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AWARD OF BACHELOR OF AGRICULTURE (B.AGRIC) DEGREE IN  
AGRICULTURAL ECONOMICS AND EXTENSION.

A PROJECT SUBMITTED TO

*AEE/13/0950*

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BY

FACTORS INFLUENCING WOMEN'S PARTICIPATION IN  
AGRICULTURAL PRODUCTION: EVIDENCE FROM SMALL-SCALE  
FARMERS IN EKITI STATE, NIGERIA

## DECLARATION

I, FAJUJI TEMITAYO ODUNAYO, hereby declare that: this project titled, **Factors influencing women's participation in agricultural production: evidence from small-scale farmers in Ekiti state, Nigeria**" is a record of my own research work and it has not been submitted in any form to any other institution for award of any degree or diploma. All quotations and sources have been duly acknowledged and referenced.

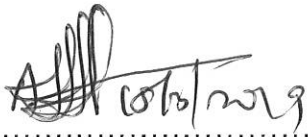
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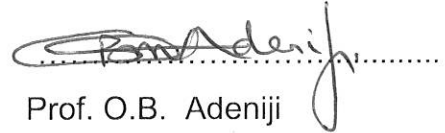
**CERTIFICATION**

This is to certify that this project was carried out by Temitayo Odunayo FAJUJI, of the department of Agricultural Economics and Extension, Federal University, Oye-Ekiti, Ekiti

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## DEDICATION

This project is dedicated to my creator the Almighty God for his infinite mercies, grace, protection and ever present help throughout my stay on campus and to my family and friends for their love and support.

## ACKNOWLEDGEMENT

My profound gratitude goes to my Creator, Maker, and the almighty God for His divine encouragement and guidance without which this thesis would not have seen the light of the day.

I wish to also express my profound appreciation and gratitude to my supervisor, Dr T. G Apata for his professional and academic guidance. Thanks for your brilliant insights, editorial comments and observations. Thanks for all that you represent. You are indeed an inspiration. My indebtedness is also to my Head of department; Prof. O.B Adeniji for his scholarly advice and encouragement which saw to the completion of this thesis. I cannot express enough, my heartfelt appreciations to Dr Fakayode and Dr Abiola for their literary insights and encouragement and all other lecturers of the department of agricultural economics and extension, Dr Mkpado, Dr Stanley, Dr Ogunjimi, Mr Femi, Mr Amen and all non-academic who have in various ways contributed to this project. Special mention is made of Mr. Dada, the erstwhile zonal co-ordinator of ADP Ekiti, Mrs E. Ajibade, Mr. Olumide , and Dr. Godwin Chris and the entire members of the ADP

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Thank you all and God bless.

## ABSTRACT

The project examines factors influencing women's participation in agricultural production: evidence from small-scale farmers in Ekiti state, Nigeria. This project provides evidence that women play a significant role in agriculture through their influential participation. Multistage sampling technique was used for the selection of the 100 respondents used for this project through the help of Agricultural Development Programme Offices in Ado, Ikere and Ikole in Ekiti State. Both the primary and secondary data was used for the study. Primary data were collected through the use of structured questionnaire, while secondary data were collected from established similar studies and ADP offices in Ekiti state. Data collected provided information which were used to achieve the project stated objectives. Secondary data helped to identify areas of study and the structure of gender participation in agricultural production. Data analysis was done using descriptive statistics and multiple regressions. Results revealed that the majority of women farmers (46%) who participated in agricultural production are within the age of (30 -39) years. Hence, farming activities in the study area is mostly dominated by young adults; innovation and new technology can easily be accepted and used. Primary education had the highest (46%) educational qualification among the women respondents. This category of women were involved more in agricultural production that other educational attainment category. Crop farming (77%) dominates other agricultural productions. Moreover, results revealed that 67% of women source capital from personal Savings 32% of women obtain loan while only 1% source for capital through grant/empowerment. Major reason that motivated high women participation in crop farming is that it is an ancestral inheritance of our people. Majority of the women farmers indicated that crop farming is conveniently to do as they have regarded crop farming as a way of life. Profitability analysis indicated that women farmer realize profit as 22% of the respondents



realized profit in the range of #2500 - #50000. However 73% of women farmers that engaged in crop farming have the highest percentage. Hence, women farmers who engaged in crop farming received the highest share of the profit than others. The project deduced that women have contributed enormously to agricultural operations in the study area. However, much of their work continues to be unrecognized. Despite widespread participation of women on farms, their farm participation often remains invisible. Several barriers affecting women's participation in agricultural activities were identified by the project as systemic gender based biases has been dominant. Government should encourage and assist women farmers by giving them special attention in terms of access to needed farm inputs and incentives. Measures should be taken to enhance women's literacy rates. A separate education policy for women may serve the purpose.

**Keywords:** Women participation, Agricultural production, Profitability analysis, Regression analysis, Ekiti state, Nigeria

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## CHAPTER ONE

### INTRODUCTION

#### 1.1 BACKGROUND OF THE STUDY

Past studies have argued that the link between gender and agriculture has existed as long as the concept of gender itself (Adenugba and Raji-Mustapha, 2013). Recently, gender labour in agricultural production has been subjected to productivity and efficiency. Yet recent analysis suggests that gender issues are explicitly integrated in less than 10% of official development assistance (African Development Bank, 2009). The focus on the gender relations within which resources are controlled and used is crucial both for understanding local resource management, practices and innovations, and for assessing policies to support or supplement them. One of the rationales for improving women participation in agriculture is that when a Woman is educated, her children tend to be better fed and healthier. As a woman earns income, she is more likely than the man to spend it on improving the well-being of the family (Ogunlela, and Mukhtar, (2009). This scenario decision can build women self-esteem and lead to a more participatory role in both public and family making (Food and Agricultural Organization, 2011). Despite these important roles, women have greater difficulty than men accessing resources such as land, credit, agricultural inputs and services that increase the productivity of their parcels and thus also their possibility to enhance their own and their family's well-being (Deere and Leal, 2001; African Development Bank, 2009; International Food and Agricultural Development, 2009).

Consequently, the productivity and economic empowerment of women is a logical priority of programs and policies aimed at promoting agricultural development. The priority is justified, as it considers women's agricultural production as a source of economic growth and as

a benefit of rural livelihood and poverty reduction. None of this is news for the professionals involved in development issues and specializing in gender analysis and its applications to policy and their program design (Doss, and Morris, (2001).

The perspective of economic empowerment of rural women in developing countries can be understood in terms of three interrelated key issues: (i) increasing access to key assets and control over them (property), (ii) increasing their influence in decision-making processes (iii) and improvement of their well-being and ease of their workload (Deere and Leal, 2001). In Latin America, different countries have shown that direct ownership of productive assets by women reduces the risk of poverty (Deere and Leal, 2001). Specifically, land ownership is the best guarantee rural women have to be able to provide food for their families. Moreover, land ownership is often seen as a precondition for increasing the productivity of peasant women, as it enhances their access to other resources needed for production (Deere and Leal, 2001).

In the agricultural sector of many developing countries, women represent the main driving force and spend considerable amount of time planting, weeding, ridging, and harvesting, while simultaneously doing their regular chores. However, irrespective of the sub-Saharan African (SSA) country under investigation, women are often found to be less productive than their male counterparts in the agricultural sector (Kilic *et al.*, 2013). Indeed, empirical evidence suggests that woman's deficits in agricultural productivity range from 4 to 50% across the world, but lie between 20 and 30% in the SSA region (FAO, 2011). Most SSA countries now recognize that the fight against gender bias in agriculture is crucial to sustaining economic growth and ensuring food security. This is particularly germane in countries where the vast majority of the populations earn their incomes from agriculture-based activities. According to recent statistics, agriculture accounts on average for 30% of the Gross Domestic Product in SSA countries, it

provides about 45% of earning sources, and employs over 65% of the total labor force (World Bank, 2015). This scenario of agriculture losing its position in the economy led to the introduction of

Agricultural development Projects (ADPs) in the late 1970s by the Nigerian government. The ADPs were designed in response to a fall in agricultural productivity, and hence a concern to sustain domestic food supplies, as labour had moved out of agriculture into more remunerative activities. The ADPs are to provide agricultural investment and services, rural roads, village water supplies, and mainstreaming of women into agricultural activities. The government's adoption of the ADP concept put the smallholder farm participation at the centre of the agricultural development strategy (Independent Evaluation Group – IEG, 2009).

## **1.2 STATEMENT OF PROBLEM**

Although rural women are actively involved in the process of food production, processing and marketing, social and economic constraints have placed barriers around their access to scientific and technological information (Oseni *et al.*, 2013). The women folk do not have needed technical knowledge to enable them derive productive use of farm input for optimum yield. According to Croppenstedt *et al.*, (2013), women farmers labour without crucial support that could raise their agricultural productivity. Scarce inputs like credit, improved seeds, among others rarely flow to women in the African country side. Generally, it is a known fact that male farmers have more access to agricultural extension services than women in Nigeria. Oseni *et al.*, (2013) observed that agricultural extension services are mostly staffed by men and are inclined to helping men folk. According to Ayodele *et al.*, (2013), when agricultural extension workers visit rural areas to explain improved technologies or access to inputs, they usually interact with men,

not women. In a study on rural women in food chain activities, Obinne (1995) found that women farm managers have inadequate access to extension services. Since they (women farmers) are engaged in both on-and off-farm activities they do not have time to enjoy the extension service offered. Similarly, Protz (1997) posited that due to the multiple roles women play in the rural household (including caretakers of children and the elderly), they do not fully benefit from extension services, particularly, when the time of delivery (of extension service) conflicts with their other household responsibilities.

According to FAO (2011), rural women are burdened by their domestic tasks and family obligations and controlled by social restraints such that they are constrained time-wise to be away from home to attend to extension training programmes. The above reviewed situation with regards to women farmers agricultural information needs and their access to same confirms existence of some problems that need further investigation.

### **1.3 JUSTIFICATION**

This study will provide evidence that women play a roles through their participation in agriculture in various countries and if similar policy intervention is pursued by the Nigerian government and the government of Ekiti State in particular. Agriculture sector could be revived with little efforts as compared to previous ones by providing the need for considering women in State's developmental policies for meaningful sustainable progress to be achieved in socio – economic and political sectors of Ekiti State.

A reason responsible for the underperformance of agricultural sector in many developing countries including Nigeria is due to women (given their roles as farmers, labourers, and entrepreneurs) exclusion of women from participating in agriculture through policy interventions

with focus that the benefit received by the head of the family (man) will as well spread to female members of the family.

The study will enable women to understand their role in fostering agricultural development through their effective participation, particularly in Ekiti State.

#### **1.4 RESEARCH QUESTIONS**

- a. What are the socio-economic variables of women respondents in agricultural production;
- b. What are the productive factors influencing gender participation in agricultural production;
- c. What are the gender contribution to agricultural operations and agricultural output; and
- d. What factors influences productive factors among women farmers in the study area.

#### **1.5 RESEARCH OBJECTIVES**

The main objective of this study is to profile women farmers and identify productive factors influencing women participation in agricultural operations and production in Ekiti State, Nigeria.

The specific objectives are to:

- a. examine the socio-economic variables of women farmers in agricultural production;
- b. identify productive factors influencing women participation in agricultural productions;
- c. determine the cost and revenue of productive inputs ; and
- d. examine the factors influencing women's participation in agricultural production.

## **1.6 RESEARCH HYPOTHESIS**

The following null hypothesis will be set for the purpose of this research:

- i. there is no significant differences between examine the socio-economic variables of respondents in agricultural production;
- ii. women farming enterprise in the study area is not profitable; and
- iii. There are no factors that influence women contribution to agricultural production.

## CHAPTER TWO

### LITERATURE REVIEW

#### 2.1 WOMEN FARMERS

In sub-Saharan African (SSA), women are often found to be less productive than their male counterparts in the agricultural sector. Indeed, empirical evidence suggests that women's deficits in agricultural productivity range from 4 to 50% across the world, but lie between 20 and 30% in the SSA region (FAO, 2011; Kilic et al, 2013). The discriminating factors generally encompass land constraints (small land size, unequal land tenure systems and property rights), low application of modern inputs (such as chemical fertilizer, improved seeds, and pesticides), limited access to advisory and extension services, low stocks of human and physical capital and exclusion from credit and financial markets (Aguilar et al, 2014; Backiny-Yetna and McGee, 2015; Ali et al, 2015). Overall, women in sub-Saharan Africa more broadly account for less than 20% of total landowners (Farming First 2012). Women are often also responsible for providing the food consumed by the household. Women's productive roles particularly in the informal sector and subsistence agriculture have been ignored or undervalued (Imam 1990; Olawoye 2000). This has led to poorly conceived development projects; for example, the services of extension agents and agricultural inputs being targeted at men even though the activities are largely carried out by women.

The overwhelming majority of empirical studies have identified gender differences in yields (a common measure of agricultural productivity in the literature) by comparing male- and female headed households. This choice may be explained by the practical impossibility from most existing data to unequivocally assign ownership and responsibility to one single person (Croppenstedt et al, 2013). In the local community government bodies are responsible for the

allocation of resources with negative implications in terms of how these get distributed due to women's lack of representation (FAO 2011; Bezner Kerr 2011). However, the validity of the conclusions from this approach will eventually hinge upon its underlying assumptions (similar productive capacity across all household members, identical access to information, and negligible differences in quantity and quality of input uses) (Kilicet al, 2013; Oseni et al, 2013).

In response to the dwindling performance of agriculture in the country, government have over the decades, initiated numerous policies and programmes aimed at restoring the agricultural sector to its pride of place in the economy. No significant success has been achieved due to several constraints inhabiting the performance of the sector (Ugwu *et al* 2013). According to its findings, Food and Agricultural Organization (2010) cited that women comprise an average of 45% of the agricultural labour force in developing countries. Odoemelam *et al* 2014) shows that there are differences in yield between male and female farmers, not because the female farmers are less skilled than their male counterpart but because they are constrained by lack of access to agricultural inputs and resources. Women farmers, despite their significant contributions to farming, are further marginalized than men farmers due to reduced access to land, inputs, extension advice, and technology; participation in leadership positions; and income generation opportunities (Bezner Kerr 2011; African Development Bank (AfDB) 2014; 2003; Oseni et al. 2015; FAO 2011; Ekenta et al. 2012). Chayal, Dhaka, and Suwalka (2010) in their study of the analysis of role performed by women in agriculture in India found that there is greater involvement of women in various agricultural operations. They concluded that policy intervention could enhance women participation in actual farm work to as high as 70%. In addition, they found landholding, age, and family income greatly influence women participation



in agriculture and recommended for effective policy intervention in order to boost women socio – economic structure.

Rural women often manage complex households and pursue multiple livelihood strategies. Their activities typically include producing agricultural crops, tending animals, processing and preparing food, working for wages in agricultural or other rural enterprises, collecting fuel and water, engaging in trade and marketing, caring for family members and maintaining their homes (SOFA Team & Doss, 2011). One of the rationales for improving women participation in agriculture is that when a woman is educated, her children tend to be better fed and healthier. As a woman earns income, she is more likely than the man to spend it on improving the well-being of the family. This scenario can build women self-esteem and lead to a more participatory role in both public and family decision making (FAO, 2011). And as agriculture sector is becoming more technologically sophisticated, commercially oriented and globally integrated; the developing countries have to fully utilize their human resources in order to take advantage of the global opportunities for all agricultural producers, including improving women participation in agriculture (FAO, 2011). In many rural communities of the North, women participate in all aspects of agricultural life, including household and family maintenance, wage labour, trading, and marketing, as well as crop and animal management. The practice of *purdah* or *kulle* (seclusion of Muslim women) is common in Northern Nigeria (Ndaghu 2013). A secluded Muslim woman is permitted to go out only under a particular necessity and with prior knowledge of her husband. In a study conducted in 2013 in Northern Nigeria, 32.9% of the respondents were in seclusion (Ndaghu 2013). Also, Butt, *et al.* (2010) conducted a study on the role of rural women in agricultural development and their constraints: a case study in Depalpur, Okara-Pakistan; found women playing crucial role in food security and stability of rural areas due to

keeping crop production, livestock production as well as cottage industry alive. They also found women having incomplete access to farm input/resources, agricultural extension education services, and newest technical knowledge and information sources. They recommended that serious attention be given to eliminating constraints faced by women because they hold the backbone of agricultural development and food security in many part of the world. Agbalajobi (2010) in his study of women's participation and political process in Nigeria: problems and prospects, using qualitative method with the aim of examining the theoretical perspective of the discrimination and inequality suffered by women thereby limiting their participation in socio-economic and political activities. The study observed that the Nigerian women constitute about half of the population of the country and play vital roles as mother, farmers, producer, time manager, community organizer and social and political activists; and postulated that the society has not given recognition to women's roles due to cultural stereotype, abuse of religion, traditional practices and patriarchal societal structures and as a result have become the target of violence of diverse forms. The study found Patriarchy, Virility deficiency – women's conception of politics, Lack of economic incentives (Financial backing), Discriminatory customs and laws, and Lack of affirmative action quota as factors responsible for women's low participation in issues. As a result, it is concluded that women participation in issues in Nigeria over the years is very low engendering the consciousness of even development. It thus recommended women empowerment programmes and support of international organizations as ways to involve women in activities and to ensure the achievement of sustainable development drive of Nigeria. Kishor, This is done to prevent women from interacting with other men except their husbands.

## CHAPTER THREE

### METHODOLOGY

#### 3.1 STUDY AREA

The study was conducted in Ekiti State, Nigeria known for their prominent agricultural activities. Each of these Local government area is a zonal head quarter for the Agricultural Development Programme(ADP) in the state. These local governments includes; Ado – Ekiti, Ikere – Ekiti and Ikole – Ekiti. The State lies between Latitude  $7^{\circ} 15^1$  and  $8^{\circ} 7^1$  North of the equator and longitude  $4^{\circ} 47^1$  and  $5^{\circ} 45^1$  East of the Greenwich Meridian. It has a mean annual rainfall of about 1400mm and a mean annual temperature of about  $27^{\circ}\text{C}$ . The State is bounded to the North by Kwara and Kogi States, to the South and East by Ondo - State and to the West by Osun - State. Its vegetation ranges from Rain forest in the south to Guinea savannah in the North with soil largely rich in organic minerals thereby making the state a major producer of both tree and food crops.

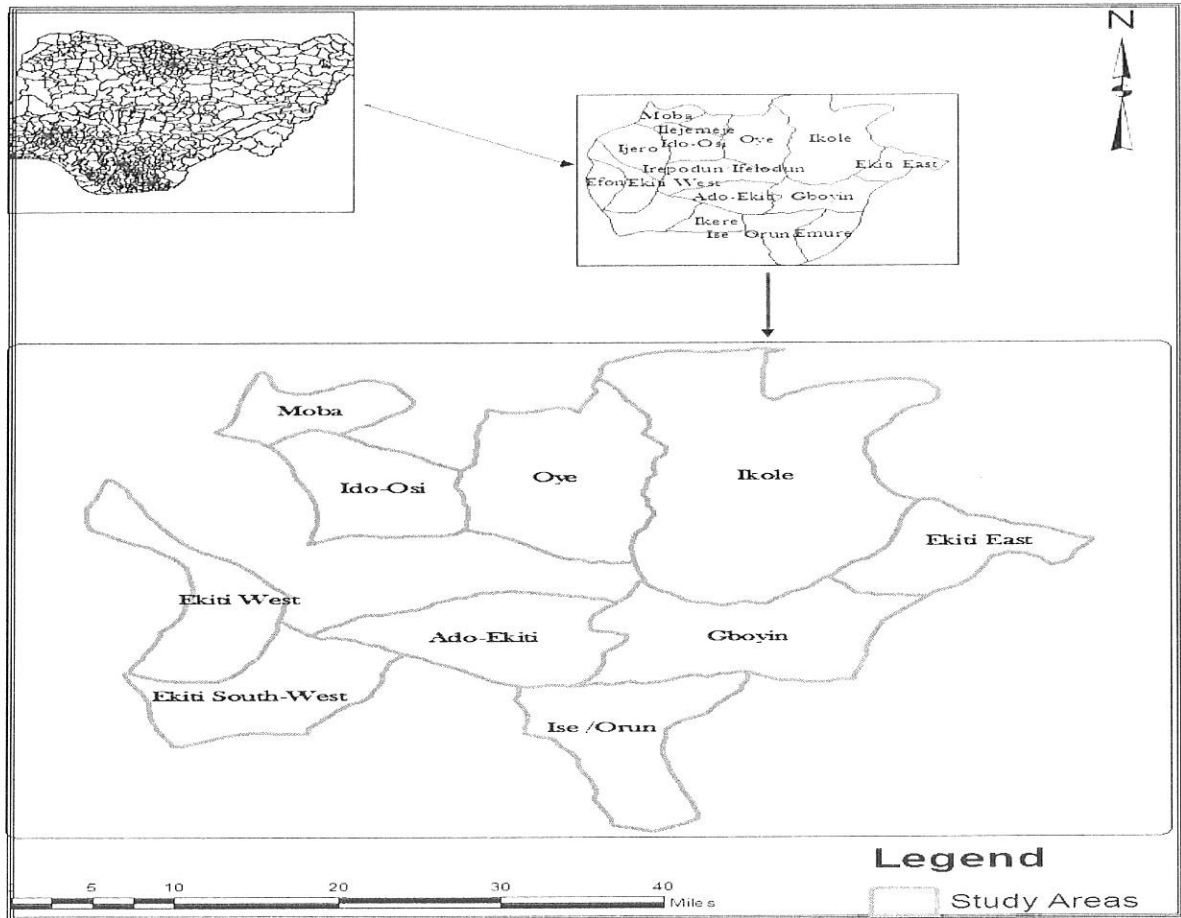


Figure 1: Study Areas

### **3.2 SOURCE OF DATA**

Both the primary and secondary data was used for the study. Primary data would be collected through the use of structured questionnaire. Socio-economic characteristics information to be collected would include household size, age, sex, education, farm size, production data etc.; while secondary data would obtain from various publications relevant to the study such as bulletins, journals, statistical reports, subjected to Descriptive statistics (expressed in percentage). The percentage analysis was based on the outcome of the Social Science Statistical Package (SPSS) while the in-depth and focus group discussions were transcribed and analyzed alongside the SPSS outcome.

### **3.3 SAMPLING TECHNIQUES**

A multistage sampling technique was used for the selection of the respondents. The first stage would be done by random selection of ten out of the sixteen Local Government Areas (LGAs) with the help of Agricultural Development Programme Office. In the second stage, 10 female farmers would thereafter be selected via chain referral technique. The sample size for the study would be 100 respondents.

### **3.4 MEASUREMENT OF VARIABLES**

The demographic characteristics were measured at nominal level. The money realized from sales of farm produce and off farm activities during the period of study measured the independent variable income. Wealth status was measured by converting to Naira value anything of value the respondents possessed. Cost of inputs was measured as the total cost of inputs used in Naira. Credit was measured as the total amount of money received from banks during the period

understudy. Farm size was measured in hectares. The dependent variable food production was measured by the amount of different crops produced in bags and converted to the Naira value.

### 3.5 DATA ANALYSIS

Descriptive statistics of frequencies, percentages and means were used to describe the socio-economic characteristics of the respondents. Correlation analysis was used to test the relationship between the independent and dependent variables. Also multiple regression models were fitted for selected variables to test the hypothesis.

### 3.6 METHODS OF DATA ANALYSIS

Descriptive statistics such as frequency, percentage table and mean would be used to achieve objectives 1 and 2, budgeting analysis would be used to achieve objective 3 while multiple regression analysis in equation 1 would be used to identify the socio-economic factors influencing productive factors of women farmers in the study area (objective 4):

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \dots + \beta_n X_n + e \dots \dots \dots i$$

Y = output in kg/ Naira

$X_1, \dots, X_n$  = Independent variable socio-economic characteristics such age of the Respondent (years), years of schooling, farm Size (ha), farming experience (years), household size, cost of labour (man-day), cost of seeds, cost of herbicides,

$\beta_0$  = Intercept

$\beta_1, \dots, \beta_n$  = slope of estimated parameters.

e = error term

### 3.7 BUDGETING ANALYSIS

Budgeting analysis was used to determine the profitability of women farming enterprises using gross margin, benefit-cost ratio and return on investment.

### 3.8 GROSS MARGIN ANALYSIS

Gross margin was determined by the difference between production revenue and total variable cost using the formular specified in equation ii:

$$GM = TR - TVC \dots \dots \dots ii$$

Where:

GM = Gross Margin

TR = Total Revenue from Sales

TVC = Total Variable Cost of Production

#### Net Profit

Net profit was determined by the difference between revenue of participants and the total cost as specified by equation iii:

$$P = TR - TC \dots \dots \dots iii$$

Where:

TR = Total Revenue from Sales

TC = Total Cost of Production (Total Variable Cost + Total Fixed Cost

### **Benefit-Cost Ratio**

This was determined by the ratio of the total revenue to the total cost using the formular specified in the equation iv:

$$BCR = \frac{TR}{TC} \dots\dots\dots iv$$

Where: BCR = Benefit – Cost Ratio

TR = Total Revenue from Sales

TC = Total Cost of Production (Total Variable Cost + Total Fixed Cost

### **Return on Investment**

This was determined by the ratio of net profit to the total cost using formula in equation v:

$$ROI = \frac{NP}{TC} \dots\dots\dots v$$

Where: ROI = Return on Investment

NP = Net Profit

TC = Total Cost of Production (Total Variable Cost + Total Fixed Cost



### 3.9 Summary of Research Methodology

Objective No	What do you intend to achieve	Methodology to be adopted: Data collection	Model
Examine the socio-economic variables of respondents in agricultural production	Socio-economic variables such as age, education as it affect crop production	Use of questionnaire	Descriptive statistics of mean, bar chart, cross tabulation
Identify productive factors influencing gender participation especially women in agricultural operations/productions;	Provide statistics of the women labour contribution to agricultural production in the study area	Use of questionnaire	Tables, percentage, Chi-square, T-Test.
determine the cost of productive inputs and revenue of women farmers; and	Provide information on profitability of women farming enterprise	Cost inputs and outputs	Budgeting analysis
examine the factors influencing women's participation in agricultural production in the study area.	Provide information on the impact of socioeconomic factors on gender labour and identify significant factors contributing to agricultural production.	Socio-economic and production data from field survey	Multiple Regression analysis

**Table 3: Summary of the Administered Questionnaires**

Questionnaire	Distributed	Returned	Not Returned
ADO LGA	40	40	-
IKOLE LGA	40	35	5
IKERE LGA	40	25	15
TOTAL	120	100	20

Source: Field Survey, 2018.

From Table 3.1 above, 120 questionnaires were administered but only 100 were retrieved and completely filled. The remaining un-used data(20) had missing information and incomplete records. It is these retrieved and completed questionnaires that were used for the analysis of the study alongside the transcribed in-depth interview and focus group discussions.

## CHAPTER FOUR

### RESULTS AND DISCUSSION

This section presents the descriptive statistics used to examine socio-economic variables of the respondents. Also cross-tabulation of main data used to describe the economic implication of the results of the examination. It consists of four (4) sub-sections; each capturing a research objective, including the first sub-section in which the overall questionnaires administered was analyzed. Data analysis was done through the use of Social Science Statistical Package (SPSS) version 17. While the in-depth data used for this study was collected through the use of questionnaire and focus group discussions which were transcribed and analyzed.

#### **Table 4.1: SOCIAL DEMOGRAPHIC CHARACTERISTIC OF WOMEN FARMERS IN ADO –EKITI, IKERE-EKITI AND IKOLE-EKITI.**

This section examines age of respondents, marital status, family structure, wife's position, respondents' children and educational qualification in relation to their farm holding. This is based on the responses obtained from structured questionnaire administered to sampled women and focus group discussion with women; the summary shown in Table 4.1 below:

**Table 4.1.1 Age distribution of women farmers in Ado, Ikere, and Ikole , Ekiti-state**

<b>Age grouping</b>			
Age	Frequency	Percent	Cumulative Percent
20-29	9	9.0	9.0
30-39	46	46.0	55.0
40-49	28	28.0	83.0
50-59	16	16.0	99.0
60-69	1	1.0	100.0
Total	100	100.0	

From table above, it revealed that the majority of women farmers (46%) who participated in agricultural production are within the age of (30 -39) years, followed by those within the ages of (40 – 49) years having 28%, while ages of (50 – 59) years having 16% and ages of (20 -29) years and (60 – 69) years are 9% and 1% respectively. However, no woman farmer falls within the ages of 70 years and above, hence no farm holding by this age bracket. The statistics revealed that farming activities in the study area is mostly dominated by young adults, innovation and new technology can easily be accepted and used.

**Table 4.1.2 Marital Status**

	Frequency	Percent	Cumulative Percent
Single	25	25.0	25.0
Married	61	61.0	86.0
Widowed	9	9.0	95.0
Divorced	5	5.0	100.0
Total	100	100.0	

The Table 4.1.2 above revealed that singles and married women are in majority in farming activities. This constitutes 25% and 61% respectively and cut across all sizes of farm holding. Although, widowed and divorced engage in farming activities, but they are in the minority. In addition, for married couples engages the mutual contribution from the spouse which can influenced decision for a better performance in farm production.

**Table 4.1.3 Contribution of marital status**

Count	Marital Status					Total
	Single	Married	Widowed	Divorced		
Age	20-29	9	0	0	0	9
grouping	30-39	15	31	0	0	46
	40-49	1	25	2	0	28
	50-59	0	5	6	5	16
	60-69	0	0	1	0	1
Total		25	61	9	5	100

The majority (46%) of women who participated in agricultural production are within the age of (30 -39) years; whereas ages with (60 – 69) years had the lowest frequency of (1%) although on a small scale venture. Age (20 -29) years only 9% are single, within (30 -39) years only 15% were single, (40 -49) years only 1% were single while age (50 -59) years and (60 -69) years had no percentage for single. Among the married within the age(30 -39) years; the highest frequency (31%) was obtained, however among the married within age (40 -49) years,(25%) frequency was obtained. The least frequency 1% was observed among the single within the age (40 -49) years and widow within age (60 -69) years.

**Table 4.1.4      Position of wives in the family**

	Frequency	Percent	Cumulative Percent
First	66	66.0	66.0
Second	18	18.0	84.0
Third	12	12.0	96.0
Fourth	4	4.0	100.0
Total	100	100.0	

The position of women farmer in their husbands' homes, responses revealed that most women farmers are 4th as well as the 3rd wives, according to Islamic injunctions, are few in farming undertakings as they constitute 4% and 12% each.

**Table 4:1:5 The number of children per women farmer in Ado, Ikere, and Ikole Ekiti**

**Children number**

	Frequency	Percent	Cumulative Percent
0	24	24.0	24.0
1	1	1.0	25.0
2	10	10.0	35.0
3	18	18.0	53.0
4	26	26.0	79.0
5	13	13.0	92.0
6	7	7.0	99.0
7	1	1.0	100.0
Total	100	100.0	

Table 4:1:5 indicated that 3-5 number of children are in the model class. Moreover among the women farmers, 24% of them have no children as majority are singles. In addition 10% of them have 2 , 18% of them have three children, 26% which is the highest percentage have four children, about 13% have five children, 7% of them have six children while only 1% has 7 children. Based on this information, women with 4-7 children are found engaging in 7 and more hectares of farm holding while few is found on this size of farm holding among those with 1 – 3 children. The children is a reliable and cheap source of farm labour during planting, weeding, fertilizer application, harvesting and processing.

**Table 4.1.6: Educational qualification**

	Frequency	Percent	Cumulative Percent
Primary	46	46.0	46.0
Secondary	17	17.0	63.0
NCE	4	4.0	67.0
OND	4	4.0	71.0
HND	13	13.0	84.0
University degree	5	5.0	89.0
Noformal Education	11	11.0	100.0
Total	100	100.0	

Table 4:1:6 revealed that primary education had the highest(46%) educational qualification of the respondents. Also, 17% had completed secondary education. Those women farmer with NCE and OND has the same percentage of 4% respectively. Also women farmers with HND has 13%. University education among respondent has 5% while women farmer without any formal education has 11% . This implies that women farmer with primary educational qualification has the highest percentage of 46% and OND holder has the least percentage of 4% each. Specifically, primary certificate holders are more in 3 – 4 hectares, 5 – 6 hectares (6% each); 1 – 2 hectares (4%); and less than 1 hectare and 7 and more hectares (2% each). Secondary certificate holders pre-dominate in 1 – 2 hectares (11.2%) followed by 3 – 4 hectares (4%); then less than 1 hectare (3.0%) while 5 – 6 hectares and 7 and more hectares constitute 0.8% respectively.



**Table 4:1:7 Access to land for agricultural productions**

	Frequency	Percent	Cumulative Percent
Yes	87	87.0	87.0
No	13	13.0	100.0
Total	100	100.0	

The study showed that 87% of women farmers have access to farm land for agriculture, while 13% does not have access to land for agriculture. Unrestricted access to farm land is an important index for improving livelihood and harnessing the potential in women farmer. This is an indication that custom, tradition and belief do not hinder women's access to farmlands.

**Table 4:1:8 Educational qualification \* Access to land for agric  
Crosstabulation**

		Access to land for agric		
		Yes	No	Total
Educational qualification	Primary	39	7	46
	Secondary	16	1	17
	NCE	4	0	4
	OND	4	0	4
	HND	9	4	13
	University degree	4	1	5
	No formal education	11	0	11
Total		87	13	100

This revealed that educational qualification has effect on access to land for agriculture as demonstrated on table 4:18. Women with completed primary education has 39% access to land

for agriculture while 7% of them has no access to land for agriculture, Moreover 16% of the women with completed secondary education has access to land for agriculture while 1% has no access to land for agriculture. The implication of this result is that educational attainment and access to farmland are independently related. The more educated a women farmer is less will be her access to farmland.

**Table 4:1:9 Land access type**

	Frequency	Percent	Cumulative Percent
Family land	39	39.0	39.0
Rentage	39	39.0	78.0
Lease	5	5.0	83.0
Communal	3	3.0	86.0
Purchased	14	14.0	100.0
Total	100	100.0	

Table 4:1:9 revealed that family land and rentage type of land access has the same percentage of 39% each, this is followed by lease type of land access with 5% while communal type of land has the least percentage with 3% and purchased type of land access has 14%. The study showed that women farmers rent farm land or use their family lands for farming. This showed that the farmland is inherited or acquired through their family or rented in the study area.

**Table 4:1:10 How frequent do you engage in farming activities**

	Frequency	Percent	Cumulative Percent
All year round	32	32.0	32.0
Sometimes	53	53.0	85.0
Leisure	15	15.0	100.0
Total	100	100.0	

From the data collected, it was observed that 32% of women farmer engage in farming activities all year round. About 53% of women sometimes engage in farming activities, 15% of women engage in farming activities at their leisure time; This implies that the highest percentage of women engage in farming activities sometimes. The study showed that women are engaged in farming, but primarily in domestic activities (cooking and taking care of the children) and many more. Therefore, farming is on a post- time by the women.

**Table 4:1:11 Farm size**

	Frequency	Percent	Cumulative Percent
0.5	3	3.0	3.0
1	56	56.0	59.0
2	23	23.0	82.0
3	16	16.0	98.0
4	1	1.0	99.0
5	1	1.0	100.0
Total	100	100.0	

The majority of the farmers (59%) had land sizes in the ranging between 0.5 – 1.0 ha. Table 4:1:11 also justified that about 41 % had land measuring over 1 ha. Land is a basic resource on which agricultural production takes place. It is commonly argued that a productive land holding needs to be at least one hectare which is perhaps why the Rwandan government prohibits fragmentation of land below one hectare (Bizimana et al., 2004; Musahara, 2006).

**TABLE 4:1:12 Educational qualification \* Farm size grouping  
Crosstabulation**

Count		Farm size grouping		
		0-3	3.1 – 10	Total
Educational qualification	Primary	46	0	46
	Secondary	15	2	17
	NCE	4	0	4
	OND	4	0	4
	HND	13	0	13
	University degree	5	0	5
	No formal education	11	0	11
Total		98	2	100

Table 4:1:12 revealed that farm or Land size and Educational qualification are important in explaining to which extent women decide on the level of land to be used for agricultural purposes. This is couple with an increase in production contributes, all factors remaining constant, to the resource endorsements to a better management decision for household farm and in return it would certainly create women's incentives to increase the size of the land under coffee. Therefore, the bigger a farm size is, the more it influences participation in agricultural production. In other words, a large farm size acts as incentives to the farmer to increase the area of land for agricultural production.

**Table 4.1.13: Type of farm enterprise**

	Frequency	Percent	Valid Percent	Cumulative Percent
Crop farming	77	77.0	77.0	77.0
Livestock	17	17.0	17.0	94.0
Fish farming	6	6.0	6.0	100.0
Total	100	100.0	100.0	

Table 4:1:13 indicated that, crop farming predominates with 77% followed by livestock production with about 17% while fish farming are 6%. Neither of the women who sometimes engage in farming activities nor those that have just crop production occupied 3 – 4 hectares, 5 – 6 hectares, and 7 and more hectares of farm land; hence these two forms of farming enterprise are on less than 1 hectare and 1 – 2 hectares respectively.

**Table 4:1:14 Sources of labour 1**

	Frequency	Percent	Valid Percent	Cumulative Percent
Family	15	15.0	15.0	15.0
Hired	27	27.0	27.0	42.0
Both family and hired	58	58.0	58.0	100.0
Total	100	100.0	100.0	

This revealed that both family and hired forms of farm holding are owned by women in the State. Family source is about 15%, hired source is 27% while both family and hired farm structure of 58% was found to be rampant among women farmers than the family farm source and hired farm source.

**Table 4.1.15: Type of farm enterprise and farm production Crosstabulation**

Count	Type of farm enterprise				
		Crop farming	Livestock	Fish farming	Total
	Type of farm production	Cereals	5	0	0
	Vegetables	8	0	0	8
	Roots and tubers	6	0	0	6
	Legumes	52	0	0	52
	Oil	2	0	0	2
	Sheep and goats	0	13	0	13
	Cattle	0	6	0	6
	Catfish	0	0	8	8
Total		73	19	8	100

Responses regarding farm output from these operations revealed that 73% of women farmers harvest at most 1 ton of farm produce in crop production while 19% usually have more than 1 ton of farm produce in livestock production and 6% in fish farming. The farm size of less than 1

hectare and 1 – 2 hectares result to the harvest of at most 1 ton of farm produce and farm size of 3 – 4 hectares and above do yield above one ton of farm produce. However, among the 73% that harvest greater than 1 ton of farm produce, 52% holds 1 – 2 hectares of farm land while 8% and 6% hold 3 – 4 hectares and 5% and 2% holds 5 – 6 hectares of farm land respectively.

## 4.2 ANALYSIS OF OBJECTIVES

**Objective 2:** Identify productive factors influencing women participation in agricultural production.

**Table 4.2.1: Source of capital**

	Frequency	Percent	Cumulative Percent
Personal	67	67.0	67.0
Loan	32	32.0	99.0
Grant/Empowerment	1	1.0	100.0
Total	100	100.0	

Information from the data analysis revealed that 67% of women source capital from personal Savings 32% of women obtain loan while only 1% source for capital through grant/empowerment. Major reasons that motivated high women participation in agricultural production (farming oriented) in Ekiti State include the following; almost all the sampled women reveled that farming is an ancestral inheritance and the only effective source of livelihood in their villages. Farming is described by various participants conveniently undertake as necessitated by high rate of unemployment and in the country in which Ekiti is not an exclusive entity and as one of the effective way of fighting poverty through ensuring adequate in-take of calorie. Hence, access to capital in very important at all levels of farming production.

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**Table 4:2:2 Labour system used**

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		Frequency	Percent	Cumulative Percent
Valid	Manual	66	66.0	66.0
	Mechanical	8	8.0	74.0
	Mixed	26	26.0	100.0
	Total	100	100.0	

---

Investigating labour system employed by these women in their various farming operations, include manual farming system/technique with 66%, mechanical farming System/technique with 8% and mixed farming system/technique with 26%. In this regard, the use of more or exclusive human power/energy is termed manual system while application of machineries is referred to as mechanical system and the combination of these two irrespective of the proportion is known as mixed farming system.

**Table 4:2:3 Access to land for agric\* Type of farm enterprise crosstabulation**

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Count		Type of farm enterprise			Total
		Crop farming	Livestock	Fish farming	
Access to land for agric	Yes	64	16	7	87
	No	9	3	1	13
Total		73	19	8	100

Ability to have access to land is another productive factor which influences agricultural productivity among women in Ekiti state, majority (87%) of the women in sampled areas have



access to land for crop farming (64%) but with limited farm size, only (13%) of the women do not have access to land for agricultural production in (table 4:2:3).

**Table 4:2:4 Education qualification \* Type of farm enterprise crosstabulation**

Count	Type of farm enterprise			Total
	Crop farming	Livestock	Fish farming	
Primary	34	9	3	46
Secondary	10	3	4	17
NCE	2	1	1	4
OND	3	1	0	4
HND	9	4	0	13
University degree	4	1	0	5
No formal education	11	0	0	11
Total	73	19	8	100

Table 4:2:4 also reflect that education as an influential productive factors. Education attained influenced farming production women farmers are into. Hence, the literate women were agricultural production especially crop farming provides ready employment. Although, the study indicated that education is not strongly necessary for agriculture production.

**Table 4.2.5: Type of farm enterprise**

	Frequency	percentage	valid percent	cumulative percentage
Crop farming	73	73.0	73.0	73.0
Livestock	19	19.0	19.0	92.0
Fish farming	8	8.0	8.0	100.0
Total	100	100.0	100.0	

The type of agricultural enterprise is another influencing factor which determines the level of participation in agricultural production by women. The study deduce that ,crop farming is most engaged as (73%) of women were into agricultural production enterprise. This followed by livestock farming (19%) then fish farming (8%) (Table 4:2:5).

**Objective 3: To determine the cost of productive inputs and revenues of respondents**

Among the notable productive inputs for agricultural productivity among women in study areas, the descriptive analysis of variance used in determining cost of inputs were described in table 4:3:1. These inputs quality seeds and fingerlings price which were most outstanding. Other inputs used include fertilizer quantity and transportation of inputs to the farm.

Table 4:3:1

**Descriptive statistics**

	N	Minimum	Maximum	Mean	std. Deviation
Seed quantity used	100	1.00	140.00	29.5100	39.65036
Fertilizer quantity used	69	1.00	35.00	2.1159	5.78674
Agro-chemical quantity used	17	.00	15.00	2.2491	4.85753
Pre-planting quantity used	34	.00	2000.00	80.4118	341.32009
Transportation quantity used	73	1.00	10000.00	1.8151 E2	1170.86610
Miscellaneous quantity used	26	.00	1.00	.9615	.19612
Fingerlins unit price	100	1.00	25000.00	6.1600E2	3640.97492

	Frequency	Percentage	Valid Percent	Cumulative percent
(#) 0 - 10000	41	41	41.0	41.0
10001- 25000	16	15.8	16.0	57.0
25001 - 50000	22	21.8	22.0	79.0
50001 – 100000	14	13.9	14.0	93.0
100001 – 500000	7	6.9	7.0	100.0
Total	100	99.5	100.0	
System		1.0		

Table 4:3:2 revealed the profit margin realized from agricultural operations which ranges from #0 to #500000 naira. The study indicated forty-one (41%) of the respondent had between #0 and #10000. This was followed by respondents who received between #25,000 and #50,000 profit, (22%) of the respondent. The productivity with profit ranges between #100,000 and #500,000 were seven, this correspond to 7% of the respondents. Profit between #25,000 and #50,000 had a frequency of 22 and accumulated for 22% of the respondents. The study showed that 57% of the respondent (women farmers) had between 0 and #25,000. This indicate that more than half of the women farmers received less than #25,000 /annum, while 21% of the women farmers had high profit between #50,000 and #100,000.

Profit and loss grouping	Type of farm enterprise				Total
	#	Crop farming	livestock	Fish farming	
0 – 10,000		20	8	5	41
10001 – 25000		12	2	2	16
25001 – 50000		17	5	0	22
50001 – 100000		9	4	1	14
100001 – 500000		7	0	0	7
Total		73	19	8	100

From the above sample in profit and loss grouping, it reviews that women farmer realize profit ranges from #0 to #500000. 20% profit was realize between #0 – #10,000 in crop farming, 22% profit realize between #25001 - #50000 , #10001 - #25000 and #50001 – #100,000 had 16% and 14% profit respectively ,while 7% was found to had the least profit of #100,001 – #500,000. However 73% of women farmers that engaged in crop farming has the highest percentage among the notable productive inputs for agricultural productivity followed by 19% of women farmers that engage in livestock production, women farmers were less invested in fish farming which resulted to low profit of 8%. The investigation shows that the women farmers who engaged in crop farming received the highest percentage than others.

Further test was carried out using t-test statistics to test whether there is a significant difference in the factors influencing women’s participation in agricultural production or not. Hence, the study develop null and alternative hypothesis to test the linear relationship between factors influencing women’s participation in agricultural production and the factors that are not.

$H_0 = 05$ : There is no significance difference in factors influencing women’s participation in agricultural production.

$H_1 \neq 0$ : There is significance difference in factors influencing women’s participation in agricultural production.

At the .05 level of significance, determine whether factors influences women participation in agricultural production. Hence the use of the t- test.

$$t = \frac{r\sqrt{n-k}}{\sqrt{1-r^2}} \text{ where } k = \text{number of parameter which is } \beta_0 \beta_1 = 2$$

n = numbers of pairs of values (10)

r = correlation value

$$t_{cal} = 0.923 \sqrt{10-2} / \sqrt{1-0.923^2}$$

$$t_{tab} = 6.7845$$

$$t_{tab} = t_{\alpha/2 (n-k)} = t_{0.0258} = 2.312$$

Hence,  $t_{cal}(6.7845) > t_{tab} = 2.312$

Therefore, there is a significance difference the factors influencing women's participation in agricultural production.

The above analysis indicated that there is income differentials between women who participated in agricultural production and those who did not.

**OBJECTIVE 4: Factors influence women's participation in agricultural production.**

Multiple regression analysis was done for two dependent variable, profit and loss grouping among women farmers in three (3) local government areas in Ekiti State and income.

Table 4:4:1 Regression coefficient and level of significance of independent variable influencing profit and loss grouping.

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	3.560	1.500		2.373	.020
	Age	.019	.027	.110	.684	.496
	Marital Status	-.442	.369	-.198	-1.198	.234
	Position among the wives	.189	.197	.102	.962	.339
	Children number	-.013	.107	-.016	-.120	.905
	Educational qualification	.090	.083	.124	1.086	.281
	Access to and for agric	.338	.473	.073	.716	.476
	Farm size	-.391	.228	-.213	-1.714	.090
	Types of farm enterprise	-.223	.280	-.089	-.796	.428
	Sources of labour 1	-.116	.139	-.087	-.830	.409
	Number of labour used	.506	.183	.281	2.759	.007
	Farm structure	.043	.186	.026	.229	.819
	Farm Isize	.007	.051	.014	.134	.894
	Labour system used	.119	.237	.065	.504	.616
	Source of capital	.185	.365	.058	.509	.612
	Loan interest	.006	.019	.033	.303	.763
	Capital access	-.694	.338	-.244	-2.053	.043
	Type of organization that give aids	.182	.086	.245	2.124	.037

a. Dependent Variable: Profit and Loss grouping

Relationship between Socio-economic Characteristics of Respondents and agricultural Production The results of regression analysis between agricultural production and socio-economic characteristics of the respondents are presented in Table 4:4:1 reveal that twelve out of the seventeen variables have positive relationship with profit and loss grouping /agricultural production. These variables are labour size used, capital access and type of organization that gives aid are important determinate of profit, access to capital is negative, while age and type of organization are positively related to profit. The implication of this result is that as the women farmers increase in age, their level of profit increases proportionally. Also if there is unrestricted access to capital, productivity will improve. On the other hand, if there is restricted to capital profitability will reduce. This suggests that as the quantity of these variables increase agricultural production also increases. Statistical analysis revealed that only 4 models are significant ,capital access  $r = -.043$  has a strong relationship followed by Type of organization that aids  $r = .037$ . Other variables are constant  $r = .020$  and Number of labour system used  $r = .007$ . Age  $r = 0.496$ , Marital status  $r = .234$ , source of capital  $0.185$ , type of organization that give aids  $0.182$ , educational qualification  $0.090$ , farm structure  $0.043$ , age  $0.019$  , farm1 size  $0.007$  and loan interest  $0.006$  have positive but weak relationship. While marital status, children number, farm access, type of farm enterprise, source of labour 1 and capital access have negative relationships with agricultural production.

**Table 4:4:2: Multiple regression estimates for Profit and Loss Account as a result of processing**

Source: Field Survey, 2018

Dependent variable = Profit and loss account.

Marginal effect is at the mean value, \* 10% significant level. \*\*5% significant level. \*\*\*1% significant level. R-squared  $R^2=0.74$  Durbin Watson DW: 1.96

**ANOVA TABLE**

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	78.169	17	4.598	2.190	.011 <sup>a</sup>
Residual	163.789	78	2.100		
Total	241.958	95			

- a. Predictors:(Constant), Type of organisation that give aids, Access to land for agriculture, Farm size, Sources of labour 1, Number of labour used, Capital access, Loan interest, Position among the wives, Farm structure, Educational qualification, Type of farm enterprise, Source of capital, Age, Farm size, Labour system used, Children number, Marital Status
- b. Dependent Variable: Profit and Loss grouping



The multiple regression model was conducted to investigate factors that influence women's participation in agricultural production and income estimated via ordinary least square method estimation technique. Table and presented the estimated results of the regression model. Overall the multiple regression model successfully predicts the possibility of women's participation in agricultural production and income (74%) suggests that 74 per cent of the explanatory variables explained the dependent variables (i.e women's participation in agricultural production and income engaging respectively). Based on the estimated results, 3 variables are found to have significant influence on income. These are number of labour used, capital access and types of organisation that gives aids .The significant positive signs on years of education and farming experience variables can be explained from the perspective of capital requirement. Fairly literate farmers tend to have more investment opportunities, influencing the decision to process farm outputs thus leading to stronger potential need for worthwhile adoption of credible and effective farming operations. In addition, this category of women farmers may also be more confident in increasing income as they cultivate more lands for agricultural purposes and hence process farm outputs beyond.

This relationship is expected because women farmers with formal education (for example, primary and secondary school) are likely to have more exposure to the external environment including risks and possess more skills. They therefore might require more income earning potentials for improving farm sizes and/or production, compared to uneducated farmers who did not process farm outputs. In contrast, a significant but negative relationship is found between variable family size and farmers' accessibility to land for agricultural purposes, suggesting that the larger size households are less likely to

engage in processing farm outputs further thus, prefer to sell farm outputs at the farm gates. This is possibly because larger size households tend to provide more hands for labour activities on such various land for agricultural purposes.

The estimated coefficient of variables agricultural practices and sources of fund are all negative and significantly different from zero at the one per cent level for regression of profit and loss model. Holding other factors constant, form of agricultural practices adopted have a significantly lower probability to improve income compared to those that adopted effective land management practices and good management programme in their farming operations. In addition, sources of fund could decrease the likelihood of engaging in the decision to process farm outputs further, this is because most credit were sourced from friends and family, fund from these sources were inadequate and untimely thus making used of credit not effective. Furthermore, the availability of other credit sources (such as informal credit) also tends to reduce the probability of engaging in effective uses of land for agricultural purposes.

Finally, the estimated coefficient of cost of farming inputs is positive, implying that the women farmer that uses relevant and timely farming operation and also adopting good management programme in farming are likely to further farm outputs and hence generate more income. One possible explanation for this unexpected relationship is that households with higher family size and dependency ratios have fewer family members taking up income generating activities and thus are more inclined not to process farm outputs further and prefer to sell farm outputs at the farm gate. The marginal effects are also calculated for the regressors of the multiple regression model to provide a direct economic interpretation on these variables on farm outputs and income.

## **CHAPTER FIVE**

### **SUMMARY, CONCLUSION AND RECOMMENDATIONS**

#### **5.1 SUMMARY**

Past studies have indicated that Nigeria's economy is predominantly agricultural, which implies that large portion of the populace derive their livelihood from crop farming, livestock production, fishing and forestry. This is shown in the economy of Ekiti State of Nigeria which is predominantly agriculture. This implies that a large number of the populace derived their livelihoods and from agriculture and related activities. It revealed that the majority of women farmers (46%) who participated in agricultural production are within the age of (30 -39) years, followed by those within the ages of (40 – 49) years having 28%, while ages of (50 – 59) years having 16% and ages of (20 -29) years and (60 – 69) years are 9% and 1% respectively. However, no woman farmer falls within the ages of 70 years and above, hence no farm holding by this age bracket. The statistics revealed that farming activities in the study area is mostly dominated by young adults; innovation and new technology can easily be accepted and used. It revealed that primary education had the highest (46%) educational qualification of the respondents. Also, 17% had completed secondary education. Those women farmer with NCE and OND has the same percentage of 4% respectively. Also women farmers with HND have 13%. University education among respondent has 5% while women farmer without any formal education has 11%. This implies that women farmer with primary educational qualification has the highest percentage of 46% and OND holder has the least percentage of 4% each. Specifically, primary certificate holders are more in 3 – 4 hectares, 5 – 6 hectares (6% each); 1 – 2 hectares (4%); and less than 1 hectare and 7 and more hectares (2% each). Secondary certificate holders pre-dominate in 1 – 2 hectares (11.2%) followed by 3 – 4 hectares (4%); then

less than 1 hectare (3.0%) while 5 – 6 hectares and 7 and more hectares constitute 0.8% respectively. It indicated that, crop farming predominates with 77% followed by livestock production with about 17% while fish farming are 6%. Neither of the women who sometimes engage in farming activities nor those that have just crop production occupied 3 – 4 hectares, 5 – 6 hectares, and 7 and more hectares of farm land; hence these two forms of farming enterprise are on less than 1 hectare and 1 – 2 hectares respectively. Responses regarding farm output from these operations revealed that 73% of women farmers harvest at most 1 ton of farm produce in crop production while 19% usually have more than 1ton of farm produce in livestock production and 6% in fish farming. The farm size of less than 1 hectare and 1 – 2 hectares result to the harvest of at most 1 ton of farm produce and farm size of 3 – 4 hectares and above do yield above one ton of farm produce. However, among the 73% that harvest greater than 1 ton of farm produce, 52% holds 1 – 2 hectares of farm land while 8% and 6% hold 3 – 4 hectares and 5% and 2% holds 5 – 6 hectares of farm land respectively. Information from the data analysis revealed that 67% of women source capital from personal Savings 32% of women obtain loan while only 1% source for capital through grant/empowerment. Major reasons that motivated high women participation in agricultural production (farming oriented) in Ekiti State include the following; almost all the sampled women reveled that farming is an ancestral inheritance and the only effective source of livelihood in their villages. Farming is described by various participants conveniently undertake as necessitated by high rate of unemployment and in the country in which Ekiti is not an exclusive entity and as one of the effective way of fighting poverty through ensuring adequate in-take of calorie. Hence, access to capital in very important at all levels of farming production. The marital status is one of the factors that influences the agricultural production, the married had the highest frequency of 61%. The married had the highest

proportion because they have many dependent like their children, aged parent etc. next of the married status are the singles (25%), the widowed (9%) then the divorced (5%). The type of agricultural enterprise is another influencing factor which determines the level of participation in agricultural production by women. The study deduce that, crop farming is most engaged as (73%) of women were into agricultural production enterprise. This followed by livestock farming (19%) then fish farming (8%). It reviews that women farmer realize profit ranges from #0 to #500000. 20% profit was realize between #0 – #10,000 in crop farming, 22% profit realize between #25001 - #50000 , #10001 - #25000 and #50001 – #100,000 had 16% and 14% profit respectively ,while 7% was found to had the least profit of #100,001 – #500,000. However 73% of women farmers that engaged in crop farming have the highest percentage among the notable productive inputs for agricultural productivity followed by 19% of women farmers that engage in livestock production, women farmers were less invested in fish farming which resulted to low profit of 8%. The investigation shows that the women farmers who engaged in crop farming received the highest percentage than others.

## 5.2 CONCLUSION

Even though rural women contribute significantly to the socio-economic development of their countries through agriculture they continue to face major socio-cultural challenges, which differ from one community to another. Kabane (2010:3) asserts that tradition and cultural norms are the major challenges that limit the access of women to agricultural input, thereby leading to the invisibility of women in agricultural development. It was observed that women have contributed enormously to agriculture in the study area. However, much of their work continues to be unrecognized. The historical exclusion of women from access to land ownership, credit and their low level of education set the stage for women's limited access to farm land at present. Despite widespread participation of women on farms, their farm work often remains invisible. This study was, therefore, prompted by the need to explore various factors that seemed to inhibit women's participation in agricultural development in the study area.

Several barriers affecting women's participation in agricultural activities have been identified in the discussion above. Even though there are laws and policies which enable women to freely access credit facilities and benefits in Nigeria, in most rural settings, these women are not making use of such resource. As the literature suggests women are inhibited from practicing activities they desire and their rights are denied them by the social norms and customs of their societies. It has been noted that systemic gender based biases are one of the major issues limiting women in engaging and accessing agriculture related resources. From the analysis, the study revealed that capital access constituted one of the greatest problems being faced by women farmer. Women face certain difficulties in accessing capital: As few women were able to access loan. This study indicated high women involvement in agriculture as a supportive mechanism through which poverty, unemployment, and hunger can be effectively tackled.

### **5.3 RECOMMENDATION**

The following recommendations were being made in view of the aforementioned findings of the study:

1. Government should encourage and assist women farmers by giving them special attention in terms of access to needed farm inputs and incentives. New farming implement should be made affordable and available to the women.
2. Women adult literacy education programme is required to help women farmers acquire basic skills and abilities to seek and receive agricultural information through extension agents. This will make them to participate more in reading extension leaflets, bulletin, newsletter etc.
3. Credit facilities should be provided by the government either through various women group and co-operate so as to enable them participate fully in agricultural activities.
4. More facilities should be provided to poor rural women for land, agricultural and livestock extension services.
5. Priority must be given to women in accessing credit on soft terms from banks and other financial institutions for setting up their business, for buying properties, and for house building.
6. Measures should be taken to enhance women's literacy rates. A separate education policy for women may serve the purpose.

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## APPENDIX I

### QUESTIONNAIRE FOR WOMEN FARMERS

Dear Respondents,

I am a under-Graduate student of the above named department and currently undertaking a project titled: **Productive Factors Influencing Women's Participation in Agricultural Production: Evidence from Small-Scale Farmers in Ekiti State Agricultural Development Projects (ADPs)**: in partial fulfillment for the award of bachelor Degree in Agriculture.

I will be most grateful if you could sincerely provide responses (answers) to the following questions.

I assure you that all your responses shall be treated as high confidentiality and the results wherefrom shall be used exclusively for academic purposes only.

Anticipating your co-operation and responses.

Yours sincerely,  
Fajuyi Temitayo Odunayo  
(AEE/13/0950).

#### BIO DATA

1. What is your age range?  
a. 18–27 Years  b. 28–37 Years  c. 38–47 Years  d. 48–57 Years  e. 58–67 Years
2. Marital status a. Single  b. Married  c. Widowed  d. Divorced
3. What is the nature of your marital home? a. Monogamous  b. Polygamous  c. Others (specify)
4. What is your position among wives in the house? a. First  b. Second  c. Third  d. Fourth
5. How many children do you have? a. 1–3  b. 4–6  c. 7–9  d. 10–12  e. 13 and above

6. What is your educational qualification? a. Primary  b. Secondary  c. NCE  d. OND  e. HND  f. University Degree
7. What is your religion? a. Islam  b. Christianity  c. Traditional Religion

### **AGRICULTURAL PRODUCTION WOMEN PARTICIPATION IN**

1. How frequent do you engage in farming activities?
  - a. All year round
  - b. Sometimes
  - c. Just vegetable garden
2. What is the size of your farm land?
  - a. Less than 1 hectare
  - b. 1–2 hectares
  - c. 3–4 hectares
  - d. 5–6 hectares
  - e. More than 7 hectares
3. Do you normally hire labour to work in your farm? a. Yes  b. No
4. What is the structure of your farm? a. Personal  b. Group
5. Do you have more than one farm land? a. Yes  b. No
6. What farming system do you normally use? a. Labour intensive  b. Capital intensive  c. Mixed
7. Does your farm output exceed one tone every year? a. Yes  b. No

### **PROBLEMS OF WOMEN IN AGRICULTURE**

1. Do you have easy access to land for farming? a. Yes  b. No
2. If no, what is the problem? .....
3. How do you acquire land for your farming activities?
  - a. Family land
  - b. Hire
  - c. Lease
  - d. Government allocation
  - e. Others (specify) .....
4. Do you have enough capital for your farming activities? a. Yes  b. No
5. Do you have access to credit facilities in your area? a. Yes  b. No
6. If yes, what is the source? a. Family/Friends  b. Government  c. Banks  d. Others (specify) -----
7. What source of Machines do you use in your farm?
  - a. Personal
  - b. Government
  - c. Cooperative
  - d. Commercial
8. Do you have access to fertilizer in your area? a. Yes  b. No
9. Do you have access to chemicals in your area? a. Yes  b. No

### **EADP AND WOMEN IN EKITI STATE**

1. Does EADP seek for the opinion of Women farmers before making provision? a. Yes  b. No
2. How frequent does EADP staffs visit your locality?
  - a. Once a year
  - b. Twice a year
  - c. Thrice a year
  - d. Always
3. Did EADP ever organize any special programmed for Women? a. Yes  b. No
4. If yes, please name the programme .....

5. Which of the following does EADP offer to Women?
  - a. Credit facilities
  - b. Farm implements
  - c. Fertilizer/Chemicals
  - d. Extension services
  - e. Improved seedlings
  - f. All of the above
6. Does EADP assist in the marketing of your farm produce? a. Yes  b. No
7. Has the presence of EADP improved your participation in agricultural production? a. Yes  b. No
8. If yes, please explain  
 .....

**WOMEN PRODUCTIVITY AND SUSTAINABLE RURAL DEVELOPMENT**

1. Are you happy working in agricultural sector? a. Yes  b. No
2. How would you describe the income you generated from farm produce?
  - a. Very small
  - b. Moderate
  - c. High
3. Would increase in your farm output increase your income? a. Yes  b. No
4. If your income improves from agricultural activities, would you prefer working in another sector of the economy? a. Yes  b. No
5. Would you prefer any of your Children to engage in agriculture if the conditions improve? a. Yes  b. No
6. Would you want EADP to develop more Women-targeted programmes in your locality?
  - a. Yes
  - b. No
7. How would you rate EADP performance in your area?
  - a. Poor
  - b. Good
  - c. Best
  - d. Undecided

**APPENDIX II**

**In – depth Interview Guide for the Staff of ADP**

- 1 How does EADP organizes programmes for the farmers in the state?  
 .....
- 2 What are the criteria for making Women benefit from EADP programmes? .....
- 3 How are the Women’s responses?.....
- 4 What role is EADP playing concerning Women mainstreaming into agriculture in Ekiti State? .....
- 5 What are your recommendations on how Women can best be served by EADP in Ekiti State? .....
- 6 Does EADP organizes exclusive Women programmes in Ekiti State? .....
- 7 How often does EADP organizes programmes for Women Ekiti State? .....
- 8 How does EADP respond to special circumstances (such as drought, disease outbreak, e.t.c) affecting farming activities in Ekiti State? .....

**APPENDIX III**

**FOCUS GROUP DISCUSSION GUIDE ON WOMEN FARMERS**