THE ROLE OF WOMEN IN AGRICULTURAL PRODUCTION IN OVIA SOUTHWEST LOCAL GOVERNMENT AREA OF EDO STATE, NIGERIA

BY

Eghosa Lawrence OSAZE
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A DISSERTATION SUBMITTED TO THE SCHOOL OF POSTGRADUATE STUDIES AHMADU BELLO UNIVERSITY, ZARIA, IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE AWARD OF MASTER OF SCIENCE DEGREE IN RURAL DEVELOPMENT

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DECLARATION

I declared that the work in this dissertation entitled ‘’The Role of Women in Agricultural ProductioninOvia South-West Local Government Area of Edo State, Nigeria’’ has been carried out by me in the department of Geography. The information derived from literature has been duly acknowledged in the text and a list of references provided. No part of this dissertation has been previously presented for another degree or diploma at this or any other institution.

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Signature Date

EghosaLawrence, OSAZE
(MSc/SCIE/01290/2010-2011)

CERTIFICATION

This dissertation titled ‘’The Role of Women in Agricultural Production in Ovia South-West Local Government Area of Edo State, Nigeria’’ by Eghosa Lawrence, OSAZE meets the regulations governing the award of the degree of Masters of Science of Ahmadu Bello University, and is approved for its contribution to knowledge and literary presentation

Dr. J.O Adefila
Chairman, Supervisory Committee ---------- ----------
Signature Date

Dr. R. O Yusuf
Member Supervisory Committee ---------- ----------
Signature Date

Dr. I. J Musa
Head of Department ---------- ----------
Signature Date

Prof. K. Bala
Dean, School of postgraduate studies ---------- ----------
Signature Date

DEDICATION

This work is dedicated to Almighty God and to my lovely wife and children for their unflinching support, encouragement and understanding throughout the period of this study.

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I owe a lot of my gratitude to my supervisors, Dr. J.O Adefila and Dr. R.O Yusuf for their patience, encouragement, guidance and willingness to supervise this work. Their comments and corrections in the course of this study were constructive and rewarding. I pray that God almighty will guide them in their entire endeavour.

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ABSTRACT

The study focused on the role of women in agricultural production in Ovia South West Local Government Area of Edo State. Systematic sampling and purposive sampling techniques were used to sample 382 respondents in the study area. Data were collected using questionnaire and Focus Group Discussion (FGD) as major research instruments. Descriptive statistical technique was employed to summarize the data and multiple regression was used to measure the degree of relationship between the socio-economic characteristics of women in agriculture and its influence on their roles in agricultural production. The study found that women in Ovia South-West LGA contribute their quota to economic development, household income and food security as revealed by 100% of the respondents. Also, it was revealed by the respondents that lack of awareness on new technologies (47.9%), land holding (67%) and financial constraints (87%) militate against the positive contribution of women farmers to nation building accordingly. Variables such as age (0.005), income (0.000), types of agricultural activities (0.000) and family size (0.002) were shown to positively influence the role women play in agricultural production as confirmed by the regression analysis which were significant at 5% level of significance. However, the Chi-square technique revealed that in harvesting/processing p-values of marital status (0.043), years of farming experience (0.002) andincome (0.044) are identified. Also, in marketing/distribution, p-value of age (.000), Educational attainment (.016), years of agricultural experience (.000) and income (.000)are revealed. In weeding p-values of age (.000), marital status (.012), educational attainment (.000), years of agricultural experience (.000) and income (.000) are also revealed. And lastly, in planting the p-values of marital status (.057), educational attainment (.002), years of agricultural experience (.000) and income (.000) were significant at 0.05 alpha level of significant. The study recommends that empowerment of rural women farmers should be prioritized through provision of special agricultural credits and subsidization of farm inputs to optimize their invaluable role in food security, and women farmers should be provided access to financial assistance for their farming activities through formation of cooperative society.The study concludes that women play important roles in ensuring food security. They act as shock absorbers, grow crops, keep animals and spend time to keep the family economic boat afloat. They are into seed sowing, weeding, harvesting, processing, storage, marketing of food produce for the health of the family and the community at large.

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CHAPTER ONE

BACKGROUND TO THE STUDY

1.1 Introduction

Agriculture contributes immensely to the Nigerian economy in various ways such as the provision of food for the increasing population, supply of raw materials and a major source of employment, generation of foreign exchange earnings, and provision of a market for the products from the industrial sector (Eze, Ugbochukwu, Eze, Awulonu and Okon, 2010). It has always played an important role in the socio-economic development of developing countries such as Nigeria. Onwualu (2012) had remarked that agriculture remains the dominant sector in the rural areas of Nigeria where over 70% of Nigerians reside. This is true to rural communities in Nigeria.

The study focuses on the role women play in farming activities in Ovia South-West Local Government Area in Edo State. Ovia South-West L.G.A of Edo State is located west of River Niger in Mid-Western Nigeria. The study area is an agrarian society which is highly dominated by a large number of women who are actively involved in agricultural activities (specifically farming activities). Women in Ovia south west are enthusiastic about their farming activities. They are actively playing the roles of planting, weeding, harvesting, transportation and marketing of their farm produce. As a rural community, women in Ovia South-West engage in the planting of okro, pepper, tomatoes, yam, cassava, cocoyam, and maize. They also engage in the planting of rubber and palm trees.

Onwualu (2012:4) stated that Nigeria was one of the world's largest agricultural producers and it is on record that at independence, agriculture contributed up to 60% of the Gross Domestic Product (GDP) in this country. It generated enormous revenue for the

development of infrastructural facilities in the defunct Northern, Eastern, and Southern, Western and Mid-Western regions of this country in the early 1960s. Oluwasola (2001) reported that women constitute 49.7 percent of the national population, 60% of world's female population with 70% of them in the developing countries, constituting two-fifth of active population in agriculture and majority of them reside in the rural areas where the means of livelihood depends on agro-forestry, soil conservation and exploiting the resources from nature. The activities of rural women in agriculture transcend beyond mere supporting food production but also promoting sustainability of the ecosystems. Historically, women are playing important roles in agriculture with a wide range of activities ranging from production, harvesting, transport, marketing to processing of the products. National Centre for Economic Management and Administration, NCEMA (1991) had highlighted the roles of women in agriculture to include among others: land clearing, crop planting, fertilizer application, weeding/pruning, spraying crops, harvesting, processing, storage, transporting farm produce and marketing of produce but the extent of the involvement of women in each of these agricultural activities varies with different cultures, economic systems and the socio-economic milieu.

Women have valuable experience and roles in agriculture which according to Pesticide Action Network Asia and Pacific, (PANAP)(2012) the custodian of seed, conservers of biodiversity and being traditional veterinarians. The sustainable production of food is the first pillar of food security as millions of women work as farmers, farm workers and natural resource managers (Onyemobi, 2000). In doing so, they contribute to national agricultural development, maintenance of environment and family food security (Brown, Feidstein, Haadad, Peria and Quisumbing, 2001).

Women produce over 60 percent of the agricultural food in the country (Ogunbameru and Pandy, 1992; Buckland and Haleegoah, 1996). This is evident in some rural societies mostly in the middle-belt and southern parts of Nigeria. Ironkwe and Ekwe (1998) remarked that more than 60% of agricultural activities of women went beyond crop production but also extended to other agricultural activities like fisheries, poultry as well as rearing of sheep and goats. Other works by Mijindadi (1993); Benjamin (1997) and Yahaya (2002) also discussed these multifaceted roles of women in agriculture. Also Buvinie and Mehra (1990) and Oluwasola (2001) are among others concerned with constraints faced by women farmers.

For women in agriculture, one cannot overlook their role in farm decision-making which constitutes an important aspect in agricultural development. Fabiyi, Danladi, Akande and Mahmood (2007) remarked that decisions have to be made when persons having limited resources have alternative causes of action and therefore must make some choices. Farmers make decisions on a number of pre-harvest and post-harvest activities such as what to produce, input to be used, methods of production - all affects production, processing, distribution, prices and costs of production. Despite the significant roles played by women in agricultural production, process and marketing in Nigeria, they have more or less been relegated to playing a secondary role in farm decision-making, (Amaechina, 2002). It was believed that agricultural development is in the decline because agricultural policies have a bias towards inappropriate technology and fail to recognize the role of women as fundamental in agriculture (Adawo, 2001). Moreover, in a country like Nigeria where agricultural extension services are largely dominated by men, women are by-passed by modern ideas of improved technology that could raise their productivity, increase their income generating capacity, and improve their general welfare (Oluwasola, 2001).

Oluwasola (2001) remarked that the efforts of rural women should no longer be ignored even at the local level and that the roles of women in agricultural development often remain concealed due to some social barriers, gender barriers and lopsided government programs that often fail to focus on women in agriculture.

Despite the high involvement of Nigerian women in agricultural production, there is stillpaucity of data in some localities on the roles these women farmers play (Arokoyo and Chikwendu, 1994). Consequently they have been in most time, excluded from salient agricultural development programs. This paucity of reliable data has been attributed to factors such as neglect of women's work in the non-wage sector which agriculture falls into and distorted statistics on women's work by development planners and researchers. Men's work is usually reflected in statistics of agricultural labour because they constitute the cash sector. Even where some data existed on women's work, these were often neglected by development planners (Arokoyo and Chikwendu, 1994). It is worth noting that Nigeria's economic recovery through agricultural self-sufficiency remains elusive as long as roles performed by Nigerian women in agricultural development particularly at local levels cannot be adequately conceptualized into meaningful policy framework. It is against this background that this study assesses the role of women in agricultural production in Ovia South-West Local Government Area of Edo State, Nigeria.

1.2 Statement of the Research Problem

Regardless of the level of development achieved by different economies, (Daman, 2003) women play a pivotal role in agriculture and in rural development in many countries of the world. The role of women in many societies however, are bound by age-old traditions and beliefs, patriarchal practices motivated by culture, interpretations of religious sanctions

which hinder women's freedom to play key roles and assert their right to social and economic development. It was observed that women's contribution to agriculture and other sectors in the economy remain concealed and unaccounted for in measuring economic development. Consequently, they are generally neglected in plans and programs. They were, in fact discriminated against by stereotypes which restricted them to a reproductive role, and denied them access to resources which could eventually enhance their social and economic contribution to the society (Daman, 2003).

Sibanda (2011) had remarked that it was unfortunate that it was only those women who enjoyed a space and platform in academics, science, economics and politics that were celebrated and yet in Africa there was a deserving group of extraordinary women who still have no voice is the African women farmers. Sibanda further asserted that women farmers are the pillars of African agriculture. FAO (2010) observed that over two-third of all women in Africa were employed in the agricultural sector and produce nearly 90% of food on the continent, responsible for growing, selling, buying and preparing food for their families. Yet, even as the pillar of food security, they are still marginalized in business relations and have minimal control over access to resources such as land, inputs, such as improved seeds, fertilizers, credit facilities and new techniques of agricultural productions. A combination of logical, cultural and economic factors, coupled with a lack of gender statistics in the agricultural sector, mean that agricultural programs are rarely designed with women's needs in mind. As a result, African women farmers have no voice in the development of agricultural policies designed to improve their productivity.

In spite of the high involvement of Nigerian women in agricultural production, there is still, a paucity of data on critical activities of these women farmers at least at local levels.

Consequently they have been excluded from national development programs. This paucity of reliable data has been attributed to certain factors which include: neglect of women's work in the non-wage sector which agriculture falls into and distorted statistics on women's work by development planners and researchers. Men's work has been usually reflected in statistics of agricultural labour because they constitute the cash sector. Even where some data existed on women's work, these were often neglected by development planners (Arokoyo and Chikwendu,1994).

It is noteworthy that Nigeria's economic recovery through agricultural self-sufficiency remains elusive as long as roles performed by Nigerian women in agricultural development particularly at local levels cannot be adequately conceptualized into meaningful policy framework. It is against this background that a well- planned and coordinated researchprogramme such as this was conceived to provide a strong base of development programmes that will adequately receive rural sector support for increased agricultural production.

However, considering the studies (Maigida, 2000; Odurukwe, 2006; Sabo, 2006; Eze, *et al*., 2010; and Tologbonse, *et al.,* 2013) assessment of roles of women in agricultural production in Ovia area of Edo State is still a gap. Agriculture remains the mainstay of Edo economy. Edo women engage in farming, producing food crop such as plantain, maize, vegetables, cassava, and cocoyam. The dearth of data in study area necessitates the scientific research for this study. Indeed, it represents the gap in knowledge that the study intends to fill.

The study addressed the following research questions:

i. What are the socio-economic characteristics of the women that engage in

agricultural Production in OviaSouth-West Local Government Area?

ii. What are the specific roles of women in agricultural production in the study area?

iii. Are these roles being performed in the study area?

iv. Are there relationships between women's socio-economic status and their performance in agricultural production?

v. What are the constraints to women in agricultural activities in OviaSouth-West Local Government Area?

vi. What are the factors affecting women farmers in the study areas?

vii. What are the strategies employed to overcome these constraints?

1.3 Null Hypothesis

In the light of the foregoing research questions, the following hypothesis was posed:-

Ho: There is no significant difference between socioeconomic characteristics of women and their roles in agricultural production.

H_1: There is significant difference between socioeconomic characteristics of women and their roles in agricultural production.

1.4 Aim and Objectives

The aim of the study is to assess the roles of women in agricultural production in Ovia South-West Local Government Area of Edo State. However, the specific objectives are to:-

i. Characterize women farmers according to their socio-economic backgrounds.

ii. Examine the factors that influence/determine women farmers participation in agricultural production

iii. examine the specific roles women play in agricultural production in Ovia Southwest Local Government Area.

iv. examine the challenges women farmers face in the study area.

1.5 Scope of Study

The study is concerned with assessing the role of women in agricultural production in OviaSouth-West local government area (LGA) of Edo State. It is made up of ten wards, namely, Iguobazuwa East, Iguobazuwa West, Umaza, Siloko, Udo, Ora, Usen, Ugbogui, Ofunama, and Nikorogha out of which five wards were selected for the study namely Igbobazuwa west, Ofunama, Siloko, Ugbogui and Usen. The study area share similar socio-economic characteristics and women farmers abound in the communities playing similar roles in farming and as such, the selected five wards can represent the entire study area. However, the study focused on the roles performed by women in agricultural production in the study area, the socio-economic characteristics of women involved in agricultural production, the constraints to effective role of women in farm activities, agricultural extension services that are available to women in performing their roles in agricultural production. The study area was chosen because of the high concentration of women in farming activities in the study area. The temporal scope spans from 2000 to 2014 because of the availability of data within this period.

1.6 Significance of the Study

Ogunlela and Mukhtar (2009) remarked that women made up to 60-70% of agricultural labour force in Nigeria. Yet the wide spread assumption that men should make the key farm decisions has continued to erode women's roles. This study on the role of women in agricultural production becomes necessary to document the specific roles of women in agriculture and provide insight into the current situation of women involved in various aspect of agriculture. In variably, women are primary breadwinners in subsistence

economies and cultures in Nigeria. Women work longer hours and devote a larger share of their earnings to supporting their families than men do (Mamman, 1994). The issue of gender in agriculture (World Bank, FAO and IFAD, 2009) pointed out that they are crucial for the attainments of food security, a main objective for sustainable agricultural growth and development.

The information generated from this study will therefore be useful for the formulation of policies on women development programmes; particularly for the Ovia South-West Local Government communities, state, agencies of government at federal levels and other NGOs with the mandate of women farmer's empowerments. On the basis of the available evidence, the role of women in agricultural production cannot be trivialized. They perform crucial roles on domestic and economic life of society. Rural and national development can hardly be achieved with the neglect of this important and substantial segment of the society (Sibanda, 2011). Therefore, the study of the role of women in agricultural production in the study area was very pertinent.

CHAPTER TWO

THEORETICAL FRAMEWORK AND LITERATUREREVIEW

2.1 Introduction

This section discussed the related key concepts of the role of women in agricultural Production and was followed by theoretical frame work used in the understanding of the role women play in farming activities. Other areas relevant to this study were also discussed which includes; Theoretical framework, Contribution of Agriculture to Nigerian Economy, Effects of Agricultural Policies and Programmes on the Agriculture Sector, Challenges to Agricultural reforms, Policies and Programmes in Nigeria, Women in Agriculture, Role of Women in Agriculture, Constraints of Women in Agriculture, Women and Agricultural Technology and Women and Extension Services.

2.2 Theoretical Framework of Study

The African Feminist Theory is a highly related theory that can be used in understanding women's agricultural production in rural Nigeria.

2.2.1 The Conflict Theory

Conflict theory is oriented towards the study of social structures and institutions. It emphasizes the fact that there are fundamental differences of interest between social groups. Due to these differences, conflict has become a common and persistent feature of society. The greatest influence on the conflict theory is based on the contributions of Karl Marx.

For Marx, mankind has created much of the physical world, and the social and political institutions that order it. The world is produced and reproduced through man's labour. To him therefore, the motivating force in history is the manner in which human beings relate to one another in their continuous struggle to extract their livelihood from

nature (Labinjoh, 2002).

The nature of any society at any one time is determined by the interaction of the forces of production, on the one hand and, on the other hand, the social relations of production. Marx theory of class stems from the premise that 'the history of all hitherto existing societies is the history of class struggles'. The potential for class conflict is inherent in every society. Such a society is one in which surplus is generated. Marx devoted much attention to clarifying the nature of exploitation and demonstrated that exploitation involves the appropriation of 'surplus value' which is produced by labour. In order to survive therefore, humans must produce food and material objects. In doing so, they enter into social relationships with other people. Conflict is seen to exist when people and groups with different economic and other interests and roles interact in a society.

Every society contains elements of contradictions. These contradictions involve the exploitation of one social group by another. In feudal societies, lords exploit their serfs; in capitalist societies, employers exploit their employees. The family is often a management of conflict between a man and his wife or his wives or his extended family relations depending on the society in question. Conflict theory, therefore, covers a wide range of sociological problems in most African societies each with its own diversities of social cultural systems. Conflict involves struggle between segments of society over valued resources. The Marxian approach to gender stratification centres on the extent to which women's access to the control of the forces of production determines their relative position in society. For this variant of Marxian theory, women's oppression is traceable to class domination and subjugation.

2.2.2 Feminist Theory

Feminism examines the position of women in society and tries to further their

interests. In general terms, feminism asserts that sex is a fundamental and irreducible axis of social organization that, to date has subordinated women to men. This structural subordination of women has been described by feminists as patriarchy with its derivative meanings of the male-headed family, mastery and superiority (Barker, 2004).

Igenozah (2004) has also observed that the concern with the gender question is primarily on the secondary standing of women in society. Feminists see the secondary standing of women in the scheme of things as a form of victimization, especially the subordinate role women are made to play in relation to men. According to Heldke and O'Connor (2004), the emphasis of the feminist theory is on oppression, discrimination, injustice and exploitation. They stated that if oppression systematically and unfairly marginalizes some members of a society, then it must also grant other members of that society an unfair advantage. Culture is the place where inequality is reproduced, but it is within culture that gender is formed (Baldwin *et al*., 2004).

Haralambos and Holborn (2008) stated that there are different versions of feminism, but most share some common features. Like Marxists, feminists tend to see society as divided into different social groups. Unlike Marxists, they see the major division as being between men and women rather than between different classes. Like Marxists, they tend to see society as characterized by exploitation. Unlike Marxists, feminist see the exploitation of women by men as the most important source of exploitation, rather than that of the working class by the ruling class. Many feminists criticize contemporary societies as being patriarchal, that is, they are dominated by men. The feminist argument is centered on the unfair treatment of women by their male partners. This movement developed to defend women from the oppression of male dominated world.

Some feminist writers (Shiva, 1991; and Sibanda, 2011), however, disagree that all women are equally oppressed and disadvantaged in contemporary societies. They believe that it is important to recognize the different experiences and problems faced by various groups of women. For example, they do not believe that all husbands oppress their wives; that women are equally disadvantaged in all types of work, or that looking after children is necessarily oppressive to women. They emphasize the differences between women of different ages, class, backgrounds and ethnic groups.

Despite the varying reactions to feminism, many African women seem to agree that the way African women perceive their reality and the exigency that shape their consciousness and mobilization has to be different from the way Western women perceive and react to their situation. The average African woman is not a hater of men; nor does she seek to build a wall around her gender across which she throws ideological missiles. She desires self-respect, an active role, dynamic participation in all areas of social development, and dignity alongside the men (Sibanda, 2011).

What is evident, therefore, is that in rural Nigeria, the relationship between men and women is based on gender inequality due to its patriarchal structure. Here, women are discriminated against in terms of land ownership because of their sex which ultimately affects women's agricultural production. The situation has also created a lack of equity and social justice in terms of access, ownership and control of land especially for agricultural purpose which is a reflection of the dictates of the culture to the neglect of the women who actually engage more in food crop production. In addition, how much access to land a woman enjoys depends on her relationship with the man, either as a wife, a relation, as a widow who has access to land due to the magnanimity of her in-laws or if she holds the land

in trust for her male children, pending when they are old enough to take possession of their inheritance. The scenario presented above is a replica of what women farmers experience in Ovia South-West Local Government Area of Edo state. It is rooted in their culture and tradition and their society is patriarchal in structure.

This theory is relevant to the study as it sheds more light in the unbalance relationship that exists between men and women in agricultural production. The feminist theorist believes that women are marginalized, oppressed and their efforts in the advancement of agricultural production is concealed. The theory brought to the fore the patriarchal nature of the African society and the situation of women farmers which is deep rooted in the African system, for instance women have no access to land, access to loan and credit, inheritance and extension services etc.

2.3 Literature Review

2.3.1 Contribution of Agriculture to Nigerian Economy

Economic history provides evidence that agricultural development is a pre-condition for economic development. The agriculture sector is usually the springboard from which a country's industrial development can take off. More often, agricultural activities are usually concentrated in the rural areas where there is a critical need for rural transformation, redistribution, poverty alleviation and socio-economic development (Stewart, 2000). A strong and an efficient agricultural sector would enable a country to feed its growing population, generate employment, earn foreign exchange, reduce poverty in the country and provide raw materials for industries (Ogen, 2007).

Nigeria is endowed with abundant natural resources including biological and non-biological resources that provide basis for agricultural development. The significance of

agricultural resources in bringing about economic growth and sustainable development of a nation cannot be underestimated. Abayomi (1997) stated that stagnation in agriculture is the principal explanation for poor economic performance, while rising agricultural productivity has been the most important concomitant of successful industrialization. Oji-Okoro (2011) is of the opinion that agriculture resource has been an important sector in the Nigerian economy in the past decades, and is still a major sector despite the oil boom.

In any country, successful economic development depends on open and balanced interaction among various sectors over a period of time; often the process of interaction is such that some sector becomes more important than others, depending on the level and the stage of development. In Nigeria, agriculture is a key sector whose role is, and would remain crucial to development. Iganiga and Unemhilin (2011) studied the effect of federal government agricultural expenditure and other determinants of agricultural output on the value of agricultural output in Nigeria. A Cobb Douglas Growth Model was specified that included commercial credits to agriculture, consumer price index, annual average rainfall, population growth rate, food importation and GDP growth rate. The researchers performed comprehensive analysis of data and estimated the Vector Error Correction model. Their results showed that federal government capital expenditure was found to be positively related to agricultural output.

Oji-Okoro (2011) employed multiple regression analysis to examine the contribution of agricultural sector on the Nigerian economic development. They found that a positive relationship between Gross Domestic Product (GDP), government expenditure on agriculture and foreign direct investment between the period of 1986-2007. It was also revealed in the

study that 81% of the variation in GDP could be explained by Domestic Savings, Government Expenditure and Foreign Direct Investment.

Using time series data, Lawal (2011) established relationship between the amount of federal government expenditure and agriculture between 1979 and 2007. The analysis showed that government spending does not follow a regular pattern and that the contribution of the agricultural sector to the GDP is in direct relationship with government funding to the sector. Ogwuma (1981), studied public expenditure in agricultural sector using econometric analysis. Based on this report, agricultural financing in Nigeria shows positive relationship between interest rate and loan-able funds on the level of agricultural output. The strong correlation that has been established between Nigerian's total GDP and the agriculture suggests that the prospects of the non-oil sub-sector and the overall economy are closely tied to the performance of the agricultural sector. Ukeji(2003) submits that in the 1960s agriculture contributed up to 64% to the total GDP but gradually declined in the 1970s to 48% and it continues in 1980 to 20% and 19% in 1985 which was as a result of oil glut of the 1980s.

2.3.2 Agricultural Reforms and Policies

Nigeria's perception of the place and role of agriculture in national development changed considerably over time. The policies, strategies and schemes used equally changed. Different strategies adopted by the country shows dynamism and changing strategies that overlaps and cannot be appropriately segregated into time phases. Often it was a combination of two or more strategies to implement agricultural policies designed at different time periods. Olayemi (1995) remarked that agricultural development strategies that have been adopted in the country can be categorised into four namely: the exploitative, the agricultural

project, the direct government production and the integrated rural development strategies.

2.3.2.1 Exploitative Strategy

The Nigerian Government during the colonial period and early years of independence adopted this strategy for agricultural development. In the 1950s the traditional economists observed agricultural sector as a residual, subsistence sector made up of peasant farmers. As such, the subsistence sector was expected to be taxed to finance the modern sector. This essentially was the basis of the agricultural strategy in the 1950s and the 1960s in Nigeria with levies on export crops providing revenue for government to develop the modern sector. The Government established institutions such as the agricultural marketing board system to boost revenue generation efforts through taxing of peasant farmers that produce export crops such as cocoa, groundnut, palm produce, cotton, etc, (Adubi 2004).

2.3.2.2 Agricultural Project Strategy

The period coincided with the time of internal self-government up till 1968. Government intervention in agriculture was minimal. The small-scale farmers in Nigeria bore the brunt of agricultural development efforts (Egwu and Akubuilo, 2007). Agriculture was seen as a sector that has appropriate linkage with other sectors and should be developed in complementarily with other sectors thereby facilitating the needed forward and backward linkages. Agriculture was regionalized with the establishment of extension fields and research institutes. Regional public funds were invested in agriculture and there were new schemes such as farm settlement schemes (established to create modern literate farmers and promote agricultural development). Tree crop plantations, smaller farmer credit schemes, and Agricultural Development corporation projects were established to encourage development of tree crops.

2.3.2.3 Direct Government Production Strategy

Olayemi (1995),remarked that this was merely a deepening of the process of direct government intervention and investment in agriculture. This period started in 1970 and coincided with the oil boom in Nigeria. There was massive Federal Government intervention and investment in agriculture. The reasons were first, the need for the rehabilitation and resuscitation of agriculture after the civil war. This demanded immediate huge investments by government in agriculture given that there was low capacity in the private sector. Second, the ideological imperatives in the world then favoured direct involvement of government in directing investments in agricultural business and allied activities (Adubi, 2004). The period witnessed direct involvement of governments in direct investments in agricultural activities and the establishment of schemes and research institutes such as National Accelerated Food Production Project (NAFPP), Nigerian Agricultural Co-operative Bank (NACB), etc.

2.3.2.4 Integrated Rural Development Strategy

The government realized that in the mid-1970s that the strategy of direct agricultural production was not yielding the desired results. So, there was gradual shift to an agricultural development approach which involved the adoption of an integrated rural development strategy (Olayemi, 1995). Under this strategy, rural development was seen from a holistic perspective with agricultural development problems being only part of a larger rural development concern. This prompted the government to embark on multipurpose rural development programmes and implementing institutions such as the Agricultural Development Projects (ADPs), the River Basin Development Authorities (RBDAS), the Directorate of Food, Roads And Rural Infrastructure (DFRRI), the National Agricultural Land Development Agency, (NALDA), etc. This integrated rural development strategy was

also adopted during the Structural Adjustment Programme (SAP) era but with significant changes in institutional design, intensity of activities and modes of operation.

2.3.3 Effects of Agricultural Policies and Programmes on the Agriculture Sector

Basically, Nigeria has developed sound agricultural policies to improve the performance of agricultural sector in Nigeria. Some of these policies are as follows;

1. Agricultural commodity marketing and pricing policy: In 1977, six national commodity boards were established which include; commodity boards for cocoa, groundnuts, palm produce, cotton, rubber and food grains; 2. Land use act was promulgated by the Federal Government in 1978 vesting the ownership of all lands on the government as to give genuine farmers access to farmlands; 3. Agricultural extension and technology transfer policy aimed at improving the adoption of improved agricultural technology by farmers with the national accelerated food production project (NAFPP) and agricultural development projects (ADPs) as implementing agencies; 4. Input supply and distribution policy was implemented to ensure adequate and orderly supply of agricultural inputs notably fertilizers, agro-chemicals, seeds, machinery and equipment. For instance; in 1975, Government centralized fertilizer procurement and distribution with numerous agro-service center's nationwide. Also in 1972 Government created national seeds service (NSS) to produce and multiply improved seeds such as rice, maize, cowpea, millet, sorghum, wheat and cassava; 5. Agricultural input subsidy policy on fertilizer, seed (50%) agro-chemicals (50%) and tractor hiring services (50%); 6. Agricultural research policy: The policy was aimed at coordination and harmonization of agricultural research and extension linkage. Agricultural research council was established in 1971.The 1973 Decree empowered the Federal Government to take over all state research institutions. The 1975 reconstitution by the Federal Government of the

Nigerian Agricultural research Institute network led to the establishment of 14 institutes which were later increased to 19 and the creation in 1977 of the national science and technology development agency to coordinate all research activities in Nigeria; 7. Agricultural co-operatives policy: In 1979, a department of agricultural co-operatives within the Federal Ministry of Agriculture, Water Resources and Rural Development was created to actualize this policy aimed at encouragement of farmers to form co-operatives and the use of same for the distribution of farm inputs and imported food commodities; 8. Water resources and irrigation policy brought about the establishment of eleven River basin development authorities in 1977 charged with the responsibility of developing Nigeria's lands and water resources and 9. Agricultural mechanization policy: The policy was instrumental to the creation of the Ministry of Science and Technology and the establishment of some Universities of Science and Technology; the operation of tractor hiring units in all the states of Nigeria, reduced import duty on tractors and agricultural equipment and implements, generalized and liberalized subsidies on farm clearing and establishment of a centre for agricultural mechanization.

In terms of effects of these agricultural reforms and policies on the agricultural sector, the imbalance in the flow of financial resources reflected in Nigeria's foreign trade. During this period imports rose by 46.5% more than the planned targets, with food, capital equipment and raw materials being, the fastest growing categories of imports. There was rapid decline in agricultural production with large food supply gaps (Sanyal and Babu, 2010) with attendant rapid increase in food imports from 7.7% in 1970 to 10.3% in 1979.Despite government efforts in agricultural production, the performance of the agricultural sector in Nigeria has been poor in terms of its growth, its export value, its contribution to GDP, and its

share in Nigeria's total export earnings.

The assessment of the effects of agricultural policies on the performance of the sector is done with respect to the fundamental roles of agriculture namely; i. Provision of adequate food for a growing population and raw materials for industries, ii. Provision of an expanding market for non-agricultural products, iii. Generation of savings for investment in agriculture as well as other sectors and release of surplus or under-utilized resources to other sectors and iv. Generation of foreign exchange.

These are discussed in line with the historical periods of the various policy reforms and programmes as follows:

2.3.3.1 The 1960 to 1969 (Adhoc policy Era)

In this era, government involvement in agriculture dropped. The small-scale farmers in Nigeria bore the brunt of agricultural development efforts (Egwu and Akubuilo, 2007). Olayemi (1995) observed that government effort took the form of settling policies and creating institutions for agricultural research, extension and export crop marketing and pricing. Agricultural development during this period witnessed withdrawal of surplus rural labour and transferring them to the industrial sector. Government established farm settlements and government research institutes and agricultural development corporations. There was visible decline in export crop production and reduced food shortage. There was a decentralized approach to agriculture with initiatives being left to the regions and the states while Federal Government played a supportive role. Regional governments were executing adhoc policies, programmes and projects. The effects of these reforms/policies on agricultural performance include increase in food importation and rise in retail food prices (Sanyal and Babu, 2010). The agricultural share of the GDP declined from 66% in 1959 to

50% in 1970. The decrease in export earnings and the increase in retail food prices led to greater importation of food, which adversely affected the balance of payments during the late 1960s (Kwanashie, Ajilima and Garba, 1998).

2.3.3.2 The 1970–1985 (Pre-SAP Era)

This was the period of oil boom in Nigeria when government intervention and investment in agricultural sector was minimal. Many agricultural policies and programmes were enunciated by government. The fiscal, monetary and trade policies under the macro-economic policies were launched during the era as enumerated in subsequent paragraphs.

Fiscal policy:Budgetary allocations to agriculture were substantially increased to accommodate capital and recurrent expenditures. However large budget deficits were recorded. The capital expenditure on agriculture declined from 6.2% of total capital expenditure by the Federal Government in 1973 to 4.0% in 1985. The expenditure of state government followed similar pattern for the period under review (Egwu and Akubilo, 2007).

Tax policy: Income tax reliefs on incomes from new agricultural enterprises were pursued.

Wage policy: A unified wage structure for all public sector workers was put in place.

Monetary policy: Agricultural loans were given at concessionary interest rate of 6% per annum. In 1980s it was raised to 9% per annum, yet women farmers in the local areas had no access to this loan to enhance their participation.

Establishment of schemes, institutions etc: The Nigerian agricultural and co-operative bank (NACB) was established in 1973 to facilitate access of credit to Nigerian farmers.

Mandatory sectoral allocation to agriculture: Commercial and Merchant Banks were mandated to extend a minimum of 6% of their loan portfolio to agriculture which was later increased to 12%.

Rural banking scheme was launched in 1977 while the agricultural credit guarantee scheme was established in 1977. Trade policy on abolition of export duties on scheduled export crops in 1973 in order to promote agricultural export trade.Liberalization of imports in respect of food, agricultural machinery and equipment.

2.3.3.3 The 1985 - 1990 (Structural Adjustment Programme-SAP Era)

This is the period of structural adjustment programme during the military administration in Nigeria. This era saw the Federal Ministry of Agriculture, Water Resources and Rural Development in 1988 produce an agricultural policy for Nigeria decreed to be operational for at least fifteen years. Ikpi (1995) asserted that with the adoption of Structural Adjustment Programme (SAP) in 1986, government admitted the failure of past policies to significantly improve the economy and reverse the declining trend of production in the agricultural sector. The Structural Adjustment Programme relied most especially on the agricultural sector to achieve the objectives of its far-reaching reforms on diversification of exports and adjustment of the production and consumption structure of the economy (Adubi, 2004).

Despite the aforementioned policy measures, the agricultural sector did not register significant overall growth for several reasons. First, SAP had more of an impact on the distribution of farm incomes than on agricultural growth and productivity (Sanyal and Babu, 2010). Second, on average, real producer prices of tradable goods did not change significantly after the policy reforms. The decline in output of the export crop subsector contributed to a reduction in foreign exchange earnings that could affect the foreign exchange requirement of the agricultural sector. As a result of this reduction and subsequent loss of export earnings from crops, the country's dependence on crude petroleum export

earnings between 1988 and 1992 increased substantially (Colman and Okorie, 1993).

During the SAP period, there was lower agricultural and economic growth with high rates of unemployment. Export earnings declined to less than 5% as well as widening gap in food supply and demand. Food prices increased from 2.6% in 1970 - 1979 period to almost 20% during 1980 - 1989. The environmental implications of these policy reforms were quite significant. During this period, there was increased deforestation with adverse impact on biotic resources, loss of biodiversity, increased desertification in arid areas and flooding in lowland areas. There was also evidence of increased use of chemicals and abuse of fertilizer use which led to soil degradation in certain agro-ecological zones (Kwanashie, et al., 1998).

2.3.4 The New Millennium Agricultural Policies (1999 - 2009)

In 2001, a new policy document was launched as the new Nigerian agricultural policy. The new agricultural policy has a clear statement of objectives. The policy seeks to attain self-sustaining growth in all the subsectors of agricultural and its structural transformation necessary for the overall socioeconomic development of the country as well as the improvement of the quality of life of Nigerians (Manyong et al, 2005).

The key features of the New Agricultural Policy (NAP) shows the priority area government intends to focus on to promote agricultural development. Evolution of strategies that will ensure self-sufficiency and improvement in the level of technical and economic efficiency in food production. This is to be achieved through (i) the introduction and adoption of improved seeds and seed stock, (ii) adoption of improved husbandry and appropriate machinery and equipment (iii) efficiency utilization of resources (iv) encouragement of ecological specialization, and (v) recognition of the roles and potentials of small-scale farmers as the major producers of food in the country.

Reduction of risk and uncertainties in agriculture to be achieved through the introduction of a more comprehensive agricultural insurance scheme to reduce the natural hazard factor militating against agricultural production and security of investment. A nationwide unified and all-inclusive extension delivery system under the ADPs, active promotion of agro-allied industry to strengthen the linkage effect of agriculture on the economy. Provision of such facilities and incentives as rural infrastructure, rural banking, primary health care, cottage industries etc. to encourage agricultural and rural development and attract youths to go back to the land, Rafindadi (2008).

The government also sought to pursue the following specific objectives: i. Attainment of self-sufficiency in basic food commodities with particular reference to those which consume considerable shares of Nigeria's foreign exchange and for which the country has comparative advantage in local production; ii. Increase in local production of agricultural raw materials to meet the growth of an expanding industrial sector; iii. Increase in production and processing of exportable commodities with a view to increasing their foreign exchange earning capacity and further diversifying the country's export base and sources of foreign exchange earnings; iv. Modernization of agricultural production, processing, storage and distribution through the infusion of improved technologies and management so that agriculture can be more responsive to the demands of other sectors of the Nigerian economy; v. Creation of more agricultural and rural employment opportunities to increase income of farmers and rural dwellers and productively absorb an increasing labour force in the nation(FMARD, 2003).

2.3.5 Challenges to Agricultural Reforms, Policies and Programmes in Nigeria

Evidence from works of Olayemi (1995), Olomola (1998), Garba (1998) is that there

is minimal positive impact from these reforms/policies on agricultural development. The evidence stems from the decaying rural infrastructure, declining value of total credit to agriculture, and declining domestic and foreign investment in agriculture. The increasing withdrawal of manufacturing companies as a result of the failure of these policies and programmes discouraged investments in the sector considerably. The haphazard and inefficient supply and distribution of input prompted the scrapping of some agricultural institution in the year 2000 which were established for agricultural promotion. A critical examination of the reforms/policies and their implementation over the years show that policy instability, policy inconsistency, lack of policy transparency, poor coordination of policies as well as poor implementation and mismanagement of policy instruments constitute major obstacles to the implementation and achievement of the goals and objectives of these policies.

Policy instability and lack of policy transparency are not unconnected with political instability and bad governance. For example, between 1979 and 1999 the country had five military/civilian regimes. At the federal and state levels, the then Ministers and Commissioners of Agriculture were changed several times on the average of one per two years. Several policy measures were initiated and changed without sufficiently waiting for policy effects or results. At one time or the other, agricultural production passed through periods of protection and unbridled opening up for competition. These could all be attributed to poor coordination and faulty implementation of policies as well as mismanagement of policy instruments. Agriculture contributed 42% of Nigeria's gross domestic product (GDP) in 2008 (National Bureau of Statistics). Despite having grown at an annual rate of 6.8% from 2002 to 2006, 2.8% higher than the sectors annual growth between 1997 and 2001, food

security remains a major concern due to the subsistence nature of the country's agriculture (Nwafor, 2008)

Many of the strategies used to improve agricultural growth in the past have failed because the programmes and policies were not sufficiently based on in-depth studies and realistic pilot surveys (Adebayo *et al.*, 2009). This could be attributed to lack of public participation in the design, formulation, implementation and evaluation of policies as well as limited implementation capacity within the sectoral ministries and a poor understanding of the details and specifics of polices by implementers (Adebayo *et al.*, 2009).

The main factors that influenced the effectiveness of policies on agriculture include high demand for agricultural produce, availability of improved technology, efficient dissemination of information by the ADPs and value added leading to improved income. On the other hand, the common factors responsible for the ineffectiveness of policies and regulations, especially on the downstream segment of agriculture, include instability of the political climate, insecurity of investment, non-standardized product quality, non-competitive nature of agricultural products from the country in the export market due to high cost of production and lack of adequate processing facilities (The New Nigerian Agriculture Policy, 2001). These policies were reviewed with less or no consideration for the role of women farmers,

2.3.6 Women in Agriculture

This programme came about in 1988 when it became obvious that in spite of a decade of World Bank's assistance in building up Nigeria's agricultural extension service, women farmers were still receiving minimal assistance and information from extension agents (World Bank, 20003). Consequently, the WIA programmes within the existing state

agricultural development programmes (ADPs) were created in 1990 to address the gender-related deficiencies within the existing extension programme. The programme was created to integrate women into development process with specific reference to agriculture since the participation of women farmers in planning and policy-making as well as the beneficiaries is important (Maigida, 1990). A serious lapse in the country's agricultural extension system had hitherto being that it was pro-male and gender-insensitive towards women farmers. The WIA programme was plagued by initial teething problems which threatened its success. Different WIA initiated in various states of the federation seemed to occur sporadically and in ad-hoc manner, some ADPs making tremendous progress and others doing nothing at all. To address this disparity, a National Planning Workshop in July 1989 brought stakeholders together to take stock of various WIA programmes initiated country-wide, share lessons and experiences among regions and develop a 3-year action plan for each state (World Bank, 2003). There was determination to give female farmers a voice in the WIA policy reform process, even though they were uncertain as to the best way to achieve this. The clue seemed to lie with the female extension agents who interacted with women farmers on a regular basis. They were better able to articulate constraints faced by women farmers and proffer solutions on their behalf. They had firsthand knowledge of the situation and good working relations with women farmers. Bringing about change in favour of women farmers required ownership by both men and women at all levels. Consequently, each state ADP demonstrated commitment to taking action in improving services for women farmers.

Establishment of the WIA programme ensured that extension service in each state in Nigeria has female extension workers at every level of operation from state headquarters down to the grassroots. The formation of WIA farmers' groups facilitates the dissemination

of agricultural innovations and provides women farmers with better access to farm inputs and credit than they would have as individuals. A rural household survey in three parts of the country was conducted to monitor and measure achievement of the WIA programme. Positive results of recommendation and action plans manifested from the survey. The programme developed better than expected due to the dynamism and resourcefulness of Nigerian women.

In spite of the laudable achievements recorded by WIA, a number of problems have been encountered. Such problems include shortage of WIA extension agents as the ratio of extension staff to farm families is still low, making it non-feasible to individually meet all the women farmers. Most of WIA extension workers are not purely agriculture-based, not trained in agriculture (Ogunlela and Mukhtar, 2009). Lack of adequate support from ADP management is another problem faced by the WIA programme. It has taken quite some time for the WIA concept to find its way into the heart of most decision makers in the ADPs, with even some yet to be reconciled with the fact.

Women embark on agricultural activities for a variety of reasons. Prominent among such reasons is that of being able to earn financial resources, as well as being a family tradition and personal interest. The scenario whereby more and more of men either temporarily or permanently migrate has caused shortage of labour in rural areas. As a result, more women are left behind to do much of the farm work as paid or unpaid family labour (Abdullahi, Undated). Other reasons that have been identified include ease of handling; lack of other alternative occupations; acquisition of technical know-how; and husband's influence. It has been observed that religion and availability of funds or farming facility also influence degree of women's involvement in crop production. Apart from providing

employment and income for resource-poor small farmers, especially women, family poultry also serves as a means of capital acquisition and accumulation (Gueye, 2003). In an effort to reach and engage the poor, we must recognize that some issues and constraints related to participation are gender-specific and stem from the fact that men and women play different roles, have different needs and face different challenges on a number of issues and at different levels. We cannot therefore assume that women will automatically benefit from efforts involving poor people in project design and implementation. Experience has also shown that unless specific steps are taken to ensure that women participate and benefit, they usually do not.

In an attempt to bridge the gap between men and women farmers in Nigeria, various women groups and organizations have emerged. Such groups and organizations have contributed substantially to the gains women farmers have recorded and the voice that they now have in overall national policy on agricultural development. One such group is the Women Farmers' Advancement Network (WOFAN), a private initiative founded in the early 1990s whose headquarters is in Kano, Nigeria. WOFAN works with 250 women's groups in five different states in northern Nigeria in an effort to mobilize and train rural women in the management of information and communication. Community participation is a key strategy (WOFAN, 2003). The network also organizes a weekly radio broadcast that features the efforts of rural women. The role of national and international non-governmental organizations (NGOs) in reaching the rural population in Africa is being increasingly documented. The importance of NGOs to rural women varies from country to country, as does their focus on rural issues. In the Nigeria's women-in-agriculture (WIA) example, government fields, recognizing that more than one-third of Nigeria's women belong to

cooperative societies and other locally recognized formal and informal associations, built on these indigenous women's groups to expand the newly established state WIA programmes. For instance, the WIA programme used NGOs to help identify women beneficiary groups and for WIA field staff to target for the initiation and execution of project activities. The formation of WIA farmer groups has facilitated the dissemination of agricultural innovations and provided women farmers with better access to farm inputs and credit than they would have as individuals. Assisted by WIA agents, women are now able to participate through these groups in all aspects of subprojects, from identification through to planning and implementation (Kotze, 2003).

2.3.6.1 Role of Women in Agriculture

Women in Agriculture is a programme created to integrate women into development process with specific reference to agriculture since participation of women farmers in planning and policy making as well as beneficiaries is important (Maigida, 1990). While this programme mainly addressed the deficiencies within the existing extension programme for women farmers, the role of women in agriculture explains the specific roles women play in agricultural production as enunciated in the following paragraphs.

Women make essential contributions to the agricultural and rural economies in all developing countries. Damisa*et al.* (2007) asserted that the roles women play in agriculture vary considerably between and within regions and are changing rapidly in many parts of the world, where economic and social forces are transforming the agricultural sector. 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. Many of these activities are not defined as "economically active employment" in national accounts but they are essential to the well-being of rural households.

Eze, Onwubuya, and Eze (2010) investigated the perception of women marketers' on constraints to marketing selected agricultural produce (milled rice and garri) in Enugu-South area. The study was based on the premise that women perceived constraints in a market driven economy such as Enugu State are impediments to sustainable food security and poverty reduction. The results indicate that low performance of the marketers can be attributed to constraints such as inadequate processing skills, rapid deteriorating conditions of produce and lack of storage facilities.

Traditionally, women are regarded as homemakers, who oversee and coordinate the affairs at home. Previously in Africa, women remained at home while their husbands and sons work on the farm. But at home, however, they were not idle as they engaged in manual processing of food crops and other farm produce in addition to their housekeeping chores.Women make up half the rural population and they constitute more than half of the agricultural labor force. Rural women inparticular are responsible for half of the world's food production and produce between 60 and 80% of the food in most developing countries.

Damisa*et al.* (2007) pointed out that contribution of women to agricultural development in Nigeria suggest that women contribution to farm work is as high as between 60 and 90% of the total tasks on the farm. The contribution of the women ranges from such tasks as land clearing, land-tilling, planting, weeding, fertilizer/manure application to harvesting, food processing, threshing, winnowing, milling, transportation and marketing as well as the management of livestock. Charles and Willem (2008) opined that the importance

of the role played by women in agricultural production is such that the wide spread failure so far to reach women farmers through formal extension services has major repercussions for national output and food security as well as social justice.

Chayal, Dhaka and Suwaka (2010) opined that women in India are the backbone of food security. Women are playing a significant and crucial role in agricultural development and allied fields including crop production, livestock production, horticulture, post-harvest operation, agro/social forestry, fisheries etc. There is a greater involvement of women under various agricultural operations along with house chores.

Other farm activities engage in by women include; ploughing field, clearing of field, leveling of field, sowing, transplanting, manure application, fertilizer application, irrigation, plant protection measures, cutting, picking, shifting production to threshing floor, threshing, winnowing, drying of grains, clearing of grains, grading, storage, marketing and processing.

2.3.6.2 Constraints of Women in Agriculture

Saito and Weidemann (1990) highlighted some constraints to women participation in agriculture to include less access to information, technology, land, inputs, markets and credits and that there is little or no awareness. Similarly, NCEMA (1991) identified some barriers inhibiting active female participation in agriculture such as land fragmentation, and the small size of land owned by a few privileged women, gender inequality in access to land due to the non-egalitarian inheritance system and cultural norms; sex discrimination in the nature of crops grown, while men tend to concentrate their efforts on cash crop production and women are left to cultivate food crops; use of obsolete and inefficient production technologies.

In Nigeria today, women are excluded from certain occupational categories due to formal barriers as well as informal barriers to entry. The formal barriers include: (i) lack of

educational or technical training, (ii) labour laws and trading customs, while the informal barriers include: (i) customs and religious practices, (ii) difficulties in combining domestic and labour market activities, (iii) management and worker attitudes,(Lawanson, 2008). Nigerian women are saddled with most of the tasks in agricultural production 'supposedly' meant for the man but the benefits gained by them are not commensurate to the man-hours they spend on the task. Despite the dominant and important role women play in agricultural production in the country, they are hardly given any attention in the area of training and/or visitation by extension agents with improved technologies.

The role of women in many societies however, are bound by age-old traditions and beliefs, patriarchal practices motivated by culture, interpretations of religious sanctions which hinder women's freedom to play key roles in social and economic development. It was observed that women's contribution to agriculture and other sectors in the economy remain concealed and unaccounted for in measuring economic development. Consequently, they are generally neglected in plans and programs. They were, in fact discriminated against by stereotypes which restricted them to a reproductive role, and denied them access to resources which could eventually enhance their social and economic contribution to the society (Daman, 2003).

Fabiyi, *et al.,* (2007) quoting Folasade (1991) on 'the role of women in food production' submitted that lack of separate land for women and inadequate contact with extension agents are serious constraints faced by women farmers. Women very rarely own land in Nigeria, despite their heavy involvement in agriculture. Because women generally do not own land or other assets it has traditionally been difficult for women to obtain Bank loans or other forms of credit through the banking system. Land tenure system is largely by

inheritance, this lack of title to land prevents women from exercising or improving their expertise in crop production and animal husbandry because of security of tenure.

2.3.6.3 Women and Agricultural Technology

Technologies are developed and tailored according to the stereotyped roles of men and women in society. Poulton*et al*,(2006) had remarked that women's use of and associations with technology reflect their major occupations in life. Telephones are used by women operators and receptionists and men repair them. Women frequently use household appliances such as cookers, vacuum cleaners, washing machines, refrigerators, and so on, during their household chores and men purchase them, allocate them and make decisions about maintenance and disposal.

Men on the other hand, are associated with computers in office work; bicycles, cars, motorcycles and steamers in transportation and; combine harvesters and tractors for agricultural production. They repair things, make furniture; take technical courses such as engineering, while women are believed to concentrate on interpersonal relationships and emotional issues. Indeed, women are more of users of technology and rarely creators, shapers and producers. Men, on the other hand, are the inventors and owners of technology. This stereotyping of technological development and its use on the basis of gender ignores the fact that the majority of scholars concentrate on male participation and achievements in technological developments. Women's role and the relevance of existing technologies to women are ignored.

In Africa, technological development has been modeled on western pre-selected packages and implemented everywhere, irrespective of their appropriateness to the environmental, cultural and economic contexts. The perception of local communities about

agricultural technology and their active involvement in technological development is largely lacking. Despite their active and continuous interaction with the environment as food producers, concern regarding women's technological knowledge on seed selection practices, pest and weed control measures, and harvesting and food preservation technologies, has never been included in policy making and implementation. This omission of the knowledge systems of a significant proportion of agricultural producers makes it difficult to develop relevant techniques for rural farmers on the continent. In those societies where agricultural production is the mainstay of economic production, it is an acknowledged fact that men and women do different things, have access to different resources and benefits, and play different roles in the production cycle. While technological implications of the different spheres of operation exist, logically, one can assume from these gender differences that the adoption, adaptation, allocation and utilization of the various technologies, are directly related to the different activities in the production cycle. It is expected that when men and women engage in the production of different crops such as cash crops and food crops, they will require different technologies in terms of farm equipment and input, storage techniques and labourrequirements, (Damisa and Yohanna, 2007).

Inter and intra-household decision making processes on the allocation and use of these technological resources is also made along gender lines. Njiro (1990), reveal that cash crop production which is dominated by men is characterized by the availability and utilization of improved farm equipment, such as tractors and combine harvesters, and farm inputs, such as fertilizers and pesticides. It is also associated with the cash economy, where substantial financial benefits are obtained from agriculture. Subsistence farming, on the other hand, which is usually dominated by women, is characterized by traditional farming

techniques, rudimentary farm technology and inadequate farm inputs.

Women access to new technology is crucial in maintaining and improving agricultural productivity. But gender gaps exist for a wide range of agricultural technologies, including machines and tools, improved plant varieties and animal breeds, fertilizers, pest control measures and management techniques. Along with other constraints, these gaps lead to gender inequalities in access to new technologies, adoption, and the use of purchased inputs across regions.

The importance of improved technology to agricultural development especially in less developed countries in improving the role of women in agriculture is not recognized. This is predicated on the observed impact these innovations and its potentials could contribute to the development of agriculture. In developing countries like Nigeria where a greater proportion of the population lives in rural areas, agricultural technologies could also provide a potential means of increasing production and subsequently raising incomes of farmers as well as their standard of living (Jibowo, 1992).

One critical policy to foster economic growth in Africa is to shift from traditional, resource-based agriculture to input-intensive, science-based agriculture. Presently, technological change is considered to be the main instrument for growth in African agriculture. As population pressure increases, traditional fallow schemes break down and soil fertility is under mined unless higher input levels are utilized. Intensive agricultural technologies with higher purchased input levels and increased labor requirements have been introduced in many regions of Sub-Saharan Africa (Sanders et al., 1996). However, this has raised an important question in the development literature of how technological change make women worse off in Sub-Saharan African agriculture despite increasing household incomes.

2.3.7 Women and Extension Services

Governments through the agricultural research institutions have become involved in educating farmers on improved farming practices, as agricultural extension bridges the gap between technical knowledge and current practices. Several studies (Birkhaeuser, Evenson and Feder, 1991)show that extension is cost-effective and has a significant and positive impact on farmers' knowledge, adoption of new technologies and productivity. Agricultural extension can be defined as an advice and assistance given to the farmers through educational procedures on new farming methods and techniques in order to improve their production efficiency and income and this improving their level of living and enhancing their farming knowledge and skills.

Essentially, agricultural extension provide farmers the scientific knowledge so that, they could solve their problems. It is also the primary means of change, the reason for change, the value of change the results you can achieved, the process by which it is arrived at and also the uncertainties inherent in this change. It helps the farmers to learn about what alternatives that exists in farming so that they can choose the best alternative for themselves.

Women account for 43% of the agricultural labour force in developing countries on average but only receive about 5% of training and advisory services, known as agricultural extension. This makes them less productive than men, and closing that gap could reduce the number of undernourished people in the world by 12-17%. A starting point is to look at how agricultural extension services are delivered. Traditionally, these have been provided by the public sector, with ministries of agriculture responsible for sending experts to visit farmers. Although women play a significant role in farming, they are still often perceived as not being "real" farmers, (Birkhaeuser, Evenson and Feder, 1991).

Extension services are important for diffusing technology and good practices, but reaching female farmers requires careful consideration. In some contexts, it is culturally more acceptable for female farmers to interact with female extension agents, and hiring female extension agents can be an effective means of reaching female farmers. Hence, it has been argued, especially in the last 15 years, that more female extension agents should be hired (Due and Magayane, 1990; Gladwin, 1991).This preference is not universal, however, so in many cases properly trained male extension agents may be able to provide equally effective services. Whether male or female, extension agents must be sensitive to the realities, needs and constraints of rural women. Extension services for women must consider all the roles of women; women's needs as farmers are often neglected in favour of programmes aimed at household responsibilities. Extension systems will also have to be more innovative and flexible to account for social and cultural obstacles and for time and mobility constraints.

2.4 Empirical Review of Related Literature

Tologbonse, Jibrin, Auta, and Damisa (2013) investigated the level of participation of women in agricultural programmes in Lere and BirninGwari zones of Kaduna State and compared the performance in terms of output and income levels with those of non-participants. A multistage sampling method was used. Data were collected from 272 respondents made up of participants and non-participants in women in agriculture (WIA) programme using structured questionnaire and oral interview schedule. Descriptive statistics, multiple regression, t-tests and Z-tests were employed to analyse the data. The result showed that the age of the majority of respondents fell between 31 and 50 years. Majority of the respondents were married, 75% and 83% for participants and non-participants respectively. Approximately, 71% and 56% of respondents from WIA and non-WIA participants had some

levels of education. Regression analysis showed that age, marital status and level of education were significantly related to level of participation at 5% level of significance, while extension services and access to market were also significantly related to level of participation at 10% level of significance. The study recommended among others that functional literacy campaign for women farmers be taken to the rural areas where these women reside.

Sabo (2006) assessed the impact of the women in agriculture (WIA) programme in Borno State, Nigeria. Primary data were collected using a structured questionnaire administered to 90 participants in WIA selected through a multistage sampling process. Although the WIA programme has led to an increase in agricultural production and income level of the participants, correlation analyses showed a negative relationship between marital status and agricultural production level ($r = -0.26$; $p=0.01$). The study recommended sustained governmental assistance to women farmers in the form of appropriate policies and strategies to ensure their access to extension services, land resources, credit, and subsidized inputs. Also, the WIA programme should include more income-generating activities and training for improved production.

Odurukwe (2006) analyzed the impact of the WIA programme on the lives of women in Imo State, Nigeria, with the view of strengthening their subsistence agricultural production. Data were collected from 160 women from both urban and rural areas of the State. Data analysis was achieved using rankings, descriptive statistics and ordinary least square regression models. The findings showed that processing packages (cassava into pancake and cassava flour; soybean into flour paste and soya-meal; cocoyam into cocoyam flour; and tomato fruits into tomato paste) which recorded high awareness values but had low

rates of adoption.

Maigida (2000) examined the relationships between socio-economic, perception and cultural characteristics of women participation in WIA programme, and examined the benefits they derived from the programme. The study was conducted in the Northern zone of Plateau Agricultural Development Programme (PADP) from March to April, 1997. Sixteen villages from four local government areas (Mangu, Bokkos, Barkin-Ladi and Jos North)of Plateau state were purposively selected because of the high concentration of women farmers who were growing maize and Irish potato which were the crops selected for the study, and the high number of WIA staff in the zone. Data were collected from 181 randomly selected respondents using a questionnaire interview method and analyzed by descriptive statistics, Pearson correlation, Stepwise regression and student "t". Pearson correlation analysis showed that six of the thirteen variables studied were significantly related with participation in WIA Programme. Perception of programme's rules and regulations, number of associations to which women belong, land ownership and extension contact (with coefficient of 0.7793, 0.3999, -0.3116 and 0.3627 respectively) were significant at 1% level of significance. Formal education and wealth status (with coefficient of 0.1804 and 0.2280 respectively) were found to be significant at 5%.

Common areas of interest exist among works carried out by other researchers (Maigida 2000, Salo 2006, Odurukwe 2006, Tologbonse 2013). The fact that they are all concerned with women in agriculture is one way which puts these authors together. Despite the similarities, there are areas of divergence. This study seeks to emphasize the specific roles of women in agricultural production in the study area using multiple regression as a statistical tool from which conclusions were drawn. It also seeks to examine the challenges

women farmers face in the area of study.

In addition, this work covers a Local Government area in Edo State, a political unit different from other regions is both nature and people.Thus lack of comprehensive empirical record as regards the roles and effort of women in agriculture and the gap that exist between this study and other works is quite significant which this research attempts to fill.

CHAPTER THREE

STUDY AREA AND METHODOLOGY

3.1 STUDY AREA

3.1.1 Location and size

The study area is located between Latitudes 6^0 00'N - 6^0 50'North of the Equator and Longitudes 5^0 00'E - 5^0 30'East of the Greenwich Meridian.Ovia South-West L.G.A of Edo State is located west of River Niger in Mid-Western Nigeria. It is bounded to the north by Ondo State, to the East by Ovia North East LGA, to the South by Delta State and to the West by Ondo State. The local government headquarters is located at Iguobazuwa town which is 40 Km west of Benin-City in Edo State. It has a landmass of 2,803Km^2 and a density of 49.3 inch/Km^2 and a population growth rate of 2.8 % per annum. The study area is made up of ten wards namely, Iguobazuwa-East, Iguobazuwa-West, Siloko, Udo, Umaza, Ora, Usen, Ugbogui, Ofunama and Nikorogha (See Fig. 3.1).

3.1.2 Relief and Drainage

A sandy plain, marked with rivers, generally running towards the south west with few hills to the east and the lands are drained by rivers through, Osse, Ovia and Siloko. The elevation generally increases and gradually producing a plain with an average of 150meters above sea level. The study area lies in the geographical region known as the western coastland characterized by sedimentary rock of the Eocene Era. It is situated on a sloping, gentle, undulating coastal plain that lacks striking features of relief, except for pockets of Inselbergs with steep-sides produced from the ancient crystalline rocks. The underlying rocks are part of the Pre-Cambrian crystalline basement complex and are covered by tertiary-aged sediments, including the Benin sands (White and Oates, 1999).

Ovia south west is an agricultural area having very favourable relief and drainage which have promoted agriculture and that is why many crops such plantain, maize, cocoyam, melon, yam, pepper tomatoes, leafy vegetables etc are grown by women farmers in the study area.

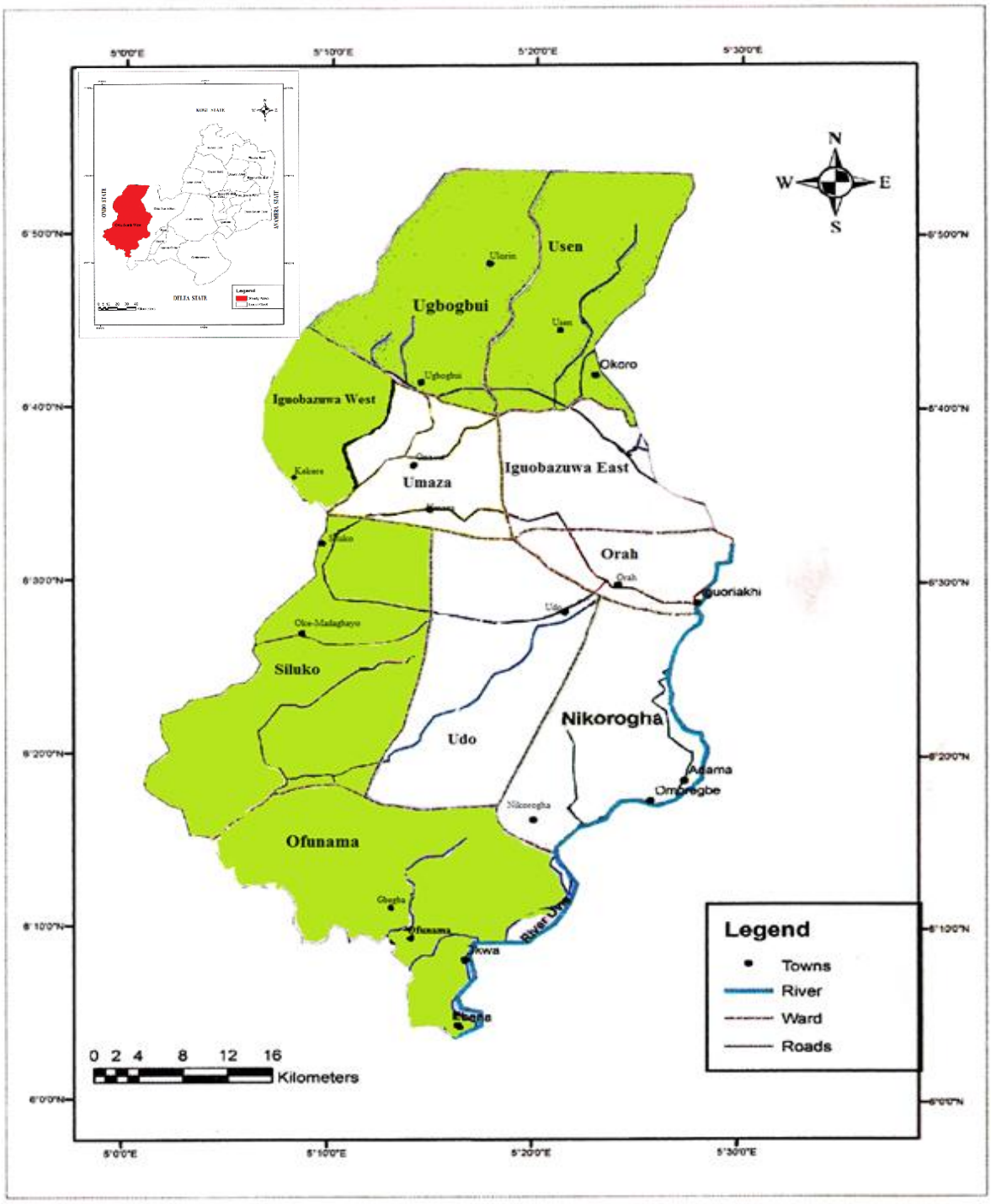


Fig. 3.1: Ovia-South West Local Government Area showing the Wards
Source: Ministry of Lands and Survey, Benin City, (2012).

3.1.3 Climate

The climate is tropical continental type with alternating wet and dry seasons of varying duration. The seasons correspond to the periods of dominance of the wet tropical continental air masses. The seasonal distribution of rainfall follows the direction of the Inter-Tropical Divergence (ITD) and varies almost proportionally with distance from the coast. The wet season occurs within seven months from April to October while the dry season lasts from November to March. There is usually a break in rainfall in August. Specifically, this area has annual mean rainfall ranging from 500 to 2780mm. About 90% of the rainuse to fallbetweenApril and October. The mean annual temperature ranges between 24^0 C and33^0C. The mean number of hours of sunshine is 5 to 7hrs depending on the season. The rate of evaporation is high being the continental interior. The relative humidity is between 60% to 80% per annum depending on the season of the year (dry or rainy). The mean atmospheric pressure is about 1013mb (Ikhile, 2012).In the study area, agriculture is the main source of food and employer of labour employing about 60-70 per cent of the population (Mayong*et al*. 2005). The climate favours the production of a wide variety of crops, which includes cereals (maize, rice and beans); solanecious crops (pepper, tomato, garden eggs and ginger); tree crops (guava, cashew, mango, orange and pawpaw); tuber crops (yam, coco yam and cassava). For life stock production, the animals that are wide kept are goat, sheep and poultry. These varieties of crops are those planted by women farmers in Ovia South-West LGA except the tree crops.

3.1.4 Soil

The soil is sandy, loams derived from deep loose deltaic and coastal sediments dating from the Eocene period. This is sometimes referred to as the "Benin sands" with pH of 5.0 which is marked acidic and therefore has low fertility (FRIN, 2000). The layers of the soil

contains 0-5 cm loose continuous litter up to 5cm thick; 6-15cm dull grey-brown humid coarse sand with bleached sand grains that are of fibrous roots in the top soil; 15-25cm coarse loamy sand, very compact and structureless; 26-75cm red brown coarse sand, and very compact; 76-178cm bright red brown loamy coarse sand, and more friable (FRIN, 2000).The soils are good for the cultivation of yam, cassava, plantain, maize, etc. They are mostly well drained, moderately to the strongly leached and low to medium humus contented and easily eroded with gullies (Ikhile, 2012). The soil is very fertile and suitable for the production of yam, cocoyam, plantain, melon seed, cassava and maize.

3.1.5 Vegetation

The study area lies in the tropical low land rainforest agro-ecological zone of south-western Nigeria. The vegetation is semi-deciduous and belongs to the humid low land rainforest occurring along the rivers including areas of swamp-forest, high forest, secondary forest, and open scrub. Among the common trees are *Lophiraalata* (Iron wood), *Ceibapentandra* (silk cotton tree), *Baphianitida* (Cam wood), *Lovoatrichiloides* (walnut) e.t.c (White and Oates, 1999).

The tropical evergreen rain forest belt bears timber production and forest development, this is suitable for the production of cassava, plantain, yam, growing of fruits-citrus, oil palm, cocoa, rubber and other arable crops.

3.1.6 Peoples and Occupation

The study area is made up of non-indigenous and indigenous communities. The non-indigenous are settlers who came from other neighboring States of different ethnic backgrounds like Urhobo, Itsekiri, Ijaw, Esan, Isoko and the Yoruba for the purpose of farming and other livelihood activities such as goat keeping, poultry, small scale cottage

industry, handcraft, tailoring and petty trading/farm produce marketing. Majority of these people live along the boarder lands and the river banks. The indigenous communities are the traditional communities. They constitute the major inhabitants of the study area. They are the Bini speaking people and they represent the dominant ethnic group in the study area.

3.1.7 Culture and Tradition

The people are traditionalist who believes in African traditional religion, worshipping a diverse number of ancestral gods, goddesses and deities such as Ogun, Olokun, Odighi, and Igue. Christianity in this area is currently on the increase as it is fast spreading across the various communities. However, the immigrants are of different cultural backgrounds in terms of religions and their modes of worship (FRIN, 2000).

The traditional headships are mostly found in Udo and Usen. The subjects in their different domains are subordinate to them and they are responsible for settling major dispute among their people. They are in turn supported by the Odionwere who oversees the smaller villages on their behalf. The Ijaw communities are administered by the Amokosiwe equivalent to the Odionwere supported by community Chairman who are elected on tenure basis. The other non-indigenous communities have their own representatives and are answerable to either the Iyase of Udo or the Elawure of Usen as the case may be (FRIN, 2000).

3.1.8 Economy

The land tenure system comprises government allocations, first occupancy, communal allocation, free holding (purchase), inheritance and rentage (FRIN, 2000). Land is a key factor in farming activities which determine roles played in agricultural production and consumption linkage. The study area allows diverse agricultural production. Farming is the

major occupation of the people and they cultivate crops like yam, cassava, plantains, maize, garden egg, tomatoes, pepper, cocoyam, okro, melon, and leafy vegetables. Other cash crops of principal industrial raw materials for agro-allied business are rubber, timber, cocoa, palm tree, pineapple, oranges and avocados-pear. There is also a significant animal husbandry activities ranging from goats, sheep, pigs to poultry. The riverine areas are prime areas of aquaculture and local gin making. The other occupation worthy of mention is petty trading mostly by women and migrants from other areas(Ikhile, 2012).

3.2 Methodology

3.2.1 Reconnaissance Survey

A reconnaissance survey was carried out in order to be well-acquainted with the study area particularly the selected wards. This helped the researcher to have first-hand information about the study area. One made some field observations with respect to women in agriculture and the activities of women farmers as well as spot assessment for the phenomenon regarding the social economic operation in the study area.

3.2.2 Data Selection

The types of data used for this study include among others:-

(i) The roles of women in farming activities.

(ii) How the roles are being performed.

(iii) The socio-economic characteristics of women involved in agricultural production.

(iv) Agricultural extension services available to women participating actively in agricultural production.

(v) Pre and post harvest farm activities of women.

(vi) Constraints to women in agricultural production.

(vii) Type of agriculture engage in by the women

3.2.3 Sources of Data

Primary data was collected through a structured questionnaire. The questionnaire elicited information based on the stated objectives of the study. The questionnaire was the major research instrument. In addition, Focus Group Discussion (FGD) was conducted among the women that participated actively in agricultural production in order to elicit detail information from the women. The FGD was held in five sessions in five selected villages in the study area. The FGD comprised of 10 participants mainly women farmers from each of the five villages. Each FGD discussion comprise of ten women selected from one community in each ward and conducted in the selected venue suitable for the discussants. The researcher was the moderator, and was assisted by a research assistance who reside in the study area. The discussion was thrown open for every member to participate and questions were raised in line with the research objectives of the study. Thedata collected through this FGD was very helpful in providing detailed insight about the research. The FGD guide is presented in Appendix II.

The secondarydatawere obtained from related textbooks, journals, magazines,conference proceedings, official diaries, official gazettes, and National population commission (NPC), information from ministries and parastatals, federal bureau of statistics (FBS) and materials from related websites. These were mostly for the literature review.

3.2.4 Sample Size and Sampling Techniques

To determine the sample size for this research, Krejcie and Morgans (1970) sample Table was adopted which states that a sample size of 382 respondents is appropriate

andrepresentative of a given population size of 104691.

Table 3.1 presents a systematic breakdown of the sample procedure. The number of respondents for each ward was derived using the following formula employed by Oguntunde(2013) as follows:-

$$N \quad 1 \quad \frac{n}{} \times \frac{382}{}$$

The study area has a total population of 138,072 made up of 72,287 males and 63,069 females (NPC, 1991) projected to 2014 (see Table 3.1). It is made up of ten wards namely; Iguobazuwa East, Iguobazuwa West, Nikorogha, Ofunama, Ora, siloko, Udo, Ugbogui, Umaza and Usen. In this study multi-stage sampling method was used. First, systematic sampling method was adopted to identify five wards for the study. From the list of wards presented in Table3.1, the even numbered wards were selected, namely;Iguobazuwa West, Ofunama, Siloko, Ugbogui and Usen. This spread is to ensure that every ward in the study area is equally represented.

The second stage involved the use of purposive sampling method to select the villages while the third stage involved the use of random sampling in selecting the women for the administration of the questionnaire in each of the households in the study area. The random sampling was done by open ballot where the entire respondents were given equal chance to be selected. The household was the unit of observation in this study.

Three hundred and eighty two (382) copies of questionnaire were administered among the sampled population out of which three hundred and sixty (360) copies were retrieved from the field. In the process of coding and collation of the data into the system some 20 copies were discovered to be faulty leaving the researcher with the sample of 340

for data analysis. This constitutes some 85% of the sampled population for the study (see Table 3.1).

Table 3.1: List of Wards/Villages and the proportion of respondents selected fromthe Study Area.

S/No	Ward	Selected wards	Projected female population 2014	No. of Female Respondents
1.	Iguobazuwa East		16634	
2.	Iguobazuwa West	Iguobazuwa West	14954	112
3.	Nikorogha		4980	
4.	Ofunama	Ofunama	6142	46
5.	Ora		3369	
6.	Siloko	Siloko	3320	25
7.	Udo		26624	
8.	Ugbogui	Ugbogui	16102	121
9.	Umaza		2158	
10.	Usen	Usen	10408	78
Total	**10**		**104691**	**340**

Source: Compiled from NPC, 1991 projected to 2014.

3.2.5 Methods of Data Analysis

Descriptive and inferential statistics were used in the analysis of data. Descriptive statistics used include, the mean, median, mode, standard deviation, frequency and percentages. This was used to summarize the socio-economic and demographic variables of the respondents. It was used in analyzing objectives i, ii, iii, and v.

Multiple regression is an extension of simple linear regression. It is used when there is the need to establish relationship between a variable and a set of other variables.

The variable to be predicted is called the dependent variable. The variables used to predict the value of the dependent variable are called the independent variables.

In this study multiple regression technique was employed to examine the relationship between the women traits and factors affecting the role of women in agricultural production. For this study the multiple regression model is expressed as

$Y = a + b_1x_1 + b_2x_2 + b_3x_3 \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots + b_9x_9 + e$

Where;

Y = dependent variable (All the roles performed by the respondents)

a and b = regression coefficients

X = independent variables

x_1 = Age of the female farmers

x_2 = Marital status of female farmers

x_3 = Income of farmers per annum

x_4 = Years of experience in farming

x_5 = Type of agricultural activity

x_6 = Type of crop

x_7 = Size of farm holding (in acres)

x_8 = Household size

x_9 = Level of education

e = error term

All statistical analysis was performed by using Statistical Package for Social Sciences (SPSS) version 20 and all tests were at 0.05 level of significance.

The chi-square which is a non-parametric statistic was used to achieve cross-tabulation of data to establish whether or not a significant difference exists between socio-

economic characteristics of women farmers and their roles in agricultural production in the study area.

Chi-square (X^2) formula is as follows:

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

Where:

Σ = addition sign or sum of

O = number of frequency observed

∈ = number of frequency expected

CHAPTER FOUR

DATA ANALYSIS AND DISCUSSION

4.1 Introduction

Analysis is done in subsections including; socio-economic status of respondents, agricultural activities of women farmers, roles performed by women on their farms, influence of socio-economic characteristics of women farmers in agricultural production and constraints encountered by women in agricultural production in the study area.

4.2 Socio-Economic Characteristics of Women in Agriculture in Ovia Southwest LGA

The study examined the socio-economic characteristics of the women in agricultural production and the result is presented in Table 4.1.

From the table, 66(19.4%) of the respondents were between the ages of 15-30 years, 140(41.2%) were between the ages of 31-45 years and another 103(30.3%) respondents were between the ages of 46-60 while 31(9.1%) are above 60 years. The age distribution of respondents' revealed that most of the respondents are very much in their productive and active age.

Table 4.1a Distribution of Respondents according to Socio-Economic Characteristics

Variables	**Iguobazuwa west**		**Ofunama**		**Siloko**		**Ugbogui**		**Usen**		**Total**	
Age Group	**Freq**	**%**	**Freq**	**%**	**Freq**	**%**	**Freq**	**%**	**Freq**	**%**	**Freq**	**%**
15-30	18	19.6	10	21.7	5	20	17	16.2	16	22.2	66	19.4
31-45	35	38.0	19	41.3	10	40	42	40	34	47.2	140	41.2
46-60	29	31.5	12	26.1	8	32	36	34.3	18	25	103	30.3
Above 60Yrs	10	10.9	5	10.9	2	8	10	9.5	4	5.6	31	9.1
Total	**92**	**100**	**46**	**100**	**25**	**100**	**105**	**100**	**72**	**100**	**340**	**100**
Marital status												
Single	18	19.6	9	19.6	3	12	14	13.3	13	18.1	57	16.8
Married	32	34.8	19	41.3	10	40	35	33.3	27	37.5	123	36.2
Divorce/Separated	15	16.3	4	8.7	4	16	17	16.2	9	12.5	49	14.4
Widowed	21	22.8	12	26.1	6	24	28	26.7	20	27.8	87	26.2
Unmarried Mothers	6	6.5	2	4.3	2	8	10	9.5	3	4.2	23	6.8
No response	-	0	-	0	-	0	1	0.95	-	0	1	0.3
Total	**92**	**100**	**46**	**100**	**25**	**100**	**105**	**100**	**72**	**100**	**340**	**100**
Educational attainment												
No Formal Education	18	19.6	7	15.2	5	20	14	13.3	13	18.1	57	16.8
Primary Education	24	26.1	13	28.3	4	16	29	27.6	21	29.2	91	26.8
Secondary Education	30	32.6	20	43.5	7	28	46	43.8	28	38.9	131	38.5
Tertiary Education	14	15.2	1	2.2	4	16	10	9.5	5	6.9	32	9.4
Others	4	4.3	3	6.5	2	8	5	4.8	3	4.2	17	5
No response	2	2.2	2	4.3	3	12	1	2.9	2	2.8	10	2.9
Total	**92**	**100**	**46**	**100**	**25**	**100**	**105**	**100**	**72**	**100**	**340**	**100**

Source: Field Survey, 2014

Table 4.1b: Distribution of Respondents according to Socio-Economic Characteristics

Variables	**Iguobazuwa west**		**Ofunama**		**Siloko**		**Ugbogui**		**Usen**		**Total**	
	Freq	**%**	**Freq**	**%**	**Freq**	**%**	**Freq**	**%**	**Freq**	**%**	**Freq**	**%**
Years of experience in agricultural practice												
0-5Yrs	15	16.3	8	17.4	4	16	16	15.2	10	13.9	53	15.6
6-10Yrs	21	22.8	11	23.9	6	24	18	17.1	21	29.2	77	22.6
11-15Yrs	5	5.4	4	8.7	3	12	11	10.5	8	11.1	31	9.1
16-20Yrs	41	44.6	18	39.1	9	36	50	47.6	30	41.7	148	43.5
Above 21Yrs	7	7.6	3	6.5	2	8	6	5.7	2	2.8	20	5.9
No response	3	3.3	2	4.3	1	4	4	3.8	1	1.4	11	3.2
Total	**92**	**100**	**46**	**100**	**25**	**100**	**105**	**100**	**72**	**100**	**340**	**100**
Annual income												
Less than ₦50,000	40	43.5	16	34.8	9	36	41	39.0	26	36.1	132	38.8
₦ 51,000 – ₦80,000	29	31.5	14	30.4	6	24	30	28.6	14	19.4	93	27.4
₦81,000 – ₦110,000	14	15.2	7	15.2	5	20	10	9.5	18	25	54	15.9
₦111,000 – ₦140,000	7	7.6	5	10.9	4	16	23	21.9	9	12.5	48	14.1
141,000 and above	2	2.2	4	8.7	1	4	1	1	5	6.9	13	3.8
Total	**92**	**100**	**46**	**100**	**25**	**100**	**105**	**100**	**72**	**100**	**340**	**100**

Source: Field Survey, 2014

Majority of the respondents 123(36.2%) were married, 49(14.4%) other respondents were once married stating that they were either divorced or widowed. Here also in the table, 57(16.8%) respondents were single women while the remaining 23(6.8%) respondents indicated that they were unmarried mothers. It was revealed that single respondents go into farming to generate income to support other business activities which is of interest to them. The divorced have obviously settled into farming as main means of livelihood. They depend solely on their farms to sustain their family. The unmarried mothers are the category of women farmers who have never been married but have children. They depend on farming to support themselves and their children. From the analysis, it could be inferred that most women farmers are pillars of support for their families in household food security which corroborates the findings of Abayomi, (1997).

The literacy of women farmers is quite encouraging considering the sum of primary, secondary and tertiary education, however, 38.5% and 9.4% have secondary and above. None formal education and primary education account for 16.8% and primary 26.8% respectively. This implies that the population used in this study are literate with a high tendency to as well provide the study with fairly accurate information about the roles of women in farming activities. This is acceptable on the ground that education affects the way farms are managed as well as overall production (Nkang, et al., 2009). Education levels play a good role in adoption of new and improved farming techniques for agricultural production.

Women constitute more or less half of any country's population. In most countries however, women contribute towards the value of production both quantitatively in labour force participation and qualitatively in educational achievement and skilled manpower

(Lawanson, 2008).The years of experience of respondents in agricultural practice as presented in the Table 4.1 shows that 130(38.2%) respondents have been farmers for about 10 years. Here also, 31 and 148 representing 9.1% and 43.5% respectively have been engaging in agricultural production between 11 to 20 years while another 31(9.1%) stated that they have been into farming activities for over 21 years and above. Indeed, experience goes along with skill acquisition which is fundamental to efficiency and effectiveness in any endeavour. The result implies that 179 respondents representing 52.6% have acquired reasonable years of experience in farming which to an extent have a positive effect on agricultural production. It is essentially an indication that farmers with more experience will likely adopt innovative ideas and techniques that would enhance increase in agricultural activities (Ben, 2015).

Here also on Table 4.1, it was revealed that 132(38.8%) respondents earn less than N50,000 per annum from sales of their farm produce. Another 93(27.4%) and 54(15.9%) revealed that they earn between N51,000 – N80,000 while (17.9%) earn between N81,000 – N110,000. The women farmers in the study area are mainly food producers for mainly subsistent farming. The FGD session at ugbogui village also revealed that these farmers only sell the surplus of their produce after they must have preserved enough for their personal consumption. According to one of the women farmers:

> *"I normally keep enough food at home for our personal use because in this village everybody try to farm what him and his family will eat for a period of time. It is only when you get surplus harvest that you can take to the market to sell"*

4.3 Farm Size, Land Allocation, Labour, Duration and Implements

This section presents the means being employed by women farmers in Ovia South-West in performing their roles in agricultural production.

Table 4.2 Distribution of respondents by Size of farmland, Source of farm labour, average number of times spent on farming activities daily, and Farm implements available to them.

Variable	Frequency (N = 340)	%
Size of farmland by Respondents		
0-1 acre	101	29.7
2-3 acres	161	47.4
4-5 acres	51	15.0
Above 5 acres	23	6.8
No response	4	1.2
Total	**340**	**100**
Sources of farm labour		
Husband	65	19.1
Personal labour	83	24.4
Children	45	13.2
Hired labour	83	24.4
Neighbours/community	28	8.2
No response	36	10.6
Total	**340**	**100**
Numbers of hours women spend on farm activities		
0-2 hours	46	13.5
3-4 hours	40	11.8
5-7 hours	190	55.9
8-10 hours	52	15.3
No response	12	3.5
Total	**340**	**100**
Farm implements used by women		
Cutlasses, Hoes, Axe, Knife,Basket, Wheel Barrow and Harvesting rod	231	67.9
Tractor/Plough	15	4.4
No response	94	27.6
Total	**340**	**100**

Source: Field Survey, 2014

The study investigated size of farm holdings, the duration of time spent on farms and the implements used by the women in agricultural production. From the analysis, the size of farmland used by respondents in the study area show that 101(29.78%) and 161(47.4) cultivate between 0 – 3 acres of land, while another 51(15%) and 23(6.8%) cultivate between 4 – 5 acres of land for their farming activities. The remaining 4 respondents did not respond to the questions. It could be inferred here that women do not possess large farmland which could have probably improved their lot. This is because of the difficulty associated with land tenure system in the area.

Several means are being employed by women farmers to ensure that they perform their roles in agricultural production. From the analysis, 83(24.4%) revealed that they perform their farm duties themselves. But owing to the fact that they engage in taking care of children and other productive activities like fetching firewood, water and preparing food at home, women farmers engaged other individuals to help them out in the farm. Many other respondents indicated that their husbands help them out in the farm representing 19.1%.Here also in Table 4.2, 13.2% and 8.2% indicated that their children help them out on the farm including neighbours and community members respectively. Another 24.4% revealed that the engage the services of hired labourers to perform this duties for them in the farm. From the analysis presented in Table 4.2, 190(55.9%) respondents revealed that they spend up to 7 hours on their farms daily, 46 and 40 others indicated that they spend between 2 to 4 hours daily. Furthermore, 52(15.3%) said that they spend 10 hours on their farms while the remaining 12 did not respond to the question. It could be surmised here that majority of women farmers spend between 7 – 10 hours on their farms daily.

Rural farmers find it difficult to purchase farm implements. This is not different from

the women farmers in Ovia South-West LGA who even find it more difficult to obtain loans and financial assistants to carry out their agricultural activities.

The extent of use of local and modern tools for farming purposes is confirmed by 231(67.9%) respondentswho revealed that they make use of Cutlasses, Hoes, Axe, Knife,Basket, Wheel Barrow and Harvesting rodto carry out their farming activities. Another 15 respondents representing 4.4% stated that apart from the cutlass and hoe, they make use of the tractor and plough which is the only modern farm implement used to complement the other tools available to them while the remaining 27.6% of the respondents did not respond. It could be inferred here that the use of modern farming implement is not common among women farmers in Ovia South-West LGA except for few who make use of the plough for farming activities. This is in agreement with the study of Njiro (1990), that cash crop production which is dominated by men is characterized by utilization of improved farm equipment, (such as tractors and combine harvesters) and farm inputs, (such as fertilizers and pesticides). Subsistence farming, on the other hand, which is usually dominated by women, is characterized by traditional farming techniques, rudimentary farm technology and inadequate farm inputs. Women access to new technology is crucial in maintaining and improving agricultural productivity. But gender gaps exist for a wide range of agricultural technologies, including machines and tools, improved plant varieties and animal breeds, fertilizers, pest control measures and management techniques.

From the FGDs, discussants revealed this situation, as one of them comments thus:

> *"Access to land is a very big problem to women farmers in this community as most land are owned by men and it is only what the men give to us that we farm with and most times we are given small portions to farm which means small harvest and small income.*

4.4 Type of Crops Produced by Women Farmers in the Study Area

The examined the various crops produced by the women that engaged in agricultural activities. The result is presented in Table 4.3. Carrying out agricultural activities on the farm entails the cultivation of numerous crops for either subsistence or commercial purposes.

Table 4.3 Distribution of Respondents according to Crops Produced by Women farmers in Ovia Southwest

Variables	**Iguobazuwa west**		**Ofunama**		**Siloko**		**Ugbogui**		**Usen**		**Total**	
Types of crops	**Freq**	**%**	**Freq**	**%**	**Freq**	**%**	**Freq**	**%**	**Freq**	**%**	**Freq**	**%**
Cassava, maize, melon and vegetables	26	28.3	17	36.97	9	36	40	38.1	24	33.3	116	34.1
Plantain, pepper, tomatoes	17	18.5	6	13.0	4	16	19	18.1	12	16.7	58	17.1
Cocoyam, tomatoes, vegetables	19	20.7	11	23.9	7	28	23	21.9	16	22.2	76	22.4
Cassava only	15	16.3	5	10.9	3	12	9	8.6	8	11.1	40	11.8
Maize only	5	5.4	4	8.7	1	4	6	5.7	4	5.6	20	5.9
Melon and vegetable only	10	10.9	3	6.5	1	4	8	7.6	8	11.1	30	8.8
Total	**92**	**100**	**46**	**100**	**25**	**100**	**105**	**100**	**72**	**100**	**340**	**100**

Source: Field survey, 2014

Respondents identified the types of crops they plant on their farms. From the Table, 116(34.1%) stated that they plant cassava, maize and melon on their farms and 58(17.1%) stated that they plant Plantain, Pepper and Tomatoes. From the Table also, 76(22.4%) revealed that they plant coco yam, tomatoes and vegetables, while 40(11.8%), 20(5.9%) and 30(8.8%) further revealed that they plant cassava, maize, melon and vegetables on their farm. It could be deduced here that women in Ovia South-West LGA plant more of cassava, maize and vegetables on their farm. From the FGD conducted in Ogbogui, Mrs. Peace Izedomwen said that:

> *"they engage more in planting food crops because this is our traditional crops because they are our staple food."*

It was also revealed by the discussants that residence of Ugboguivillage are much more up and doing in farming activities than the respondents from the other wards. This is not unconnected to the fact that they find it easier to get access to farm land and to an extent credit facilities. Also, the group session revealed that inadequate farm land necessitate the practice of mix cropping in the various study area.

4.5 Roles Performed by Women in Agriculture

The spread of women farmers across the five wards as reflected in Table 4.4 is to show the different level of involvement of women farmers in agricultural production in Ovia South West L.G.A based on population size and availability of farmland. The study area is characterized by similar geomorphologicfeatures. E.g. climate, soil, vegetation, relief and drainage. In this regard women farmers enjoy similar fate in agriculture production.

There are varieties of roles performed by the women in agricultural production in the study area. These roles are examined and the results are presented in Table 4.4. Majority of the respondents stated that they do not engage in land preparation (felling of trees, slashing and burning of grasses) but are mostly contracted to labourers as 153(45%) and 25(7.4%) ranked it poor, while those who ranked good and excellent accounted for 85(25%) and 48(14.1%) and next to it were those who ranked it good representing 29(8.5%). The inference here is that while some perform these duties themselves, majority of the respondents hired labour for these farm operations.

Majority of the respondents revealed that they engage in planting of seeds on their farm as 93(27.4%) ranked it as very good and 133(39.1%) ranked excellent, while 58 other respondents stated that they do not perform the role of planting of seeds on their farms. This is corroborated by 25.9% and 37.1% of respondents who ranked excellent and very good revealedthat women perform the role of weeding on their farms, while 17.9% and 9.4% of respondents ranked it average and poor.

Table 4.4a: Distribution of Women by Roles Performed on their Farm

Variables	Wards	Poor		Average		Good		Very good		Excellent		N = 340	
		Freq	%	Freq	%	Freq	%	Freq	%	Freq	%	Freq	%
Land preparation (slashing, tree felling and Burning)	Iguobazuwa west	48	31.2	5	20	2	6.9	30	35.3	7	14.6	92	27.1
	Ofunama	16	10.5	5	20	6	20.7	10	11.8	98	18.8	46	13.5
	Siloko	10	6.6	3	12	2	6.9	6	7.1	4	8.3	25	7.4
	Ugbogui	49	31.8	9	36	10	2.9	20	23.5	17	35.4	103	30.2
	Usen	30	19.5	3	12	9	31.0	19	22.4	11	22.9	72	21.2
	Total	**153**	**45**	**25**	**7.4**	**29**	**8.5**	**85**	**25**	**48**	**14.1**	**340**	**100**
Planting	Iguobazuwa west	2	14.3	8	19.0	13	22.4	29	31.2	40	29.4	92	27.1
	Ofunama	5	35.7	7	16.7	8	13.8	12	12.9	14	12.5	46	13.5
	Siloko	1	7.1	3	7.1	5	8.6	6	6.5	10	7.4	25	7.4
	Ugbogui	1	7.1	13	31	20	34.5	27	29.0	44	33.4	105	30.9
	Usen	5	35.7	11	26.2	12	20.7	19	20.4	25	18.4	72	21.2
	Total	**14**	**4.1**	**42**	**12.4**	**58**	**17.1**	**93**	**27.4**	**133**	**39.1**	**340**	**100**
Weeding	Iguobazuwa west	17	27.9	14	42.4	5	15.5	24	27.3	32	25.4	92	27.1
	Ofunama	9	14.8	4	12.1	2	6.3	12	13.6	19	15.1	46	13.5
	Siloko	5	8.2	1	3.0	3	9.4	6	6.8	10	7.9	25	7.4
	Ugbogui	17	27.9	10	303	14	43.8	28	31.8	36	28.6	105	30.9
	Usen	13	21.3	4	12.1	8	25	18	20.5	29	23.0	72	21.2
	Total	**61**	**17.9**	**33**	**9.7**	**32**	**9.4**	**88**	**25.9**	**126**	**37.1**	**340**	**100**

Source: Field Survey, 2014

Table 4.4b: Distribution of Women by Roles Performed on their Farm

Application of pesticides	Iguobazuwa west	35	29.9	9	31.0	10	40	20	23.3	18	30.5	92	27.1
	Ofunama	22	18.8		6.9	5	20	10	11.6	7	11.9	46	13.5
	Siloko	10	8.5	2	6.9	1	4	7	8.1	5	8.5	25	7.4
	Ugbogui	40	34.2	10	34.5	3	12	35	40.7	17	28.8	105	30.9
	Usen	34	29.1	6	20.7	6	24	14	16.3	12	20.3	72	21.2
	Total	**141**	**41.5**	**29**	**8.5**	**25**	**7.4**	**86**	**25.3**	**59**	**17.4**	**340**	**100**
Transportation/sales of farm produce	Iguobazuwa west	5	25	14	35.9	17	29.3	20	26	36	24.7	92	27.1
	Ofunama	4	20	5	12.8	6	10.3	11	14.3	20	13.7	46	13.5
	Siloko	1	5	3	7.7	4	6.9	7	9.1	10	6.8	25	7.4
	Ugbogui	6	30	9	23.1	19	32.8	23	29.9	48	32.9	105	30.9
	Usen	4	20	8	20.5	12	20.7	16	29.8	32	21.9	72	21.2
	Total	**20**	**5.9**	**39**	**11.5**	**58**	**17.1**	**77**	**22.6**	**146**	**43**	**340**	**100**
Marketing / distribution of farm produce	Iguobazuwa west	2	20	11	34.4	14	30.4	25	27.5	40	24.8	92	27.1
	Ofunama	1	10	4	12.5	5	10.9	12	14.3	23	14.3	46	13.5
	Siloko	2	20	3	9.4	4	8.7	6	6.6	10	6.2	25	7.4
	Ugbogui	2	20	10	31.3	16	3.8	27	29.7	50	31.1	105	30.9
	Usen	3	30	4	12.5	7	15.2	20	22	38	23.6	72	21.2
	Total	**10**	**2.9**	**32**	**9.4**	**46**	**13.5**	**91**	**26.8**	**161**	**47.4**	**340**	**100**
Harvesting and processing	Iguobazuwa west	7	21.2	5	27.8	15	28.3	24	30	41	26.3	92	27.1
	Ofunama	4	12.1	3	16.7	8	15.1	11	13.8	20	12.8	46	13.5
	Siloko	3	9.1	2	11.1	4	7.5	6	7.5	10	6.4	25	7.4
	Ugbogui	11	33.3	6	33.3	16	30.2	18	22.5	54	34.6	105	30.9
	Usen	8	24.2	2	11.1	10	18.9	21	26.2	31	19.9	72	21.2
	Total	**33**	**9.7**	**18**	**5.3**	**53**	**15.6**	**80**	**23.5**	**156**	**45.9**	**340**	**100**

Source: Field Survey, 2014

Here also on Table 4.4b, 77(22.6%) and 146(43%) who ranked very good and excellent revealed that they transport their farm produce to the market place for onward sales to generate income,while 20(5.9%) and 39(11.5%) who ranked it poor and average stated that they do not transport their farm produce nor take them out for sales, while 58(17.1%) respondents ranked it good. From the analysis, it could be observed and stated that majority of women in Ovia South-West LGA transport their farm produce to the point of sales.

The marketing and distribution of farm produce in Ovia South-West LGA by women was also surveyed. From the analysis shown on Table 4.4b, 252(74.2%) of the respondents ranked it very good and excellent as they revealed that women in Ovia South-West LGA, market the surplus of their produce after harvesting themselves, while 42(12.3%) ranked it poor and average with the remaining 46(13.5%) ranking it good. From the survey also, 236(69.4%) of the respondents who ranked it very good and excellent revealed that they perform the role of harvesting and processing of farm produce from their farms while 51(15%) women ranked it poor and average and the remaining 53(15.6%) ranked it good.

NCEMA (1991) had highlighted the roles of women in agriculture to include among others: land clearing, crop planting, fertilizer application, weeding/pruning, spraying crops, harvesting, processing, storage, transporting farm produce and marketing of produce. This study as shown in Table 4.4a disagrees with the assertion of NCEMA (1991) as it was revealed that women do not engage in land preparation (clearing, slashing, tree felling and burning).

The roles performed by women as revealed in this study corroborate the findings of Damisa*et al.,* (2007) who stated that women contribution to farm work is as high as between 60 and 90% of the total farm task performed. Sharon (2008) also pointed out that women

play critical roles in agriculture throughout the world, producing, processing and providing the food we eat. Women make up half the rural population and they constitute more than half of the agricultural labor force. Rural women in particular are responsible for half of the world's food production and produce between 60 and 80 percent of the food in most developing countries.

4.6 Methods Adopted in Performing the Roles

Some methods were adopted by the women that engaged in agricultural production and this was investigated. The result is presented in Fig. 4.1. 173 respondents representing 50.9% revealed that they perform most of the farming activities by themselves, another 39.1% stated that they contract the work out to wage labourers.

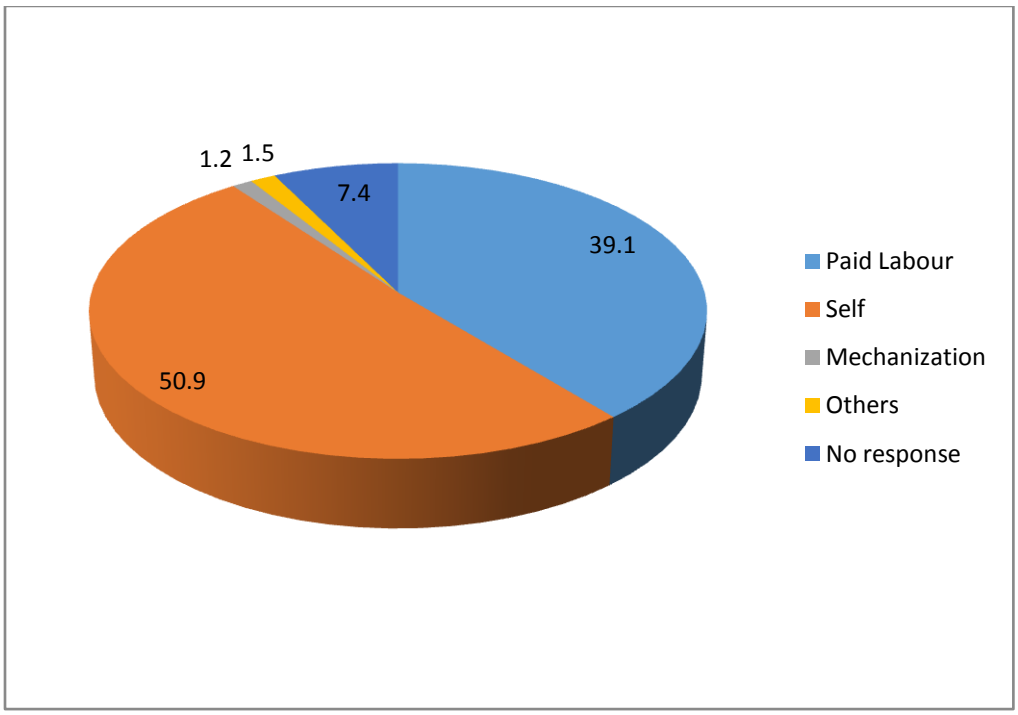


Fig. 4.1: Methods adopted to perform farming roles by respondents
Source: Field Survey, 2014

Here also in the chart, 4 respondents representing 1.2% revealed that they employ the use of modern machines like tractor to help them out in the farms with another 6 respondents

representing 1.5% also stating that they make use of other means to carry out their farming activities. Another 7.4% did not respond to this question.

4.7 Factors Affecting Women Farmers in the Study Area

There are some important factor that usually influence women farmers in the process of agricultural production in the study area. This issue was investigated and the result is presented in Table 4.5. The extent of affirmation by respondents of who takes decision on what to plant and how to market the farm produce is also presented in Table 4.5.

Table 4.5: Factors Affecting Women Farmers in Agricultural Production

Variables	**Iguobazuwa west**		**Ofunama**		**Siloko**		**Ugbogui**		**Usen**		**N = 340**	
Process of decision makers	Freq	%	Freq	%	Freq	%	Freq	%	Freq	%	Freq	%
Husband	49	53.3	19	41.3	10	40	43	41	24	33.3	145	42.6
Self	29	31.5	15	32.6	7	28	28	26.7	19	26.4	98	28.8
Extension workers	5	5.4	9	19.6	4	16	20	19.0	11	15.3	49	14.4
Cooperative society	2	2.2	1	2.2	1	4	4	3.8	8	11.1	16	4.7
No response	7	7.6	2	4.3	3	12	10	9.5	10	13.9	32	9.4
Total	**92**	**100**	**46**	**100**	**25**	**100**	**105**	**100**	**72**	**100**	**340**	**100**
Source of Finance/ Capital for Farm activities												
Husband	24	26.1	10	21.7	7	28	27	25.7	16	22.2	84	24.7
Cooperative society	7	7.6	6	13.6	4	16	13	12.4	10	13.9	40	11.8
Agricultural loan	2	2.2	4	8.7	2	8	2	1.9	5	6.9	15	4.4
Family and Friends	49	53.3	19	41.3	9	36	44	41.9	28	38.9	149	43.8
No response	10	10.9	7	15.2	3	12	19	18.1	13	18.1	52	15.3
Total	**92**	**100**	**46**	**100**	**25**	**100**	**105**	**100**	**72**	**100**	**340**	**100**
Extension Services Benefited from												
Use of improved seedlings	9	9.8	10	21.7	5	20	12	11.4	18	25	54	15.9
Use of modern implement	3	3.3	5	10.9	-	0	4	3.8	5	6.9	17	5
Providing marketing information	7	7.6	2	4.3	2	8	18	17.1	11	15.3	40	11.8
All of the above	52	56.5	21	45.7	10	40	48	45.7	30	41.7	161	47.4
No response	21	22.8	8	39.1	8	32	23	21.9	8	11.1	6.8	20
Total	**92**	**100**	**46**	**100**	**25**	**100**	**105**	**100**	**72**	**100**	**340**	**100**
Source of advice on improving farm production other than extension workers												
Husband	48	52.2	19	41.3	11	44	51	48.6	32	44.4	161	47.4
Relative and friends	11	12	7	15.2	2	8	12	11.4	10	13.9	42	12.4
Depends on nature knowledge	14	15.2	9	19.6	5	20	17	16.2	14	19.4	59	17.4
No response	19	20.7	11	23.9	7	28	25	23.8	16	22.2	78	22.9
Total	**92**	**100**	**46**	**100**	**25**	**100**	**105**	**100**	**72**	**100**	**340**	**100**

Source: Field Survey, 2014

From the analysis, majority of the respondents as revealed in Table 4.5 indicated that their husband takes the major decision on how to secure, plant and market their farm produce accounting to 70.3% of the population sampled while about 80(23.5%) stated that they take the decision themselves. Another 49(14.4%) and 16(4.7%) revealed that extension agents and the corporative society they belong to help them with such decision. It could be deduced here that the respondents make use of the help available to them so as to protect the farmland and what they produce. Women farmers in Ovia South-West are faced with the problem of capital as revealed by 281(82.6%) who said that they do not have capital to embark on a wider agricultural production (growing of crops, rearing of animals and poultry production).

From the analysis, 84(24.7%) clearly indicated that their husbands are responsible for the capital to purchase seedlings and maintenance of the farm. Another 40(11.8%) indicated that the corporative societies they belong to provide them capital for their farming activities with 149(43.8%) others indicated that they obtain their capital from friends and relatives while the remaining 15(4.4%) stated that they got their capital from agricultural loans sourced from bank of agriculture. The implication of their affirmation is that it clearly shows that though the respondents are committed to contribute to agricultural production in the study area, they still depend largely on friends and relatives for farm support.

Also from Table 4.5, 54(15.9%) respondents indicated that they were trained on how to use improved seedlings by extension workers. More so, 17(5%) and 40(11.8%) other respondents reveal that they were trained on improved farm practices and use of modern farm implement and also providing them with information on how to market their farm produce while most of the respondents stated that they went through all the above training accounting

for 47.4% but the gap between the women farmers and extension workers has not helped to improve their production.

The extent of affirmation by respondents of their source of advice on improving their farm production aside professional services by extension agents is also presented in Table 4.5. From the analysis, 161(47.4%) respondents affirmed that their husband advices them on what to do in their farms. Others stated that relatives and friends also help them with words of advice while another 59(17.4%) revealed that they depend on their native knowledge of farming production with 78(22.9%) whoremained neutral. From the data, it is obvious that women farmers still rely on advice and support from family and friends.

4.8 Activities of Women in Agricultural Production

Agricultural activities engaged in by women in Ovia South-West L.G.A was surveyed by the study. The table below presents the activities being carried out by women farmers in the study area.

Table 4.6 Types of Agricultural Activities Women Engage In by Women Farmers in Ovia South West

Variables	**Iguobazuwa west**		**Ofunama**		**Siloko**		**Ugbogui**		**Usen**		**Total**	
Types of agricultural activities respondents are involved in	Freq	%	Freq	%	Freq	%	Freq	%	Freq	%	Freq	%
Farming only	40	43.5	18	39.1	10	40	50	47.6	28	38.9	146	42.9
Farming and fishing	14	15.2	8	17.4	4	16	16	15.2	11	15.3	53	15.6
Farming and animal husbandry	1	1.1	1	2.2	2	8	2	1.9	3	4.2	9	2.6
Farming and poultry	11	12	5	10.9	3	12	10	9.5	7	9.7	36	10.6
Others	2	2.2	4	8.7	-	0	7	6.7	4	5.6	17	5
No response	24	26.1	10	21.7	6	24	20	19.0	19	26.4	79	23.2
Total	**92**	**100**	**46**	**100**	**25**	**100**	**105**	**100**	**72**	**100**	**340**	**100**
Other non farm activities												
Taking care of children at home	37	40.2	12	26.1	6	24	18	17.1	19	26.4	92	27.1
Business / Marketing	54	58.7	28	60.9	16	64	81	77.1	47	65.3	226	66.5
No response	1	1.1	6	13.0	3	12	6	5.7	6	8.3	22	6.5
Total	**92**	**100**	**46**	**100**	**25**	**100**	**105**	**100**	**72**	**100**	**340**	**100**

Source: Field Survey, 2014

The study investigated the various activities that women engaged in agricultural production and the result is presented in Table 4.6. Among the female farmers sampled, 146(42.9%) respondents indicated that they only perform arable farming activities on their farms only, 53(15.6%) respondents said they engage in crop and fish farming, another 9(2.6%) and 36(10.6) respondents revealed that engage in animal husbandry and poultry farming coupled with their crop farming on the farms.

The remaining 79(23.2%) respondents could not provide any detail response as they did not attend to that section of the questionnaire. This table shows that a significant proportion of the women farmers engage in crop farming activities. From the FGD conducted in Ofunama ward, Mrs. Patience Tombra, said "that women generally practiced mixed farming as oppose to sole cropping. This pattern of farming is as a result of limited farmland available to them." Some of the other activities engaged in by these women include; tailoring, petty trading and marketing of farm produce.

Table 4.6 also show respondents response on the open ended question that sought for respondents affirmation on the activities they perform aside farming activities, 92(27.1%) respondents revealed that apart from farming, they engage in taking care of their children at home. Another 226(66.5%) respondents stated that they engage in marketing activities while the remaining 22 respondents did not respond.

Women have developed valuable experience and knowledge which was contained in (PANAP, 2012) highlighting the multi-faceted roles of women in agriculture ranging from the custodian of seed, conservers of biodiversity, to traditional veterinarians. Women play significant role in supplying major ingredients crucial to achieving sustainable food security in Nigeria. The sustainable production of food is the first pillar of food security as millions of

women work as farmers, farm workers and natural resource managers (Onyemobi, 2000). In doing so, they contribute to national agricultural development, maintenance of environment and family food security (Brown, Feidstein, Haadad, Peria and Quisumbing, 2001).

4.9 Major Challenges Facing Women in Agricultural Production

The table below presents the challenges being faced by women farmers in the study area.

Table 4.7: Major Constraints Facing Women Farmers in Ovia South-West

Variables	**Iguobazuwa west**		**Ofunama**		**Siloko**		**Ugbogui**		**Usen**		**Total**	
	Freq	**%**	**Freq**	**%**	**Freq**	**%**	**Freq**	**%**	**Freq**	**%**	**Freq**	**%**
Inadequate size of farm land	30	32.6	15	32.6	8	10.7	36	34.3	22	30.6	111	32.6
Inaccessibility to credit facility/land	25	27.2	10	21.7	2	2.7	30	28.6	9	12.5	76	22.4
Inadequate new farm techniques	17	18.5	7	15.2	4	5.3	19	18.1	10	13.9	57	16.8
Lack of extension services	15	16.3	3	6.5	2	2.7	8	7.6	5	6.9	33	9.7
Absence of farmers cooperatives	3	3.3	11	23.9	3	4	10	9.5	13	18.1	40	11.8
Other constraints	1	1.1	-	0	1	1.3	-	0	5	6.9	7	2.1
No response	1	1.1	-	0	5	6.7	2	1.9	8	11.1	16	4.7
Total	**92**	**100**	**46**	**100**	**25**	**100**	**105**	**100**	**72**	**100**	**340**	**100**

Source: Field Survey, 2014

Lack of adequate farm techniques is another constraint being faced by women farmers in Ovia South-West as attested by 57(16.8%) and another 40(11.8%) revealing that the lack of farmers' cooperative societies is another factor that affects their effective performance in agricultural production.

This is in agreement with Saito and Weidemann (1990) who highlighted some constraints to women participation in agriculture to include less access to information, technology, land, inputs, markets and credits and that there is little or no awareness by extension workers on new farming techniques and seedlings. Eboh and Ogbazi (1990), also asserted that women suffer from institutional neglect and planner's indifference towards their plight. For the farm women to be more relevant and productive in agriculture and farming activities, an effective institutional framework should be developed through programmes that address their training needs. This was also confirmed by the respondents in the FGD in Siloko Ward, Mrs. Margret Osagiewho said that:

> *"extension workers have not visited the study area for a long time now. For a very long time now, I have not seen anybody who said he/she is an extension worker and have come to teach me new ways of farming. The Last time I saw something like that was when I was still very young when they came to teach my father and other elders"*

Also, other discussants corroborating her statement revealed that the last time extension workers visited was about 20-25years ago which they believe have gone a long way in limiting their knowledge about current trends in agricultural practices and much more better yields from the farm.

4.10 Result of the Regression Analysis

The study attempted to carry out the statistical test on the stated null hypothesis (H□) that there is no significant relationship between socioeconomic characteristics of women and their roles in agricultural production. The result is presented in Table 4.8.

Table 4.8: The Result of Regression Analysis

Variables	**Coefficient**	**Standard Error**	**T-values**	**Sig**
(Constant)	2.325	.466	4.988	.000
Age of respondents X_1	.348*	.124	-2.806	.005
Marital status X_2	-.065	.061	-1.062	.289
Income per annum X_3	-.731	.084	8.744	.000
Years of experience X_4	-.052	.069	-.749	.455
Types of agricultural activities X_5	.221*	.055	4.049	.000
Types of crops X_6	.000	.050	-.011	.991
Size of landholding? X_7	.058*	.095	.612	.541
Family size X_8	.258*	.083	3.118	.002
Educational qualification X_9	.082*	.065	1.251	.212

Source: Field Survey, 2014
Number of Observation = 340; R-squared = 0.564; Adj R-squared = 0.509
Significant at 0.05 probability level

The regression result presented on Table 4.8 reveals R-squared of 0.56, implying that 56% of the roles women play in agricultural production could be explained by the independent variables included in the equation. Considering the values for all the variables included in the equation as shown on Table 4.8, only X_1, X_3, X_5 , $X_{,8,}$ were found to have weak relationship and they are all significant at 5% α-levels having confidence interval of

95%. Since it is less than alpha; we reject the null hypothesis and accept the alternate which states that socio-economic characteristics of women influence the role of women in agricultural production (age, income and types of agricultural activities and family size).

The implication of these from the findings is that these variables will impact positively on the role women play in agricultural production. This is in agreement with the study of Tologbonse, *et al.*,(2013), that some socioeconomic variables were significantly relevant related to level of participation of women in agricultural production. The implication of these from the findings is that increase in the level of any of the explanatory variables with positive sign, X_3, X_5 and X_8 will impact positively on the role women farmers play in agricultural production, whereas the explanatory variable with negative sign X_1 will exert a negative relationship on women farmers in agricultural production. Types of agricultural activities women engage in being positive is in agreement with Ben (2015) and PANAP (2012) as they posited that women serve as custodian of seed, conservers of biodiversity and being traditional veterinarians. Not only do they work as farmers, farm workers and natural resource managers, they also engage in poultry, fishery, rearing of animals as elucidated by Oluwasola (2001).

While, X_2, X_4, X_6, X_7, and X_9 are not statistically significant as 0.289, 0.455, 0.991, 0.541, 0.212 and 0.153 are all greater than p-alpha at 0.05 level of significance,therefore, the null hypothesis is accepted. This suggests that majority of farmers' are yet to fully contribute maximally to agricultural activities in the study area. For example, the regression coefficients for size of landholding (X_7), and educational qualification (X_9) were positive, though not significant. This implies that while these are vital variables in agricultural production, women farmers in Ovia South-West LGA do not have enough farmland for their farming

activities.Olayemi (1995), Olomola (1998), Garba (1998) posited that there is minimal positive impact from governmental reforms/policies on agricultural development which to a large extent have been a barrier to women playing effective role in agricultural production. The evidence stems from the decaying rural infrastructure, declining value of total credit to agriculture.

The results also show the degree of explanation of the independent variables have on the dependent variables in the study area. The results indicate age of respondents, income per annum, types of agricultural activities and family size are strong and statistically significant variables that describes the benefiting impact of women farmers in Ovia South-West at 5% level of significance.

4.11 Cross tabulation and Chi-square test onsocio-economic characteristics of women farmer against roles played by women farmers

Table 4.9: Distribution of respondents on socio-economic characteristics and Harvesting/processing among women farmers (N = 340)

Variables	harvesting/processing					X^2	Df	P-value
	Poor	Average	Good	Very Good	Excellent			
Age of respondents								
15-30	1(10.0)	0(.0)	0(.0)	9(16.7)	23(8.8)			
31-45	9(90.0)	6(85.7)	4(57.1)	27(50.0)	167(63.7)			
46-60	0(.0)	0(.0)	1(14.3)	12(22.2)	50(19.1)	15.605	12	.210
Above 60 yrs	0(.0)	1(14.3)	2(28.6)	6(11.1)	22(8.4)			
Marital status								
Single	1(10.0)	0(.0)	0(.0)	6(11.1)	26(9.9)			
Married	9(90.0)	3(42.9)	5(71.4)	32(59.3)	178(67.9)			
Divorced/separated	0(.0)	0(.0)	0(.0)	2(3.7)	14(5.3)			
Widowed	0(.0)	2(28.6)	0(.0)	9(16.7)	35(13.4)	32.026	20	.043
Unmarried mothers	0(.0)	2(28.6)	2(28.6)	4(7.4)	9(3.4)			
No response	0(.0)	0(.0)	0(.0)	1(1.9)	0(.0)			
Educational attainment								
No formal education	0(.0)	0(.0)	0(.0)	12(22.2)	38(14.5)			
primary education	3(30.0)	2(28.6)	2(28.6)	16(29.6)	78(29.8)			
secondary education	6(60.0)	3(42.9)	5(71.4)	15 (27.8)	85(32.4)			
Tertiary Education	1(10.0)	1(14.3)	0(.0)	9(16.7)	33(12.6)	18.814	20	.534
Others	0(.0)	1(14.3)	0 (.0)	2(3.7)	17(6.5)			
No response	0(.0)	0(.0)	0(.0)	0(.0)	11(4.2)			
Years of experience in agricultural practice								
0-5 years	1(10.0)	1(14.3)	2(28.6)	11(20.4)	52(19.8)			
6-10 years	0(.0)	2(28.6)	0(.0)	18(33.3)	55(21.0)			
11-15 years	5(50.0)	2(28.6)	0(.0)	9(16.7)	47(17.9)			
16-20 years	3(30.0)	1(14.3)	5(71.4)	7(13.0)	64(24.4)	43.242	20	.002
21 and above	1(10.0)	1(14.3)	0(.0)	6(11.1)	44(16.8)			
No response	0(.0)	0(.0)	0(.0)	3(5.6)	0(.0)			
Annual income								
Less than N50,000	5(50.0)	3(42.9)	1(14.3)	33(61.1)	89(34.0)			
N51,000-N80,000	3(30.0)	3(42.9)	4(57.1)	11(20.4)	75(28.6)			
N81,000 - N120,000	2(20.0)	0(.0)	2(28.6)	8(14.8)	82(31.3)	26.808	16	.044
N121,000-N160,000	0(.0)	1(14.3)	0(.0)	0(.0)	11(4.2)			
No response	0(.0)	0(.0)	0(.0)	2(3.7)	5(1.9)			

Source: Field survey (2014)

Table 4.9 above shows the ranking score of women farmers in harvesting/processing. As revealed, the age bracket of 31-45yrs is ranked highest with 63.7% as compared to the age brackets of 40-46 with 19.1%. The observed chi-square value of 15.605 with a p-value of 0.210 with degree of freedom 12 indicate that there is no statistical significant different amongst women farmer in respect to their age categories. It can be deduced that most of the women farmers are in their productive and active age.

From their marital status, it was observed that married women constitute the majority with 67.9% although a significant percent of 13.4 which represents the widowed also rank high in the performance of harvesting and processing. However, the chi-square value of 32.026 with df of 20 and p–value of .043 further justified that there is significant difference in the performance of women farmers in harvesting/processing. This could be attributed to the fact that married women are more committed to farming activities in order to meet their family and domestic needs.

In literacy ranking of the women, it was observed that even though women with secondary school education constitute majority with 32.4%, as compared to women with primary educational with 29.8%, no formal education with 14.5%, tertiary education with 12.6% and others with 6.5 respectively. The chi-square value of 18.814 df of 20 and p-value of .534 shows that there is no statistical significant difference between their educational attainment and their performance of harvesting/processing. It can be deduced that majority of the women are educated and therefore can easily understand the issue pertaining to harvesting/processing. This is corroborated with the findings of (Nkang et al., 2009) on the ground that education plays a good role in adoption of new and improved farming techniques for agricultural production.

In respect to their years of experience, women with 16-20yrs of experience constitute the majority with 24.4% followed by 6-10yrs with 21.0% and 0-5yrs with 19.8%. However, the chi-square test further revealed a statistical significant different between their years of experience and role performance of harvesting/processing as observed from the value of 43.242 df of 20 and p-value of .002. This is in accordance with the findings of (Ben, 2015) where farmers with more experience will likely adopt innovative ideas and techniques that would enhance increase in agricultural activities.

From their annual income, result shows that women farmers earning less than N50, 000 are ranked highest with 34.0% with regard to harvesting/processing followed by those earning N81,000-N120,000 with 31.3%, significant percent of women farmers is also observed from those earning N51,000-N80,000. However, the chi-square test conducted shows that, income wise, women farmers perform significantly different in harvesting/processing.This observation is made from the chi-square value 26.808 df of 16 and p-value of .044.

Table 4.10: Distribution of respondents on socio-economic characteristics and Marketing/distribution of farm produce

Variables	marketing/distribution of farm produce							
	Poor	Average	Good	Very Good	Excellent			
Age of respondents								
15-30	1(10.0)	2(9.1)	5(16.7)	13(14.6)	12(6.3)			
31-45	3(30.0)	9(40.9)	14(46.7)	44(49.4)	143(75.7)	46.012[a]	12	.000
46-60	4(40.0)	10(45.5)	6(20.0)	17(19.1)	26(13.8)			
Above 60 yrs	2(20.0)	1(4.5)	5(16.7)	15(16.9)	8(4.2)			
Marital status								
Single	1(10.0)	1(4.5)	5(16.7)	12(13.5)	14(7.4)			
Married	7(70.0)	18(81.8)	16(53.3)	59(66.3)	127(67.2)			
Divorced/separated	0(.0)	3(13.6)	0(.0)	3(3.4)	10(5.3)			
Widowed	2(20.0)	0(.0)	7(23.3)	11(12.4)	26(13.8)	20.486[a]	20	.428
Unmarried mothers	0(.0)	0(.0)	2(6.7)	4(4.5)	11(5.8)			
No response	0(.0)	0(.0)	0(.0)	0(.0)	1(.5)			
Educational attainment								
No formal education	0(.0)	2(9.1)	7(23.3)	12(13.5)	29(15.3)			
primary education	6(60.0)	8(36.4)	5(16.7)	25(28.1)	57(30.2)			
secondary education	2(20.0)	3(13.6)	15(50.0)	27(30.3)	67(35.4)			
Tertiary Education	2(20.0)	6(27.3)	3(10.0)	11(12.4)	22(11.6)	35.934[a]	20	.016
Others	0(.0)	1(4.5)	0(.0)	12(13.5)	7(3.7)			
No response	0(.0)	2(9.1)	0(.0)	2(2.2)	7(3.7)			
Years of experience in agricultural practice								
0-5 years	1(10.0)	2(9.1)	16(53.3)	16(18.0)	32(16.9)			
6-10 years	3(30.0)	14(63.6)	2(6.7)	20(22.5)	36(19.0)			
11-15 years	4(40.0)	1(4.5)	3(10.0)	16(18.0)	39(20.6)			
16-20 years	0(.0)	5(22.7)	3(10.0)	20(22.5)	52(27.5)	63.422[a]	20	.000
21 and above	2(20.0)	0(.0)	5(16.7)	15(16.9)	30(15.9)			
No response	0(.0)	0(.0)	1(3.3)	2(2.2)	0(.0)			
Annual income								
Less than N50,000	5(50.0)	18(81.8)	22(73.3)	48(53.9)	38(20.1)			
N51,000-N80,000	4(40.0)	2(9.1)	4(13.3)	28(31.5)	58(30.7)			
N81,000 - N120,000	1(10.0)	2(9.1)	3(10.0)	11(12.4)	77(40.7)	86.030[a]	16	.000
N121,000-N160,000	0(.0)	0(.0)	0(.0)	0(.0)	12(6.3)			
No response	0(.0)	0(.0)	1(3.3)	2(2.2)	4(2.1)			

Source: Field survey (2014)

As revealed in table 4.10 above, the age bracket of 31-45yrs is ranked highest with 75.7% as compared to the age brackets of 40-46 with 13.8%, 15-30yrs with 6.3% and above 60yrs with 4.2% respectively. The observed chi-square value of 46.012 with a p-value of 0.000 with degree of freedom 12 indicates that there is statistical significant different amongst women farmer in marketing/distribution of farm produce as far as age is concerned.

From their marital status, it was observed that married women constitute the majority with 67.2% although a significant percent of 13.8 which represents the widowed also rank high in marketing/distribution of farm produce. However, the chi-square value of 20.486 with df of 20 and p–value of .428 revealed that there is no significant difference in the marketing/distribution of farm produce.

In literacy ranking of the women, it was observed that even though women with secondary school education constitute majority with 35.4%, as compared to women with primary educational with 30.2%, no formal education with 15.3%, tertiary education with 11.6% and others with 3.7 respectively. The chi-square value of 35.934 df of 20 and p-value of .016 shows that there is statistical significant difference between their educational attainment and their marketing/distribution of farm produce. It can be deduced that majority of the women are educated and therefore can easily understand the issue pertaining to marketing/distribution of farm produce.

Regarding their years of experience, women with 16-20yrs of experience which constitute the majority with 24.4% are ranked highest followed by 11-15yrs with 20.6% and 6-10yrs with 19.0%. However, the chi-square test further revealed a statistical significant different between their years of experience and role in marketing/distribution of farm produce as observed from the value of 63.422 df of 20 and p-value of .000.

From their annual income, result shows that women farmers earning less than N81,000-N120,000 are ranked highest with 40.7% as regard to marketing/distribution of farm produce followed by those earning N51,000-N80,000 with 30.7%, significant percent of women farmers is also observed from those earning less than N50,000. However, the chi-square test conducted shows that there is statistical significant different in marketing/distribution of farm produce. This observation is made from the chi-square value 86.030, df of 16 and p-value of .000.

Table 4.11: Distribution of respondents on socio-economic characteristics and weeding

	Weeding							
	Poor	Average	Good	Very Good	Excellent			
Age of respondents								
15-30	2(8.3)	0(.0)	2(12.5)	10(9.7)	19(10.1)			
31-45	18(75.0)	4(50.0)	8(50.0)	48(46.6)	135(71.4)	48.750[a]	12	.000
46-60	0(.0)	0(.0)	5(31.2)	32(31.1)	26(13.8)			
Above 60 yrs	4(16.7)	4(50.0)	1(6.2)	13(12.6)	9(4.8)			
Marital status								
Single	3(12.5)	0(.0)	3(18.8)	7(6.8)	20(10.6)			
Married	11(45.8)	6(75.0)	10(62.5)	64(62.1)	136(72.0)			
Divorced/separated	2(8.3)	0(.0)	0(.0)	2(1.9)	12(6.3)	37.014[a]	20	.012
Widowed	6(25.0)	2(25.0)	1(6.2)	26(25.2)	11(5.8)			
Unmarried mothers	2(8.3)	0(.0)	2(12.5)	4(3.9)	9(4.8)			
No response	0(.0)	0(.0)	0(.0)	0(.0)	1(.5)			
Educational attainment								
No formal education	2(8.3)	0(.0)	0(.0)	18(17.5)	30(15.9)			
primary education	10(41.7)	2(25.0)	9(56.2)	29(28.2)	51(27.0)			
secondary education	10(41.7)	1(12.5)	1(6.2)	22(21.4)	80(42.3)	63.705[a]	20	.000
Tertiary Education	2(8.3)	2(25.0)	5(31.2)	15(14.6)	20(10.6)			
Others	0(.0)	3(37.5)	1(6.2)	13(12.6)	3(1.6)			
No response	0(.0)	0(.0)	0(.0)	6(5.8)	5(2.6)			
Years of experience in agricultural practice								
0-5 years	2(8.3)	0(.0)	3(18.8)	25(24.3)	37(19.6)			
6-10 years	7(29.2)	1(12.5)	6(37.5)	24(23.3)	37(19.6)			
11-15 years	6(25.0)	2(25.0)	3(18.8)	14(13.6)	38(20.1)			
16-20 years	5(20.8)	2(25.0)	2(12.5)	15(14.6)	56(29.6)	55.179[a]	20	.000
21 and above	4(16.7)	3(37.5)	0(.0)	24(23.3)	21(11.1)			
No response	0(.0)	0(.0)	2(12.5)	1(1.0)	0(.0)			
Annual income								
Less than N50,000	6(25.0)	3(37.5)	7(43.8)	59(57.3)	56(29.6)			
N51,000-N80,000	8(33.3)	5(62.5)	1(6.2)	28(27.2)	54(28.6)			
N81,000 - N120,000	7(29.2)	0(.0)	6(37.5)	13(12.6)	68(36.0)	58.009	16	.000
N121,000-N160,000	3(12.5)	0(.0)	0(.0)	0(.0)	9(4.8)			
No response	0(.0)	0(.0)	2(12.5)	3(2.9)	2(1.1)			

Source: Field survey (2014)

Table 4.11 above shows the ranking score of women farmers in weeding. As revealed, the age bracket of 31-45yrs is ranked highest with 71.4%. The observed chi-square value of 48.750 with a p-value of 0.000 with degree of freedom 12 indicate that there is statistical significant different amongst women farmer in respect to their age categories.

From their marital status, married women which constitute the majority with 72.0%, single women are ranked the second highest with 10.6% in weeding. The chi-square value of 37.014 with df of 20 and p–value of .012 further revealed that there is significant difference in the role performance of women farmers in weeding. This could be attributed to the differential resource base of the women farmers.

With regard to the educational attainment of the women, it was observed that even though women with secondary school education constitute majority with 42.3%, as compared to women with primary educational with 27.0%, no formal education with 15.9%, tertiary education with 10.6% and others with 1.6 respectively. The chi-square value of 638.705 df of 20 and p-value of .000 shows that there is statistical significant difference between their educational attainment and the role performance in weeding their farms. It can be deduced that majority of the women are educated and therefore can easily understand the issue pertaining to weeding their farm.

Considering their years of experience, women with 16-20yrs of experience which constitute the majority with 24.4% are ranked highest followed by 11-15yrs with 20.1%. However, the chi-square test further revealed a statistical significant different between their years of experience and role women farmers perform in weeding their farm lands as observed from the value of 55.179 df of 20 and p-value of .000.

From their annual income, women farmers earning less than N81,000-N120,000 are ranked

highest with 36.0% as regard to the role women farmers perform in weeding their farm lands followed by those earning less than N50,000with 29.6%, significant percent of women farmers is also observed from those earning N51,000-N80,000. However, the chi-square test conducted shows that, there is statistical significantly different in the role women farmers perform in weeding their farm land. This observation is made from the chi-square value 58.009 df of 16 and p-value of .000.

Table 4.12: Distribution of respondents on socio-economic characteristics and Planting

Variables	Planting							
	Poor	Average	Good	Very Good	Excellent			
Age of respondents								
15-30	0(.0)	0(.0)	4(26.7)	8(9.2)	21(9.5)			
31-45	8(88.9)	5(62.5)	9(60.0)	49(56.3)	142(64.3)	15.623[a]	12	.209
46-60	1(11.1)	1(12.5)	2(13.3)	18(20.7)	41(18.6)			
Above 60 yrs	0(.0)	2(25.0)	0(.0)	12(13.8)	17(7.7)			
Marital status								
Single	0(.0)	0(.0)	4(26.7)	9(10.3)	20(9.0)			
Married	9(100.0)	6(75.0)	8(53.3)	59(67.8)	145(65.6)			
Divorced/separated	0(.0)	2(25.0)	0(.0)	0(.0)	14(6.3)			
Widowed	0(.0)	0(.0)	1(6.7)	14(16.1)	31(14.0)	30.890[a]	20	.057
Unmarried mothers	0(.0)	0(.0)	2(13.3)	4(4.6)	11(5.0)			
No response	0(.0)	0(.0)	0(.0)	1(1.1)	0(.0)			
Educational attainment								
No formal education	2(22.2)	2(25.0)	3(20.0)	20(23.0)	23(10.4)			
primary education	0(.0)	2(25.0)	7(46.7)	21(24.1)	71(32.1)			
secondary education	6(66.7)	1(12.5)	2(13.3)	26(29.9)	79(35.7)			
Tertiary Education	1(11.1)	0(.0)	3(20.0)	16(18.4)	24(10.9)	43.744[a]	20	.002
Others	0(.0)	3(37.5)	0(.0)	3(3.4)	14(6.3)			
No response	0(.0)	0(.0)	0(.0)	1(1.1)	10(4.5)			
Years of experience in agricultural practice								
0-5 years	0(.0)	0(.0)	5(33.3)	23(26.4)	39(17.6)			
6-10 years	2(22.2)	4(50.0)	2(13.3)	21(24.1)	46(20.8)			
11-15 years	5(55.6)	2(25.0)	2(13.3)	15(17.2)	39(17.6)	56.704	20	.000
16-20 years	0(.0)	2(25.0)	2(13.3)	13(14.9)	63(28.5)			
21 and above	2(22.2)	0(.0)	2(13.3)	14(16.1)	34(15.4)			
No response	0(.0)	0(.0)	2(13.3)	1(1.1)	0(.0)			
Annual income								
Less than N50,000	2(22.2)	2(25.0)	8(53.3)	44(50.6)	75(33.9)			
N51,000-N80,000	2(22.2)	6(75.0)	1(6.7)	24(27.6)	63(28.5)			
N81,000 - N120,000	5(55.6)	0(.0)	4(26.7)	15(17.2)	70(31.7)	56.090	20	.000
N121,000-N160,000	0(.0)	0(.0)	0(.0)	0(.0)	12(5.4)			
No response	0(.0)	0(.0)	2(13.3)	4(4.6)	1(.5)			

Source: Field survey (2014)

Table 4.12 above shows the ranking score of women farmers in role women farmers played in planting. As revealed, the age bracket of 31-45yrs is ranked highest with 64.3% as compared to the age brackets of 40-46 with 18.6%. The observed chi-square value of 15.623 with a p-value of 0.209 with degree of freedom 12 indicate that there is no statistical significant different amongst women farmer in respect to their age categories.

From their marital status, it was observed that married women constitute the majority with 65.6% although a significant percent of 14.0 which represents the widowed also rank high in the performance of harvesting and processing. However, the chi-square value of 30.890 with df of 20 and p–value of .057 further justified that there is significant difference in the performance of women farmers in harvesting/processing.

Considering the literacy ranking of the women, women with secondary school education which constitute the majority with 35.7% are ranked highest in the role played by women farmers in planting on their farm lands, also a significant percentage covering 32.1% represent those with primary education as compared to women with primary educational with 32.1%, no formal education with 10.4%, tertiary education with 10.9% and others with 6.3% respectively. The chi-square value of 43.744 df of 20 and p-value of .002 shows that there statistical significant difference between their educational attainment and the role they perform in planting on their farm lands.

In respect to their years of experience, women with 16-20yrs of experience constitute the majority with 28.5% followed by 6-10yrs with 20.8%, 0-5yrs and 11-15yrs with 17.6% respectively. However, the chi-square test further revealed a statistical significant different between their years of experience and role played by women farmers in plating on their farm lands as observed from the value of 56.704 df of 20 and p-value of .000.

From their annual income, result shows that women farmers earning less than N50, 000 are ranked highest with 33.9% as regard to the role played by women farmers in planting on their farm lands, those earning N81,000-N120,000 with 31.7% are ranked the second highest, significant percent of women farmers is also observed from those earning N51,000-N80,000 with 28.5%. However, the chi-square test conducted shows that, there is a statistical significant different between the role women farmers played in planting on their farm land and their annual income. This observation is made from the chi-square value 56.090 df of 20 and p-value of .000.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This Chapter gives a summary of the research findings, conclusions and recommendations of the study, the summary briefly gives a description of Chapter one, Two, Three, Four and Five while the conclusion is a concise statement that embodies the main points of the study. Lastly, the recommendation proffered solutions to the problems discussed in the findings.

5.2 Summary of Findings

The aim of the study was to assess the roles of women in agricultural production in Ovia South-West Local Government Area of Edo State. From the socio-economic characteristics, 66.8% and 83.5% of the respondents revealed that they are married women and mothers and have also had one form of education from primary to tertiary as presented in Table 4.1. Though majority of the women have been engaging in farming activities between 16-20 years, the study found that income generated from farming activities is not commensurate to the years of experience as generated from table 4.1. This is not unconnected to the fact that these women farm at subsistence level as they find it difficult to access larger farm lands and finance.

Equally, it was revealed by 38.2% and 43.5% of the respondents that years of experience affects their agricultural production both negatively and positively. This is also confirmed in the regression analysis which revealed that there is no significant relationship between the role of women in agricultural production and their years of experience in farming.

On the specific roles women play in agricultural production as examined by their activities carried out,the study found that women perform the role of planting, weeding etc. in the farm. Findings also revealed that majority of the respondents engage in the growing of food crops such as Cassava, Cocoyam, Maize, Plantain, Melon and Vegetables e.t.c.as revealed by 90.6% and 89.2% respectively.

It was found also that majority of the farmers in the study area still make use of local traditional farm implements like cutlasses, hoes and plough on their farm for farming activities.

On the relationship between socio-economic characteristics and role of women in agriculture, the study revealed that socio-economic characteristics affect the role of women in agriculture positively. Also, 92% of the respondents revealed that the challenges women farmers face in Ovia South-West stem from inadequate farm land (50%), inaccessibility to credit facility (20%), lack of modern farm technology (10.3%), lack of extension service (2.6%), and absence of farmers cooperative (9.1%).

5.3 Conclusion

Based on the findings made, it was concluded that women play important roles in ensuring food security. They act as shock absorbers, producers and keepers of the household food. They grow crops, keep animals and spend time to keep the family economic boat afloat. They are into seed sowing, weeding, harvesting, processing, storage, marketing of food produce for the health of the family and the community at large. Despite their lack of access to large land, limited education, credit problems, they still work assiduously for the well-being of the household.

The findings in the study revealed that majority of the women are actively involved in

farming activities and agricultural production. Financial constraints, lack of credit facilities and access to available farm land are the major challenges encountered in the study area.

Following the objectives of the study and the results obtained, the study arrived generally at the conclusion that women participation in farming activities is positive and contributes positively to agricultural production and socio-economic development of Ovia South-West Local Government Area. This assertion notwithstanding, their roles could be enhanced if the constraints they face are addressed by all stakeholders.

5.4 Recommendations

Based on the findings and conclusion of the study, the following recommendations were made to improve the farming activities of women:

1. Empowerment of rural women farmers should be prioritized through provision of special agricultural credits and subsidization of farm inputs to optimize their invaluable role in food security.
2. Women should be empowered by the government with modern technological tools in farming activities to enable them generate enough revenue to sustain their families and contribute to the economic development of the community.
3. Government and should endeavor to provide rural women farmers access to land by way of legislation to recognize their rights as this will help in reducing the challenges they face.
4. Women farmers should be provided access to financial assistance for their farming activities through formation of cooperative society.

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APPENDIX I

I am a postgraduate student of the above named institution and department and I am undertaking an M.Sc research work on the Role of Women in Farming Activities in Ovia South-West L.G.A of Edo state.

- I would appreciate your willingness to assist in this research.
- Your contribution/personal information this questionnaire will remain confidential
- Please fill in your opinion on these questions and tick where necessary.

SECTION A: Socio-Economic Characteristics

1. Age group: a. 15-30 ( ) b. 31-45 ( ) c. 46-60 ( ) d. 61 and above ( )
2. Marital Status: a. Single ( ) b. Married ( ) c. Divorced ( ) d. Separated ( ) e. Widowed ( ) f. Unmarried mothers ( )
3. Highest educational qualification: a. No formal education ( ) b. Primary education ( ) c. Secondary education ( ) d. Adult education ( ) e. Others please specify:_____
4. Length of Agricultural Training: a. 0-3 ( ) b. 4-6 ( ) c. 7-10 ( ) d. Above 11 years ( )
5. Family size (No surviving children): a. None ( ) b. 2-4 ( ) c. 5-6 ( ) d. Over 6 ( )
6. Who is the head of your household: a. Self ( ) b. Husband ( ) c. Husband's brother ( ) d. Father ( )
7. What is your income per annum? a. NLess than N50,000 ( ) b. N51,000-N80,000 ( ) c. N81,000-N110,000 ( ) d. N111,000-N140,000 ( ) e. N141,000 and above
8. What are your years of experience in agricultural practice? a. 0-5 years ( ) b. 6-10 years ( ) c. 11-15 years ( ) d. 16-20 years ( ) e. 21 and above ( )

SECTION B: Agricultural Activities

9. Do you belong to any agricultural cooperative societies/community based organization for agricultural production purpose? a. Yes ( ) b. No ( )
10. What is the size of your landholding? a. 0-1 acre ( ) b.2- 3 acres ( ) c. 4-5 acres ( ) d. 5 Hectares ( )
11. What types of agricultural activities do you perform? a. Farming ( ) b. Fishing ( ) c. Animal husbandry ( ) d. Poultry ( ) others specify

15a. What are the roles you perform in your farms?

Roles performed in your farm	**Poor**	**Average**	**Good**	**Very good**	**Excellent**
Land preparation (slashing, felling and burning)					
Planting					
Weeding					
Application of pesticides/fertilizers					
Transporting/sales of farm produce					
Marketing/distribution of farm produce					
Harvesting/Processing					

15b. How do you perform this roles? a. paid labour ( ) b. you do it alone all by yourself ( ) c. use of machines d. do it with your husband e. with the whole household

f. communal labour ( )

16 List the types of crops you plant on your farm_____

17. Who takes decision on how you secure your farm land, what you plant and how you market them? a. Self ( ) b. Husband ( ) c. Extension workers ( ) d. Cooperative society ( )

18a. What are your constraints with regard to effective performance of your roles in agricultural production?

a. Access to land ( ) b. Access to credit ( )

c. Lack of adequate farm technology ( ) d. Lack of extension services ( )

e. Absence of farmers cooperatives f. Others, specify:_____

18b. Suggest ways you intend to overcome these constraints.

_____

_____

_____

19a. Do you have enough capital for your farming? a. Yes ( ) b. No ( )

19b. If No, how do you finance your farm activities? a. Husband ( ) b. Cooperative ( )

c. Bank loan ( ) d. Family and friends ( )

20a. Are you aware of extension services in your area? a. Yes ( ) b. No ( )

20b. If yes, what extension services have you benefited from?

a. Training on how to use improved seedlings ( )

b. Training on improved farm practice like use of modern tools/implements ( )

c. Providing marketing information ( ) d. All of the above ( )

e. None of the above ( )

21. If no, what is your source of advice on improving your farm production?

a. Husband ( ) b. Relative and friends ( )

c. Depends on my native knowledge ( )

d. NGO(s) (please state the name(s)_____

22. What are the sources of your farm labour? a. Husband ( ) b. Personal labour ( )

c. Children ( ) d. Hired labour, neighbours/community ( )

23. What are the average numbers of hours you spend on your farm activities daily?

a. 0-2 hours ( ) b. 3-4 hours ( ) c. 5-7 hours ( ) d. 8-10 hours ( )

e. 11-15 hours ( )

24. What are the agricultural tools and implement are available to you?

_____

_____

25. Apart from farming what other roles do women play?

_____

_____

26. What are the factors affecting your role in your faming activities?

_____

_____

27. Suggest any five ways rural women can be encouraged to improve their agricultural production?

_____

APPENDIX II

Focus group discussion guide

- What is the main occupation of women in this area? This is to investigate those who are actively involved in farming and why.
- How many years participants have had in farm practices?
- How many acres of land do women farmers cultivate individually every year?
- Membership of cooperative society
- Types of agricultural activities women carry out
- Types of crop women cultivate and why
- What are the specific roles women play on the farms
- What are the constraints and other factors affecting women role performance in farming
- What is the situation of extension service in the area
- Source of capital for farming (probing on access to bank or government loans or any other sources.
- What possible solutions are there to woman farmers constraints?