

**RURAL WOMEN'S PARTICIPATION IN FARM AND NON-FARM ECONOMIC
ACTIVITIES IN KANKARA LOCAL GOVERNMENT AREA OF KATSINA STATE
NIGERIA**

BY

Ladi JIBRIN
P16PSGS8543 (MSC/SCIE/11021/2010-2011)
(M.SC RURAL DEVELOPMENT)

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DECLARATION

I declare that this dissertation titled “**Rural Women’s Participation in Farm and Non-Farm Economic Activities in Kankara Local Government Area of Katsina State**” has been carried out by me in the Department of Geography and Environmental Sciences. The information derived from the literature has been duly acknowledged in the text and a list of references provided. No part of this dissertation was previously presented for another degree or diploma at this or any other Institution.

Ladi JIBRIN

Signature

Date

CERTIFICATION

This dissertation entitled “**Rural Women’s Participation in Farm and Non-Farm Economic Activities in Kankara Local Government Area of Katsina State**” by Ladi JIBRIN meets the regulations governing the award of Masters of Science degree of the 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. A. K. Usman
Head of Department

Signature

Date

Prof. S. Z. Abubakar
Dean, School of Postgraduate Studies

Signature

Date

DEDICATION

This dissertation is dedicated to my loving husband - Mr. Ajogwu J. Etubi, my dear mother - Mrs. R. B. Jibrin and siblings.

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ABSTRACT

This study was conducted mainly to examine the participation of rural women in farm and non-farm economic activities. The study was conducted in Kankara Local Government Area of Katsina State. Specifically, the study identified types of farm and non-farm economic activities performed by women, determined the reasons for participation in farm and non-farm activities, assessed the contribution of farm and non-farm activities to women's income and welfare, assessed the perceived influence of selected factors on participation and identified the constraints to participation in farm and non-farm activities. Data were obtained from both primary and secondary sources. Primary data collection involved the use of structured questionnaire and focus group discussions. A sample of 382 women was selected through systematic sampling technique. The data was processed, organized and presented with the help of descriptive statistical techniques such as; frequency counts, percentages, priority and rank order, means and standard deviation. Chi-square analysis was employed in assessing the impact of farm and non-farm activities participation on the welfare of rural women. The findings show that farm and non-farm economic activities carried out by the women were small scale and include production and marketing of groundnut cake (kuli-kuli), processing of groundnut oil, production and marketing of shea butter (mai kadanya), sale of vegetables, harvesting activities, livestock rearing, planting activities, post harvest activities, and poultry rearing. Others are petty marketing of vegetables, tiger nut drink (kunun-aya) and firewood. The respondents' annual income is generally low. The study also found that majority (51.3%) of the respondents had high level of participation in farm and non-farm activities, 33.2% had medium participation while 15.5% respondents had low participation in farm and non-farm activities. The study also evaluated the respondents' perceptions of the influence of selected factors (attitude, knowledge, opportunities

and resources) on participation in farm and non-farm activities. The findings also revealed that rural women's participation in farm and non-farm economic activities are significantly influenced by these factors. The result of the Chi-square analysis indicates that farm and non-farm participation of women has significant effect on their welfare. As nine out of ten indicators were statistically significant at various degrees of freedom ($p = 0.000 \leq 0.05$). However only improved credit worthiness produced a chi-square result ($X^2 = 1.377, p = 0.848 \geq 0.05$). The study therefore recommends provision of skills training and special credits schemes that address particular financial needs of women are necessary to encourage the undertaking of technical and higher return activities. Provision of credit schemes and linking them with financial institutions so as to acquire women friendly loans by the government to stimulate investment in the farm and non-farm sector is deemed necessary in order to provide rural people with access to capital investment to start sustainable, competitive and high return non-farm economic activities.

TABLE OF CONTENTS

Cover Page	i
Title Page	ii
Declaration	iii
Certification	iv
Dedication	v
Acknowledgments	vi
Abstract	vii
Table of Contents	ix
List of Figures	ix
List of Tables	xiv
List of Appendices	xvi
List of Abbreviations	xvii

CHAPTER ONE: INTRODUCTION

1.1	Background to the Study	1
1.2	Statement of the Research Problem	3
1.3	Aim and Objectives	5
1.4	Research Hypothesis	6
1.5	Significance of the Study	6
1.6	Scope of the Study	7
1.7	Operational Definition of Terms	8

CHAPTER TWO: CONCEPTUAL, THEORETICAL FRAMEWORK AND LITERATURE REVIEW

2.1	Introduction	10
2.2	Conceptual Framework	10
2.2.1	Attitude	10
2.2.2	Knowledge	11
2.2.3	Opportunities	12
2.2.4	Resources	13
2.3	Theoretical Framework	15
2.3.1	Feminism Theory	15
2.3.2	Persuasion Theory	16
2.3.3	Decision Making Models	17
2.4	Literature Review	19
2.4.1	Farm and Non-Farm Economic Activities of Rural Women	19
2.4.2	Participation in Farm and Non-Farm Economic Activities and Contribution to Rural Women's Livelihoods	24
2.4.3	Reasons for Rural Women's Participation in Farm and Non-Farm Economic Activities	26
2.4.4	Socio-Economic Factors Influencing Participation in Farm and Non-Farm Economic Activities	28
2.4.5	Constraints to Women in Farm and Non-Farm Economic Activities	31

CHAPTER THREE: THE STUDY AREA AND METHODOLOGY

3.1	The Study Area	35
3.1.1	Location and Size	35
3.1.2	Climate	37
3.1.3	Relief and Drainage	37
3.1.4	Soil and Vegetation	38
3.1.5	People and Economic Activities	39
3.2	Methodology	40
3.2.1	Reconnaissance Survey of the Study Area	40
3.2.2	Types of Data Utilized for the study	41
3.2.3	Sources of Data	42
3.2.4	Sample Size and Sampling Technique	43
3.2.5	Determination of Objectives	44
3.2.6	Data Analysis	45

CHAPTER FOUR: RESULTS AND DISCUSSION

4.1	Introduction	48
4.2	Socio-Economic Characteristics of the Respondents	48
4.3	Types of Farm/Non-Farm Economic Activities and Participation of Respondents	50
4.4	Participation in Farm and Non-Farm Economic Activities and Contribution to Respondent's Welfare	59
4.5	Reasons for Participation in Farm/Non-Farm Economic Activities	61

4.6	Perceived Influence of Selected Factors on Participation in Farm and Non-Farm Economic Activities	63
4.7	Test of Hypotheses - - - - -	71
4.8	Perceived Constraints to Women’s Participation in Farm and Non-Farm Activities	72

CHAPTER FIVE: SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1	Introduction	77
5.2	Summary of Findings	77
5.3	Conclusion	80
5.4	Recommendations	81
5.5	Recommendations for Further Research	82

	REFERENCES	83
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	APPENDICES	90
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LIST OF FIGURES

Figure 2.1 Conceptual Framework	14
Figure 3.1 Map of Kankara Local Government Area of Katsina State	36

LIST OF TABLES

Table 3.1	List of Wards in Kankara Local Government Area	43
Table 3.2	List of Selected Wards	44
Table 4.1	Socio-Economic Characteristics of the Respondents	49
Table 4.2	Frequency Distribution of Farm and Non-Farm Economic Activities of Respondents	51
Table 4.3	Distribution of Farm and Non-Farm Economic Activities by Communities	54
Table 4.4	Distribution of Women according to their Extent of Participation	56
Table 4.5	Respondents Farm and Non-Farm Average Yearly Income (2009-2013)	58
Table 4.6	Participation in Farm and Non-Farm Economic Activities and Contribution to Respondent's Welfare	60
Table 4.7	Reasons for Participation in Farm and Non-Farm Activities	61
Table 4.8	Respondents Perceptions of Attitude and Participation in Farm and Non-Farm Economic Activities	63
Table 4.9	Respondents Perceptions of Knowledge and Participation in Farm and Non-Farm Economic Activities	65
Table 4.10	Respondents Perceptions of Opportunities and Participation in Farm and Non-Farm Economic Activities	67

Table 4.11	Respondents Perceptions of Resources and Participation in Farm and Non-Farm Economic Activities	69
Table 4.12	Chi-square Test Result	71
Table 4.13	Perceived Constraints to Women’s Participation In Farm and Non-Farm Activities	73
Table 4.14	Perceived Solutions to Constraints by the Respondents	76

APPENDICES

Appendix I - Questionnaire Survey	90
Appendix III – Focus Group Questions	97
Appendix III- Chi-Square Distribution Table	98
Appendix IV - SPSS OUTPUT	99
Appendix V - Pictorial Evidence	103

LIST OF ABBREVIATIONS

GDP - Gross Domestic Product

IFAD - International Fund for Agricultural Development

ILO - International Labour Organisation

OECD - Organisation for Economic Co-operation and Development

RNF - Rural Non Farm

RNFA - Rural Non Farm Activities

RNFE - Rural Non Farm Economy

UNDP - United Nations Development Programme

CHAPTER ONE

INTRODUCTION

1.1 BACKGROUND TO THE STUDY

Rural women spend a lot of time managing their homes, farms and also participate in non-farm activities. The everyday activities of women on the farm are related to planting, harvesting, preparation of animal food, and taking care of livestock and poultry. Sadighi and Nazarpour (2011) pointed out that women play great roles in rural communities either directly (crops production, livestock, handicrafts, cottage industries) or indirectly by helping in the agricultural sector (as labour). In the agricultural sector, rural women make important input to crop production, livestock production, horticulture, post-harvest operations and agro-forestry (Lodha, 2006). The nature and extent of women's involvement varies greatly from region to region (Borghain and Akand, 2011). It is often stated that women are responsible for more than half the world's food production overall and produce up to 60-80% of basic foodstuff in Africa (Fresco, 1998). Rural women have taken over the production and processing of arable crops and are responsible for as much as 80% of the staple food items. Estimate of women's contribution to the production of food crops range from 30% in Sudan to 80% in Republic of Congo, contributing substantially to national agricultural production and food security (Organization for Economic Cooperation and Development (OECD) 1990).

Women in Africa (including Nigeria) generally play important roles in small-scale traditional agricultural production (Afolabi, 2008). Women take part actively in farming activities and in processing farm products in addition to their domestic and reproductive responsibilities. Yahaya (2002) reported that 76% of women from Oyo and Bauchi States are actively involved in farming activities or engaged in their husband's farms. In Nigeria, women

supply most of the needed labour in agricultural activities and this is the most important factor of production to farmers, as it is needed at the stages of agricultural production. Even women in seclusion (purdah) generate substantial income through food crop processing (Yahaya, 2002). However, in many rural areas, agriculture being rain-fed and seasonal, alone cannot provide sufficient livelihood opportunities and therefore the need for rural women to diversify their activities to enable them meet up with economic responsibilities during off-season periods. Nonetheless, the general public and a vast majority of policy makers continue to view rural development as agricultural development. In the past, governments of developing countries have focused almost exclusively on agricultural development as the way to reduce poverty and achieve sustainable economic growth (World Bank, 1998). Despite this narrow view, it is evident that in developing regions, the rural sector is much more than farming. Reardon, Stamoulis, Balisacan, Berdeque and Banks (1998) summarized the evidence regarding the nature, importance, determinants and effects of rural non-farm activities on farming households in developing regions. They showed the growing importance of rural non-farm activities that accounts for roughly 25% of employment and as much as 40% of the incomes generated in rural Latin America. Data from other regions of the world also show sizeable income shares for non-farm rural sector in Asia as 32% and 42% in Africa.

Women's participation in farm and non-farm economic activities is expected to help them earn sustainable income in order to meet their livelihood needs. The present study tried to find out what has hindered women's ability to earn substantial income and problems they encounter in their endeavors with an aim of providing recommendations to women and to policy makers. Specifically, the study looks at participation of women in farm and non-farm economic activities.

1.2 STATEMENT OF THE RESEARCH PROBLEM

Participation in economic activities among rural women is an increasingly important reality in Nigeria, especially in Kankara Local Government Area of Katsina State where there is low level of development. The socio-economic condition in Kankara L.G.A is poor as the income from the major income generating activities is small and wage employment is very limited. The low income at household and individual levels is a major concern. As such; rural women are caught in a trap of low income, abject poverty and low education. Women are therefore double exploited in an attempt to maximize family income. Women living in rural areas of Nigeria are known to be suffering from general deprivation; the reasons may not be unrelated to the socio-economic status of the rural women (Phillips, 2006).

Traditionally women's roles are confined to household chores, farming activities and other trade transaction that, in general, engage them for a longer hour than men (UNDP, 2004). Besides rural women have limited access to educational and employment opportunities. The problem encountered by rural communities in Katsina state, Nigeria is the need to encourage them and their potentialities for their well-being development (Afolabi, 2004). In Nigerian societies rural women are culturally deprived to participate fully in income generating activities due to religious, social norms, and belief that women are suborder to be at home for only domestic chores, whereby women are not allowed to go out for any business transaction.

Azikiwe (2008) reveals that social norms, inadequate incentives, ignorance, poverty, illiteracy and cultural institution against women in most societies in Nigeria are barriers to the advancement of rural women. Religion, culture, and education, are factors that lead to the little participation of rural women in economic activities in Kankara Local Government Area. This is because it comes with the seclusion that women are not allowed to go out for any business

transactions; they remain at home to oversee the activities of the house. This practice is called “*purdah*” keeping women in the house; the fact here is that mixing between women with non-family members of the opposite sex is prohibition in Islam, so the aim is creating a pure environment for preventing the negative consequences of such mixture (Abdullahi, Abdul Ghani and Dalhatu, 2015).

Muslim women in *purdah* in the northern part of Nigeria are known to be mainly involved in processing activities of agriculture although some of them have personal farms which are managed by their husbands (Tsado, Tologbonse, Tologbonse, Alabi and Tergema, 2009). The acceptance and practice of *purdah* creates a social gap and reduces the economic contributions made by rural women in Kankara local government area to their households and communities. It has become a standard assessment for men’s economic dominance and success over women, and it is believed that a man is adequately well-off sufficient, and able to meet his family and his wife’s need without their intervention (Coles and Mack, 1991).

To alleviate these constraints, participation of women in diverse economic activities is encouraged. This can be achieved by improving their level of knowledge, increasing skills and awareness of wider environment and access to opportunities and also by changing the way in which people perceive women and in which women perceive about themselves with reference to the impact of participation. Most studies on farm and non-farm activities have been carried out in other parts of Nigeria and none have been reported carried out in Katsina state and Kankara local government area in particular. Based on the aforementioned, there is need to carry out a study on women’s participation. This will therefore increase database of women participation in farm and non-farm economic activities. It is against this background that this research intends to answer the following questions:-

- i. What are the socio-economic characteristics of the women in the study area.
- ii. What are the farm and non-farm activities engaged in by women in Kankara LGA?
- iii. How has farm and non-farm participation contributed to household income and welfare of women in the study area?
- iv. What are the reasons for women's participation in farm and non-farm economic activities?
- v. What is the influence of attitude, knowledge, opportunities and resources on rural women's participation in farm and non-farm activities in the study area?
- vi. What are the constraints militating against women in performing farm and non-farm activities effectively in the study area and perceived solutions?

1.3 AIM AND OBJECTIVES

This study sought to assess farm and non-farm participation of rural women in Kankara Local Government Area of Katsina State. The specific objectives are to:

- i. describe the socio-economic characteristics of the women in the study area.
- ii. characterize the major farm and non-farm activities performed by women in the study area.
- iii. assess farm and non-farm participation and its contribution to household income and welfare of women in the study area
- iv. examine the reasons for the women's participation in farm and non-farm economic activities in the study area.
- v. evaluate the perceived influence of attitude, knowledge, opportunities and resources on participation of women in farm and non-farm activities economic in the study area.

- vi. examine the constraints facing women participating in farm and non-farm economic activities in the study area and perceived solutions.

1.4 RESEARCH HYPOTHESIS

H₀: Farm and non-farm participation has no significant effect on the welfare of women in Kankara Local Government Area of Katsina state.

1.5 SIGNIFICANCE OF THE STUDY

The purpose of this study was to provide an understanding on the participation of rural women regarding farm and non-farm economic activities and its impact on household income and livelihood since agriculture alone appears not to be sufficient for achieving sustainable household income. In many rural areas, the majority of households are involved in farm activities but many of them get their income from non-farm activities (World Bank, 2008). Thus in the rural areas, it is hard to find women involved in only farming. As a matter of fact, households devote part of their time to farm activities and part to non-farm activities (Zahonogo, 2001).

The importance of studying women's income generating activities lies in its contribution to the eradication of poverty and possible economic independence for women. Throughout the world, women are still disproportionately represented among the poor, the illiterate, the unemployed and underemployed. Participation in non-farm activities particularly, can reduce rural poverty and also have an indirect effect on wages amongst the poor rural dwellers especially women. This statement corroborates Lanjouw and Murgai (2008) findings, which reveal that non-farm income increasingly plays an important role and exhibits an increasing share in agricultural household income. Women participation in farm and non-farm economic activities is not widely known. As literacy rate of women is very low in general there are many

constraints in their involvement. However, the participation level of rural women may differ due to existing social values, norms and culture. Therefore, the study was undertaken to determine the rural women participation in farm and non-farm activities in Kankara Local Government Area of Katsina State.

The findings from this study may be valuable to students and academics in understanding the processes of women's participation in farm and non-farm activities. The information gathered from this study will be useful to policy makers, especially those concerned with rural poverty reduction and women empowerment. Also, this study may be useful to decision makers and development practitioners in refining their policies and strategies to enhance the performance of rural women in farm and non-farm economic activities in Kankara Local Government Area and Nigeria at large. Finally this work will also serve as reference material for planners, donor agencies, local governments, and non-governmental organizations (NGOs) and individual philanthropists interested in transforming the rural economy.

1.6 SCOPE OF THE STUDY

The spatial scope of the study covered the entire Kankara Local Government Area of Katsina State. This study focused on only women involved in farm and non-farm activities as their source of livelihood. The LGA is made up of two districts; Kankara and Ketare respectively and eleven wards namely; Burdugau, Danmurabu, Garagi, Gatakawa, Kankara A and B, Ketare (Hurya), Kukasheka, Pauwa A and B (Gurbi), Wawar-Kaza, Yargoje (Danmaidaki) and Zango. The content scope of this study is expanded to cover the major types of farm and non-farm economic activities of women, contribution of farm and non-farm activities, reasons for women's participation in farm and non-farm activities, factors that influence participation in farm and non-

farm economic activities and the constraints faced by rural women in participating in farm and non-farm economic activities. The temporal scope is 2009-2013.

1.7 OPERATIONAL DEFINITIONS OF CONCEPTS

Participation: In this study, it refers to the involvement in farm and non-farm economic activities such as; planting, poultry and livestock rearing, post harvest operations, cottage industries, tailoring, etc.

Farm activities: In this study, it refers to the activities which occur on the farm in connection with the production of farm products. These activities include; crop, fish, livestock production, etc.

Non-Farm Activities: For the purpose of this study, it refers to those activities that are not primarily agriculture, forestry, or fisheries, but located in rural areas.

Economic Activities: In this study, it refers to those efforts undertaken by women in order to earn income.

Income generating activities: In this study, it refers to those activities through which rural women earn money directly in form of profits.

Rural women: In this study, rural women refer to the married, never married, widowed or divorced women living in the rural areas as individuals or families and engaged in farm and non-farm activities.

Attitude: in this study, attitude refers to the opinions and beliefs rural women nurture about themselves or situations as they relate to their level of self esteem/confidence, motivation and willingness to participate in farm and non-farm economic activities.

Knowledge: In this study, it refers to the level of understanding derived from the education, skills and training necessary for rural women in order to participate fully in farm and non-farm activities.

Opportunities: For the purpose of this study, opportunities refer to those conditions that make it favorable for rural women to participate in farm and non-farm economic activities. These conditions comprise availability of market information, empowerment training, extension services and modern processing equipments.

Resources: In this study, it refers to the productive factors required by rural women in order to accomplish their farm and non-farm economic activities. Resources here include; land, labour, wage, capital and financial records.

Rural Women's Perceptions: In this study, it refers to the beliefs or opinions rural women have towards participation in farm and non-farm activities. This relates to women's conviction, values and culture as these can affect their farm and non-farm activities.

Welfare: In this study, it refers to the availability of resources and presence of conditions required for reasonably comfortable, healthy and secure living.

CHAPTER TWO

CONCEPTUAL, THEORETICAL FRAMEWORK AND LITERATURE REVIEW

2.1 INTRODUCTION

This chapter reviews literature related to rural women's participation in farm and non-farm economic activities. It also highlights the conceptual and theoretical framework guiding the study.

2.2 CONCEPTUAL FRAMEWORK

The conceptual framework underlying this study is presented in Figure 1.1, where it shows a set of relationships between the variables used subsequently in the study. The framework for this study is based on the assumption that participation in farm and non-farm activities is influenced by several factors. Basically, some of the factors which determine women's participation economic activities are presented in a simplified manner. These factors can be categorized as; attitude, knowledge and skills, opportunities and resources. These factors are also the bases of the problems faced by women in their income generating endeavours.

2.2.1 Attitude

Most African traditions are still being practiced in the rural areas. In Nigeria, particularly in the north for instance; the division of labour between men and women is still well defined. Men's role as major bread winners is still paramount, whereas women only supplement the men's income. Women's major role is seen in reproduction and household chores. Thus, the duties of a woman are so enormous and involving that she becomes overworked both mentally and physically at the end of the day. She hardly has time to learn about viable economic activities, or other associations (groups, cooperatives) which may help her progress in her

endeavours. Traditional attitudes regarding what activities women should carry out also limit their participation in income-generating activities. Mostly, women are not expected to engage in activities which will take them far from home, or lead to spending nights outside their matrimonial houses, or places of residence. This is typical in the northern part of Nigeria; where purdah (women in seclusion) is practiced. In connection to this situation, are the psychological issues. These are attitudes that women themselves have internalized. As a matter of fact, most women believe they do not have the ability to carry out some activities or should not do them. They are characterized by low self esteem. For example, most of them feel that transport business or restaurant enterprises are purely male domain (Okumu, 1992).

Very few women dare venture into such income-generating activities solely without the backings of male relatives (husband, brother, and son). As such; this limits women to only some types of income-generating activities. They themselves believe that these activities are left for women who want to compete with men. Such attitudes are bad as they limit women's choices of income-generating activities to be carried out by only a few.

2.2.2 Knowledge

Women often do not have the required knowledge (education, skills and training) to perform effectively in their farm and non-farm economic activities. This discrepancy can be seen in the way women's small scale economic activities are organised; for example, in planning, production, storage, marketing and the distribution of the final products. Invariably, participation in the informal sector requires some amount of knowledge and the application of skills for increased production. This is absent in most women's activities. This has led to poor management, misappropriation of funds and low production and yield. Absence of knowledge

has caused frustration, for example, in the field of loan acquisition. Most women do not know the proper channels to follow. Also, they cannot acquire loans to expand their enterprises. On another note, lack of knowledge has left women vulnerable to exploitation by middlemen. Lack of education has made women not be able to have some basic skills like book-keeping to be able to record their daily activities, expenses and profit gains. It is because of this reason, that most women do not have bank accounts where they can save their money and later reinvest in their income-generating enterprises (Okumu, 1992).

2.2.3 Availability of Opportunities

Women are left with only a little or no access to opportunities necessary for participation in income generating activities. They are mostly disadvantaged in the area of interventions, empowerment programmes, cooperatives, media, legal and extension services. These have serious effect on their occupations. Their male counterparts have better access to these opportunities. For instance; men have more organized associations and groups that are easily accessible by international, governmental and non-governmental interventions when available. They also have better organized and well represented cooperatives which put them at an advantage. Also, most women are not conversant with local authorities' bye-laws on petty trading or engagement in informal (income-generating) activities. They, for example, set up "make-shift" shops or tents without acquisition of licenses or informing the local authorities. (Okumu, 1992).

Note that most of these shops or tents do not meet the public health standards. They are often demolished and a lot of properties which would otherwise not have been damaged extensively go to waste. Women, in cases of demolition incur a lot of losses. There are cases

where all the products (vegetables, fruits, drinks and many others) are thrown away or even burnt. These affect women's enterprises very much as they have to look for money elsewhere to start all over again. (Okumu, 1992).

2.2.4 Access to Resources

Access to resources is an important factor that determines women's level of participation in income generating activities. These resources include; capital, land, production equipment, labour, land, time, income. Capital here mainly has to do with money. Most women lack money to set up viable income-generating activities. They are further inhibited by the fact that most rural women do not own land or structures, therefore, lack items to use as collateral in obtaining loans. The money they use to start businesses is usually gotten from relatives whom they are either to pay back or too little to set up viable income-generating activities (Okumu, 1992). Land ownership for instance in the northern part of Nigeria is another serious issue that is worsened by the existing patriarchal kinship systems which maintain a set of social relations that enable men to own and control land. Even where women inherit land, it is often controlled by male relatives (husband, brother, and son). This limits women's choice of income generating activities, for instance commercial farming.

Women spend a lot of time in reproduction and bringing up children and as such; are left with only a little time to participate in income-generating activities as they have to attend to the house chores. They have to choose activities which can only be done in or near the house. Presence of young children curtails movement to far off places or taking up activities which demand a lot of time. Due to this reason rural women are only limited to participating in small scale trading within their communities, which are not often profitable. Men, also control the

income of women. In a household where a man is present he often has a say in the money a woman gets. He may want to be given the money for his own selfish gains. This often frustrates women as they would like to hide the income-generating activities they participate in from their husbands. In some cases, however, when a husband is present in a household, he may give his wife money to start an income generating activity. It can be said that he boosts his wife's morale such that she feels like taking up a more worthwhile income-generating activity. In a case where a husband is absent a woman is often overburdened with the family responsibilities that she only participates in a "hand to mouth" income-generating activity without any savings. Some husbands also choose for their wives the income-generating activities they should carry out.

Influencing Factors

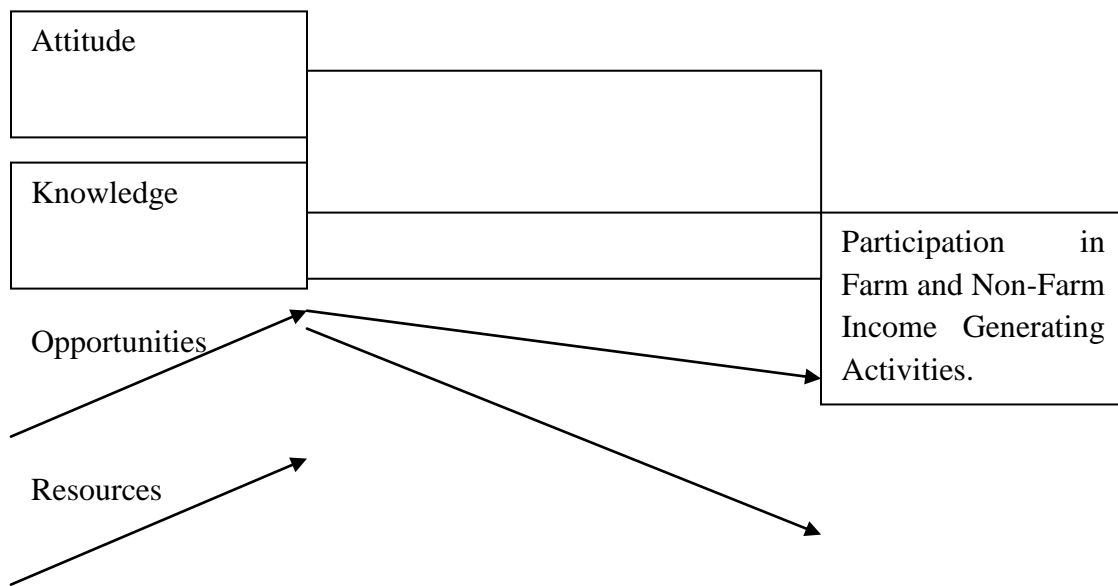


Figure 1.1: Conceptual framework

Source: Compiled by the Author, 2016

2.3 THEORETICAL FRAMEWORK:

Theories and Models of Change in Occupational Diversification.

A theory of change can be a helpful tool for developing solutions to complex social problems. Harris (2008) also defined theory of change as a systematic assessment of what needs to happen in order for a desired outcome to occur. Theories of change should be designed to explain how and why change happens. He also outlined a list of generally accepted components common to most theories of change: namely; contextual factors, needs/issues, guiding principles, assumptions and beliefs, values, preconditions, strategies and expected change (short-term, mid-term and long-term). This present study is however hinged on the Feminism, Persuasion theories and Decision maker models. These change theories and model were found to be relevant to the study as they explained and captured the relevance of diversification of economic activities; through rural women's participation in farm and non-farm activities. Furthermore, these theories outlined some of the factors that determine women's participation and the need to diversify in order to avoid reliance on only one source of income. Also stressed, is the need to recognize women's abilities, capabilities and potentials as agents of change.

2.3.1 Feminism theory

A theory that discusses relations of men and women in society is regarded as feminist theory. Thus, various feminist theories include: cultural determinism, biological determinism, Marxian/radical feminism, liberal feminism and social feminism. It is unequivocal that women's marginalization is mentioned in all feminist theories but different reasons are advanced for such marginalization in each strand of feminism (Haralambos and Holborn, 2005). For instance, unlike the argument of biological feminists, who noted that nature and biological factors such as genes and hormones subordinated women to men, cultural feminists like Anne Oakley and

Sherry Ortner emphasized that women's marginalization is rooted in the ways in which every culture defines and evaluates female biology (Haralambos and Holborn, 2005). While these arguments cannot be washed away especially in the search for the rationale behind women marginalization, the argument of liberal feminists is considered more relevant to the discourse because it stipulates the modalities for incorporating women into development as active players. These modalities include a gender balanced access to life enriching opportunities such as quality education, income, health, power, agricultural credits, information and technology. For example, in most northern areas of Nigeria, traditionally, men have been known to carry out all farm activities from pre-planting to post-harvest activities, while women only performed domestic/household chores. These days, women have diversified their activities to planting, harvesting, post-harvest activities, and processing of farm produce.

It has been shown that in Nigeria and many societies of the world, more women than men are facing problems such as poverty, illiteracy, inadequate educational and vocational training opportunities, lack of access to credit. These problems are sustained by traditional gender norms which condone male domination over females. In recognition of implications of feminization, appreciable recognition of women abilities and capabilities is urgently needed to enhance development process and minimize feminization of agriculture in Nigeria (Okafor, Akinwale and Hassan, 2007). More importantly, the potentials of women as agents of change should be tapped and developed to improve upon the present level of socio-economic situations in Nigeria.

2.3.2 Persuasion Theory

This theory grew out of psychological research in the late 1930s to 1950s on attitude and behavioural change (De Fossard, 1997). In its most basic form, persuasion involves changing person's mental state, usually as precursors to behavioural change. Persuasion has often been

conceived of as fundamentally involving attitude change. The theory assumes that exposure to information leads to a change in attitude which in turn leads to a change in behaviour. Persuasion theory focuses on psychological characteristics that affect a person's perception of and response to messages, this includes:

- i. Knowledge and skills
- ii. Attitudes towards behavioural and social issues;
- iii. Predispositions or preferences; and
- iv. Beliefs and concerns about the behaviour and its consequences; and attitudes towards the source of message.

Many of these are related to demographic characteristics, such as age, gender, ethnic group, income and level of education. An example can be observed when a rural woman is educated and acquires certain skills, she may not want to remain a farmer, she will want to go into non-farm occupations such as public service to increase her income and sustain her livelihood. Even though she may still be farming at a subsistence level, her main occupation is no longer farming (Ajani, 2012).

2.3.3 Decision-Making Models

Decision-maker models focus on individuals and employ techniques of micro economic analysis and the theoretical perspectives of methodological individualism. They include studies of farm economics in neo-classical mould which are concerned with the allocation of resources on the farm and farmers' responses to markets and innovations (Laird, 2010). Decision-maker models are easily adapted to incorporate non-agricultural activities. Thus non-agricultural enterprises are seen as analogous to the farm enterprise, but drawing on different natural

resources and participating in different output markets. Non-agricultural rural labour is treated in the same way as rural labour in general; returns are calculated on the basis on wage rates and compared to the net returns per capita per day. Low's model of farming and migration in Swaziland (Low, 1996) incorporates the male migration component well, explaining that households divide rationally because of the higher wages for males in industry and mining, and cheaper costs of reproduction and living for females in the original community.

The ways in which such micro-economic, usually household models have been repackaged in sustainable livelihoods frameworks, and how the conventional microeconomic components of resources (assets), activities (micro-transformations) and preferences (for wellbeing) have been developed or re-presented are examined (Start and Craig, 2004). Two areas of interest are:

(i) Understanding differential returns across diverse activities- those beyond agriculture and even beyond rural labour. This provides us with a micro-economic basis for explaining differential access, opportunity and hence differentiation.

(ii) Exploring these household models further, particularly with relation to decision-making strategies and the light they shed on diverse portfolios and multiple occupational activities. The role of choice and utility optimization to explain such strategic behaviour was also explored. Indeed, Harris (1997) points out that a number of studies by anthropologists and sociologists also fall into this decision-maker category when rural women make choices about their involvement in multiple occupations.

2.4 LITERATURE REVIEW

2.4.1 Farm and Non-Farm Economic Activities of Rural Women

Women all over the world contribute substantially to the economic survival of their households. Such farm and non-farm economic activities involve farming, trading, food processing, hairdressing and weaving, sewing and knitting, and handicrafts. Rural women in Nigeria have little benefits compared to men regarding education, employment opportunities, personal income, assets and land tenure. Over 50% of women in Nigeria live in a rural community where they draw their livelihood and highly struggle for survival. Ekong, (2003) examined the economic contribution of rural women as way of national development, they save as the major source of capital of the country and principal market for domestic manufacturers, they are responsible for over 50% of all productive activities, (80% of food production in Africa, 60% of food production in Latin America), yet they are indignant as a result of great poverty, ignorance, and poor health condition. The researcher further stressed that 75% of the population live and work in rural areas, lack the basic amenities such as potable water, electricity, and motorable roads.

Anne and Mary (1998), in a study legitimized the idea of productive partners in agriculture and other economic activities, discovering and documenting the various roles played by rural women as farmers, and agricultural professionals. Besides working on farms, rural women in Nigerian societies also participate actively in non-agricultural activities as various trade transactions, such as handicrafts, but despite the important role rural women play in economic activities they are hardly given any attention in the area of training and visitation by extension agents or any government officials with improved technologies. Banks hardly grants them loans and they are hardly reached with improved seeds, fertilizer and other inputs (Damisa

and Yohanna, 2007). Rural women have worked side by side with men in agriculture with some marked division of labor, the men performed the tasks of felling trees, gathering and burning of bush, and making ridges while women were involved in planting of seeds particularly foods crops, harvesting, transporting, processing and selling of farm products (Lawanson, 2008).

Damisa, Samndi and Yohanna, (2007) pointed out that various researches conducted on the contribution of women to agricultural development in the country suggest that women contribution to farm work is as high as between 60 and 90% of the total farm task performed. 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.

The performance of domestic roles for the survival of their households ensures that women engage in other activities outside the home which include trading, providing support services to traditional caterers, and selling of ice water to generate income in order to reduce the poverty levels of their households. For instance, the income earned from these activities are usually used to purchase buckets, basins and cooking utensils like sauce pans, plates, bowls, and other things necessary for household use. Hence, women perform dual responsibilities, that is, responsibilities in and outside the home. They also bear principal responsibility for maintaining the home and caring for society's dependants – children and the elderly. However, it is surprising to note that in the developing world, majority of them are engaged in the informal sector of the economy as opposed to the formal sector; they perform low paid jobs, or work in the family enterprise (ILO, 2008).

It has been reported that 80% of the work done on the farm in agricultural activities takes place in rural areas. It is now widely demonstrated that rural women, as well as men, throughout

the world are engaged in a range of productive activities essential to household welfare, agricultural productivity and economic growth. Yet women's substantial contribution continues to be under-valued in conventional agricultural and economic analyses and policies, while men's contribution remains the central, often sole focus of attention (Fabiya, Danladi, Akande, and Mahmood 2007). However, while reliable statistics on the different levels of participation of women and men in rural non-farm employment are hard to find, those that exist point to women not participating equally. Haggblade, Hazell and Brown (1989) showed that in rural areas of Mali the participation rate of women in non-farm employment is 16 percent as opposed to 84 percent for men, an indication that men do have more opportunities to pursue this type of diversification. Meanwhile, in some instances, women may also employ coping strategies that are not easily available to men (Koch Laier, Davis, Milward and Kennan, 1996).

The question of who participates more in non-farm activities; whether men or women, remain unresolved in most literatures. Haggblade, Hazell and Brown (1987) suggest that men participate more and perform better in non-farm activities for instance; Haggblade et al (1989). This assumption seems somewhat true when one looks at it only from the point of access to credit, assets and opportunities which favour mostly men. However, one cannot agree with these authors as this submission becomes vague and unrealistic considering the fact that these studies were not carried out in Nigeria, where women are known compete favourably or participate more than men in farm activities in most parts of the country and also participate more than men in non-farm activities. Also, women are more involved in different varieties of non-farm activities which they can perform from/at their homes unlike men. Also women are known to be better managers of household finances since they manage the home, nurture and take care of their children and husbands even with the little resources at their disposal. As such, women tend to be

involved in non-farm activities that require little start-up capital, whereas men do not due to either their nature or ego. Besides, the participation and contributions of women in non-farm economy are not usually recorded nationally or otherwise and for this reason the assumption that men are more involved in non-farm activities cannot be accepted.

2.4.1.1 Rural Non-Farm Activities

Literature on the concepts of non-farm suffers from deficiencies associated with definitions, inconsistencies and difficulty in making comparative analyses (Barrett, Bezuneh and Aboud, 2001). “Non-farm” simply means activity outside agriculture (own-farming plus wage employment in agriculture) (Lanjouw, 1999). Rural non-farm activity is diverse. As such there is no standard definition either internationally or within Nigeria. Non-farm activities are defined by most countries to include all economic activity other than agriculture, forestry and fishing. They therefore include agricultural processing and trade (conventionally classified as part of the manufacturing and commerce sectors, respectively), as well as construction, mining, transport and financial and personal services (Rosegrant, 1999).

There are two alternative approaches in defining rural-non-farm activities (Saith, 1992). The first is the locative approach in which the primary criterion is that a RNF activity is performed in a location which falls within a designated rural area. The second is based on the linkage approach where an industrial enterprise generates significant development linkages with the rural areas. For the purpose of this study we are using the first. Rural-Non-Farm Activities (RNFA) includes all economic activities *viz.*, household and non-household manufacturing, handicrafts, processing, repairs, construction, mining and quarrying, transport, trade, communication, community and personal services in rural areas. Broadly speaking, non-farm activities in the rural areas can be divided into the following categories (Mayer, 1991)

- i. Small-scale industrial activities such as food processing (flour milling, oil processing, soap making and food processing)
- ii. Cottage industries (handicrafts, spinning of cotton or wool, cloth weaving and dying, pottery, leather tanning and distilling local brews)
- iii. Artisan activities (blacksmiths, masonry, wood work/carpentry, house construction, repair services and fabrication of farm tools)
- iv. Commercial activities (trade and transportation)
- v. Infrastructure development activities (special public works, feeder roads and irrigation works, and food-for-work programs) and
- vi. Formal employment including professional and administrative jobs.

The term non-farm should not be confused with off-farm. The latter generally refers to activities undertaken away from the households own farm, and some authors for example (Ellis, 1998) used it to refer exclusively to agricultural labouring on someone else's land, so off-farm used in this sense would not fall within the normal definition of non-farm. Rural-Non-Farm-Activities (RNFAs), thus, play an important role in providing supplementary employment to small and marginal farm households, reducing income inequalities and rural-urban migration. Therefore, development of various non-farm-activities can effectively be exploited as a potent stimulator for further economic growth offering rural communities better employment prospects on a sustainable basis. It does not matter where the activity takes place, at what scale, or with what technology.

2.4.1.2 Characteristics of Women's Income Generating Activities

Women usually conduct income generating activities of one kind or another; sometimes duplicate business that may lead to problem of considerable competition for market and lack of business sustainability (IFAD, 2006). Majority of these are traditional, low capital input and labor intensive while the returns accruing to them by comparison tend to be low (Women Watch, 2005). According to ILO (2000), women tend to concentrate in the least rewarding income generating activities production that usually covers a fairly narrow range of consumer goods for example garments, woven goods, food processing and handcrafts. Moreover, women tend to keep business close to home to minimize conflict between their many roles as wage earners, mothers and home makers. For example a cross regional studies of women in the informal sector in Zimbabwe found that about 64% of women run their business close to their home (UNICEF, 2006).

2.4.2 Participation in Farm and Non-Farm Economic Activities and Contribution to Rural Women's Livelihoods.

The contribution made from participation in farm and non-farm economic activities to rural livelihoods is a significant one which has often been ignored by policy makers who have chosen to focus their activities on agriculture alone (Ellis, 1998). Reardon (1997) and Turner, Hyden and Katese (1993) have highlighted the importance of earnings from non-farm activities. This is because rural households tend to participate in both farm- and non-farm activities in order to buffer shortages in income. There arises the need for rural women to diversify their income generating activities since farming is rain-fed and therefore seasonal. This is to enable them to acquire additional income and meet up with economic responsibilities during off-season periods. This has made many rural women to engage in occupational diversification.

Rural areas where these women reside are dominated by the geographical isolation, low quality physical infrastructure, poor human capital development, underdeveloped markets, resource scarcity or incidence of some natural disaster (Ranjan, 2006). According to Lanjouw and Murgai (2008), non-farm income increasingly plays an important role and exhibits an increasing share in agricultural household income. Thus, the non-farm employment has been generally recognized to have the potential in raising agricultural household income, thereby reducing rural poverty. Previous surveys of Ellis (1998) reports that there was an estimate of roughly 40% of African rural household's income on average being derived from non-farm sources. Bryceson and Jamal (1997) reiterated that occupational diversification activities are of increasing importance for women empowerment. The non-farm activities undertaken by women can be permanent or casual in nature. An increasing number is establishing small rural processing or handicraft enterprises (IFAD, 1995). Haggblade (1999) reported that pursuing non-agricultural activities therefore represents a risk minimization strategy to achieve basic household subsistence needs. Many analyses of income diversification conceive of diversification in terms of strategies employed to earn cash income in addition to primary production activities from a variety of sources.

Women dominate many of the non-farm activities that will grow most rapidly during structural transformation activities such as food processing and preparation, tailoring, trading and many services. They likewise hold a major interest in many of the declining rural non-farm occupations; basket making, mat making, ceramics and weaving. Consequently, women will be key actors in the economic transition of Africa's rural economy (Haggblade, 1999). While these are important income-generating activities, it must still be emphasized that the greater body of evidence suggests that diversification activities open to women are often less lucrative than those

pursued by men. Delgado (1989) reported that rural women in Burkina Faso normally obtain 25 to 50% of their income from non-agricultural activities. Here, participation in non-agricultural activities allowed women living near to subsistence levels to acquire cash to supply their basic needs in addition to those supplied by own production. According to Delgado (1989), the activities pursued include: small-scale food processing, artisanal activities for example; basket making, sale of prepared food in markets, carry out petty trading in cereals, sale of shea nuts and butter, sale of groundnut oil, and processed grains (such as soumbala, a flavouring for sauces made from the grains of the neem tree).

Moreover, several studies (Barrett, Berzzuneh and Aboud, 2001; Ellis and Bahiigwa, 2001; Escobal, 2001; Ferreira and Lanjouw, 2001) indicate that in a variety of regional and local settings rural women capable of combining conventional farming activities with innovative rural enterprises enjoy higher income and safer livelihoods than rural women deriving their income from conventional farming alone or from a combination of conventional farming and wage labour. One can easily conclude here that the impact of non-farm activities among rural women is not only seen in the increases in their income but also in the improvement of their household income and livelihoods.

2.4.3 Reasons for Rural Women's Participation in Farm and Non-Farm Economic Activities

Given that employment opportunities fluctuate according to the health of the economy as a whole, an increase in the number of diversification activities undertaken does not necessarily mean that livelihoods are becoming more sustainable. Poor rural women farmers who increasingly engage in non-farm activities may rather be doing so as a long-term adaptation to

stress, shocks and poverty. These farmers are trying simply to survive in a poorer, riskier world, rather than to improve livelihoods and invest in production (Tacoli, 2002). However, in most developing countries, employment in the agricultural sector is decreasing. Many rural areas are undergoing a process of de-agrarianization, with younger workers seeking to move out of agriculture because of lack of jobs, low incomes and agro-climatic constraints.

Increasing numbers of rural women are working in non-agricultural activities in or outside their place of origin in order to diversify their income and reduce risk. One important reason for this is population growth and increased pressure on natural resources, exacerbated by economic reform and trade liberalization that has made it impossible to maintain employment in activities that cannot withstand competition (Tacoli, 2002; Taylor and Yunez, 2002). In areas of intensive farming, increased mechanization of agriculture has also led to a fall in farm employment, for example in India (Mukherjee, 2002). At the household level, gender and generation differences in access to, and control over resources, can be an important reason for some groups to diversify their income-generating activities. This also involves significant transformations in farming households, where the family as the traditional unit of production and consumption is replaced by more individualized priorities and behaviours. Young men's increasing reluctance to engage in full-time farming can be explained on one hand to limited access to land, either because of shortages (as in northern Tanzania and southeast Nigeria and in some of the Mali settlements) or because of control by older men over perennial cash crops (as in southern Tanzania) (Reardon, Stamoulis, Cruz, Balisacan, Berdegue and Banks, 1998).

However, low incomes from family farming are more important reason, and are the emerging opportunities in non-farm employment. For example, in northern Mali young men have found an occupational niche by offering transport services on motorbikes from the river banks

where fishermen unload their boats to the main roads where traders purchase the fish. This is much more profitable than farming, and relatively less affected by climatic vagaries (Ranjan, 2006). Non-farm employment and especially income-generating activities which are not controlled by the family are even more attractive for young women, who often have limited inheritance rights on land (Tacoli, 2002). Young women are more likely than young men to engage in petty trading, either as a primary or as a secondary occupation. The main reason for this is that farming is usually in the form of unpaid family labour with little prospects, since daughters rarely inherit land from their parents who also control farming income and decision making. By contrast, young women keep control of their earnings from trading, on which they also make independent decisions (Warren, 2001). Women are often able to play an autonomous role in livelihoods diversification by undertaking on their own small-scale enterprises. The participation in innovative enterprises is often advocated as an important means to promote rural women empowerment and more equitable gender relationships within the household.

2.4.4 Socio-Economic Factors Influencing Participation in Farm and Non-Farm Economic Activities

Socio-economic factors here comprise knowledge, attitude, access to resources and availability of opportunities needed to pursue different livelihood strategies. Education and training are essential components of any strategy to improve agricultural and non-farm productivity and pull households out of poverty. Learning about improved production technologies and methods, new products and markets, business skills, as well as life skills (such as; health management, decision-making, self confidence, or conflict management) can make a big difference (International Labour Organization (ILO), 2008). Venna, Jain and Devi (1989) conducted a study on gain in knowledge and change in attitude through farming experience. The

study revealed that attitude of farm women changed significantly after farming involvement. They remarked that due to gain in practical knowledge the attitudes become more favorable. Venna *et al.* (1989) found that there was significant change in attitude of rural women from before - training to after - training in improved home making tasks. They said that due to gain in knowledge the attitude become more favorable. Education and training are essential components of any strategy to improve agricultural and non-farm productivity and pull households out of poverty.

Education and training are powerful tools against poverty and hunger, and for women's empowerment. Educated women are more likely to be wealthier, have higher earnings and exercise greater decision-making power within the household. They are also more likely to ensure that their own children are educated, thus breaking the cycle of poverty and hunger. The existence of a positive link between access to, and level of education on one hand and involvement in the more remunerative non-farm activities on the other hand is virtually undisputed in the literature. Devi (1995) found that education of women had a significant positive impact in labour force participation. Khan (1983) found that the rural women's education level had a positive relationship with their participation in community activities and income generation projects in Bangladesh. Where diversification takes the form of a new enterprise, capital will be required in order to initiate entry. This capital may come from their own resources but where credit markets exist, credit is a likely source of capital. It appears that the purchase of specialised equipment, such as machinery, which represents a sunk cost, is a greater deterrent to entry than investment in buildings and related structures (Siegfried and Evans, 1994). On-farm diversification may often be utilising redundant farm buildings, thus sunk costs are more likely to be generated through the requirement of specialised equipment. The

existence of a rental market for such equipment reduces the magnitude of sunk costs as an entry barrier (Kelly, 1995). Begum (1995) in his study found that credit availability of rural women had positive relationship with their income. Biswalo *et al.* (2001) observed women's participation in income generating activities as well as their need for access to credit. A system for the provision of loans to the women which also incorporated ways of collecting loans and monitoring how loans were used was presented.

Khandker *et al.* (1995) found in their study that the role of credit availability improved women's participation in economic activities and observed significant negative relationship between credit availability and impact in terms of improved well-being. Ellis (1998) observed that in Africa, poverty can be largely explained in terms of location, and lack of access to facilities. When asked what improvements in their circumstances they would most ask, villagers most frequently cite road access. The majority of African farmers currently sell their products to local markets. However, improvements in transportation can also expose the user to increased competition for rural enterprises formerly protected by remoteness.

While in most developing countries, both men and women farmers do not have access to adequate resources, women's access is even more limited due to cultural, traditional and sociological factors. Accurate information about men's and women's relative access to, and control over, resources is critical in the development of food security strategies. Women access to economic resources and control of products of their labor has been worsened by the trends of globalizing economy, where by competition is high, requiring quality and large scale productivity (Mbilinyi, 2000). Rural women remain a disadvantaged group when it comes to access and control of formal credit facilities. Mukangara and Koda (1997) identified factors contributing to this situation including high rate of illiteracy, lack of collateral, smallness of their

and undertakings and their preoccupation in predominantly subsistence level activities.

Mutangadura (2005) noted that water and land are the most fundamental resources to women's living conditions, economic empowerment and to some extent, their struggle for equity and equality. But the majority of women lack access to these resources and most in matrilineal customary system has access to farmland only through their husbands or fathers as they are only granted use rights as land title pass through the male line. Chachage (2005) provided that, there are some customs prohibiting women from owning land in certain parts of Tanzania. In some instances, women are not permitted to control the fruits of their labor on economic resources (Rweyemamu, 2003).

There is no doubt that the health status of household members has a significant bearing on their participation in income generating activities, while this general rule applies to health in its broadest sense, at the present time in parts of sub-Saharan Africa concerns about health tend to focus on HIV/AIDS, Malaria, and Hepatitis among other terminal diseases. For example, White and Robinson (2000) outlined the considerable extent to which HIV/AIDS has impacted on household livelihood in sub-Saharan Africa. Many of the conclusions may also be applicable to health problem other than aids. HIV/AIDS is particularly relevant as it often results in the loss of household members who are at the peak of their productivity, and potentially have most to contribute to the livelihood of the household.

2.4.5 Constraints to Women in Farm and Non-Farm Economic Activities

The gender gap in rural employment and sustainable development in terms of access to non-farm employment returns to labour and capacities strengthened through individual and collective support mechanisms such as micro-credit, insurance and non-formal education remains large in many countries. It is important to note that in socio-economic terms women are

generally worse off than men because they lack access to cash or in-kind income and income-generating activities due to a range of constraints embedded in social, economic, political and cultural systems. The formal and informal economies are characterized by occupational segregation, pay differentials and gender time division which increase gender disparities (ILO, 2008). Lanjouw and Lanjouw (2001) and Akinsanmi (1994) reported that rural households in Africa, especially the poor, often lack access to key agricultural inputs and to the markets necessary to achieve an agricultural-led pathway out of poverty. They noted that in West Africa and farmers were considered to occupy the lowest ranks in society. Their skills do not receive the public recognition accorded those of other professions. People in white-collar jobs often have a higher standard of living than the average farmer.

Olaitan (1984) observed that the village farmers who produce the crops sold in urban markets, towns and villages were usually very poor. He remarked that the middlemen appear to be wealthier hence it was financially preferable to be a distributor of farm produce rather than a producer. The foregoing juxtaposed the inherent poverty among rural farm families in spite of their involvement in multiple income generating activities. Previous studies confirmed that rural farm households engage in several income generating activities but the polemic was tackled from the perspectives of inequality and motives without considering the factors influencing involvement in non-farm income generating activities by rural poor farmers. For instance, Senadza (2011) found that aggregate non-farm income increased income inequality among rural households in Ghana. In terms of its components, while non-farm self-employment income reduced income inequality, non-farm wage income increased income inequality.

Women are generally less able than men to participate in economic opportunities because they face a work burden that men do not. In most societies, women are responsible for most of

the household and child-rearing activities as well rearing of small livestock, although norms differ by culture and over time. This additional work burden is unpaid and limits women's capacity to engage in income-earning activities, which often require a minimum fixed time before being profitable. Furthermore, the nature of tasks, such as caring for children and elderly household members, requires women to stay near the home, thus limiting options to work for a wage. Time scarcity forces many women to start-up cottage industries, such as handicrafts, which are often characterized by low returns and limited potential for expansion (Lanjouw and Lanjouw, 2001). In Uganda, Ellis, Manuel and Blackden (2006) report that women, when asked about the causes of labour constraints, cited the time they spent looking after their families, working in their husbands' gardens and producing food for their households as reasons for their inability to expand production in the market. Men, on the other hand, simply noted that they had no money to hire labour. Electricity, On the other hand, rural infrastructure is also crucial to the growth of the rural non-farm sector. Although improved infrastructure may have a detrimental impact on rural non-farm enterprise due to competition from outside products and shifts in tastes, poor infrastructure also imposes serious costs on rural firms. For example, due to electricity shortages in Wuxi Province of China, almost every township and village enterprise (TVE) had installed diesel generators to meet its own needs at a cost several times that of power transmitted through the electricity network (Wang, 1990).

This is a widely observed problem for all firms (rural and urban) in developing countries. Surveys of large- and small-scale manufacturers in Nigeria and Indonesia found that 92 and 59%, respectively, had their own electricity generators operating at less than 50% capacity (World Bank, 1994). It is a problem which is particularly acute in rural areas and for smaller firms, raising costs and leaving them less able to compete with foreign or domestic imports. In

addition to lowering costs, good infrastructure in the form of transport links are essential if non-farm enterprises are to break away from dependence on local market demands and sell to the outside world (Mead, 1984). An evaluation by USAID of six new rural roads in the Philippines found that the fall in the costs of transportation and broadening of the market led to a substantial increase in both agricultural and non-farm incomes between 1975 and 1978 when the roads were built. Further, there was an average net increase in the number of non-farm incomes between 1975 and 1978 when the roads were built, and an increase in the number of non-farm establishments in the region of the roads of 113% (Ranis, Stewart and Angeles-Reyes, 1990).

Based on the submissions made by various authors, it is evident that rural women face more constraints in performing non-farm activities compared to their male counterparts. These constraints range from poor access to credit, labour, skills and education. One could attribute this to the gender differences and preference that exists socio-economically, politically and culturally in our society. Also, another reason could be as a result of the disregard of the contribution of women to the rural non-farm economy.

CHAPTER THREE

THE STUDY AREA AND METHODOLOGY

3.1 THE STUDY AREA

This study covered Kankara Local Government Area, of Katsina State Nigeria.

3.1.1 Location and Size

It is located between Latitudes $11^{\circ} 42' - N - 11^{\circ} 51'$ North of the Equator and Longitudes $7^{\circ} 30' 0'' E - 7^{\circ} 39'$ East of the Greenwich meridian, and covers a total area of about 1,462 Km². It is located at the southern part of the state, shares boundaries with Malumfashi LGA to the south, Danmusa LGA to the north, Musawa LGA to the east and Faskari LGA to the south and Zamfara state to the west. The LGA is made up of eleven wards namely; Burdugau, Danmurabu, Garagi, Gatakawa, Kankara A& B, Ketare (Hurya), Kukasheka, Pauwa A and B (Gurbi), Wawar-Kaza, Yargoje (Danmaidaki) and Zango (Figure. 3.1)

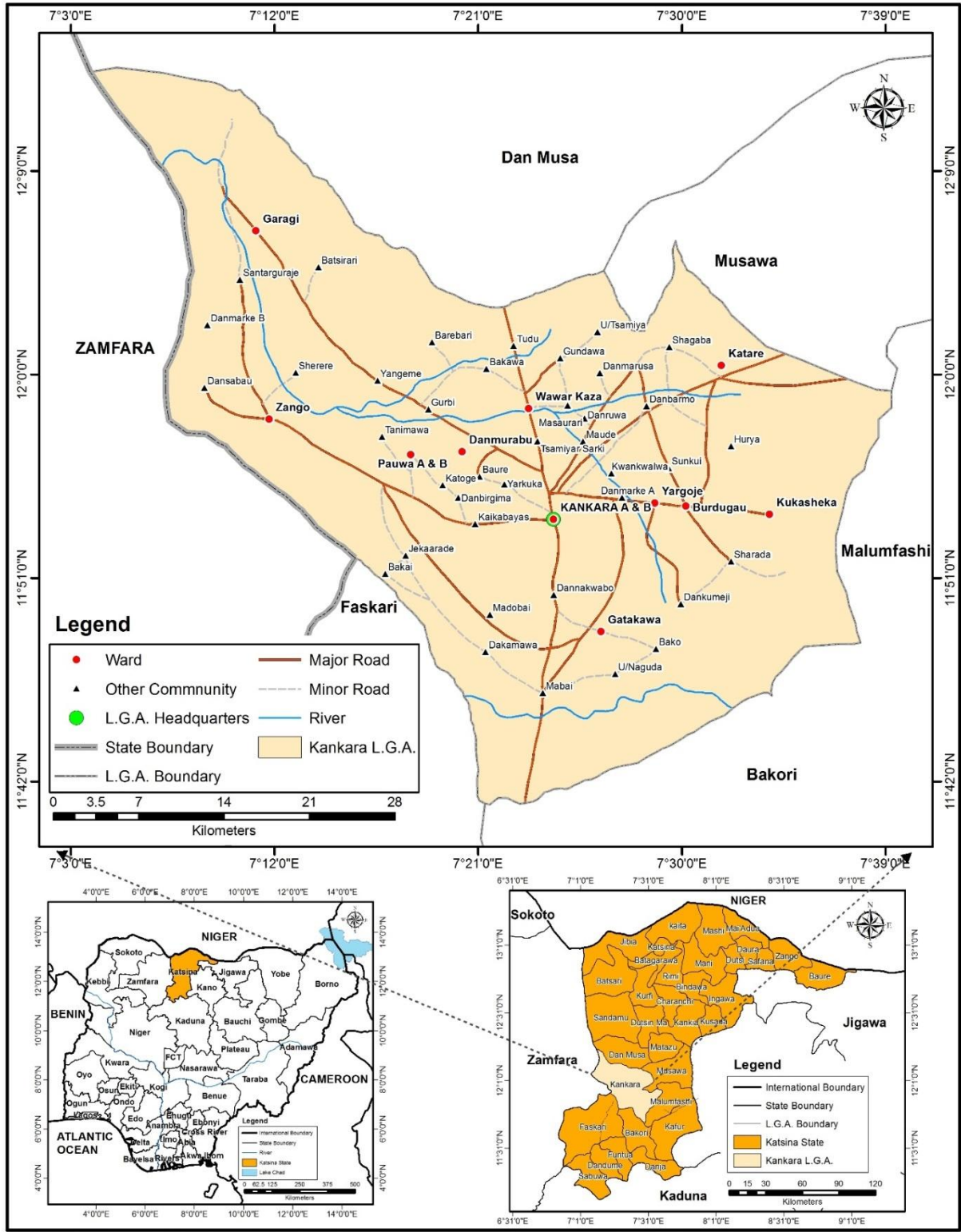


Figure 3.1: Map of Kankara Local Government Area.

Source: Adapted from the administrative map of Katsina State (2014)

3.1.2 Climate

The study area has a mean annual rainfall of about 800mm to 1000mm (Olofin, 1989). The area is characterized by four distinct seasons. A dry and cool season (Hausa: *Kaka*) which last from around mid – November to the end of March and is characterized by the harmattan winds. A dry and hot season (Hausa: *Bazara*) which is a short transitional period between the harmattan season and the wet season from March to about mid- May characterized by the warmest temperature of the year. A wet and warm season (Hausa: *Damina*) follow the hot season and ends in mid- October during which over ninety percent of the annual rainfall is received. A dry and warm season (Hausa: *Rani*) which is the shortest season last from about the end of October to mid- November (Olofin, 1989).

Relative humidity falls considerably during the harmattan. Maximum day temperature is about 33.1°C while the minimum day temperature is about 19.2°C. Overall, the climate is hot and dry for many months of the year due to the latitudinal location of the town and its location away from the sea (Mortimore, 1970). These climatic factors affect crop farming which is the major economic activity in the study area.

3.1.3 Relief and Drainage

The study area lies within the highest plain of Hausa–land, which slopes gently towards the desert and the streams drain north–east toward Lake Chad. The plains reach altitude of about 71m in the southern part and gradually decline in altitude north ward (Mortimore, 1970).

The research area falls within the region of the Precambrian rocks, which is dissected by numerous shallow valleys, forming the drainage channels of streams flowing into the upper reach of the Rima River tributaries. All the tributaries of the Rima Basin rise from the Precambrian

region (Udo, 1970). The major streams in the area drain into Rivers Bababba, Malmo, Galma and Turame.

3.1.4 Soil and Vegetation

The study area is underlain by crystalline rock of the basement complex, consisting of solid rock that is covered by several feet of weathered materials or sandy drifts (Udo, 1970). The area has a clayish, sandy loam soil texture that is slightly acidic and the alkalinity is not a serious problem. They are derived from a fine sandy drift and belong to the Zaria group. On the upper slope the soils are red – brown to orange in color and form a sandy clay loam within a PH value of about 5.6, overlying vesicular iron stone and partly indurated, strongly mottled, grittily clay (Mortimore, 1970). The vegetation over the region is a Sudan savannah type. It is made up of stunted trees which are scattered within the area. The tallest trees in the area are normally the silk cotton trees and the Baobab trees of up to 30m height; and also consist of shorter and more feathering grass and thorny bushes (Mortimore, 1970).

Vegetation is green during the rainy season while the trees shed leaves annually. The bush land vegetation is characterized by species that include *Guiera Senegalensis* (Hausa: *Sabara*), *Adansonia Digitata* (Boabab – *kuka*), *Butryrospermum Parkii* (Sheabutter – *Kadanya*), and *Tamarindus Indica* (Tamarind – *Tsamiya*). Others include *Acacia Arabica* (Hausa: *Bagaruwa*), *Khaya Senegalensis* (Mahogany – *Madaci*), *Senna Singueana* (Hausa: *Runfu*), *Ziziphus Spina-Christi* (Hausa: *Kurna*), *Cassia Sieberiana* (Hausa: *Malga*), *Gardenia Aqualla* (Hausa: *Gaudi*), *Hyptis Pectinata* (Hausa: *Kimba*), *Diospyros mespiliforms* (Hausa: *Kanya*), *Prosopis Africana* (Hausa: *Kiryra*), *Lepta Demis-histata* (Hausa: *Yadiya*) among others. Most of these plants are used for medicinal purposes, firewood and timber for traditional Hausa Roofing

(Hausa: *Soro*). The sandy loam texture of the soil in the area encourages the cultivation of variety of crops such as; maize, groundnut, cotton, millet, beans and guinea corn. The local government area also has abundant natural resources such as kaolin, which is in large quantity, and is considered to be the best in the country (Kankara LGA manual, 2013). It is extracted for sale to our domestic industries.

3.1.5 People and Economic Activities

The major ethnic groups are Hausa and Fulani. The family unit in the study area consists of the husband who is usually the head of the household, wife/wives and their children and may be their relations all living together in a house. The main livelihood of the people is predominantly subsistence agriculture including irrigation farming. Livestock keeping is also practiced. Others are engaged in trading activities within neighbouring villages and towns on weekly basis, at the weekly markets of Kankara, Dansabau, Yartsamiya, Danmusa and Yankuzo. The Fulanis are noted for their animal husbandry and do engage in seasonal migration with their cattle, goats, sheep and donkey. The Hausas also engage in animal rearing but mostly occupied with sedentary agriculture (Udo, 2001). Men own most of the farm lands and as such carry out the major farm activities. This phenomenon can be attributed to the fact that the study area consists of Muslim communities and in line with the teaching of Islam, women are meant to remain at home to avoid interacting with other men (*purdha*). This is one of the reasons which cause rural non-farm activities to be an important income generating activity to the participating women in the area. Most women in the study area are confined to their homes due to religion, culture and social restrictions.

However, with the current socio-economic situation of the country, some women are breaking through the traditional norms and coming forward to participate in economic activities outside their homes. The women are involved in some form of farm activities and other non-farm economic activities in the area, these activities include; petty trading, mat weaving, pottery, knitting, groundnut oil production, groundnut cake (*kuli-kuli*) making, shea butter production and sale, selling vegetables (gotten from irrigated farms) and hired labour. There is a serious concern about the welfare of women. Cotton is also produced in large quantity in the area and as a result, Dangote Group of Companies established a ginning company called “Dangote Ginnery” which is very big and functional. However, the kaolin processing industry established by the state government is not functioning but all the structure and machines are still available and are sometimes rented out to individuals who want to undertake kaolin processing for export. Some people also engage in the excavation of a particular type of sand “*lamso*” (fertilizer processing sand) which is believed to contain high amount of fertilizer nutrients that supports plant growth and is extracted for exportation to other states and even countries outside Nigeria. The only tourist attraction present in the area is Matsafa water fall which is about 17km from the LGA headquarters. People from different places including foreigners, often visit the area (Kankara LGA manual, 2013).

3.2 METHODOLOGY

This section treated the methods and materials used in the study.

3.2.1 Reconnaissance Survey

A reconnaissance survey was undertaken at the beginning of the study in order to be well acquainted with the study area and also to assess rural activities carried out by women. During

the reconnaissance visit, Danmurabu, Ketare and Yargoje wards were visited. Farming was noticed to be the major occupation of the people and carried out by mostly men. The rural women were found to be less involved in farm activities but more involved in non-farm activities. The major rural activities of the women discovered were; planting, harvesting, post harvest activities, livestock rearing, embroidery, tailoring, production and selling of groundnut cake and oil, shea butter, selling of fruits and vegetables. Young girls were seen to be engaged in hawking of fruits, vegetables and household wares. Small markets within the communities were also seen with the rural people engaging in various trading activities such as; selling food crops, livestock, fruits and vegetables and labour sale (kwadogwo) by young males. Information gathered showed that rural women face serious economic hardship and poverty and as such involve themselves in various farm and non-farm income generating activities thereby justifying the need to conduct this study. The observation from this visitation provided the researcher foreknowledge about the study area; which helped in achieving the set objectives.

3.2.2 Types of Data Utilized For the Study

The variety of data used for this study include:-

- i. Socio-economic characteristics of the women, such as; age-group, marital status, household size, level of education and level of income.
- ii. Types of farm or non-farm economic activities engaged in by rural women.
- iii. Farm and non-farm participation and contribution to the welfare of rural women
- iv. Reasons why rural women are involved in farm and non-farm economic activities.
- v. Factors that influence participation in farm and non-farm economic activities.
- vi. Constraints women face in performing farm and non-farm economic activities.

3.2.3 Sources of Data

This study employed both primary and secondary sources of data.

3.2.3.1 Primary Sources

Data was generated through the administration of questionnaires which was the major research instrument for this study. It was designed to collect relevant data with respect to the stated objectives of the study. In addition a focus group discussion (FGD) was conducted among selected rural women whereupon relevant data on the problems and issues related to their participation in farm and non-farm economic activities were collected in the study area. The focus group discussion in this study involved eight participants. The women were purposively selected. The purpose was to let the women discuss, give views and suggestions on the participation of women in farm and non-farm economic activities which help improve their livelihoods.

3.2.3.2 Secondary Sources

Secondary data were obtained from variety of sources namely; population data was obtained from the National Population Commission (NPC) for the determination of the sample size for the study. Also, documented materials from textbooks, journals, official gazettes, conference papers, research thesis and materials from related websites were obtained for the literature review. Also, population data, maps and data on the study area were obtained from the Local Government Secretariat.

3.2.4 Sample Size and Sampling Techniques

Kankara Local Government Area has a total population of 243,259 with a male population of 121,815 and female population of 121,444 respectively (NPC, 2009). The 1991 census figure for female population (77,649) was projected to 2014 with a growth rate of 3.0% and gave female population of 157,845 and applying the formula $P_n = P_o (1 + r)^t$ Where:-

P_n = population at a future date

P_o = base year population

t = time interval between the base year and the future years

r = rate of growth

To determine the sample size for the study, the eleven wards were arranged in alphabetical order. A stratified systematic sampling was adopted, where wards that fell within the even numbers were selected for the study and were mostly noted for agricultural production and other non-farm activities (Table 3.1).

Table 3.1: List of Wards in Kankara LGA

S/N	Ward	Female Population 1991	Projected Female Population 2014
1	Burdugau	5,084	10,335
2	Danmurabu	5,738	11,664
3	Garagi	6,579	13,374
4	Gatakawa	4,921	10,003
5	Kankara A & B	15,642	31,797
6	Ketare (Hurya)	6,289	12,784
7	Kukasheka	6,703	13,626
8	Pauwa A & B (Gurbi)	6,558	13,331
9	Wawar-Kaza	7,887	16,033
10	Yargoje (Danmaidaki)	5,523	11,227
11	Zango	6,725	13,671
Total	11	77,649	157,845

** Sampled Wards Note: $11,664 + 10,003 + 12,784 + 13,331 + 11,227 = 59,009$

Source: Compiled from National Population Commission (1991)

Krejcie and Morgan's (1970) table of determining sample size was used, where population range of 75,000-999,999 was represented by 382 sample size. Using the projected female population of 59,009 for the five wards, a total of 382 respondents were selected among the wards (Table 3.2). Systematic sampling technique was used in selecting respondents in each ward whereby women were selected at intervals of four houses in each community, till the sample size was achieved. The respondents comprise the women that are engaged in farm and non-farm economic activities. This was done in order to obtain information from their own experience regarding their participation in farm and non-farm economic activities.

Table 3.2: List of Selected Wards by Sample Size

S/N	Ward	Projected Female Population 2014	Sample Size
1	Danmurabu	11,664	75
2	Gatakawa	10,003	65
3	Ketare (Hurya)	12,784	83
4	Pauwa A & B (Gurbi)	13,331	86
5	Yargoje (Danmaidaki)	11,227	73
Total	5	59,009	382

Source: Compiled from National Population Commission (1991)

3.2.5 Determination of Objectives

Objective one which focused on the socio-economic characteristics of women was achieved by asking respondents to indicate their ages, marital status, educational level and household size.

Objective two was achieved by asking the respondents to indicate the farm and non-farm economic activities they engaged in, such as production, marketing and processing of farm produce; rearing of farm animals; handicrafts; petty trading; tailoring; hair dressing; wage labour, among others.

Objective three was achieved using a 5-point Likert scale with weights of 1-5 assigned to each option. Respondents were asked to indicate their options of Strongly Agree (5), Agree (4), Undecided (3), Disagree (2) and Strongly Disagree (1) amongst the impact variables.

Objective four was achieved using priority ranking method. In order to do this, the respondents were asked to give priority on the reasons in order of importance. The rank order was calculated after giving weight to each of the priority. For example; 3 points is for priority I, 2 points for II and 1 point for III respectively. The respondents reacted to possible variables such as, meeting basic family needs, absence of male earning family member, meeting additional family requirement, meeting personal needs, increasing household income, among others.

Objective five was achieved using a 5-point Likert scale, where respondents were asked to indicate their options of Strongly Agree (5), Agree (4), Undecided (3), Disagree (2) and Strongly Disagree (1). Furthermore, in analysing the responses, the rule was such that any mean response of 1-2.49, 2.50-3.49 and 3.50-5.00 was rated as below average, average and above average respectively.

Objective six was achieved by asking the respondents to indicate the constraints they faced in performing farm and non-farm activities.

3.2.6 Data Analysis

Both descriptive and inferential statistical techniques were employed in the analysis of data. Data was presented through the use of tables. Descriptive statistics such as percentages and frequencies were employed in the analysis of data. Data generated through Focus Group Discussion were analysed qualitatively. Also the inferential statistics was centred on Chi-Square

(X^2), which was used in analyzing the hypothesis. That is; whether farm and non-farm participation has a significant impact on the welfare of rural women. All tests were carried out at 0.05 level of significance.

The statistical techniques that were employed to measure the stated objectives of the study are as follows:-

Objective (i) Examine the socio-economic characteristics of women. This was analysed using tables, frequency counts and percentages.

Objective (ii) Characterize the major farm and non-farm activities women participate in. This was analyzed using tables, frequency counts and percentages. Participation in farm and non-farm income generating activities by communities and level of participation in farm and non-farm activities were also further analysed. Where participation level of 50% and above is considered high, 30 - 49% participation level is considered medium and participation level of 29% and below is considered low.

Objective (iii) Assess the contribution of farm and non-farm participation to the welfare of rural women. This was analysed using frequency counts and percentages.

Objective (iv) Examine the reasons for women's involvement in farm and non-farm activities. This was analyzed using descriptive statistics such as frequency counts, percentages, priority and rank order.

Objective (v) Assess the perception of women on the influence of some factors on participation in farm and non-farm economic activities. This was analysed using frequency counts, means and standard deviation.

Objective (vi) Examine the constraints faced by rural women in farm and non-farm economic activities. This was analyzed using descriptive statistics such as frequency counts, percentages and rank order.

CHAPTER FOUR

RESULTS AND DISCUSSION

4.1 INTRODUCTION

This chapter presents the data collected during the field survey. The results of the data analyzed were discussed and presented according to the objectives set for this study. Interpretations were given about some trends and inferences drawn from these analyses.

4.2 SOCIO-ECONOMIC CHARACTERISTICS OF THE RESPONDENTS

The socio-economic characteristics of the respondents are presented in Table 4.1. These include; age, marital status, income, household size and educational level. Table 4.1 shows that 11.5% of the respondents are below the age of 20 years, 26% are within the age of 21-30 years, 33.5% within the age of 31-40 years, another 16% within the age of 41-50 and about 13% of the respondents are above 50 years. This finding suggests that those that are more active in farm and non-farm economic activities in the study area are mostly between 21-50 years, which is the economically active age group, giving a total of 75.5%. This corroborates the statement of Mafimisebi (2007) that respondents within this age limit are in the economically active age bracket to undertake various livelihood activities. While those aged less than 20 years and above 50 years are the least involved in farm/non-farm activities in the study area. This could be due to the absence of opportunities. But also indicates that very young and elderly women are involved in farm/non-farm economic activities.

Table 4.1 Socio-Economic Characteristics of the Respondents

Variable	Frequency (N=382)	Percentage (%)
Age		
<20	44	11.5
21-30	99	26
31-40	128	33.5
41-50	61	16
50>	50	13
Total	382	100
Marital Status		
Never married	48	12.5
Married	153	40
Divorced	75	20
Separated	37	10
Widowed	69	18
Total	382	100
Educational Level		
No formal education	123	32.2
Quranic education	175	45.8
Adult education	44	11.5
Primary education	21	6.5
Secondary education	19	6
Tertiary education	0	0
Total	382	100
Household Size		
<5	64	17
6-10	126	33
11-15	101	26
16-20	54	14
21> above	37	10
Total	382	100

Source: Author's Field survey, (2016)

Also, Table 4.1 shows that 12.5% of the respondents were never married as at the time of the survey. Similarly 40% of the respondents were married, 20% were divorced while 10% were separated and 18% were widowed. These analyses suggest that 153 of the respondents who were in the married category were the majority involved in farm/non-farm activities in the study area. This is in conformity with Ogunbameru, Gwary, Idrisa, Ani and Yero (2006) who reported that married women were involved in various livelihood activities in order to solve numerous family problems and also assist in supplementing household income for sustenance. Hence the effect on increased number of household size which is needful both for farm and non-farm labour. The

divorced respondents ranked third at 20% respectively. This statistic is not surprising as they may be striving harder to provide for the family as single parent household heads. Finally, the single and separated respondents with 12.5% and 10% respectively shows the least respondents involved in farm/non-farm activities. This is due to the fact that marriage is a culturally approved phenomenon that confers status on women hence; these categories are few in rural areas.

Table 4.1 further reveals that 32% of the respondents did not have any form of formal education, 49% had only quaranic education. Also, 11.5% had adult education, 6.5% had primary education, 6% secondary education while none had tertiary education. This analysis suggests that there is a general low level of education acquired by the respondents in the study area. With their low level of education, the women could likely lack the necessary skills/training and knowledge to improve on their farm/non-farm activities. This is in line with Imam (1998) who observed that women with little or no education have limited economic opportunities. The result (Table 4.1) on respondent's household size shows that 17% had an average of household size of less than 5 while 33% had an average household size between 6-10 members. Also, 26% had an average household size of 11-25 members, 14% had an average household size of 16-20 while 10% had an average size of 21 and above. This analysis suggests that all the respondents had various categories of family sizes.

4.3. TYPES OF FARM/NON-FARM ECONOMIC ACTIVITIES AND PARTICIPATION OF RESPONDENTS

Here the types of farm and non-farm activities and participation as indicated by the respondents were presented. In order to achieve objective two, frequencies and percentages were used to present the various types of farm and non-farm activities carried and participation in the

study area as seen in Table 4.2. The distribution of farm and non-farm activities by communities was further presented as seen in Table 4.3.

Table 4.2 Frequency Distribution of Farm and Non-farm Economic Activities and Participation of Respondents

Types of Activity	Frequency	Percentages	Rank order
Planting	10	2.6	12 th
Harvesting	13	3.4	9 th
Poultry rearing	11	2.9	11 th
Livestock rearing	12	3.1	10 th
Post harvest operation	20	5.2	5 th
Handicrafts (baskets, brooms, hand fans, mat)	17	4.5	6 th
Rice husking	11	2.9	11 th
Embroidery work	12	3.1	10 th
Tailoring/dress making	14	3.7	8 th
Labour selling (<i>kwadogwo</i>)	7	1.8	13 th
Making and sale of Locust bean (<i>dadawa</i>)	14	3.7	8 th
Making and sale of groundnut cake (<i>kuli-kuli</i>)	53	13.9	1 st
Making and sale of shea butter (<i>mai kadanya</i>)	34	8.9	2 nd
Selling of fruits	15	3.9	7 th
Selling of vegetables	29	7.6	3 rd
Selling of moringa leaf delicacy (<i>zogalai</i>) and juice	14	3.7	8 th
Selling of firewood	20	5.2	5 th
Selling of <i>kunun aya</i> (tigernut drink)	23	6.0	4 th
Processing of groundnut oil	53	13.9	1 st
Total	382	100	

Source: Author's Field survey, (2016)

Table 4.2 shows respondents participation in different farm and non-farm activities in the study area, showing that making and sale of groundnut cake (*kuli-kuli*) and processing of groundnut oil both ranked 1st with the highest percentage of women participating in farm and non-farm economic activities at 13.9%, this may be connected to the fact that groundnut is one of

the major crops grown in the area. Making and sale of shea butter (*mai kadanya*) ranked second with 8.9%, selling of vegetables ranked third with 7.6%. Ranking the least (13th) is labour selling with only 1.8%. It was observed in the study area that labour selling is a male dominated activity. Other activities include; harvesting activities 3.4%, livestock rearing 3.1%, planting activities 2.6%, post harvest activities 5.2% and poultry rearing 2.9%. Also selling vegetables 7.6%, selling tiger nut drink (*kunun-aya*) 6.0%, and selling firewood 5.2% among others.

The women were involved in planting of crops such as; maize, beans and guinea corn during the planting season. The FGD further reveals that participation in farm activities was mostly seasonal and done during the rainy season. Also harvesting activities of the women include; beans picking, maize harvesting and post harvest activities such as; maize threshing, guinea corn sifting, beans husking and rice sifting. It was however observed that the women were not involved in land preparation, weeding and fertilizer application. The discussion with the respondents reveals that this phenomenon could be attributed to religion and socio-cultural factors. One of the respondents further stated thus:

Here, hardly would you see women performing some farm activities such as; land preparation, weeding and fertilizer application because our husbands will not permit us. Traditionally it has always been the activities of men. Also most husbands in our communities feel it is an insult to them for their wives to be seen carrying out some or all of farm activities. They believe that it is a sign that a man is unable to cater for his family which usually bruises his ego. (Laure, Danmurabu)

This is in conformity with Tsado, Tologbonse, Alabi and Tergema (2009) who reported that muslim women in *Purdah* in the northern part of Nigeria, are known to be mainly involved in processing activities of agriculture although some of them have personal farms which are being managed by their husbands. One respondent provided further details that the situation

might be linked to the fact that the men are most times the owners of the farmland and as such would be fully involved in these farming activities. Farming which is the major occupation in the study area. Most of the farm activities are done seasonally while the non-farm activities are done on a more permanent basis.

Participation of women in farm/non-farm activities enables them obtain additional income to empower themselves financially. The reason for this could be because women have better ability for these activities. The findings are in conformity with Haggblade (1999) who reports that women dominate many of the non-farm activities such as petty trading, tailoring and many services that will grow most rapidly during structural transformation. The study also notes that women hold a major interest in many declining non-farm occupation such as basket making. As such; women are likely to become the key actors in the economic transition of Africa's rural economy. This could also be attributed to the fact that farming activities are dominated by men in the study area and is seasonal; as such many of the women resort to non-farm activities.

Table 4.3 Frequency Distribution of Farm and Non-Farm Economic Activities and Participation by Communities

Activity	Communities					Total
	Dan	Gat	Ket	Pau	Yar	
Planting	1	2	2	3	2	10
Harvesting	3	3	2	3	2	13
Poultry rearing	2	2	2	3	2	11
Livestock rearing	3	3	2	2	2	12
Post harvest operation	4	4	5	5	2	20
Handicrafts (baskets, brooms, hand fans, mat)	3	3	4	3	4	17
Rice husking	2	2	2	2	3	11
Embroidery work	2	2	3	2	3	12
Tailoring/dress making	3	3	3	3	2	14
Labour selling (kwadogwo)	1	1	2	2	1	7
Making and sale of Locust bean (dadawa)	3	3	3	3	2	14
Making and sale of groundnut cake (kuli-kuli)	10	8	12	13	10	53
Making and sale of shea butter (mai kadanya)	7	6	7	8	6	34
Selling of fruits	3	3	3	3	3	15
Selling of vegetables	6	4	6	6	7	29
Selling of moringa leaf delicacy (zogalai)	3	3	14	3	2	3
Selling of firewood	4	3	4	4	5	20
Selling of kunun aya (tigernut drink)	5	2	6	6	4	23
Processing of groundnut oil	10	8	12	13	10	53
Total	75	65	83	86	73	382

Source: Author's Field survey, (2016)

Key: Dan=Danmurabu, Gat=Gatakawa, Ket=Ketare, Pau=Pauwa, Yar=Yargoje

The analysis in Table 4.3 shows that Pauwa A&B had the highest participation in planting when compared to Danmurabu, which had the lowest. Pauwa A&B also had the highest participation in poultry rearing, making and sale of groundnut cake, making and sale of shea butter and processing of groundnut oil. This could be due to the availability of high quantity of food crops produced; proximity to and availability of the weekly markets. Also Yargoje recorded the highest participation in the sale of vegetables. This might be due to the practice of irrigation farming (*fadama*) which encourages growing of vegetables within the community. However, selling of fruits recorded equal participation from all communities with a frequency of (3). The

farm activities engaged in by these women are mostly planting, harvest and post harvest activities. This situation was evident in all the communities. As the five communities selected for this study were noted for farming and non-farm activities. It was also discovered that non-farm activities were widely practiced in all the communities, the reason may be connected to the fact that the communities are agricultural and therefore high producers of food crops; which encourages local production and processing of food crops. Also, they are endowed with raw materials suitable for crafts activities like mat making, broom making and basket weaving which are often sold at the weekly markets within the communities and other neighbouring villages. Also location and proximity to the markets within the communities encourage participation in these activities. Indeed rural non-farm incomes are important as an off-season, part-time or home based income supplement. This could probably be as a result of the low level of income derived from reliance on one activity alone; hence the need to diversify.

Table 4.4 Distribution of Rural Women According to their Extent of Participation in Farm and Non-Farm Economic Activities.

Variables	Frequency	Percentages (%)
Extent of Participation		
Low	59	15.5
Medium	127	33.2
High	196	51.3
Total	382	100
Production type		
Subsistence	323	84.6
Commercial	59	15.4
Total	382	100
Regularity of Involvement		
Occasional	152	39.7
Permanent	230	60.2
Total	382	100
Amount for Initial Investment		
5,000-10,000	171	44.7
11,000-15,000	97	25.3
16,000-20,000	76	19.9
>20,000	38	9.9
Total	382	100
Sources of Start-up Capital		
Income from farm/non-farm	138	36.1
Loan from family and friends	202	52.9
Thrift (asusu)	12	3.1
Money lender	22	5.8
Others	8	2.1
Total	382	100

Source: Author's Field survey, (2016)

Data contained in Table 4.4 indicates that majority of the respondents 51.3% had high participation in farm and non-farm economic activities, 33.2% had medium participation while 15.5% respondents had low participation in farm and non-farm activities. This finding shows that a large portion of the rural women had medium to high level of participation in farm and non-farm activities. During the discussion with the women, they attributed their level of participation to the need to provide for their families' needs and to increase household income. In the case of category of production, more women produce at subsistence level (84.6%). Discussion with the women revealed that financial incapacity remains the major reason for their production level. Respondents were involved in permanent or occasional activities of both farm and non-farm

activities. However, 60.2% were permanently engaged in farm and non-farm activities. This could be attributed to the fact that activities such as farming is seasonal, during peak periods/planting season some of the respondents engage in farming activities while at lean periods after harvest/dry season they resort to non-farm activities. This is to empower them economically to cope with family responsibilities.

Bryceson and Jamal (1997) observed that occupational diversification activities are of increasing importance for women empowerment and the activities undertaken by women can be permanent or casual in nature. As regards the amount of initial start-up capital, the highest number of respondents representing about 44.7% started their businesses with less than eleven thousand naira (₦11,000), underlying the fact that women have limited access to credit, especially in the rural areas, and highlights the importance of informal sources of funds available from family and friends. These are however inadequate, since household expenditure follows a similar pattern in rural areas, with everyone's need to be satisfied at the same time. Another 9.9% started with above ₦20,000, while 25.3% started with less than ₦16, 000. The sources of start-up capital for non-farm activities as revealed by the women is largely loan from family and friends and income from farm and non-farm activities with 52.9% and 36.1% respectively. This may be because these two sources do not require documented collaterals. Discussion with respondents revealed that getting financial capital for starting non-farm activities is a major factor that determines the participation of women in this activity. This can be attributed to the fact that most women generate little funds from these activities. This situation is worsened by the fact that women have limited chances of accessing credit from financial institutions. This discouraging environment might explain the low level of annual income of the respondents as shown in Table 4.5.

Table 4.5 Respondents Farm and Non-Farm Average Yearly Income (2009-2013)

Year	2009(₦)	2010(₦)	2011(₦)	2012(₦)	2013(₦)	Frequency	Percentage
Planting	17,300.50	17,520.65	15,150.60	18,050.00	16,200.55	10	4.50
Harvesting	20,115.50	22,342.80	18,420.45	25,010.20	21,432.30	13	5.74
Poultry rearing	20,350.67	19,200.70	22,180.10	21,090.00	18,000.00	11	5.40
Livestock rearing	21,050.55	22,010.50	18,900.74	20,144.00	20,923.45	12	5.51
Post harvest operation	24,365.52	28,051.50	20,633.00	29,614.33	25,060.67	20	6.83
Handicrafts (baskets, brooms, hand fans, mat)	22,239.40	24,060.71	23,115.20	21,350.00	24,500.65	17	6.20
Rice husking	18,111.34	20,220.15	19,300.40	20,050.10	17,180.77	11	5.07
Embroidery work	16,020.45	17,180.00	16,500.40	19,300.15	18,550.00	12	4.68
Tailoring/dress making	17,800.00	17,458.42	17,515.30	18,000.43	19,120.50	14	4.81
Labour selling (<i>kwadogwo</i>)	13,150.60	14,050.68	13,540.51	12,010.75	14,220.43	7	3.58
Making and sale of Locust bean (<i>dadawa</i>)	12,060.00	11,315.00	12,220.61	11,050.60	11,900.50	14	3.13
Making and sale of groundnut cake (<i>kuli-kuli</i>)	25,111.80	29,478.10	31,046.20	31,570.44	32,330.50	53	8.00
Making and sale of shea butter (<i>mai kadanya</i>)	22,000.50	21,153.70	23,420.90	25,210.35	25,010.44	34	6.25
Selling of fruits	15,010.00	15,350.15	14,120.68	15,372.12	15,220.77	15	4.01
Selling of vegetables	17,050.55	17,122.43	18,111.20	15,014.81	16,958.00	29	4.51
Selling of moringa leaf delicacy (<i>zogalai</i>) and juice	12,040.72	11,530.51	12,012.86	12,273.21	12,022.66	14	3.20
Selling of firewood	22,500.51	20,150.43	21,020.50	20,560.40	23,590.50	20	5.77
Selling of <i>kunun aya</i> (tigernut drink)	13,010.57	12,530.51	12,021.86	11,140.18	14,026.22	23	3.35
Processing of groundnut oil	28,544.00	34,932.10	35,370.67	38,488.26	40,351.58	53	9.50
Total	357,833.18	375,659.04	364,602.18	385,300.33	386,600.49	382	100

Source: Author's Field survey, (2016)

Table 4.5 shows the contribution of the various farm and non-farm activities to the annual income (2009-2013) of the rural women in the study area. It also shows that the contribution of the various farm and non-farm activities to the total annual income of the rural women in the study area was low. With the highest farm and non-farm average yearly income of ₦386,600.49 recorded in 2013 and the lowest average yearly income of ₦357,833.18 recorded in 2009. This

simply means that when the income of women from the participation in farm and non-farm activities is small, it cannot sustain and meet household basic needs and as such remain unsustainable.

Table 4.5 further reveals that 9.50% of the total annual income for the five years, generated from farm and non-farming activities was from those engaged in processing of groundnut oil which was the highest (53); and also the number of the women engaged in the activity was the highest. This could be attributed to the fact that the study area is characterized by high agricultural activities. Also is the availability of groundnuts in commercial quantity. This was followed by making and sale of groundnut cake (8.0%). While the 3.13% of the annual income generated was from the making and sale of locust beans (*dadawa*) which remained the lowest though, the number of the women engaged in the activity was not the lowest at 14. The women opined that the reason for this is probably because locust beans are amongst the readily available spices in most households due to its low cost of production as such; it is produced both for household consumption and sale. It becomes necessary to buy only when households run out of the commodity and probably unable to get from relatives, friends or neighbours. This in most cases is responsible for the low income generated. This also indicates that farm and non-farm activities that require low cost of production do not necessarily generate high income.

4.4 PARTICIPATION IN FARM AND NON-FARM ECONOMIC ACTIVITIES AND CONTRIBUTION TO RESPONDENT'S WELFARE

The respondent's perception of the contribution of various economic activities to their welfare were presented using a 5 point Likert Scale of Strongly Agree, Agree, Undecided, Disagree and Strongly Disagree as seen in Table 4.6.

Table 4.6 Participation in Farm And Non-Farm Economic Activities And Contribution to Respondent's Welfare.

S/N	Impact	S.A	%	A	%	U	%	D	%	SD	%
1	Farm input	25	6.54	23	6.02	37	9.68	135	35.34	162	42.41
2	Less Dependence on people	148	38.74	119	31.15	21	5.49	50	13.08	44	11.51
3	Increase in income	136	35.60	109	28.53	38	9.94	48	12.56	51	13.35
4	Changes in diet	112	29.31	101	26.43	59	12.82	64	16.75	46	12.04
5	Improved healthcare	40	10.47	45	11.78	43	11.25	124	32.46	130	34.03
6	Payment of children school fees	35	9.16	31	8.11	30	7.85	156	40.83	130	34.03
7	Improved credit worthiness	83	21.72	80	20.94	75	19.63	74	19.37	70	18.32
8	Remittance	38	9.94	37	9.68	35	9.16	128	33.50	139	36.38
9	Changes in production	90	23.56	88	23.03	69	18.06	85	22.25	50	13.1
10	Better clothing	32	8.37	35	9.16	40	10.47	132	34.55	143	37.43

Source: Responses from the Questionnaires Administered (2016)

Key: Strongly Agree = SA, Agree = A, Undecided =U, Disagree = D, Strongly Disagree = SD

The analysis in the above table 4.6 reveals that majority 77.8% of the respondents disagreed on the impact of farm/non-farm participation on farm input. From this analysis it is obvious that the respondents have poor perception of the contribution of farm/non-farm participation to farm input. Similarly, on the issue of their dependence on people, majority 69.9% agreed that they are less dependent on people. These responses suggest that the respondents mostly relied on their own effort rather than depend on other people. Concerning the increase in their income, it was gathered that 64.1% agreed that their income increased. Concerning the issue of diet, 57.4% agreed that their diet improved. It is therefore clear that, there are changes in diet of the respondents. However, it can be observed that participation in farm/non-farm income generating activities increased their level of income. In the area of health, 10.5% strongly agreed while 66.9% disagreed. This suggests that there is no improved health care in the communities under observation. With regards to the payment children school fees, 17.3% agreed while a large number of respondents 74.9% disagreed. This response shows a wide margin in the responses on the impact of farm/non-farm participation on payment of children school fees. Similarly, 42.7%

agreed on their improved credit worthiness, while 35.7% disagreed. From this analysis, one can deduce that all the respondents fairly had improved credit worthiness. On remittance, only 19.6% agreed while 69.9% disagreed. On the changes in production, 46.6% agreed while 35.3% disagreed. Also, 17.5% agreed on better clothing while 72% disagreed. This suggests that there were various perceptions on improvement in the areas of farm input, better clothing, remittance, health care and payment of children's school fees respectively. Women involved in farm and non-farm activities who did not improve in the area of farm input, clothing, healthcare, remittance and payment of children's school fees attributed it to their poor financial base and family size.

4.5 REASONS FOR WOMEN'S PARTICIPATION IN FARM/NON-FARM ECONOMIC ACTIVITIES

The priority ranking method was used in achieving objective four. In order to do this, the respondents were asked to give priority on the reasons in order of importance. The rank order was calculated after giving weight to each of the priority. For example; 3 points is for priority 1, 2 points for 2 and 1 point for 3 respectively. Respondents were asked to indicate the reasons for involvement in farm and non-farm activities as contained in Table 4.7

Table 4.7 Reasons for Participation in Farm/Non-Farm Economic Activities

Reasons	Priority			Total Score	Rank Order
	I	II	III		
To meet basic family needs	292	50	40	1016	1 st
Absence of male earning family member	104	99	179	689	4 th
To meet additional family requirements	157	102	123	798	3 rd
To meet personal needs	56	116	160	560	5 th
To increase household income	180	150	62	902	2 nd

Source: Author's Field survey, (2016)

Note: Total score = I × 3 + II × 2 + III × 1

There are many reasons for the participation of rural women in various farm and non-farm income economic activities. The main reasons for their participation in farm/non-farm activities in the study area are; to increase family income, absence of capable income-earning members, to meet basic family requirements, to meet personal needs, food security, avoid dependence on other people, obtain food for their children, obtain better future for their children and increasing the opportunities to improved wellbeing. The analysis in Table 4.6 shows that the most important reason for participation in various activities by the women was to meet basic family needs, which ranked 1st with a frequency of 292 women out of 382 participating in various farm/non-farm activities. Poor women and those who do not have alternative source of earning are involved in different types of farm/non-farm activities to improve their livelihoods. This corroborates the findings of the study conducted by Farid, Mozumdar and Goswami (2009) which shows that the most important factor for seeking employment or participation in various activities by rural women is to provide for their family's needs.

Also ranking 2nd was to increase household income and 3rd was to meet additional family requirements. However, ranking the least was to meet their personal needs. This could probably be attributed to the selfless nature of women; as women by nature tend make sacrifices to first satisfy their family's needs before meeting their own personal needs. The women who are very poor and those who have no alternative source of earning are involved in different types of work for improving their livelihoods. One of the respondents stated that:

Providing food for our families daily is our major concern. We have to engage in any type of activity available to meet this need. Most women here are left with the sole responsibility of providing basic needs for their family needs especially the poor

ones. As for me, I have to engage in any type of work in order to be able to provide food, clothe and medicines especially for my children so that I don't lose them due to hunger or ill health. Also it is only when this is satisfied with the little income derived that one can even think of trying to save part of the income. (Suwaiba, Yargoje)

4.6 PERCEIVED INFLUENCE OF SELECTED FACTORS ON PARTICIPATION IN FARM AND NON-FARM ECONOMIC ACTIVITIES.

In line with this objective, questions were asked using questionnaire and discussion. The rule for this analysis is that any mean response of 1-2.49, 2.50-3.49 and 3.50-5.00 is rated as below average, average and above average respectively.

Table 4.8 Respondents Perceptions of Attitude on Participation in Farm and Non-Farm Economic activities

S/N	Questions	N	Minimum	Maximum	Mean	Std. Deviation
AT1	Women's self confidence can determine their participation	382	1	5	2.92	1.412
AT2	Feeling equal to my peers will give me the hope of being more productive	382	1	5	2.90	1.433
AT3	The willingness to participate in farm and non-activities can determine women's participation and income level	382	1	5	3.09	1.384
AT4	Women are more likely to perform better than men in farm and non-farm activities if given the same opportunities	382	1	5	3.04	1.414
AT5	Motivation serves as an influencing factor in the participation and income of rural women	382	1	5	2.60	1.401

Source: Author's Field survey, (2016)

Table 4.8 presents the descriptive statistics of women's perceptions of attitude on participation in farm and non-farm activities. The mean variable of questions 1- 5 are within average with minimum score of 1 and a maximum score of 5. Question (AT1) has an average

mean score of 2.92, which means that women's self confidence can determine their level of participation in farm and non-farm economic activities. Discussion with the respondents reveals that having self confidence as a woman encourages participation in farm and non-farm activities. They stated that women who often displayed or exhibited self confidence were mostly taken seriously in terms of interventions and support. Some of the respondents stated that this may be attributed to the community's socio-cultural framework which worsens the self esteem/confidence level of the rural women; and probably the absence of capacity building programmes needed in order to groom and encourage the rural women to improve on their self worth and confidence level. Also of importance is the need to change their attitude towards the need to participate more in farm and non-farm income generating activities.

Question (AT2) has an average mean score 2.90. This signifies that the feeling of equality amongst peers encourages productivity.

Question (AT3) has an average mean score of 3.09. This shows that women's willingness to participate in farm and non-farm economic activities can improve their income. Here the respondents agreed that willingness to participate in farm and non-farm activities is important for improvement. They however provided that some women do not show the willingness to participate while those who do not have the opportunities or access to resources necessary for full participation. Question (AT4), has an average mean score of 3.04. This indicates that given the same of opportunities, women perform better than men in farm and non-farm income generating activities. However, this is not the case as women hardly have the same opportunities as their male counterpart. When asked what they thought was responsible for the situation, they provided that it was probably because the situation had always been the same, as tradition and culture have always favoured men. Question (AT5) has an average mean score of 2.60. It means

that participation and income of rural women is determined by motivation. This is because motivation remains crucial in achieving success in any type of activity performed by rural women. A respondent provided that women only need a little push in order to encourage participation. And as such will do better in our chosen activity if properly motivated.

Table 4.9 Respondents Perceptions of Knowledge on Participation of Women in Farm and Non-Farm Economic Activities

S/N	Questions	N	Minimum	Maximum	Mean	Std. Deviation
KN1	Women with high managerial skills participate more in farm and non-farm activities	382	1	5	2.86	1.346
KN2	Women with higher literacy levels are more successful than their non-literate counterparts	382	1	5	2.53	1.498
KN3	Having specialized skills increases the chances of opportunities for women	382	1	5	2.85	1.339
KN4	Women with higher educational qualification tend to have better opportunities	382	1	5	2.52	1.384
KN5	Adequate entrepreneurial skills are important in enhancing the participation of rural women	382	1	5	3.01	1.392

Source: Author's Field survey, 2016

Table 4.9 shows the descriptive statistics for women's perceptions of knowledge and participation in farm and non-farm economic activities. The mean variable of the questions from questions 1- 5 are within average with minimum score of 1 and a maximum score of 5. Question (KN1) has an average mean score of 2.86. This means that, women with high managerial skills participate more in farm and non-farm activities. This is true as women with managerial skills are more likely to manage their businesses better than those without managerial skills. Also knowledge of loan acquisition from financial institutions, accounting and management are inevitable for assured success in undertakings. Question (KN2) has an average mean score of

2.53. This shows that women with higher literacy levels are more successful than their non-literate counterparts. When asked about the importance of being literate, the respondents provided that being literate have great influence on their participation. One of the respondents stated that most of them from the community are not literate and thus remains a limiting factor. The respondent further stated that most of them cannot even read or write. In the words of one of the respondents:

I only understand hausa language, though I have always had the interest in tailoring but because I cannot read or write; I always feel discouraged in going for necessary training in the township (Amina, Yargoje).

This could probably explain the reason for the few number of participants found in tailoring, as seen in the study area. And also the reason for the low income generated across the years as seen in table 4.6. An activity such as tailoring requires participants who are semi literate or literate; who can at least identify some numbers and alphabets, probably read and understand English or Hausa. This is often not the case in the rural areas. As most rural women are not literate and therefore do not have the capacity to participate. This remains a limiting factor compared to women in the urban areas with some level of literacy.

Question (KN3) has an average mean score of 2.85. This shows that having specialized skills increases the chances of opportunities for rural women. This is especially true for women who are into production. For example women who are into the production of groundnut cake (*kuli-kuli*) and oil, shea butter (*mai kadanya*), moringa leaf and juice (*zogalai*) and tiger nut drink (*kunun aya*) which are recorded as the four highest activities in the study area, are characterized by a lot of competition. As such; only the best attract more customers. Specialized skills become necessary in this case. Question (KN4) has an average mean score of 2.52. This implies that

women with higher educational qualification tend to have better opportunities. As such; are likely to participate in farm and non-farm income generating activities compared to women who have less educational qualification. Having higher educational qualification leads to specialization. Question (KN5) has an average mean score of 3.01. This means that having adequate entrepreneurial skills enhances the participation of women in farm and non-farm activities. Knowing how to trade, buy and sell and being innovative, becomes necessary for participation in farm and non-farm income generating activities.

Table 4.10 Respondents Perceptions of Opportunities on Participation in Farm and Non-Farm Economic Activities

S/N	Questions	N	Minimum	Maximum	Mean	Std. Deviation
OP1	Adequate market information can positively affect participation	382	1	5	2.97	1.443
OP2	Transportation cost and distance location to markets are determining factors of participation in farm and non-farm activities	382	1	5	3.02	1.412
OP3	Availability of empowerment training programmes can influence the participation and income level of women	382	1	5	2.48	1.386
OP4	Availability of modern processing facilities can influence the capacity of production	382	1	5	2.95	1.374
OP5	Access to extension services will increase in participation and income generation	382	1	5	2.64	1.367

Source: Author's Field survey, (2016)

Table 4.10 shows the descriptive statistics for respondents' perceptions of opportunities and participation in farm and non-farm economic activities. The mean variable of the questions from questions 1- 5 are within average with minimum score of 1 and a maximum score of 5. Question (OP1) has an average mean score of 2.97. This means that having adequate market information can positively affect participation in farm and non-farm income generating activities.

It is obvious that majority of the respondents agreed with the opinion that having access to market information will enable them participate in farm and non-farm income generating activities. Question (OP2) has an average mean score of 3.02. This implies that transportation cost and distance location to markets are determining factors of participation in farm and non-farm income generating activities. This also means that transport cost and location to markets can influence the participation of women in farm and non-farm activities. The lower the transport cost and shorter the distance to markets, the higher the level of participation in farm and non-farm economic activities.

The lowest mean score here is 2.48 representing question (OP3) showing that majority of the respondents disagreed with the opinion that availability of empowerment training programmes can influence the participation and income level of women. This signifies that the availability of empowerment training programmes is not a major determinant of rural women's participation in farm and non-farm income generating activities. This is further buttressed in the discussion with the respondents. Most of them complained of not being beneficiaries of any empowerment training or programmes. When asked the reason for the situation, they provided that even when such opportunities are available, favouritism is displayed in selecting beneficiaries.

Also, the few women who stated that they were beneficiaries of some empowerment training or programme stated that after the empowerment training programmes; they were not provided with start up capital or materials to enable them start any economic activity of their choice. Another respondent further stated that it made no difference to them whether such programmes were available or not, since they haven't had any impact on them. And that most of them already have some form of experience, as such; would rather source for capital directly in

order to start any income generating activity of their choice as it might be fruitless and delaying to attend the empowerment programmes. Based on these findings, it can be concluded that availability of empowerment training programmes have not influenced rural women's participation in farm and non-farm economic activities in the study area. This probably accounts for the low expertise, poor entrepreneurial and management skills, poor account and record keeping and in turn poor income generation experienced by women in the rural areas. Question (OP4) has an average mean score of 2.95. This shows that availability of modern processing facilities can influence the capacity of production of women in combined farm and non-farm income generating activities. Where modern processing facilities are available, there is a tendency of an increase in the production capacities of the women. Question (OP5) has an average mean score 2.64. This implies that access to extension services will increase their participation and income generation. When rural women have access to extension services, their level of participation in farm and non-farm income generating activities and income is likely to increase.

Table 4.11 Respondents Perceptions of Resources and Participation in Farm and Non-Farm Economic Activities

S/N	Questions	N	Minimum	Maximum	Mean	Std. Deviation
RS1	Having access to land can influence participation and income level	382	1	5	2.77	1.547
RS2	Availability of labour encourages participation and income generation	382	1	5	2.92	1.476
RS3	Income level affects the ability to participate in farm and non-farm activities	382	1	5	2.91	1.427
RS4	Amount of start-up capital available to rural women for investment in any activity is insignificant in determining their level of participation.	382	1	5	2.26	1.388
RS5	Proper financial record keeping is necessary for women	382	1	5	3.12	1.441

Source: Author's Field survey, 2016

Table 4.10 shows the descriptive statistics for respondents' perception of resources and participation in farm and non-farm economic activities. The mean variable of the questions from 1- 5 are within average with minimum score of 1 and a maximum score of 5. Question (RS1) has an average mean score of 2.77 which means that having access to land can influence participation in farm and non-farm activities and also lead to increase in income. From the responses provided it is obvious that the respondents agreed that having access to land could influence participation and income level. Having land of their own for their farm and non-farm activities encourages participation and increases income. Question (RS2) has an average mean score of 2.92, which implies that availability of labour encourages participation in farm and non-farm activities and income generation for rural women. This also shows that the amount of labour available to rural women can determine their level of participation in farm and non-farm income generating activities and income.

Question (RS3) has an average mean score of 2.91, which means that income level affects the ability to participate in farm and non-farm activities. This also shows that the respondents are of the belief that the higher the income of rural women, the higher their ability to participate in farm and non-farm activities. This simply means that income levels of rural women, whether high or low can determine their level of participation in farm and non-farm income generating activities. Question (RS4) has a below average mean score of 2.26. This shows that majority of the respondents disagreed with the statement. This also signifies that respondents were of the belief that the amount of start up capital available to rural women is very vital and can determine their level of participation in farm and non-farm activities. Based on this, it can be said that the amount of start-up capital available to rural women for investment in any economic activity is significant in determining their level of participation. Question (RS5) has

an average mean score of 3.12 which means that proper financial record keeping is necessary for rural women participating in farm and non-farm income generating activities. In this case, the better kept the records are, the less likely for the women to encounter shortages or losses. Also the lower the financial losses encountered, the higher the chances of broader participation in farm and non-farm economic activities.

4.7 Test of Hypothesis

The data in table 4.6 was used to test the hypothesis. The hypothesis is restated as follows:

H₀: Farm and non-farm participation of women has no significant effect on their welfare in Kankara Local Government Area of Katsina State.

Table 4.12 Chi-square Test Result

S/N	Effect	Chi-square	Df	Asymp. Sig
1	Farm input	233.074	4	0.000
2	Less Dependence on people	289.686	5	0.000
3	Increase in income	98.707	4	0.000
4	Changes in diet	42.581	4	0.000
5	Improved healthcare	112.110	4	0.000
6	Payment of children school fees	201.272	4	0.000
7	Improved credit worthiness	1.377	4	0.848
8	Remittance	15.513	4	0.004
9	Changes in production	163.838	4	0.000
10	Better clothing	207.372	4	0.000

Source: Researcher's Computation from SPSS 20.0 Output

From table 4.12, the chi-square result reveals that farm input ($X^2 = 233.074$, $p = 0.000$), less dependence on people ($X^2 = 289.686$, $p = 0.000$), increase in income ($X^2 = 98.707$, $p = 0.000$), changes in diet ($X^2 = 42.581$, $p = 0.000$), improved healthcare ($X^2 = 112.110$, $p = 0.000$) and payment of children school fees ($X^2 = 201.272$, $p = 0.000$) are statistically significant at 0.05 level of significance given a critical value of 9.49. Similarly, Remittance ($X^2 = 15.513$, $p = 0.004$), changes in production ($X^2 = 163.838$, $p = 0.000$) better clothing ($X^2 = 207.372$, $p = 0.000$)

are all statistically significant at 5% significant level. The chi-square result shows that all the issues raised are statistically significant at various degrees of freedom. This is likely to improve their capacity to expand their participation in farm and non-farm activities and could in turn improve their welfare. However, improved credit worthiness produced a chi-square result ($X^2 = 1.377, p = 0.848$). It is obvious that the women under observation have low credit worthiness. As such; it is statistically non-significant. The non-significant relationship suggests that there is possibility of the women not having access to finance because of the low state of their credit worthiness. Since nine indicators out of the ten had their p values less than the 0.05 level of significance, the null hypothesis (H_0) is hereby rejected. This implies that the women's farm and non-farm participation had significant effect on their welfare. The significant effect could be attributed to the fact that women participate in both farm and non-farm economic activities and do not rely on a single source of livelihood which improved their welfare however little.

4.8 PERCEIVED CONSTRAINTS TO WOMEN'S PARTICIPATION IN FARM AND NON-FARM ECONOMIC ACTIVITIES IN THE STUDY AREA

The perceived constraints faced by women in farm and non-farm economic activities were presented using frequencies, percentages and rank order as seen in Table 4.13. Analysis of the result showed that the most serious constraints faced by respondents in farm and non-farm activities were inadequate finance and inadequate provision of loans/credit facilities which ranked 1st by 18.1% and 2nd with 8.0% respectively. This is expected considering the fact that these women are mostly housewives without reliable sources of income and opportunities. This constrains their ability to participate fully in farm and non-farm economic activities. Most of the economic activities carried out by women is at small scale (subsistence) yet most of them would have desired to expand them. They often have a problem of acquiring initial or starting capital.

Table 4.13 Perceived Constraints To Women’s Participation In Farm And Non-Farm Economic Activities In The Study Area

Constraints	Frequency	Percentage	Rank order
Poor access to land	23	6.0	5 th
Inadequate finance	69	18.1	1 st
Inadequate market information	14	3.7	10 th
Absence of modern processing facilities	12	3.1	12 th
Poor transport	16	4.2	9 th
Inadequate managerial skills	14	3.7	10 th
Inaccessibility of extension services	21	5.5	6 th
Lack of access to modern production technology	17	4.5	8 th
Rigid religious and cultural norms	19	5.0	7 th
Illiteracy	26	6.8	4 th
Inadequate input resources	27	7.1	3 rd
Poor health/illness	11	2.9	13 th
Increase in domestic choice combined with farm/non-farm activities	8	2.1	16 th
Poor skills	10	2.6	14 th
Inaccessibility to production implements	13	3.4	11 th
Lack of rural women empowerment/training programmes	9	2.4	15 th
Discrimination	9	2.4	15 th
Post-harvest losses	6	1.6	17 th
High transport cost	8	2.1	16 th
Distance location to market	9	2.4	15 th
Low wages	11	3.0	13 th
Inadequate provision of loan/credit facilities	30	8.0	2 nd
Total	382	100	

Source: Author’s Field survey, (2016)

It is important to note that most of them derive their start-up capital from their personal savings, family and friends, asusu, wage labour and remittances or borrow from their family and friends, relatives. The money they acquire through these sources is often too meagre and inadequate to establish large economic activities which can yield high income. Also, the women do not have access to credit which limits their involvement in farm/non-farm activities. This is in line with the findings of Barrett (1997) which provides that “lack of access to credit is a critical

obstacle to successful engagement of rural women in non-farm economic activities. During the discussion with the women, a respondent made the following statement:-

We who are into groundnut oil production face serious problems of finance in carrying out our work. Most of us do not have the money to buy the raw material for groundnut oil production which is groundnut. I and the other women that I know have to result to collecting groundnuts (maybe a bag or more) on credit from the sellers to be paid/remitted after production and sale of product. Most times what is left after remittance (payment of credit) is meagre and unable to meet our families' needs. This way we hardly save anything because most of us do not have any other means of support. Sometimes we are refused groundnut loans from our lenders as form of punishment once we have defaulted in remittance. This could sometimes take up to months before we are again given groundnuts on credit. This situation is really stressful on us but then there is nothing we can do but to cope (Habiba, Unguwar Baidu)

This to great extent shrinks women's saving opportunities or their ability to be credit worthy obtaining loans from money lending bodies (also collateral). Some of the respondents also suggested that they could partially solve this problem if they were able to borrow loans from recognized financial institutions.

Inadequate input resources ranked 3rd by 7.1% followed by illiteracy which ranked 4th by 6.8%. Lack of basic education hinders the women from utilizing opportunities available. This corroborates the findings of Imam (1998) who observed that women with little or no education have limited economic opportunities. Also, another important constraint faced by the women in farm/non-farm activities is poor access to land which ranked 5th with 6.0%. The inaccessibility to sizeable land is another challenge the women face. Women have no right to land, even when land is inherited; the married women amongst them usually bequeath the land to their husbands and even work on their husband's farmlands sometimes. The unmarried women most times also bequeath their inherited land to the male members of their families. This is in line with the

findings of Folashade (1991) which concludes that lack of separate land for women is a major constraint faced by women farmers. Poor roads, distance location to markets and high cost of labour are also constraints such that in some cases women have taken up serious farming and business but have had to stop due to their inability to mobilize sufficient labour resources. Also, low wages, rigid religious and cultural norms are also forms of constraints faced by women in farm and non-farm income generating activities.

Another constraint was inaccessibility of extension workers which ranked 6th by 6.6%. Respondents do not have access to extension services. This shows that impact of extension service has not been felt amongst the women in the study area. This could probably be attributed to the absence of female extension workers in the study area. This is in line with Jeggins, Samanta and Olawoye (1996) who stated that women generally do not have access to extension services. Other challenges include; lack of rural women empowerment and lack of access to modern production technology. However, the least important constraint in the order of hierarchy was post-harvest losses, which ranked 17th at 1.6%. All these challenges corroborates the findings of Bloom, Craig and Malaney (2001) who state that rural women continue to struggle with dual responsibilities of economic production and domestic labour, and most of them are confronted by poverty, illiteracy, high health risks, inadequate access to productive resources. Furthermore, they also note that rural women throughout the sub-Saharan African region work long hours and confront drudgery as a reality of their daily existence.

Table 4.14 Perceived Solutions to Constraints by the Respondents

Solution	Frequency	Percentage
a. Provision of adequate loan/credit facilities	60	15.7
b. Economic empowerment of widows in rural areas for self employment	11	2.9
c. Encourage women farmers to form cooperatives	10	2.6
d. Regular and timely supply of farm inputs for example; fertilizer	15	3.9
e. Establishment of adult literacy programmes	44	11.5
f. Proper legislation regarding property rights and inheritance	37	9.7
g. Provision of adequate input resources	50	13.1
h. Training and education of women by extension staff to improve women's conditions	31	8.1
i. Easy access to modern technology	23	6.1
j. Sensitization of religious leaders/traditional leaders on the need to relax and abolish some religious/traditional beliefs	28	7.3
k. Appropriate government policy on women empowerment	18	4.7
l. Equal collateral requirement	35	9.2
m. Establishment of industries in rural areas	20	5.2
Total	382	100

Source: Author's Field survey, (2016)

The major strategies indicated by the respondents as shown in table 4.18 include; provision of adequate loans/credit facilities (15.7%), provision of adequate input resources (13.1%), establishment of adult literacy programmes (11.5%), proper legislation regarding property rights and inheritance (9.7%), equal collateral requirement (9.2%), training and education of women by extension staff to improve women's conditions (8.1%) and sensitization of religious leaders/traditional leaders on the need to relax and abolish some religious/traditional beliefs (7.3%). This analysis indicates that access to loans/credit and provision of adequate input resources will enhance increased participation of rural women in farm /non-farm activities. This is possible as availability of input resources can encourage further diversification and expansion of economic activities for rural women.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 INTRODUCTION

This chapter presents the summary of findings and conclusion reached on the basis of the stated objectives of the study as well as recommendations which are based on the results.

5.2 SUMMARY OF FINDINGS

Results of the study revealed that majority (75.5%) of the respondents were in their productive age. This shows that those that are more active in farm and non-farm activities were mostly between 21-50 years. 40% of the respondents were married and the most involved in farm and non-farm economic activities and as such have to engage in various livelihood activities in order to solve numerous family problems and also help in supplementing household income. Majority of the respondents had no formal education which could limit their participation in farm and non-farm activities. Also, 33% had 6-10 household members, 26% had 11-15 household members, 14% had 16-20 household members, while only 17% had less than 5 household members and a minority at 10% had over 21 household members.

From the findings, rural women were found participating in various farm and non-farm economic activities, though mostly at subsistence level. This is so as avoid reliance on only one activity for source of income and also due to seasonality of farming activities. The types of farm and non-farm activities in Kankara LGA, engaged in by the respondents include; planting of crops, harvest activities, livestock rearing, processing and sale of groundnut oil, rice husking, production and sale of shea butter, selling of vegetables, tailoring, and activities such as; handicrafts and embroidery work which are mostly supported by the natural resources found in

the area. This is to enable them obtain additional income to empower themselves financially. However, they were not involved in land preparation, weeding and fertilizer application. This phenomenon could be attributed to the existing traditional, religious and cultural structures. The making and sale of groundnut cake (*kuli-kuli*) and processing of groundnut oil both ranked 1st with the highest percentage of women participating in farm and non-farm economic activities with 13.9% while labour selling ranked the least (13th) with 1.8% participation rate. Also the overall respondents' participation rate was moderately high at 84.5%. As regards the amount of initial start-up capital, majority of the respondents (44.7%) started their businesses with less than eleven thousand naira (#11,000), with loans from family and friends 52.9% and income from farm and non-farm activities 36.1% respectively as the major sources of start-up capital.

The findings revealed that participation in various economic activities improved the livelihoods of the women, in the area of dependence on people, increase in their income, diet, health and changes in production except in the area of farm input, clothing, healthcare, remittance and payment of children's school fees. This could be attributed rural women's family sizes.

The major reason for participation in various farm and non-farm economic activities as indicated by the respondents were to meet basic family needs which ranked 1st, increase household income which ranked 2nd and to meet additional family requirements which ranked 3rd respectively.

The study established the influence of some socio-economic factors on participation in farm and non-farm economic activities as perceived by the respondents. The result showed that attitude, knowledge, availability of opportunities, access to resources can influence the decision of rural women to participate in combined farm and non-farm economic activities.

Result of hypothesis shows that the effect of farm and non-farm participation on the welfare of the women; were statistically significant (9 out of 10) at various degrees of freedom with the exception of improved credit worthiness which produced a chi-square value of 1.377 with 4 df and p-value of 0.848. Indicating that, the low state of their credit worthiness could be as a result of their poor financial base.

The respondents also indicated the major constraints they face in farm and non-farm economic activities. The results show that that the most serious constraints faced by respondents in farm and non-farm activities were inadequate finance and inadequate provision of loans/credit facilities which ranked 1st by 18.1% and 2nd with 8.0% respectively. Inadequate input resources ranked 3rd by 7.1% followed by illiteracy which ranked 4th by 6.8%. Lack of basic education hinders the women from utilizing opportunities available. Also, another important constraint faced by the women in farm/non-farm economic activities is poor access to land which ranked 5th with 6.0%. Another Constraint is inaccessibility of extension workers which ranked 6th by 6.6%. Respondents do not have access to extension services. Other challenges include; lack of rural women empowerment and lack of access to modern production technology. However, the least important constraint in the order of hierarchy was post-harvest losses, which ranked 17th at 1.6%.

5.3 CONCLUSION

The study examined the participation of rural women in farm and non-farm economic activities in Kankara Local Government Area, Katsina State, Nigeria. The following conclusions were drawn based on the findings of the study.

Age seems to be an important factor in participation in economic activities. As such; women in their productive age participate more in farm and non-farm activities. Majority of these women have no formal education in the study area. Also, women participate in various types of farm and non-farm economic activities in the study area. However, majority are involved in farm and non-farm activities that are subsistence in nature. This could be attributed to the low amount of initial start-up capital, inadequate finance and access to loans available for investment in the activities that would otherwise have enhanced their performance.

However little, participation in farm and non-farm economic activities tends to improve the welfare of women involved compared to those who do not participate at all. Providing basic family needs remains paramount for women in the study area. However, there are several factors which affect the capacity of women to participate in farm and non-farm economic activities such as; attitude, knowledge, availability of opportunities and access to resources which as well determines their capacity to participate in productive and remunerative activities in order to generate income.

Rural women's participation in farm and non-farm economic activities are constrained by inadequate finance, inadequate loan/credit facilities, inadequate input resources, illiteracy, lack of basic education, poor access to land, inaccessibility of extension workers, poor access to extension services, lack of rural women empowerment and lack of access to modern production technology. This however raises a concern over the growth and sustainability of these activities

and the livelihoods that depend on them. Targeted actions are needed to overcome these problems. The study concludes that adequate provision of adult literacy programmes, improved access to loans, and establishment of vocational skill acquisition centres, motivational training programmes, and implementation of policies that will meet the economic empowerment needs of rural women will help to ameliorate the problems faced by rural women in farm and non-farm economic activities.

5.4 RECOMMENDATIONS

Based on the findings of this study, the following recommendations were made:

1. It is recommended that government intensifies its efforts at enhancing human capital. Knowledge has been noted to be a variable which determines women's participation in farm and non-farm income generating activities. With this in mind, women's knowledge such as; education, skills and training should be strengthened and expanded. Provision of skills training and special credits schemes that address particular financial needs of women are necessary to encourage the undertaking of technical and higher return activities.
2. In order to encourage increased participation in various types of farm and non-farm income generating activities for improved welfare in the study area, concerted efforts are needed to ensure that they move into the production of higher value-market oriented products on commercial scale, rather than produce for subsistence. In particular, such interventions should be primarily focused on exploring the options for improving farm productivity and non-farm activities. Such interventions should go hand in hand with capacity building programmes specifically focused on building technical and managerial skills necessary to rural women, to enable them realize their potential and effectively

undertake new types of activities. As such; Provision of credit schemes and linking them with financial institutions so as to acquire women friendly loans by the government to stimulate investment in non-farm sector is deemed necessary in order to provide rural people with access to capital investment to start sustainable, competitive and high return non-farm income generating activities.

3. However, there are several factors which affect the capacity of women to participate in farm and non-farm income generating activities such as; attitude, knowledge, availability of opportunities and access to resources which as well determines their capacity to participate in productive and remunerative activities in order to generate income.
4. Constraints such as inadequate finance, inadequate loan/credit facilities, inadequate input resources, illiteracy, lack of basic education, poor access to land, inaccessibility of extension workers, poor access to extension services, lack of rural women empowerment and lack of access to modern production technology usually faced by women require targeted actions to overcome these problems. Policy makers should also formulate and implement policies that will meet economic empowerment needs of rural women who are agents of farm and non-farm economic activities.

5.5 RECOMMENDATIONS FOR FURTHER RESEARCH

The following suggestion is made for further researches:

1. It would be more enlightening if future studies made comparison between factors which determine women's participation in farm and non-farm economic activities and those which determine men's participation in the same sector. Such studies would be helpful for sound policy measures for participants of the sector.

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APPENDICES:

APPENDIX IQUESTIONNAIRE SURVEY

This questionnaire is designed to elicit information for a research study titled: *Rural Women's Participation in Farm and Non-Farm Economic Activities in Kankara Local Government Area of Katsina State*. You are one of the carefully selected respondents and I solicit your support to respond truthfully. All information will be used for academic purpose and treated as confidential.

Thanks for your assistance.

Please provide information or (√) tick where appropriate.

SECTION A: SOCIO-ECONOMIC CHARACTERISTICS OF RESPONDENTS

1. Name of community
2. Marital status: a. Never married () b. Married () c. Divorced () d. Separated () e. Widowed ()
3. Age: a. < 20 () b. 21-30 () c. 31-40 () d. 41-50 () e. > 51 ()
4. Educational level: a. No formal education () b. Quranic education () c. Adult education () d. Primary education () e. Secondary education () f. Tertiary education ()
5. Household size: a. <5 () b. 6-10 () c. 11-15 () d. 16-20 () e. 21 and above ()
6. What is the extent of your participation? a. Low () b. Medium () c. High ()
7. What is your level of production? a. Subsistence () b. Commercial ()
8. What is the regularity of your participation? a. Occasional () b. Permanent ()
9. How much was your initial investment in naira? a. 5000- 10,000 () b. 11,000-15,000 () c. 16,000-20,000 () d. >20,000 ()
10. How did you obtain the start-up capital? a. Income from farm/non-farm activities () b. Money lender () c. Loan from family and friends () d. Thrift (asusu) () e. Others ()
11. What is your average annual income in naira from farm and non-farm activities as required below?
2009
a. < ₦10,000 () b. ₦11,000-₦20,000 () c. ₦21,000-₦30,000 () d. ₦31,000-₦40,000 ()
e. ₦41,000-₦50,000 () f. >₦50,000
12. What is your average annual income in naira from farm and non-farm activities as required below?
2010
a. < ₦10,000 () b. ₦11,000-₦20,000 () c. ₦21,000-₦30,000 () d. ₦31,000-₦40,000 ()
e. ₦41,000-₦50,000 () f. >₦50,000
13. What is your average annual income in naira from farm and non-farm activities as required below?
2011
a. < ₦10,000 () b. ₦11,000-₦20,000 () c. ₦21,000-₦30,000 () d. ₦31,000-₦40,000 ()
e. ₦41,000-₦50,000 () f. >₦50,000

14. What is your average annual income in naira from farm and non-farm activities as required below?

2012

a. < ₦10,000 () b. ~~₦11,000-₦20,000~~ () c. ~~₦21,000-₦30,000~~ () d. ~~₦31,000-₦40,000~~ () e. ~~₦41,000-₦50,000~~ () f. >₦50,000

15. What is your average annual income in naira from farm and non-farm activities as required below?

2013

a. < ₦10,000 () b. ~~₦11,000-₦20,000~~ () c. ~~₦21,000-₦30,000~~ () d. ~~₦31,000-₦40,000~~ () e. ~~₦41,000-₦50,000~~ () f. >₦50,000

16. Are you able to access better food, healthcare and education more than when you were not involved in non-farm activity? a. Yes () b. No ()

SECTION B: PARTICIPATION IN FARM AND NON-FARM ACTIVITIES

17. What type of farm/non-farm economic activities are you involved in?

S/N	Type of activity	Tick (√) below
a.	Livestock rearing	
b.	Harvesting	
c.	Post harvest operation	
d.	Harvesting	
e.	Planting	
f.	Processing and sale of groundnut oil	
g.	Selling of firewood	
h.	Handicrafts (baskets, brooms, hand fans, mat)	
i.	Embroidery work	
j.	Labour selling (kwadogwo)	
k.	Making and sale of groundnut cake (kuli-kuli)	
m.	Selling of fruits	
n.	Selling of moringa leaf delicacy (zogalai) and juice	
o.	Rice husking	
p.	Tailoring/dress making	
q.	Making and sale of Locust bean (dadawa)	
r.	Making and sale of shea butter (mai kadanya)	
s.	Selling of kunun aya (tigernut drink)	
t.	Selling of vegetables	

SECTION C: CONTRIBUTION OF FARM/NON-FARM ACTIVITIES TO HOUSEHOLD WELFARE AMONG RURAL WOMEN

18. From the following options tick as appropriate the area of contribution of farm and non-farm activities.

Contribution	SA	A	U	D	SD
Farm input					
Less dependence on people					
Increase in income					
Changes in diet					
Improved healthcare					
Payment of children's school fees					
Improved credit worthiness					
Remittance					
Changes in production					
Better clothing					

SECTION D: REASONS FOR INVOLVEMENT IN FARM/NON-FARM ACTIVITIES

19. What are the reasons for your involvement in farm/non-farm activities (rank according to the order of importance) 1 for 3 points, 2 = 2 points, 3 = 1 point.

Reasons	Ranking
i. To increase family income	
ii. Absence of male earning members	
iii. To meet basic family needs	
iv. Meet additional family requirements	
v. To meet personal needs	
vi. Food security	
vii. To avoid dependence on other people	
viii. Obtain better future children	

SECTION E: INFLUENCE OF SOME FACTORS (ATTITUDE, KNOWLEDGE, OPPORTUNITIES, AND RESOURCES) ON PARTICIPATION.

Attitude and Participation

S/N	Questions	SA	A	U	D	SD
AT1	Women's self confidence can determine their participation					
AT2	Feeling equal to my peers will give me the hope of being more productive					
AT3	The willingness to participate in farm and non-activities can determine women's participation and income level					
AT4	Women are more likely to perform better than men in farm and non-farm activities if given the same opportunities					
AT5	Motivation serves as an influencing factor in the participation and income of rural women					

Knowledge and Participation

S/N	Questions	SA	A	U	D	SD
KW1	Women with high managerial skills participate more in farm and non-farm activities					
KW2	Women with higher literacy levels are more successful than their non-literate counterparts					
KW3	Having specialized skills increases the chances of opportunities for women					
KW4	Women with higher educational qualification tend to have better opportunities					
KW5	Adequate entrepreneurial skills are important in enhancing the participation of rural women					

Opportunities and Participation

S/N	Questions	SA	A	U	D	SD
OP1	Adequate market information can positively affect participation					
OP2	Transportation cost and distance location to markets are determining factors of participation in farm and non-farm activities					
OP3	Availability of empowerment training programmes can influence the participation and income level of women					
OP4	Availability of modern processing facilities can influence the capacity of production					
OP5	Access to extension services will increase in participation and income generation					

Resources and Participation

S/N	Questions	SA	A	U	D	SD
RS1	Having access to land can influence participation and income level					
RS2	Availability of labour encourages participation and income generation					
RS3	Wage level affects the ability to participate in farm and non-farm activities					
RS4	Amount of start-up capital available to rural women for investment in any activity is insignificant in determining their level of participation.					
RS5	Proper financial record keeping is necessary for women					

Key: Strongly Agree-SA, Agree-A, Undecided-U, Disagree-D, Strongly Disagree-SA

SECTION F: CONSTRAINTS TO FARM/NON-FARM ACTIVITIES

20. From the following options tick as appropriate the constraints confronting your participation in farm/non-farm activities.

S/N	Constraints	Tick (√) below
i.	Low wages	
ii.	High cost of labour	
iii.	Post harvest losses	
iv.	Discrimination	
v.	poor skills	
vi.	Inadequate finance/credit facilities	
vii.	Poor access to land	
viii.	Lack of access to modern production technology	
ix.	Inadequate managerial skills	
x.	Poor transport	
xi.	Inadequate market information	
xii.	Absence of processing facilities	
xiii.	Inaccessibility of extension services	
xiv.	Distance location to market	
xv.	Poor health/illnesses	
xvi.	Inadequate input resources	
xvii.	Increase in domestic chores combined with farm/non-farm activities	
xviii.	Illiteracy	
xix.	Inaccessibility to production implements	
xx.	Rigid religious and cultural norms	
xxi.	Lack of rural women empowerment/training programmes	
xxii.	Inadequate provision of loan	

21. Suggest possible ways of solving the problems you encounter in farm and non-farm activities

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Thanks

APPENDIX I I..... FOCUS GROUP QUESTIONS

1. What do you think is responsible for the non-participation of women in some farm activities?
2. What is the major reason for your participation in farm and non-farm activities?
3. Do you agree that having self-confidence as a woman can encourage your participation in farm and non-farm economic activities?
4. What do you think is responsible for the poor attitude of women towards farm and non-farm participation?
5. Are you aware of the importance of being literate?
6. What in your own opinion is responsible for your inability to benefit from any empowerment training or programmes
7. How would you rate the importance of having skills and why?
8. What in your opinion is the most serious constraint faced in carrying out farm and non-farm economic activities.
9. What do you think should be done to ameliorate these constraints faced?

APPENDIX III..... CHI-SQUARE DISTRIBUTION TABLE

<i>Df</i>	$\chi^2_{.995}$	$\chi^2_{.990}$	$\chi^2_{.975}$	$\chi^2_{.950}$	$\chi^2_{.900}$	$\chi^2_{.100}$	$\chi^2_{.050}$	$\chi^2_{.025}$	$\chi^2_{.010}$	$\chi^2_{.005}$
1	0.000	0.000	0.001	0.004	0.016	2.706	3.841	5.024	6.635	7.879
2	0.010	0.020	0.051	0.103	0.211	4.605	5.991	7.378	9.210	10.597
3	0.072	0.115	0.216	0.352	0.584	6.251	7.815	9.348	11.345	12.838
4	0.207	0.297	0.484	0.711	1.064	7.779	9.488	11.143	13.277	14.860
5	0.412	0.554	0.831	1.145	1.610	9.236	11.070	12.833	15.086	16.750
6	0.676	0.872	1.237	1.635	2.204	10.645	12.592	14.449	16.812	18.548
7	0.989	1.239	1.690	2.167	2.833	12.017	14.067	16.013	18.475	20.278
8	1.344	1.646	2.180	2.733	3.490	13.362	15.507	17.535	20.090	21.955
9	1.735	2.088	2.700	3.325	4.168	14.684	16.919	19.023	21.666	23.589
10	2.156	2.558	3.247	3.940	4.865	15.987	18.307	20.483	23.209	25.188
11	2.603	3.053	3.816	4.575	5.578	17.275	19.675	21.920	24.725	26.757
12	3.074	3.571	4.404	5.226	6.304	18.549	21.026	23.337	26.217	28.300
13	3.565	4.107	5.009	5.892	7.042	19.812	22.362	24.736	27.688	29.819
14	4.075	4.660	5.629	6.571	7.790	21.064	23.685	26.119	29.141	31.319
15	4.601	5.229	6.262	7.261	8.547	22.307	24.996	27.488	30.578	32.801
16	5.142	5.812	6.908	7.962	9.312	23.542	26.296	28.845	32.000	34.267
17	5.697	6.408	7.564	8.672	10.085	24.769	27.587	30.191	33.409	35.718
18	6.265	7.015	8.231	9.390	10.865	25.989	28.869	31.526	34.805	37.156
19	6.844	7.633	8.907	10.117	11.651	27.204	30.144	32.852	36.191	38.582
20	7.434	8.260	9.591	10.851	12.443	28.412	31.410	34.170	37.566	39.997
21	8.034	8.897	10.283	11.591	13.240	29.615	32.671	35.479	38.932	41.401
22	8.643	9.542	10.982	12.338	14.041	30.813	33.924	36.781	40.289	42.796
23	9.260	10.196	11.689	13.091	14.848	32.007	35.172	38.076	41.638	44.181
24	9.886	10.856	12.401	13.848	15.659	33.196	36.415	39.364	42.980	45.559
25	10.520	11.524	13.120	14.611	16.473	34.382	37.652	40.646	44.314	46.928
26	11.160	12.198	13.844	15.379	17.292	35.563	38.885	41.923	45.642	48.290
27	11.808	12.879	14.573	16.151	18.114	36.741	40.113	43.195	46.963	49.645
28	12.461	13.565	15.308	16.928	18.939	37.916	41.337	44.461	48.278	50.993
29	13.121	14.256	16.047	17.708	19.768	39.087	42.557	45.722	49.588	52.336
30	13.787	14.953	16.791	18.493	20.599	40.256	43.773	46.979	50.892	53.672
40	20.707	22.164	24.433	26.509	29.051	51.805	55.758	59.342	63.691	66.766
50	27.991	29.707	32.357	34.764	37.689	63.167	67.505	71.420	76.154	79.490
60	35.534	37.485	40.482	43.188	46.459	74.397	79.082	83.298	88.379	91.952
70	43.275	45.442	48.758	51.739	55.329	85.527	90.531	95.023	100.425	104.215
80	51.172	53.540	57.153	60.391	64.278	96.578	101.879	106.629	112.329	116.321
90	59.196	61.754	65.647	69.126	73.291	107.565	113.145	118.136	124.116	128.299
100	67.328	70.065	74.222	77.929	82.358	118.498	124.342	129.561	135.807	140.169

Source: Biometrika Table for Statistics, Volume 1,3rd ed Cambridge: University Press, 1966.

APPENDIX IV..... SPSS OUTPUT

better clothing

	Observed N	Expected N	Residual
strongly disagree	11	76.4	-65.4
disagree	88	76.4	11.6
undecided	11	76.4	-65.4
agree	131	76.4	54.6
strongly agree	141	76.4	64.6
Total	382		

farm input

	Observed N	Expected N	Residual
strongly disagree	162	76.4	85.6
disagree	135	76.4	58.6
undecided	37	76.4	-39.4
agree	23	76.4	-53.4
strongly agree	25	76.4	-51.4
Total	382		

less dependence on people

	Observed N	Expected N	Residual
strongly disagree	44	63.7	-19.7
disagree	1	63.7	-62.7
undecided	69	63.7	5.3
agree	119	63.7	55.3
strongly agree	148	63.7	84.3
33.00	1	63.7	-62.7
Total	382		

increase in income

	Observed N	Expected N	Residual
strongly disagree	51	76.4	-25.4
disagree	48	76.4	-28.4
undecided	38	76.4	-38.4
agree	109	76.4	32.6
strongly agree	136	76.4	59.6
Total	382		

changes in diet

	Observed N	Expected N	Residual
strongly disagree	46	76.4	-30.4
disagree	64	76.4	-12.4
undecided	59	76.4	-17.4
agree	101	76.4	24.6
strongly agree	112	76.4	35.6
Total	382		

improved healthcare

	Observed N	Expected N	Residual
strongly disagree	130	76.4	53.6
disagree	124	76.4	47.6
undecided	43	76.4	-33.4
agree	45	76.4	-31.4
strongly agree	40	76.4	-36.4
Total	382		

payment of children's school fees

	Observed N	Expected N	Residual
strongly disagree	126	76.4	49.6
disagree	160	76.4	83.6
undecided	30	76.4	-46.4
agree	31	76.4	-45.4
strongly agree	35	76.4	-41.4
Total	382		

improved credit worthiness

	Observed N	Expected N	Residual
strongly disagree	70	76.4	-6.4
disagree	74	76.4	-2.4
undecided	75	76.4	-1.4
agree	80	76.4	3.6
strongly agree	83	76.4	6.6
Total	382		

Remittance

	Observed N	Expected N	Residual
strongly disagree	50	76.4	-26.4
disagree	85	76.4	8.6
undecided	68	76.4	-8.4
agree	89	76.4	12.6
strongly disagree	90	76.4	13.6
Total	382		

changes in production

	Observed N	Expected N	Residual
strongly disagree	142	76.4	65.6
disagree	133	76.4	56.6
undecided	40	76.4	-36.4
agree	35	76.4	-41.4
strongly agree	32	76.4	-44.4
Total	382		

Test Statistics

	farm input	less dependence on people	increase in income	changes in diet	improved healthcare	payment children's school fees
Chi-Square	233.079 ^a	289.686 ^b	98.707 ^a	42.581 ^a	112.110 ^a	201.272 ^a
df	4	5	4	4	4	4
Asymp. Sig.	.000	.000	.000	.000	.000	.000

a. 0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 76.4.

b. 0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 63.7.

APPENDIX V PICTORIAL EVIDENCE



Rural women carrying out planting activities



Rural women involved in the local production of groundnut oil



Rural women involved in the production of groundnut cake (kuli-kuli)



Signpost of Kankara Local Government Education Authority (L.G.E.A)