in the area, as many of the farmers had never had any contact an agent on their farms. The average farm income from ginger of the male farmers was ₦190,415.80 while the female farmers had ₦93,147.93.

The average score of 3.8 obtained for male farmers and 1.43 obtained for female farmers implied that women farmers do not have equal access to land compare to men farmers who engaged in ginger production. Majority of the women agreed that women do not have access to land due to financial and mode of land acquisition in the area. The result of the study revealed the score of 1.67 for female and 1.40 for male farmers indicating their disagreement with the statement of men and women ginger farmers having equal access to fertilizer input for ginger production.

The factors influencing gender accessibility to labour resource were age, household size, income and extension contact. The factors that had significant influence on gender accessibility to land resource in the study area were household size, income, membership of a cooperative society and access to credit while age, education and extension contact were not statistically significant. Factors that had significant influence on gender accessibility to seed resource were age, education and income. The factors that had significant influence on gender accessibility to fertilizer resource were household size, income, extension contacts, cooperative membership and access to credit. While, the factors that had significant influence on gender accessibility to agrochemical resource was income while others were not statistically significant.

Objective v of this study was to assess ginger farmers' perception of poverty. The mean score of 4.1 indicate that ginger farmers agree with the assertion that poverty is a state where by poor people are not regarded. The farmers also (4.4) agree that poverty is the lack of money to take care of one's need. It was also agreed by the farmers that social inferiority and humiliation are all parts of the consequences of poverty. Result on poverty status of the farmers showed that about 60% of the male farmers and 32% of the female farmers were non-poor, while 40% of the male and 68% of the female farmers were poor. As regards monthly expenditure, 36% of male ginger farmers versus 25% female farmers spent between N2000 and N3000, while 4% of the male farmers spent between ~~N4000-N5000~~. This showed that male farmers are more comfortable than women. The implication of this is that men earn better income thereby, placed them at a better advantage than the women. This also suggests that the households' expenditure is low in the study area.

Cost of production and provision of credit facilities are some of the constraints indicated by the farmers. Farmers lacked improved storage technology. Due to the absence of improved storage facilities or technologies, farmers are forced to sell the produce immediately after harvest when the prices are low. Access to extension services is lacking in the study area and lack of good roads.

6.2 Conclusion

Based on the findings of this study, it is concluded that ginger production in the study area needs to be improved in terms of land area cultivated. Ginger production in the area was laborious; practically all the operations, including planting, fertilizing, harvesting, and processing are done manually. This has adverse implications. First, it limits the hectares that each individual farmer can cultivate. Secondly, production costs are high, because of the high costs of labor and other inputs. Since all the farm operations were done manually; the farmers have low financial capacity, resulting to low productivity. With sixty eight percent (68%) of rural women living below the poverty line, women constitute the majority of the poor.

Poverty alleviation in rural areas is significantly related to increased access to productive resources. Improved gender equality in access to productive resources not only improve nutrition, health and education outcomes, but can also have a long-lasting impact on economic growth by raising the level of human capital in societies (Adereti, 2005). Gender accessibility to resources is important to realizing the poverty reduction strategies of African countries and the achievement of the Millennium Development Goals (MDGs). Ginger farmers in the study area have limited access to major productive resources, but the female ginger farmers were more constrained. Providing

resources in an efficient and equitable manner will alleviate poverty reduction in Nigeria.

6.3 Recommendations

Based on findings of this study, It is therefore, recommended that:

i. Factors such as, extension contact and credit showed significant relationship to accessibility of resources; implying that an increase in these variables among farmers will enhance farmers' productivity and address household poverty. Extension services should be improved in the area especially to the ginger farmers to enhance their productivity. NGOs and other relevant organization should intensify their efforts in the provision of these resources to farmers.

ii. Based on the findings of this study, it can be concluded that some resources were not adequately used by farmers, owing to a range of reasons which include limited use of modern technological inputs, such as improved ginger seeds, inorganic fertilizers, and poor access to credit. Therefore, the need for government to increase in the provision of modern technological inputs and the purchasing price of these resources should be subsidized which can improve ginger production.

iii. In this study, it was found that about 40% of the male and 68% of the female farmers lived below the poverty line. There is need for policy makers and managers of poverty alleviation programmes to identify the poor at community levels so as to direct poverty alleviation project towards them. There is need for investment in human capital (education and health, including nutrition and sanitation) so as to improve human welfare. Policies directed at addressing poverty reduction should start from an understanding of how poverty is perceived by the rural farmers.

iv. Farmers indicated prices of ginger to be fluctuating. To address this and increase the profitability of ginger production and marketing, efforts need to be made by stakeholders to raise and stabilize producer prices. This is aimed at establishing farmers produce price throughout the year by fixing price for agricultural produce. This is to short-circuit a situation where ginger farmers may desert their farms because of unfavourable price fluctuations.

v. Rural infrastructure such as roads be constructed and also rehabilitate old ones by local government officials to facilitate and enhance accessibility to resources and marketing activities. Similarly; there are no equipment fabricated to perform activities such as peeling and cutting of ginger. It is therefore, recommended that equipment that will aid the farmers in these aspects should be fabricated and disseminated to them to ease the conduct of these activities by the relevant research institutes. Labour saving implements should be made accessible to farmers. This will reduce the drudgery involved in ginger production and conserve time for the farmers. Ginger farming would be made more attractive to both the old and the young, through the invention and eventual mechanization of both the production, harvesting and post-harvest processes.

vi. Besides making marketing of ginger easy, there is also the need for value addition to ginger by the farmers in order to generate more revenue for their family upkeep. There is the need to educate the farmers on value addition to their produce through workshops. This can be done through the Kaduna Agricultural Development Project (KADP).

vii. The study has shown that majority of the ginger farmers do not belong to cooperative societies. In light of this, it is recommended that ginger farmers should be encouraged to organize themselves into viable groups so as facilitate the farmers' access to resources. Most of the ginger production constraints encountered by farmers will easily be over come through group efforts rather than individual effort.

Ginger production in Kaduna and in Nigeria at large would have been put on greater heights should all of the above recommendations be considered.

6.4 Contributions to knowledge:

i. Results from this study revealed that male respondents cultivate mean farm size of 2.7 hectares and a mean size of 1.8 hectares cultivated by the females. The results clearly indicated that the farm size for ginger in the area is small scale.

ii. Resources needed for ginger production are not efficiently accessed by farmers especially the women. The average score of 3.8 obtained for men and 1.43 obtained for women in terms of their access to land indicates that women do not have access to land as men. Furthermore, the score of 1.67 for female farmers and 1.40 for the male farmers indicates disagreement with the statement of men and women having access to fertilizer input. Therefore, the policy implication includes increased provision of modern technological inputs which can improve ginger production.

iii. Factors influencing gender accessibility to land resource were income (10.529), membership (2.624) and credit (2.059) while factors such as extension contact (3.120), household size (2.108) credit (5.332) and membership of cooperative society (2.517) influence gender accessibility to fertilizer resource.

iv. The poverty depth and severity were 24% and 16%, respectively among the males and 51% and 17%, respectively among the females in the study area. In addition 60% of the male and 32% of the female farmers lived above the poverty line.

v. Ginger farmers were beset with various constraints which served as drawbacks to the farmers. Among the range of constraints, high cost of production was 96% and 100% for male and female respectively, lack of credit was 69% and 93% for male and female and low price/fluctuation was 64% and 72% for male and female respectively.

REFERENCES

- Acharya, M. (2003). *Efforts at Promotion of Women in Nepal*. Kathmandu: Tanka Prasad Memorial Foundation, Friedrich-Ebert-Stiftung (FES), Kathmandu. 23.
- Adedoyin, F.S and Adeokun, O.A (2004). Theory building in Agricultural Extension. In: Terry, A.O (ed). *Research Methods in Agricultural Extension*. Published by Agricultural and Rural Management Training Institute (ARMTI) Ilorin, Kwara. PP 1-288.
- Adejobi, A. O. (2004). Rural Households Food Production and Demand in Kebbi State. Unpublished Ph.D Thesis submitted to University of Ibadan, Nigeria.
- Adereti, F.O. (2005). Rural Women's Access to and Control over Productive Resources: Implications for Poverty Alleviation Among Osun-State Rural Women, Nigeria. *Journal of Human Ecology*. 18 (3): 225-230.
- Addis, T., Teklu, T., Wilfred, M., and Hugo, V. (2001). Gender Differentials in agricultural Production and Decision-Making among Smallholders in Ada, Lume, and Gimbichu Woredas of the Central Highlands of Ethiopia. Publication of International Maize and Wheat Improvement Center (CIMMYT) and Ethiopian Agricultural Research Organization (EARO). : 1-72.
- Adger, W. N. (1999). Social vulnerability to climate change and extremes in coastal Vietnam. *World Development journal*. 27(2): 249–269.
- Agbongiarhuoyi, A. E., Abdulkarim, I. F., Fawole, O. P., Obatolu, B. O., Famuyiwa, B. S. and Oloyede, A.A. (2013). Analysis of farmers' adaptation strategies to climate change in cocoa production in Kwara State. *Journal of Agricultural Extension*. 17 (1) June, 2013.
- Ahearn, M.C. (2010). Gender Issues in Agricultural and Rural Household Well-being. Paper Presented at the third Global Conference on Agricultural and Rural Household Statistics. 24-25 May 2010, Washington D.C. : 1-18.
- Ahmad, F. (2001) Gender Division of Labour: Bangladesh Context. 6 (1): 7- 26.
- Ahmed, F.(2004). Practices of Poverty Measurement and Poverty profile of Bangladesh. ERD Working Paper Series No. 54. Asian Development Bank. Manila. :1- 6
- Amoke, B., Awotide, A. D., Timothy T.A. and T. O. Ebiomomon (2011). Household Endowments and Poverty Reduction in Rural Nigeria: Evidence from Rice Farming Households. *Agricultural Journal of Nigeria*. 6(5): 274-284.
- Anyaegbunam *et al.* (2010). Analysis of Determinants of Farm Size Productivity among Small-Holder Cassava Farmers in South East Agro Ecological Zone, Nigeria. *American Journal of Experimental Agriculture*. 2(1): 74-80.

- Ajayi, M.T. (2002). Sources of Information of Improved Technologies Adopted by Farmers: A Study of Farmers in Akinyele Local Government Area of Oyo State, Nigeria. *Journal of Extension Systems*. 18 (2): 94 -103.
- Ajayi, O.J, Adebayo, A.H. and Ndatsu, J. (2008). Assessment of Poverty Levels Among the Rural Farming Households in Bosso Local government Area of Niger State, Nigeria. *Continental Journal of Agricultural Economics*. 2: 58 – 64.
- Ajakaiye, O. (2001). Economic Development in Nigeria: A Review of Experience. Paper presented at CBN Annual Monetary Policy Forum, November 2001.
- Akpoko, J.G. (2004). Factors affecting adoption of recommended soil management practices for sustainable Agriculture in Kaduna state, Nigeria. *Savanna Journal*, Ahmadu Bello University, Zaria. 19 (2) :27.
- Allendorf, K.(2007). Do women’s land rights promote empowerment and child health in Nepal? *World Development*. 35(11): 1975–1988.
- Alkire, S. (2002) Dimensions of Human Development. *World Development*. 30 (2): 181-205.
- Amaza, P., Tahirou, A., Patrick, .K., and Amare, T. (2009). Changes in household food security and poverty status in PROSAB area of Southern Borno State, Nigeria. Promoting Sustainable Agriculture in Borno State (PROSAB). International Institute of Tropical Agriculture, Ibadan, Nigeria. :1-40.
- Andersen, C. (1992). Practical Guidelines. In: Lise Østergaard (ed.), *Gender and Development: A Practical Guide*. London and New York: Routledge
- Anderson, M.L. and Taylor, H.F. (2009). *Sociology: The Essentials*. Belmont, CA: Thomson Wadsworth.
- Andy, N. (2003). Accessibility, transport and time travel information. : Modeling across geographic scales. REAL CORP. Proceedings Vienna, May 19-21 2008 www.corp.at: 1-7.
- Aloysius, M. N. and Paul, N.(2008). Characterizing weights in the measurement of multi-dimensional poverty: An application of data-driven approaches to Cameroonian data. OPHI Working Paper 21 www.ophi.org.uk: 1-37.
- Asen, R. (2002). *Visions of Poverty: Welfare Policy and Political Imagination*. East Lansing: Michigan State University Press.
- Asika, N. (2001). *Research methodology in Behavioural Sciences*. Longman Plc, Ikeja, Lagos State, Nigeria.
- Asumugha, G.N. (2002). Internal Marketing and Export of Ginger in Nigeria: Critical Issues and Suggestions for Support Mechanism. In: N. Nakatani and K. Komaki (eds), *Potential of root crops for food and industrial resources*. Symposium of

International Society for Tropical Root Crops (ISTRC), Tsukuba, Japan, 10-16 Sept. 2000, : 420-423.

- Asumugha, G.N., Njoku, J.E. and Nweke, F.I. (2003). Marketing System and Spatial Price Differentiation of Ginger in Nigeria” *African Journal of Root and Tuber Crops* 4 (2) December, 2003, :1-7.
- Asumugha, G.N., Kormawa, P.M. and Haan, N.C. (2009). Gender Impacts of Small Farmers’ Commercialization of Ginger (Zingiber Officinale Rosc.) Enterprise in Nigeria. EAAE-IAAE Seminar ‘Small Farms: decline or persistence’ University of Kent, Canterbury, UK:1-8.
- Arnfred, S. (2001). Question of Power: Women’s Movements, Feminist Theory and development Aid. In: *Discussing Women’s Empowerment: Theory and Practice* (SIDA Studies, No: 3), Stockholm: SIDA, 73-87.
- Awerji, B.O. (2014). Exploring the Potential of Cassava for Agricultural Growth and Economic Development in Nigeria. A thesis submitted to the University of Plymouth in partial fulfillment for the degree of Doctor of Philosophy.:1-570.
- Awoyinka, Y.A. (2009). Cassava marketing: Option for sustainable agricultural development in Nigeria. *Ozean Journal of Applied Science*, 2, (2):1-9.
- Ayanwuyi, E., Adeola, R. G and Oyetoro, J. O (2013). Analysis of Relevance of Agricultural Extension Services on Crop Production in Irepodun Local Government Area of Kwara State, Nigeria. *Global Journal of Science Frontier Research Agriculture and Veterinary*. 13 (7):1-7
- Ayoade, A. R. and Adeola, R. G. (2009). Constraints to domestic industrialization of cassava in Osun State Nigeria. *Ozean Journal of Social Sciences*, 2, (2):1-5.
- Ayuba, N.A (2007) Economic Analysis of ginger Production in Jaba Local Government Area of Kaduna State. Unpublished Msc. Dissertation submitted to the Department of Agricultural Economics and Rural Sociology, Ahmadu Bello University, Zaria.
- Ayinde, O.E., Adewumi, M.O. and Omotosho, F.J. (2009). Effects of fertilizer policy on crop production in Nigeria. *The Social Sciences*, 4, (1): 53-58.
- Ayoola, G.B. (2001). A Book of Reading on Agricultural Development Policy and Administration in Nigeria. Ibadan, Nigeria: TMC.
- Azadeh N., Abdolazim, A., Mohammad, C., and Masoud, B. (2009). The Socio-economic Characteristics of Wheat Farmers Regarding Adoption of Sustainable Soil Management (SSM). *Journal of Human Ecology*, 27(3): 201-205
- Bagheri, A., 2010. Potato farmers' perceptions of sustainable agriculture: The case of Ardabil province of Iran. *Procedia Social Behavioural Sci.*, 5:77-81.

- Bankole, B. Balogun, O.S. Zungum, A., Olowohunwa J.I. (2008). Rural Development: An approach to Poverty alleviation in Nigeria. *International Journal to Economic and Development Issues by the Development Universal Consortia*. 7 (2) : 28-42.
- Babatunde, R.O, and Boluwade, E.O (2004). Resource use efficiency in food crop production in Ekiti state Nigeria. *Journal of Agric and Social Research*, 4 (1), 105-117.
- Barke, M. and O'Hare, G.(1991). *The third world Conceptual Frameworks in geography*, Oliver & Boyd publishers.
- Bashaasha, B., Kidoido, M. and Esbern F.(2006). Determinants of wellbeing among smallholders in Adjumani District, Uganda. *African Crop Science Conference Proceedings*. 7. :847-858
- Ben, E.A. (2000). Poverty, growth and inequity in Nigeria:A case study. African Economic Research Consortium (AERC) Research Paper, Nairobi. 2000.:1-63.
- Behrman, J.R., Alderman, H. and Hoddinott, J. (2004). *Hunger and malnutrition. Challenges and Opportunities* Unpublished Paper prepared for the Copenhagen Consensus :1-60.
- Bhatta, G. (2001) of Geese and Gander: main streaming Gender in the Context of Sustainable Human Development. *Journal of Gender studies* 10 (1) :17-32.
- Blackden, C. M and Bhanu, C. (1999). *Gender, Growth, and Poverty Reduction. Special Program of Assistance for Africa, 1998 Status Report on Poverty in Sub-Saharan Africa*. World Bank Technical Paper No. 428. Washington DC.
- Blackden, C.M., Canagarajah, S., Klasen, S. and Lawson, D. (2006). *Gender and growth in sub- Saharan Africa*. UNU-WIDER Research Paper No. 2006/37. World Institute for Development Research. Helsinki,
- Bradshaw, T. K. (2000). Complex Community Development Projects: Collaboration, Comprehensive Programs and Community Coalitions in Complex Society. *Community Development Journal*,_35(2), 133-145.
- Bradshaw, T.K. (2006). Theories of Poverty and Anti-Poverty Programs in Community Development. Rural Poverty Research Center, Working Paper No. 05-06.:1-22.
- Bird and Shepherd, 2003).Livelihood and chronic poverty in Semi –Arid Zimbabwe. *World development*, 31(3):1-610.
- Brettell, C.B. and Sargent, C.F. (1993). *Gender in cross-cultural Perspective*. Englewood Cliffs; New Jersey: Prentice Hall.
- Bourgois, P. (2001). "Culture of Poverty". *International Encyclopedia of the Social & Behavioral Sciences*. Waveland Press.

- Boserup, E. (1970). *Woman's Role in Economic Development*. St. Martin's Press, New York: 283
- Buvinic, M. (1986): "Projects for Women in the Third World: Explaining their Misbehavior", in *World Development* 14 (5), 653-664.
- Chant, S. (2003). *New Contributions to the Analysis of Poverty: Methodological and Conceptual Challenges to Understanding Poverty from a Gender Perspective*. United Nations Economic Commission for Latin America and the Caribbean. <http://www.eclac.cl/publicaciones/UnidadMujer/5/LCL1955/lcl1955i.pdf>
- Chukwu, G.O, and Emehuite, J.K.U (2003). Fertilizer efficiency and productivity of ginger on a haply acrisol in southern Nigeria. In Akoroda, M.O (edt.) *Root crops: The small processor and development of local food industries for market economy*. Ibadan, Nigeria, Polygraphic venture.
- Common wealth Plan of Action (1995). *The 1995 Commonwealth Plan of Action on Gender and Development*. A common wealth Vision for Women Towards the Year 2000. Common Wealth Secretariat. :14.
- Competitive Commercial Agriculture in Sub-Saharan Africa (2007). Mozambique, Nigeria and Zambia Case Studies on Social and Environmental Impact Assessment draft report. Department of Economics Università Degli Studi Roma Tre. August 2007. : 1-419.
- Central Statistical Office (CSO): Report of the Mission on Gender Statistics ,14 July to 8 August, 1997 by Wariara Mbugua, Adviser, Gender Population and Development and Jacob Tayo, Advisor, Population Statistics and UNFPA/CST Harare, Central Statistical Office, Harare.
- Connelly, M.P; Murray-Li, T., MacDonald, M., Parpart, J. L (2002). Feminisms and development: Theoretical perspectives. In Parpart J, Connelly P, Barritreau VU, (Eds.), *Theoretical perspectives on gender and development*. International Development Research Centre, Canada:. pp. 51–160.
- Development Assistance Committee (DAC). (2001). *Rising to the Global Challenge: Partnership for Reducing World Poverty*. Policy Statement by the DAC High Level Meeting upon endorsement of the DAC Guidelines on Poverty Reduction, Paris, 25-26 April.
- Daniel, S. U. (2009). Socio-economic impact of Hiv/Aids on farm women in Nigeria: evidence from Enugu state. *World Applied Sciences Journal* 6 (12): 1617-1624.
- Danso, G., Cofie O., Annang L., Obuobie E. and Keraita B. (2004). *Gender and Urban Agriculture: The case of Accra, Ghana*. Paper presented at the RUAf/IWMI/ Urban Harvest Woman Feeding Cities Workshop on *Gender Main streaming in Urban Food Production and Food Security*. 20-23 September, 2004. Accra, Ghana.

- Darling, R.(2002). *Partnership models in human services: Sociological foundations and practices*. New York, NY: Kluwer Academic/ Plenum Publisher.
- Dike, V. E. (2002). "Poverty in Nigeria." *The Daily Independent (Opinion Column)*, October 6.
- Dolan, C.S. (2004). Gender and livelihood diversification in Uganda. *Canadian Journal of Development Studies*, 25(4): 643–661.
- Doss, C. and Morris, M. (2001). How does gender affect the adoption of agricultural innovations? The case of improved maize technology in Ghana. *Agricultural Economics*, 25 (1): 27–39.
- Duflo, E. (2006). Gender Equality in Development. Bureau for Research In Economics Analysis of Development (BREAD) Policy Paper No. 011 December. :1-24
- Echibiri, R.N and Mbanasor, J.A. (2003). Rural age distribution and farm labour supply in food crop production systems in Abia state, Nigeria. *Tropical and sub-tropical agro ecosystem*. 2:129-136.
- Echols, A. (1989). *Daring to Be Bad: Radical Feminism in America, 1967–1975*. Minneapolis: University of Minnesota Press. : 416.
- European commission (2003) <http://europa.eu.int/comm/employment-social/index/final-report>
- Ekeke, B.A (2003). Community Forestry and Poverty Reduction in the Nigerian Mangrove Area. In: *community Forestry and Stakeholders' participation in sustainable Development* (ed) by Akindele and popoola. Forestry Association of Nigeria. : 15-21
- Ekong, E.E. (2010). *An Introduction to Rural sociology*, Dove Educational publications, Uyo, Nigeria. 3rd Edition. :1 – 417.
- El Bushra, J. (2000): "Rethinking Gender and Development Practice for the Twenty-First Century", in *Gender and Development* 8 (1), 55-62.
- Ellis, A., Manuel, C. and Blackden, C.M. (2006). Gender and economic growth in Uganda: unleashing the power of women. World Bank, Washington, DC.
- Elson, D. 1991. "Male-bias in macro-economics: the case of structural adjustment. In: *Male Bias in the Development Process*, edited by D. Elson. Manchester University Press.
- Eriksson, V. and Carlberg, M. (1995). *Women in the Slums of Madras, India. A project-work in India sponsored by Swedish International Development Cooperation Agency (SIDA)*.

- Etim, N.A., Sunday, O. and Iniobong, A. A. (2009). Determinants of Deprivation among Part-time Cassava Farming Households in the Humid Tropic. *International Journal of Agricultural Management & Development*. 1(1):45-51
- Ezeagu. W. (2006). Ginger export. A paper presented a 3-day National Workshop on massive cassava and ginger production and processing for local industries and export; held at Fati Muasu Hall, National centre for women development, Abuja, Naigeria.
- Fabiyi, E.F., Danladi, B.B., Akande, K.E., and Mahmood, Y. (2007). "Role of Women in Agricultural Development and Their Constraints: A Case Study of Biliri Local Government Area of Gombe State, Nigeria". *Pakistan Journal of Nutrition* 6 (6): 676 – 680.
- Ferrante, J. (2005). *Sociology: A Global Perspective*. Wadsworth Publishing; 6th edition.
- Fletschner, D. (2009). Rural women's access to credit: market imperfections and intra household dynamics. *World Development*, 37(3): 618–631.
- Flora, C.B. (2001). Access and Control of Resources: Lessons from the SANREM-CRSP. *Agriculture and Human Value*, 18 (1): 41-48.
- Freedman, E. B. (2003). *No Turning Back : The History of Feminism and the Future of Women*. Ballantine Books. :464.
- Food and Agricultural Organization (2003). *The Special Programme for Food Security, Responding to new Challenges*. FAO Publication. Rome.
- Food and Agricultural Organization of United Nations (2008). Economic and Social Department, Statistical Division. *Top ten Ginger Producers*.
- Food and Agricultural Organization of United Nations (2010). *Gender and Land Rights Database*. <http://www.fao.org/gender/landrights>.
- Food and Agriculture Organization (2011). *The State of Food and Agriculture*. FAO Publication. Rome. 2011 :1-160.
- Food and Agriculture Organization (2012). *Statistical year book*. Food and Agriculture Organization, Rome.
- Foster, J., Greer, J. and E. Thorbecke (1984). "A class of decomposable poverty measures". *Econometric*, 52 (3): 761-766.
- Gans, H. J (1995). *The War Against the Poor: The Underclass and Antipoverty Policy*. New York New York: Basic Books.
- Giovanni, E. R. (2012). www.ucm.es/info/nomadas/4/gereyes.

- Gilbert, R .A., Sakala, W.D. and Benson, T.D. (2002). Gender analysis of a nationwide cropping system trial survey in Malawi. *African Studies Quarterly*, 6 (1&2): 223–243.
- Graff, J. (2006). *Poverty and Development*, Oxford University Press Southern Africa, Cape town.
- Geeta, K. and John K. (2004). “Subjective Well-being Poverty vs. Income Poverty and Capabilities Poverty?” *Journal of Development Studies* 42(7): 1199-1224
- Godoy, J. (2005). *Women Entrepreneur, the Motor for Development* Conference on Building awareness of women’s entrepreneurship in the MENA region, Istanbul, July. :11-12.
- Gul, M., Koc, B ., Dagistan, E., Akpınar, M. G. and Parlakay, O. (2009). Determination of technical efficiency in cotton growing farms in Turkey: A case study of Cukurova Region". *African Journal of Agricultural Research* 4(10): 944 – 949.
- Hardman, M. and Midgely, J. (1981).“The Social Dimensions of Development”. Willy publishers, New York
- Hazarika, G. & Guha-Khasnobis, B. (2008). *Household access to microcredit and children’s food security in rural Malawi: a gender perspective*. IZA Discussion Paper No.3793. Bonn, Germany, Institute for the Study of Labor.
- Holden, S., Shiferaw, B. and Pender, J. (2001). Market imperfections and land productivity in the Ethiopian Highlands. *Journal of Agricultural Economics*, 52(3): 53–70.
- Ibrahim, H. and Umar, H.S. (2008). Determinants of Poverty among Farming Households in Nasarawa State, Nigeria. *Journal of Production Agriculture and Technology (PAT)*. 4 (1) :11-21.
- Idrisa, Y.L. Sulumbe, I.M. and Mohammed, S.T.(2007). Socio-Economic Factors Affecting the Participation of Women in Agricultural Cooperatives in Gwoza Local Government, Borno State, Nigeria. *Journal of Agriculture, Food, Environment and Extension*. 6 (2): 73-78.
- International Fund for Agricultural Development (2001). *The Challenge of Ending Rural Poverty. Rural Poverty Report 2001*, Rome.
- International Fund for Agricultural Development (2005) Extension delivery system in rural areas. *Report 2005*, Rome.
- International Labour Organization (2003). Employment growth and basic needs: Strategies For Eradicating Mass Poverty and Unemployment”. *International Labour Organization Report*. Geneva Switzerland.
- Islam, S. (2005). Sociology of Poverty: Quest for a New Horizon. Bangladesh e-journal of Sociology, 2(1) :58.

- Jaquette, J. S. and Staudt, K. (2006). "Women, Gender and Development." Women and Gender Equity in Development Theory and Practice: Institutions, Resources, and Mobilization. Eds. Jaquette and Summerfield. Duke University Press: Durham, NC. 17-52.
- Jordaan, H. (2012). New institutional economic analysis of emerging irrigation farmers' food value chains. Unpublished Ph.D thesis, Department of Agricultural Economics. University of the Free State, Bloemfontein, South Africa. pp. 245.
- Kabeer, N. (1996). Agency, Well-being and Inequality: Reflections on the Gender Dimensions of Poverty', *IDS Bulletin*, 27:1, 11-21.
- Kabeer, N. (2003). Gender Mainstreaming in Poverty Eradication and the Millennium Development Goals. A handbook for policy makers and other stake holders. Ottawa: International Development Research Centre.
- Kajoba, G.M. (2002). Women and Land in Zambia: A Case Study of Small-Scale Farmers In Chenena Village, Chibombo District, Central Zambia. *Eastern Africa Social Science Research Review* 18 (1) :35-61
- Kaduna State Agricultural Development Project – KADP (2000). Production of ginger. An extension guide. Kaduna State, Agricultural Development Project, Kaduna.
- Kaduna State Government www.kadunastate.gov.ng/kad.html, accessed November, 2011.
- Khalid, M. (2003). Access to Formal and Quasi-Formal Credit by Smallholder Farmers and Artisanal Fishermen: A Case of Zanzibar. Mkuki na Nyota Publishers Dar es Salaam Tanzania. :1-53.
- Khan, M.N. (2001). Rural poverty in developing countries: Implication for public policy. *Economic Issues*, 26:8-15.
- Kashuliza, A. K., Hella, J. P., Magayane, F. T. and Mvena, Z. S. K. (1998). "The Role of Informal and Semi-formal Finance in Poverty Alleviation in Tanzania. Research on Poverty Alleviation, Research Report No. 98.1.
- Ki, J.B., Faye, S., Faye, B. (2005) *Multidimensional Poverty in Senegal : A Non-Monetary Basic Needs Approach*; Final Report, PMMA Working Paper-PEP
- Kiling, J. (1984). *The Quest for Economic Stabilization: The IMF and the Third World*. London Overseas Development Institute. : 45-56.
- Kinkingninhoun-Médagbé, F.M., Diagne, A., Simtowe, F., Agboh-Noameshie, A.R. and Adégbola, P.Y. (2010). Gender discrimination and its impact on income, productivity, and technical efficiency: evidence from Benin. *Agriculture and Human Values*. 27(1): 57–69.

- Klasen, S. (2005). "Pro Poor Growth and Gender: What can we learn from the literature and the OPPG case studies?" Discussion Paper to the Operationalizing Pro-Poor Growth (OPPG) Working Group of AFD, DFID, BMZ and the World Bank
- Kofi, A. (2005). *Progress Towards the Millennium Development Goals, 1990-2005*, Secretary-General's United Nations Millennium Development Goals Report. June 13, 2005.
- Korotayev, A. (2004). *World Religions and Social Evolution of the Old World Civilizations: A Cross-cultural Perspective* (First ed.). Lewiston, New York: Edwin Mellen Press:1-8.
- Koyenikan, M.J. (2010). Genders Analysis of Participatory needs assessment of Emeroke community of Akwa Ibom State, Nigeria. Implications for Agricultural Extension [Org>>Articles>>downloaded 2011](#).
- Levy, M. (1967). *Social Patterns and Problems of Modernization*. Englewood Cliffs, New Jersey: Prentice-Hall. :189-207
- Lewis, O. (1998). The culture of poverty. *Society journal*. 35 (2): 7.
- Malaba, J. (2006). The Development of gender statistics: Zimbabwe's experience. A paper presented at the inter-Agency and Expert Group Meeting on the Development of Gender Statistics. United Nation, New York :1-15.
- Martin, M. (1998). , Introduction- Marx and Engels. *The Communist Manifesto*. New York: Penguin group.:35
- Mahabub, H. and Jaim, W. M. H. (2011). Empowering Women to Become Farmer Entrepreneur Case study of a NGO Supported Program in Bangladesh. Paper presented at the IFAD onference on New Directions for Smallholder Agriculture 24-25 January, 2011 :1-30.
- May, J., Woolard, I., and Klasen, S. (2000). "The Nature and Measurement of Poverty and Inequality". In: J. May (Ed.) 2000. *Poverty and Inequality in South Africa: Meeting the challenge*. Cape Town: David Philip Publishers.
- Meinzen-Dick, R., Quisumbing, A., Behrman, J., Biermayr-Jenzano, P., Wilde, V., Noordeloos, M., Ragasa, C. and Beintema, N. (2010). *Engendering agricultural research*. IFPRI Discussion Paper No. 973. Washington, DC.
- Messer, D. E. (2002). *Disciplining Feminism: From Social Activism to Academic Discourse*. Durham, N.C. Duke University Press. :1-424.
- Michael, A.A (2011). Evaluation of farmers' response to extension services on ginger production in Kagarko local government area of Kaduna State. *Scientific Research and Essays Vol. 6(6)*, pp. 1166-1171
- Mills, C.W. (1956). "The Power Elite." Oxford University Press, USA.

- Minot, N., Epprecht, M., Anah, T.T., and Trung, L.Q (2006). 'Income Diversification in the Northern Uplands of Vietnam' Research Report 145. International Food Policy Research Institute, Washington D.C
- Moser, C. (1993). *Gender Planning and Development: Theory, Practice and Training*, London and New York: Routledge.:1-254.
- Mohammed, B. T. (2011). Socio-economic analysis of melon production in Ifelodun Local Government Area, Kwara State, Nigeria. *Journal of Development and Agricultural Economics*. 3(8), :362-367
- Muruviwa, A.T (2011). Livelihood strategies of the aged people in Mubaira community, Zimbabwe. A Dissertation submitted to the department of Sociology, University of Fort Hare, Zimbabwe. :1-295
- Mueller, A. (1987). Peasants and Professionals: The Social Organization of Women in Development Knowledge. PhD thesis, Department of Education, University of Toronto.
- Musa,M.W.(2006). Indigenous resource management systems among communities in North West Zone of Nigeria and their relevance for participatory poverty reduction. Unpublished Ph.D Thesis submitted to the Department of Agricultural Economics and Rural Sociology, Ahmadu Bello University, Zaria.
- Myrdal, G. (1957). Economic Theory and Underdeveloped Regions. London: Gerald Duckworth and Co.
- Najafi, B. (2003). An Overview of Current Land Utilization Systems and Their Contribution to Agricultural Productivity. Report of the APO Seminar on Impact of Land Utilization Systems on Agricultural Productivity. Productivity Organization, Islamic Republic of Iran Asian.
- National Root Crop Research Institute (2004). Ginger Production Extension Bull. 20. Umuahia Nigeria, : 20-24.
- Nigeria National Bureau of Statistics report 2012.
- Nolan, B. and Whelan, C. (1996), Resources, Deprivation and Poverty, Oxford: Clarendon Press.
- Obamiro, E., Doppler, W., Kormawa, M. (2003). "Pillars of Food Security in Rural Areas in Nigeria". Food Africa, Internet forum. 31st March – 11 April.
- Obayelu, A. E. (2005). Economics of Poverty, Environment and Natural Resources Use: Policy Implications and Remedies using Nigeria as case study. :1-28.

- Obwona, M. (2000) Determinant of technical efficiency among small and medium scale farmers in Uganda: A case of tobacco growers. Final Report at the AERC Biannual Research Workshop, Nairobi, Kenya.
- Ogunlela, Y.I. and Mukhtar, A. A. (2009). Gender Issues in Agriculture and Rural Development in Nigeria: The Role of Women. *Humanity & Social Sciences Journal* 4 (1): 19-30
- Ojuekaiye, E. O. (2001). Economic Analysis Analysis Of Cassava Production in Three Local Government Area of Kogi State. Unpublished M.Sc Thesis, Department of Agricultural Economics and Rural Sociology, Ahmadu Bello University, Zaria, Nigeria.
- Oladeebo, J.O. (2003). "The Effect of Socio-Economic Characteristics of Farmers on Land Degradation in The Derived Guinea Savanna Ecological Zone of Nigeria" *International Journal of Environmental Issues*, 1 (1):237-243.
- Oladele, O.I (2004). Effect of World Bank loan withdrawal on the performance of agricultural extension in Nigeria. *Nordic Journal of African Studies*, 13(2):141-145.
- Olaleye, R. S , Ibrahim, M. and Ojo, M. A. (2009). Probit Analysis of Women's Access to Agricultural Inputs in Bosso Local Government Area, Niger State, Nigeria *Journal of Agricultural Extension* Vol. 13 (2):1-9.
- Olayemi, J. K. (1995) A Survey of Approaches to Poverty Alleviation. Paper Presented at the NCEMA National Workshop on Integration of Poverty Alleviation Strategies into Plans and Programmes in Nigeria NCEMA Ibadan.
- Omonona, B.T. (2000) Poverty and its Correlates among Rural Farming Households In Kogi State, Nigeria. Unpublished Ph.D Thesis University of Ibadan.
- Omotola, J.S. (2008). Combating Poverty for Sustainable Human Development in Nigeria: The Continuing Struggle. *Journal of Poverty*, 12(4), 496-517.
- Omotesho, O.A, Adewumi, M.O. and Fadimula, K.S.(2007). Food Security and Poverty of the Rural Households in Kwara State, Nigeria. *AAAE Conference Proceedings (2007)* :571-575.
- Oriola, E.O. (2009). A Framework for Food Security and Poverty Reduction in Nigeria. *European Journal of Social Sciences*, 8(1), 132-139.
- Østergaard, L. (1992): "Gender", *and Development: A Practical Guide*. London and New York: Routledge, 1-10.
- Parsons, T., and N. J. Smelser, (1956). *Economy and Society*. In: *Theories of Development Contentions, Arguments, Alternatives*. By: Richard Peet and Elaine

- Hartwick (2009). Second Edition. The Guilford Press A Division of Guilford Publications, Inc. 72 Spring Street, New York,: 1-337.
- Perrin, R.G. (1973). "The Functionalist Theory of Change Revisited." *The Pacific Sociologist Review* 16, :1.
- Pico, J. Teorias, S. (1995). *Estado de Bienestar*. Madrid, España: Siglo XXI editores.
- Pope, W. (1983) *Inside Organic Solidarity*. *American Sociological Review* 48.5
- Phillip, E., Ali. M. G. and Amadi, S. (2005). SEEDS Review – North West Zone Consultants' Report Number 209 :18
- Pradhan, M. and R. Martin. (2000) "Measuring Poverty using Qualitative Perceptions of Consumption Adequacy." *Review of Economics and Statistics* 82: 462–71.
- Prakash, D. (2003). Rural Women, Food Security and Agricultural Cooperatives Rural. Paper presentation at Asian-African International Conference on Women in Agricultural Cooperatives in Asia and Africa organised jointly by the ICA, AARRO, JA-Zenchu and IDACA at Tokyo, Japan.:1-15
- Prebisch, R. (1950). *The Economic Development of Latin America and Its Principal Problems*. New York: United Nations.
- Quisumbing, A. (2003). *Household Decision, Gender, and Development: A synthesis of recent research*. Washington, DC: International Food Policy Research Institute
- Quigley, W.P. (2003). *Ending Poverty As We Know It*. Philadelphia: Temple University Press.
- Rahman, S.A. (2006). Gender Analysis of labour Contribution and Productivity for Popular Cropping Systems in Kaduna State of Northern Nigeria. *Tropical Agricultural Research & Extension* . vol.9 :53-64.
- Rahman, S A, Ibrahim H and Ibrahim H (2007). Socio-Economic Study of Gender Role in farm production in Nasarawa State of Nigeria. *Asia Pacific Journal of Rural Development*. 17(1):57-58.
- Rahman, S.A. (2008). Women's Involvement in Agriculture in Northern and Southern Kaduna State, Nigeria. *Journal of Gender Studies*, Volume 17, Issue 1, :17-26
- Rainwater, L. (1970). Neutralizing the Dinherited: Some Psychological Aspects of Understanding the Poor. In: V. L. Allen (ed), Psychological Factors in Poverty pp. 9-28. Chicago: Markham.
- Rank, M.(2004). *One Nation, Underprivileged*. New York: Oxford University Press.

- Rathgeber, E. (1990). "WID, WAD, GAD: Trends in Research and Practice", in *The Journal of Developing Areas*. :494 -502.
- Razavi, S. and Miller, C. (1995). *From Women in Development to Gender and Development: Conceptual Shifts in the Women and Development Discourse*. Geneva: UNRISD (Part II: Rethinking Women in Development :1-20.
- Redfield, R. (1965). *Peasant Society and Culture*. Chicago: University of Chicago Press. :35-43.
- Reddock, R. (2000). *Why gender? Why development Theoretical perspectives on gender and development*. IDRC Publishers :23
- Richard, P. and Hartwick, E. (2009). *Theories of Development*. Second Edition. The Guilford Press A Division of Guilford Publications, Inc. 72 Spring Street, New York,: 1-337
- Ritzer, G and D..J Goodman, (2003), *Sociological Theory*. 6th edition. Mc Graw Hill.London.
- Robertson, I. (1983). *Introduction to Sociology* second Ed. Worth publishers, Inc. New York.:1 – 680.
- Sabo, E. (2006). Participatory assessment of the impact of women in agriculture programme of borno state, Nigeria. *Journal of Tropical Agriculture* 44 (1-2): 52-56.
- Schaefer, R. T. (2006). *Sociology, A brief Introduction*. 6th edition. Mc Graw Hill. London.
- Sahn, D. and Stifel, D. (2003). Exploring alternative measures of welfare in the absence of expenditure data. *Review of Income and Wealth*. *Wiley International journal* 49 (4): 463–489
- Saito, K.A., Mekonnen, H. and Spurling, D. (1994). *Raising the productivity of women farmers in sub-Saharan Africa*. World Bank Discussion Paper 230. Washington D.C.:
- Santos, D. (1971). *The Structure of Dependence*. Extending Horizons publishers, Boston. :225-233.
- Scoones, C. (2000). *Rural livelihoods and Diversity in developing countries*. New York: Frank Allis.
- Segun, O. (2010). Galloping Poverty in Nigeria: An Appraisal of the Government's Interventionist Policies. *Journal of Sustainable Development in Africa*. 12 (6) :264-274.
- Sen, A. (1990). *Development as Capability Expansion*. In Keith Griffin and John Knight (eds), *Human Development and the International Development Strategy*. London: Macmillan. :.58.

- Sen, A. (1983). "Poor, Relatively Speaking," *Oxford Economic Papers* 35(2):153-69.
- Sen, A. (2001). *Poverty and Famines: An Essay on Entitlements and Deprivation*. Oxford: Clarendon Press
- Shahnaj, P. (2008). Access of Rural Women to Productive Resources in Bangladesh: A Pillar for Promoting their Empowerment. *International Journal of Rural Studies* vol. 15 (1) : 1- 8
- Smith, L.C., Ramakrishnan, U., Ndiaye, A., Haddad, L. and Martorell, R. (2003). *The importance of women's status for child nutrition in developing countries*. Research Report No. 131. Washington, DC, IFPRI.
- So, A. (1991). *Social Change and Development*. Newbury Park, California: SAGE. : 17- 23.
- Solomon, O. (2008). Identification of training needs of oil palm (*Elaeisguinensisjocq*) Farmers in Rainforest Zone of south western Nigeria. *Pakistan Journal of Nutrition* (5)
- Stolen, K. A. (1991). *Introduction: Women, Gender and Social Change*. In: *Gender and Change in Developing Countries*, Kristi Anne Vaa (ed.): 1-10. Norwegian University Press.
- Suda, C. (2002). Gender disparities in the Kenyan labour market: implications for Poverty reduction .*Nordic journal of African studies* 11(3): 301-321.
- Sparr, P. (1994). "Feminist Critiques of Structural Adjustment", in Pamela Sparr (ed.), *Mortgaging Women's Lives: Feminist Critiques of Structural Adjustment*. London and New Jersey: Zed Books, 1-39.
- Sztompka, P. (2002). *Socjologia, Znak*, [ISBN 83-240-0218-9](https://www.znak.com/isbn/83-240-0218-9) :1-500.
- Taimi K.K. (2003). Strategy for Professionalization of Rural Development. *Tamindu Journal of Development*. Nadras Vol. 9 : 269-304.
- Takane, T. (2008). Labor use in smallholder agriculture in Malawi: six village case studies. *African Study Monographs*, 29(4): 183–200.
- The Guardian Newspaper. Agriculture in Nigeria. April, 3, 2009.
- The Guardian Newspaper, July, 26, 2002.
- Thomas, A. (2000). Poverty and the end of development. In: *Poverty and Development into the 21st Century*. T. Allen and A. Thomas (eds). Oxford University Press. UK.

- Tijani, A.A., Alimi, T., Adesiyan, A.T (2006). Profit efficiency among poultry egg farmers: a case study of Aiyetodo farm settlement, Nigeria. *Research Journal Agric. Biol. Sci.*, 2(6): 256-261.
- Tipps, D. (1977). *Modernization Theory and the Comparative Study of Societies: A critical perspective*. New York: Free Press.: 65-77.
- Tischler, H. L (2006), Introduction to Sociology, Wadsworth Pub Co. New York.
- Todaro, S. (2012). Classic Theories of Development: A Comparative Analysis. http://www.aw-bc.com/info/todaro_smith/Chapter4.pdf
- Turner, J. (2003). *The structure of sociological theory*. 7th ed. Belmont,CA: Thompson Wadsworth. : 182-194.
- United Nations Development Fund for Women (2002). Securing The Peace Guiding The International Community Towards Women's Effective Participation Throughout Peace Processes. Newyork. : 1-13
- United Nations Development Programme (1995). *Human Development Report*. New York: Oxford University Press.
- United Nations Development Programme (2005). *Human Development Indicators*. New York.
- United Nations Development Programme (2010). *Achieving Growth with Equity. Human Development Report Nigeria 2008-2009*.
- United Nations Development Fund for Women. Progress of the World's Women 2000. :UNIFEM publications, New York.
- UNFPA 2002. State of World Population 2002: People, Poverty, and Possibilities. New York: UNP-FA
- Valdivia, C. and Gilles, J. (2001) Gender and Resource Management: Households and Groups, Strategies and Transitions. *Agriculture and Human Value*, 18 (1): 5-9.
- World Bank (1996). Evolution of Poverty and Welfare in Nigeria (1985-92). World Bank Policy Research Working Paper 1715 Washington D.C.
- World Bank (2002). *Attacking Poverty, World Development Report*. World Bank Washington D.C
- World development report (2001). The World Development Report. New York: World Bank
- World Bank (2003). Development indicators. New York: World Bank
- World Bank. (2005). *Attacking Poverty: World Development Report 2005/6*. Washington, D.C

- World Bank. (2007a). *World Development Report. Agriculture for development*. Washington, DC.
- World Bank. 2007b. Promoting gender equality and women's empowerment. In: *Global Monitoring Report 2007: Millennium Development Goals: Confronting the challenges of gender equality and fragile states*. : 105– 148, Washington, DC.
- World Bank (2008a) 'Project information document: Report no. AB3515', World Bank, Washington DC.
- World Health Organization (2001) Transforming health systems: gender and rights in reproductive health. WHO publication.
- Ya'aishe Modu, Alice J. Putai and A. M. Petu-Ibikunle (2009). An Economic Analysis of Cowpea Production among Women Farmers in Askira/Uba Local Government Area Borno State Nigeria. *African Journal of General Agriculture* 6 (1) :1-11
- Young, Kate (1993): *Planning Development with Women: Making a World of Difference*, London: Macmillan.
- Yusuf, N. (2000). Poverty and Nigeria Development: A Sociological Analysis. *African Journal of Development Studies*, 2 (1&2) : 198-204.

APPENDIX 1: QUESTIONNAIRE

Department of Agricultural Economics and Rural Sociology, Ahmadu Bello University, Zaira.

Farmers questionnaire

Topic: Comparative Analysis of Gender Accessibility to Productive Resources in Ginger Production for Poverty Alleviation in Kaduna State, Nigeria

Dear respondent,

This questionnaire will be used for Ph.D Research in the above- named department. Please, provide the necessary information required in the questionnaire. All information will be treated with utmost confidentiality and will strictly be used for academic purposes.

Thanks for your cooperation.

SECTION A

Socio-Economic Characteristics

1. Village.....
2. Name of respondent (optional)
3. GSM no (optional)
4. Sex (i) Male [] (ii) Female []
5. Age in years.....
6. Educational qualification: (a) No formal education Yes [] No []
(b) Primary education.....years
(c) Secondary education.....years
(d) Tertiary education.....years
(e) Islamiya.....years
(f) Others (specify):.....
7. Marital status: (i) Married [] (ii) Single []

8. If single, tick the one that best describes your status

(i) Divorced [] (ii) Widowed []

(iii) Separated [] (iv) Single parent []

(v) Others, specify.....

9. What is your household size?.....

10. How many of your household members fall in the following age group?

Age group (in years)

(a) 0–4 []

(b) 5–14 []

(c) 15–64 []

(d) 65 and above []

11. What is your primary occupation?.....

12. How much do you earn (income) per week or monthly ₦:.....

13. Any secondary occupations (Tick as appropriate)

(a) Farming [] (b) Trading []

(c) Others, specify:.....

14. How much do you earn (income) per week or monthly ?.....

SECTION B. Level of gender accessibility to productive resources in the study area

15. How long have you been farming?..... years

16. How long have been growing ginger

17. How much land do you cultivate for ginger?.....

18. Which of these varieties do you grow on your farm? (a) *Tafin giwa* [] (b) *Yatsun biri* [] (c) Others specify.....

19. Do extension staff usually visit you to give you farm advice? (a) Yes [] (b) No []

20. If yes above, how many times in a year?

21. Do you belong to any cooperative society? (a) Yes [] (b) No. []

22. If yes, name the cooperative society.....

23. What services do you receive from the cooperatives in relation to ginger production?.....

.....
.....
24. Do you agree to the statement of men and women having equal access to land?

a. Strongly agreed [] b. Agreed [] c. Undecided [] d. Disagreed [] e. Strongly disagreed []

25. Do you have access to land? a. yes () b. no ()

26. If no, why?.....

27. Kindly indicate the ownership of the land you cultivate.

(a) Individual [] (b) Family [] (c) Rented []

(f) Other, specify:.....

28. How do you negotiate access to your land? Through a. Father [] b. Brothers [] c. Husband [] d. Sons []

29. What is the average price of buying land in this area?.....(N)

30. What is the average cost of renting land in this Area?.....(N)

31. Kindly give a rough estimate of the total size of land you cultivated (ha).

32. Do you agree to the statement of men and women having equal access to credit?

a. Strongly agreed [] b. Agreed [] c. Undecided [] d. Disagreed [] e. Strongly disagreed []

33. Do you have easy access to credit for ginger production? a. yes () b. no ()

34. If yes, from which of the following sources and how much did you collect?

a. personal savings [] b. friends/relatives [] c. banks [] d. money lenders [] e. All of the above []

Please kindly state the amount collected

35. If no to question 34 above, why?.....
.....
.....

36. Do you agree to the statement of men and women having equal access to improved seeds?

a. Strongly agreed [] b. Agreed [] c. Undecided [] d. Disagreed [] e. Strongly disagreed []

37. Do you have access to improved seed? a. yes () b. no ()

38. If no, why?.....

39. If yes, state

- source.....
40. What is the price of ginger seed.....
41. What is the quantity of ginger you purchase for planting (kg)
42. Do you consider ginger seeds to be expensive a. yes () b. no ()
43. Do you always have the resources to buy enough ginger seeds? a. yes () b. no () .
44. If no, why.....
45. Do you agree to the statement of men and women having equal access to labour?
 a. Strongly agreed [] b. Agreed [] c. Undecided [] d. Disagreed [] e. Strongly disagreed []
47. Do you have access to labour? a. yes () b. no ()
48. If no, why?.....
49. What is your main source of labour for ginger production?
 a) Family labour [] (b) Hired labour [] (c) Both []
50. Do you agree to the statement of men and women having equal access to modern inputs? a. Strongly agreed [] b. Agreed [] c. Undecided [] d. Disagreed [] e. Strongly disagreed []
51. Do you use modern farm inputs on your farm? (a) Yes [] (b) No []
52. If yes above, which among the following farm inputs did you use on your farm last cropping season? (Tick as many as possible)

Inputs used	Source	Quantity
Improved seeds		
Agrochemicals		
Fertilizer		
Others (specify)		

53. If no in question 51 above,
 why?.....
54. Do you have access to inputs from government agencies? Yes () No ()
55. If yes, list the inputs

-
-
56. If no, why?.....
57. Do you agree to the statement of men and women having equal access to fertilizer?
a. Strongly agreed [] b. Agreed [] c. Undecided [] d. Disagreed [] e. Strongly
disagreed []
58. Do you have access to fertilizer? a. yes () b. no ()
59. If no, why?.....
60. If yes, state source.....
61. What is the price of fertilizer per bag?.....
62. What is the quantity of fertilizer you use in your farm (bags)?
63. Do you consider fertilizer to be expensive a. yes () b. no ()
64. Do you always have the resources to buy fertilizer? a. yes () b. no () .
65. If no, why?.....
66. Do men and women have equal access to agrochemicals?
a. Strongly agreed [] b. Agreed [] c. Undecided [] d. Disagreed [] e. Strongly
disagreed []
67. Do you have access to agrochemicals? a. yes () b. no ()
68. If no, why?.....
69. If yes, state source.....
70. What is the price of agrochemicals.....
71. What is the quantity of agrochemicals you use in your farm?
72. Do you consider agrochemicals to be expensive a. yes () b. no ()
73. Do you always have the resources to buy agrochemicals? a. yes () b. no () .
74. If no, why?.....
75. Have you received any form of training on use of input in ginger production? a)
Yes [] b) No []
76. If yes, who provided the training?
a) Extension agent [] (b) NGO [] (c) Fellow farmers [] (d) others specify.....

SECTION C. Effects of gender accessibility to productive resources on ginger farmers.

77. What is the average yield of ginger per hectare?.....
78. Do you sell ginger produced on you farm (a) Yes [] (b) No []

79. At what price do you sell (₦).....

80. Do you make profit? (a) Yes [] (b) No []

81. If yes, give the estimate of profit made per *bag*? ₦.....

82. Indicate if you acquire any of the following assets. If yes, state if purchased from ginger profits.

Tick as appropriate.

Items owned/used at home	Purchased using profits accrued from ginger	Purchased using other sources
Source of lighting at home.		
Possession of mobile phone		
Possession of refrigerator		
Energy for cooking		
Possession of TV set		
Bicycle.		
Motorcycle.		
Car		
Land		
House		
Possession of Radio		
Kitchen utensils and cutlery		
Furniture (beds, tables, chairs, carpet		
Kerosene.		
Detergents (soaps).		
Pomades.		
Toothpaste		

83. Please state the amount you spend on household food, weekly or monthly.....(₦)

SECTION D. Farmers perception of poverty in the study area

Please tick as appropriate to the following questions. Where: Strongly agreed (SA), Agreed (A), Undecided (U), Strongly disagreed (SD) and Disagreed (D)

84. What is poverty or how do you perceive poverty?

It is a state where by the poor are not regarded	SA	A	U	SD	D
It is the lack of money to take care of one's needs.	SA	A	U	SD	D
Poverty is the inability to meet ones immediate problems.	SA	A	U	SD	D
Poverty is poor source of income.	SA	A	U	SD	D
Lack of employment	SA	A	U	SD	D
Poverty is when there is no food to eat in the morning, afternoon and evening.	SA	A	U	SD	D
The situation of constant begging and borrowing of money.	SA	A	U	SD	D
Lack of access to social and economic infrastructure such as education, health, portable water, good roads and sanitation.	SA	A	U	SD	D

Please tick as appropriate to the following questions. Where: Strongly agreed (SA), Agreed (A), Undecided (U), Strongly disagreed (SD) and Disagreed (D)

85. In your own view, do any of the following constitute consequences of poverty?

Powerlessness and isolation.	SA	A	U	SD	D
Vulnerability to a sudden dramatic decrease in consumption levels..	SA	A	U	SD	D
Ill-health and physical weakness.	SA	A	U	SD	D
social inferiority, and humiliation.	SA	A	U	SD	D
Others please					

specify.....					
.....					

86. How much money do you personally consider to be enough for you and your family monthly?

5,000-15,000 (₦):	SA	A	U	SD	D
16,000-26,000 (₦):	SA	A	U	SD	D
27,000-37,000 (₦):	SA	A	U	SD	D
38,000 (₦) and above	SA	A	U	SD	D

87. How satisfied (contented, happy) are you with your level of living?

Satisfactory living conditions					
Unsatisfied	SA	A	U	SD	D
Neither unsatisfied nor satisfied	SA	A	U	SD	D
Satisfied	SA	A	U	SD	D

SECTION E. Constraints confronting ginger farmers in the study area.

88. Do you have problems while producing ginger? a) Yes [] (b) No []

89. If yes, what are these

problems.....

90. What problems do you encountered in harvesting of

ginger?.....

91. How can these problems be solved?.....

.....

92. Do you have problems in marketing ginger?

a) Yes [] (b) No []

93. If yes above, what are these problems?.....

.....
.....
.....

94. How can these problems be solved?

.....
.....
.....

95. What general suggestions can you give to improve gender accessibility to resources in gingerproduction in this area?.....

.....
.....
.....

Thank you very much.