ASSESSMENT OF IMPACT OF WOMEN-IN-AGRICULTURE (WIA) GROUNDNUT PROCESSING PROGRAMME ON POVERTY ALLEVIATIONIN KANO STATE, NIGERIA

BY

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ZARIA – KADUNA STATE, NIGERIA

DECEMBER, 2015

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

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

DECEMBER, 2015

DECLARATION

I hereby declare that this thesis titled "**Assessment of Impact of Women-In-Agriculture (WIA) Groundnut Processing Programme on Poverty Alleviation in Kano State, Nigeria"** has been written by me and it is a record of my research work. No part of this thesis has been presented in any previous application for another degree or diploma in this or any other institution. All borrowed information have been duly acknowledged in the text and in a list of references provided.

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CERTIFICATION

This thesis titled "**Assessment of Impact of Women-In-Agriculture (WIA) Groundnut Processing Programme on Poverty Alleviation in Kano State, Nigeria"**, by HajaraShuaibu meets the regulations governing the award of the Degree of Doctor of Philosophy in Agricultural Extension and Rural Sociology of the Ahmadu Bello University, Zaria and is approved for its contribution to knowledge and literary presentation.

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DEDICATION

This entire work is dedicated to my Mum for all her struggles, to my Husband for his encouragement and understanding and to my children for their patience.

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ABSTRACT

The study assessed the impact of Women-in-Agriculture (WIA) groundnut processingprogrammeon poverty alleviationin Kano State, Nigeria. Two groups (each consisting of 25 members) of women groundnut processors that benefitted from WIA programme were purposively selected from the three zones of the State. This gave a sample size of 150 women across the State. For non-beneficiaries, equal number of sample size were randomly selected from the three zones. However, two questionnaires could not be retrieved from the non-beneficiaries to give a sample size of 148. This gave a total sample size of 298 respondents. The tools of the analysis employed for data interpretation include: descriptive statistics, gross margin analysis, Foster, Greere and Thorbecke Poverty index, Z - test statistics and multiple regression analysis. A 5-point Likert type scale was used to capture the perception of the women on the strengths, weaknesses, opportunities and threats of their enterprise. The findings of the study revealed that monthly gross income of about ₦24,006.7 was obtainedfrom groundnut processing with average return on investment of 26%and contributed about 94% to the household income of the women. The poverty indices revealed that 68% of the benefitting households and 59% of non-beneficiaries' households were non-poor with poverty gap of 0.123 and 0.296 for beneficiaries and non-beneficiaries respectively while the severity was 0.108 for beneficiaries and 0.282 for non-beneficiaries. The results of the regression indicates that age (β = 165.822, $P<0.05$), household size (β = 464.540, $P<0.05$), dependency (β = -732.52, $P<0.05$), years of formal education (β = -2016.520, $P<0.01$), years of membership in cooperative (β = 610.859, $P<0.10$), nature of involvement in enterprise (β = 5002.815, $P<0.01$), ownership structure (β = -5064.657, $P<0.05$) and access to market (β = -3009.693, $P<0.05$) significantly influenced the level of income of women groundnut processors in WIA programme. The programme significantly impacted on the poverty status of the women as the calculated t-value (5.59) for the mean difference of their income exceeds the critical value (1.97). For the SWOT analysis, the strongest point perceived by the respondents for the strengths was: 'location of enterprise is good' (MWS=4.31); the weakness was: 'profit margin is low' (MWS=4.37); the opportunity was: 'provision of loan/credit with low interest rate will improve their enterprise' (MWS=3.88); and the threat was: 'seasonality of market demand for product' (MWS=3.98). The study concludedthat some socio-economic and institutional factors influenced the household income of the women in WIA programme and the programme had significantly impacted on their poverty status. It was therefore recommended that the programme should be widened in scope so that more women can be empowered and theprogramme should improve on meeting one of its objectives of assisting in linking women to sources of credit so as to make more credit available to them and the programme should improve in meeting one of itsmain objectives of assisting in linking women to credit sources.

CHAPTER ONE

INTRODUCTION

1.1 Backgroundto the Study

The role of women in development has increasingly become the concern of various countries since Boserup's (1970) seminal work, in terms of both the effect of modernization on female economic activities and the potential contributions women can make. The position of women and their status in any society is an index of the society's civilization. It is certain that in African countries women play a significant role in the wellbeing of their families and the overall economic development of a nation (Ekong, 2010).

In Nigeria, women occupy a dominant place in the socio-economic life of the nation. There is increasing realization of the critical role of women in agriculture and food production and the fact that the empowerment of women is necessary for achieving sustainable development at a faster pace. Studies (Ani, 2004; Fabiyi*et al*., 2007; Ukeje, 2008) have shown that women produce between 60 to 80 per cent of the food in most developing countries and are responsible for half of the world's food production. Ekong (2010) further confirmed this by stating that the Nigerian rural economy and its urban food security are largely sustained by rural women. Rural women play a very important part in the highly labour intensive production process, but within the confines of their own home (Kabir*et al*., 2012). Basically, women are involved in the supply of labour, food crops production and livestock processing as well as transportation of farm produce for effective storage and marketing (Shannon, 2005; Ugwu and Agbo, 2009).

Although women constitute a significant proportion of Nigeria's population and contribute effectively to the Nigerian economy, they have remained the most economically and socially deprived in society. For instance, women do not only make up a disproportionate proportion of the poor, which accounts for 60 per cent of the Nigerian population, but are most vulnerable than men to economic dwindling, deterioration of natural resources and general neglect in the area of development efforts (Nnadozie and Ibe, 2000; Ani, 2004; Nwosu and Nwawill, 2010). The poverty situation in Nigeria is quite disturbing as both quantitative and qualitative measurements attest to the growing incidence and increasing depth of poverty in the country (Okunmadewa, 2005). Poverty is absolute and more pronounced in rural areas. The World Bank President, Jim Yong Kim ranked Nigeria third among the top five countries that has the largest number of the poor (World Bank, 2014). Nigeria has seven percent of the totalworld poor following India (33%) and China (13%). Specifically, in a report by National Bureau of Statistics (NBS) (2010), 112.519 million Nigerians, which represent 69 percent of the total population, live in relative poverty condition. The report further revealed that the North West and North East had the highest poverty rates in the country in 2010 with 77.7 per cent and 76.3 per cent respectively.

In order to mitigate the adverse effects of poverty and contribute to the care and upkeep of members of their families, Nigerian women are engaged in a variety of income earning activities as a way of improving their livelihood. Such activities include groundnut processing among others (Ajayi, 2005; Henn, 2005; Nwachukwu and Jibowo, 2007). Groundnut (*Arachis hypogea L.)*, otherwise called peanut, monkey nut, gobber pea and *arachide*belongs to the family *leguminoseae*. It originated from Latin America and Portugal. The Portuguese were responsible for its introduction into West

Africa from Brazil in the 16th Century (Gibbon and Pain, 1985; Abalu and Etuk, 1986). Peanut is one of the most popular commercial crops in Nigeria and remains the major source of livelihood for small-scale farmers, contributing about 54% of household cash revenue (Rural21, 2015). Nigeria is one of the world's largest groundnut producers, accounting for 10%, 39% and 51% of the total world's, Africa's and West Africa's groundnut production, respectively (ICRISAT, 2011). It is cultivated for its kernel, oil and hay for livestock. Its cake is often deep fired or dried to make a snack locally called *kuli-kuli*. In fact, groundnut flour is used as an ingredient in soups, sweet, confectionaries and puddings. Groundnut has been used traditionally in developing countries since the origin of humanity. It is rich in oil and protein and has a high energy value. Though there is little participation of women in groundnut production activities, they are strongly involved in local groundnut processing activities. In Nigeria, the processing of groundnut into various products is mostly done by women either for home consumption or for commercial purposes (Ibrahim *et al*., 2005). The most common commercial products of groundnut are: groundnut oil, groundnut cake and fried peanuts which are sold at market places or hawked on the streets (Ihekoronye and Ngoddy, 1985). The processing of groundnut is both a source of income and employment to a large proportion of rural women in northern Nigeria.

The empowerment of women that are involved in groundnut processing is therefore crucial to the reduction of poverty and their meaningful participation in income earning activities. Promotion of these activities is a dependable path to economic stability of women and their families. Empowerment is relevant to women as well as other disadvantaged or socially excluded groups; however, this study focuses on women because their empowerment encompasses some unique elements.

1.2 Problem Statement

Women contribute considerably to rural economic activities. In Nigeria, especially the northern part of the country, though culture and religion have assigned to men the role of providing basic necessities to their families, dwindling economic conditions have made it difficult for them to adequately fulfillthis role. This has therefore made it imperative for women to assist men particularly in the face of large family sizes. However, the women are constrained by many factors such as engagement in irregular and low-paying, physically demanding, daily wage labour which has long term effects on their livelihoods and, consequently prevent them from giving their maximum contribution in assisting their male partners (Edward, 2011; Abonge, 2012; Iyiola and Azuh, 2014).

It is against this backdrop that several programmes were launched in Nigeria to empower women. One of such programmes that is gender specific and which considered women as special beneficiaries is Women-in-Agriculture (WIA) Programme. The programme assisted women involved in various income earning activities especially agricultural related ones. In 2005, women involved in groundnut processing benefitted from the programme through training, and the provision of some inputs. However, literature review showed that there has not been any study to assess the impact of the programme on the women groundnut processors that were beneficiaries of the programmein Kano State. There is therefore the need to fill the knowledge gap by assessing the impact the programme had on the women in reducing their household poverty status. It is against this background that this study seeks to assess the impactof Women-in-Agriculture groundnut processing programme on

poverty alleviation in Kano State, Nigeria.The study thus attempted to provide answers to the following research questions:

i. What are the socio-economic, institutional and groundnut processing characteristics of the respondents in the study area.

ii. How profitable is groundnut processing in the study area?

iii. What is the level of contribution of the groundnut processing activities engaged by the women to their income?

iv. What is the poverty status of the women groundnut processors?

v. What are the socio-economic, institutional factors and groundnut processing characteristicsinfluencing the level of income of the women groundnut processors?

vi. What is the impact of the programme on the poverty status of women groundnut processors in the study area?

vii. What are the strengths, weaknesses, opportunities and threats faced by women groundnut processors in the study area?

1.3 Objectives of the Study

The broad objective of the study was to assess the impact of WIA groundnut processing programme on poverty alleviation of beneficiaries in Kano State, Nigeria. The specific objectives were to:

i. describe the socio-economic, institutional and groundnut processing characteristics of the respondents in the study area.

ii. determine the profitability of groundnut processing in the study area.

iii. ascertain the level of contribution of the processing activities engaged by the women groundnut processors to their income.

iv. determine the poverty status of women groundnut processors.

v. determine the socio-economic, institutional factors and groundnut processing characteristicsinfluencing the level of income of the women groundnut processors.

vi. assess the impact of the programme on the poverty status of women groundnut processors in the study area.

vii. identify and describe the strengths, weaknesses, opportunities and threats faced by the women groundnut processors in the study area.

1.4 Justification for the Study

The enormous contribution of income earning activities (at whatever scale) of women to the social and economic advancement as well as development of any locality cannot be over emphasized. In north-western Nigeria, engagement in micro and small-scale enterprises is the dominant livelihood strategy of poor rural women who have been identified as key factors in improving livelihood, food security, nutrition and health of families, communities and the nation at large (Oyesola and Ademola, 2012). According to Singer (2006), the best cure for poverty alleviation in any region of the world lies in encouraging more business activities. Empowerment contributes to poverty reduction when it creates employment through the startup of new ventures or the expansion of existing ones.This will increase social wealth by creating new markets, new industries, new technology, new institutional forms, new jobs and net increases in real productivity as well as increases in income, which culminates into higher standards of living for the population (Mayoux, 2000).

Generally, the concern about women economic and social empowerment has been a priority of the agenda of different countries. Moreover, promoting gender equality and empowering women is the third goal of the Millennium Development Goals (MDGs). The trend is gaining more emphasis given the positive association between poverty and disempowerment (Malhotra *et al*., 2002; Abdel Mowla, 2009). To this end, any study on rural women does have some importance. Findings from the study would be applicable to Kano State, Nigeria. Moreover, they would beof relevance to other areas of the

country where the socio-cultural, psychological, economic and institutional situation of the people do not differ much from those of the study area.

The study is justified on the ground that its findings would add to existing knowledge on contribution of women to household welfare. The study aimed to give quantitative information of the level of contribution of women activities to household income. Furthermore, the study intended to assess the impact of empowerment on poverty status of women groundnut processors whichwould shed more light on the outcome of the intervention to the stakeholders concerned. Finally, the study was justified on the ground that most of the literature reviewedfocused on constraints militating against women's income-earning activities. However, the study examined the strengths, weaknesses, opportunities and threats (SWOT) of the activity as a combination. This would assist stakeholders to minimize or avoid both weaknesses and threats. Weaknesses can be looked at in order to convert them into strengths and likewise, threats can be converted into opportunities. Lastly, strengths and opportunities could be matched to optimize the potential of the women.

In general, results of the researchwould assist policy makers and planners to identify and formulate effective strategies for rural women towards improving quality of living with specific focus on groundnut processing. Government organisations related to women and rural welfare along with non-government organisations (NGOs) would also benefit from the findings to improve their action plans to include gender specific programmes. They would get valuable information about the opportunities or limitations of their organisations which would help them to re-organise their organizational set-up and action plans. The findings of the study would be helpful to academicians and researchers to add knowledge and supplement empirical evidence

regarding different aspects of livelihood in relation to rural women. Ultimately, as a consequence of all these, poor rural women would beable to improve their vulnerable economic condition.

1.5 Hypotheses of the Study

The following null hypotheses were tested:

(i) Socio-economic, institutional and groundnut processing characteristics of the respondents have no significant influence on level of income of women groundnut processors in the Women-in-Agriculture programme.

(ii) Empowering women in groundnut processing does not have any significant impact on their poverty status.

CHAPTER TWO

LITERATURE REVIEW

2.1 Women-in-Agriculture Programme (WIA)

Women-in-Agriculture (WIA)programme was set up by the National Council on Agriculture in 1989 under the various Agricultural Development Programmes (ADPs) across the nation. It was established in response to the needs of women farmers which were not being met by regular extension services. There was the realization that women were marginalized in the society. This view was supported by Jayaweera*et al.* (1994) that the gender role assumptions of middle class planners, both national and expatriate, and administrators were based on the ideology of the domestication of women. In the same vein, Heyzer (1994) stated that the needs of women from the poorest strata of rural society have long been ignored or overlooked in an attempt to raise rural productivity and to create access to land, employment, credit and new opportunities and skills for the poor. Bamberger (1994) similarly stated that agricultural projects have been designed on the assumption that the "male" household members are the main agricultural workers and decision-makers.Consequently, most technical assistance and productive inputs were directed towards the male members of the household leaving women as mere dependents rather than participants. The overall objective of the Women-in-Agriculture programme therefore is to ensure full participation of women in agriculture with the aim of increasing productivity and income.

The Women-in-Agriculture programme, a gender sensitive programme, was institutionalised in 1989 by the Federal Government of Nigeria because of the need to improve extension services for women farmers in the country, Federal Agricultural Coordinating Unit(FACU, 1995). There was the argument that women farmers were marginalised in the Nigerian society where most policy plans had targeted only male farmers while public extension services for women focused mainly on home management activities with little or no attention given to agricultural production in spite of women's intensive involvement in agriculture. The implication of this had been that women experience considerable difficulties in securing access to agricultural services such as extension, agricultural inputs, credit, market facilities and technical assistance (Dunmade, 1990).

The programme was therefore established mainly to contribute to women's welfare in the agricultural development industry. Sabo (2006) asserted that the World Bank played a catalytic role in making the establishment of WIA a reality and recommended the programme as a model for developing and delivering extension services to women farmers, as well as developing an effective and relevant extension service involving government, donors, and the farmers.

According to FACU (1995) the overall objective of the WIA programmewas to ensure full participation of women in agriculture with the aim of increasing productivity and income while some of the specific objectives were to:

(i) Develop gender specific programmes and technologies for women farmers in close collaboration with research institutes,

(ii) Promote the use of appropriate technologies which would meet the needs of women farmers,

(iii) Assist in linking women farmers to sources of credit;

(iv) Support group and individual women activities aimed at increasing the animal protein resources of the country;

(v) Increase agricultural production and income of women farmers;

(vi) Improve the skills of women in food processing, utilization and marketing;

(vii) Organize women into cooperative societies for the purpose of acquiring credit and information; and,

(viii) Encourage women farmers to keep livestock in order to improve nutritional status of the family.

2.2 Concept of Empowerment

Empowerment is a concept that has been extensively discussed in the literature. Some of the earlier definitions include that of Morgan and Bookman (1988) which sees empowerment as a process aimed at consolidating, maintaining or changing the nature and distribution of power in particular cultural context. Smith (1996) considers empowerment to be a process that can only begin in a climate in which there are high expectations and where everyone feels respected and valued and where people will offer their best at all times. The concept of empowerment ranges from encouraging people to play a more active role in their work. This could be through involvement in taking active roles and responsibilities, to enabling them to make more and bigger decisions without having to refer to someone more senior (Ako-Nai, 2005). On its part, the World Bank sees empowerment as an expansion of freedom of choice and action which means

an increase in one's authority and control over the resources and decisions that affect one's life (World Bank, 2003).

Bennett (2002) describes empowerment as the enhancement of assets and capabilities of diverse individuals and groups to engage, influence and hold accountable the institutions that affect them. The conception of empowerment is based on the notion of power; empowerment by definition means "enabling", "giving, receiving or obtaining power" or "giving the official or legal authority or the freedom to do something". In addition, empowerment is defined as the equalisation of power and the more efficient use of resources (Claassens, 1993). Power can be defined as control over material assets, intellectual resources and ideology. Material assets can be physical, human or financial; intellectual resources are knowledge, information and ideas; and control over ideology signifies the ability to generate, propagate, sustain and institutionalise specific sets of beliefs, values, attitudes and behaviour (Batliwala, 1994; Fernando and Heston, 1997). According to the United Nations Development Fund for Women (UNIFEM) (2000), the important elements of women's empowerment include gaining the ability to generate choices and exercise bargaining power, developing a sense of self-worth, a belief in one's ability to secure desired changes, and the right to control one's life.

2.2.1 Women's empowerment

Empowerment is about change, choice, and power. It is a process of change by which individuals or groups with little or no power gain the power and ability to make choices that affect their lives.The original definition of the term "women's empowerment", the so called transformative approach, was meant to give a framework to, and facilitate, the struggle for social justice and women's equality through a transformation of economic,

social and political structures at the national and international levels (Bisnathand Diane, 1999).

Women need to be empowered for them to be able to cope with the day-to-day problems associated with household welfare. It is estimated that women head one-third of the world's household, and 50 percent or more households in urban areas. In some parts of Africa and most especially in rural areas, where men usually migrate to urban areas for greener pasture, the figure has always been quite high (Moser, 1993). Furthermore, women need to be empowered because they constitute about 50% of the African population and account for about 60 – 80% of the agricultural labor force. They produce up to 80% of essential food stuffs, which they process and sell in large quantities (United Nations, UN, 1991). Above all, women shoulder more than 90% of the domestic production tasks. Indeed, they have the biological and social tasks of bearing, nurturing, and providing initial education for children and ensuring the well-being of the family and that of the entire society.

It is obvious from the above that women's empowerment involves individuals and that the overall goal of women's empowerment (be it political, or economic) should be seen not only as a goal in itself but also as a means towards women's increased welfare, self-reliance, efficiency, and equality.

Basu (2006) has however, indicated that women empowerment can be categorised into three types, namely:

2.2.1.1 Economic empowerment

Women's access to savings and credit gives them a greater economic role in decision-making through their decision about savings and credit. When women control decisions regarding credit and savings, they will optimize their own and the household's welfare (Mayoux, 2000). The investment in women's economic activities will improve employment opportunities for women and thus have a 'trickle down and out' effect.

2.2.1.2 Increased well-being

Access to savings and credit facilities and women's decision about what is being done with savings and credit strengthens women's say in economic decisions of the household. This enables women to increase expenditure on theirown well-being and that of their children.

2.2.1.3 Social and political empowerment

A combination of women's increased economic activity and control over income resulting from access to micro-finance with improved women's skills, mobility, access to knowledge and support networks. Status within the community is also enhanced. These changes are reinforced by group formation, leading to wider movements for social and political change (Biswas, 2008).

Women's empowerment needs occur along the following dimensions: economic, socio-cultural, familial/interpersonal, legal, political, and psychological. However, these dimensions are very broad in scope, and within each dimension, there is a range of sub domains within which women may be empowered (Mayoux, 2000).

2.3 Concept of Poverty

There is no standard definition of poverty because of its multi-dimensional nature. Poverty is commonly defined as a situation of low income or low consumption. It can also be viewed as a situation in which individuals are unable to meet the basic necessities of life such as food, clothing, shelter, education, security and health. Ajakaiye and Adeyeye (1999) conceptualize poverty as a function of education, health, child mortality and other demographic variables. Poverty to them is the availability or otherwise of the above parameters. Nasir (2002) however, defined poverty as a concept that entails socio-economic and political deprivation which may affect individuals' households or communities and which may result in lack of access to the basic necessities of life.

The World Bank (1996) and Narayan (2000) see poverty as hunger, lack of shelter, being sick and not being able to go to school, not knowing how to read, not being able to speak properly, not having a job, having fear for the future, losing a child to illness brought about by unclean water, powerlessness, as well as lack of representation and freedom. According to the United Nations (1995) the various manifestations of poverty include: lack of income and productive resources sufficient to ensure sustainable livelihood, hunger and malnutrition and other basic services, homelessness and unsafe degraded environment among others. Poverty is alsowidely understood as the condition of living on an income below a certain minimum threshold. The World Bank defines those living on under US$2 a day as living in poverty, and those living on under US$1.25 as living in extreme poverty internationally (Chen and Ravallion, 2008). Going by the foregoing definitions and facts about poverty, Ogunleye (2006) concludes that the indicators of poverty include: literacy, health status, nutrition status, access to

housing andavailability of safe water. Poverty therefore, is the inability to attend to or meet up with the basic necessities of life as a result of lack of the wherewithal to do so.

However, some definitions focus on “absolute poverty”, which is interpreted as a lack of resources to meet the physical needs for survival. Others focus on “relative poverty”, which is interpreted as a lack of resources to achieve a standard of living that allows people to play roles, participate in relationships, and live a life that is deemed normative of the society to which they belong.Therefore, people who are unable to meet the minimum level of basic requirements of life such as food, nutrition, housing, education, medical facilities, drinking water, sanitation and security are poor. Persons who lack the ability to cope with crisis have also been considered as poor; andwhen a person’s or family’s income and expenditure level is below the poverty line they are classified as poor (Islam *et al*., 1997).

Conversely, Aku *et al.* (1997) have analysed poverty from five dimensions of deprivation:

1. Personal and physical deprivation experienced as a result of health, nutritional, literacy and educational disability and lack of self-confidence.
2. Economic deprivation drawn from lack of access to property, income, assets, factors of production and finance.
3. Social deprivation as a result of denial from full participation in social, political and economic activities.
4. Cultural deprivation in terms of lack of access to values, beliefs, knowledge, information and attitudes which deprives the people the control of their own destinies.

5. Political deprivation in terms of lack of political voice to participate in decision making that affects their lives.

In a nut shell, poverty can be seen as a situation in which an individual is unable, because of economic, social, political and psychological incapacitation, to provide to himself and his family the barest basic necessities of life.

2.3.1 Classification of poverty

Sanyal (1991) and Schubert (1994) classify poverty as either absolute or relative or both. Absolute poverty is that which could be applied at all times in all societies such as the level of income necessary for bare subsistence, while relative poverty relates the living standard of the poor to the standards that prevail in the society in which they live. According to the United Nations Development Programme (2005), poverty is classified as absolute poverty, which refers to people who fail to receive sufficient resources to support a minimum level of physical health expressed in terms of calories or nutritional values;and relative poverty, which refers to general standard of living in different societies culturally stated as being poor rather than absolute deprivation, and hardcore or ultra-poverty, which is the group below the absolute poverty line.

Mukhtar (2011) however, classified poverty into absolute poverty, relative poverty, rural poverty and urban poverty. Absolute poverty refers to lack of minimum physical requirements for existence; relative poverty on the other hand refers to a situation in which a person's or household's provision of goods is lower than that of others. Rural poverty is characterized by poor material condition, low level of education, lack of

infrastructures, poor health condition, underemployment, low investment and high out-migration. Urban poverty, on the other hand, is characterized by environmental degradation, overcrowded accommodation, low per capita income, and other problems associated with urban areas such as slums, ghettos and shanties (Galbraith, 1969).

2.3.2 Causes and consequences of poverty

Obadan (1997) identified some factors as the causes of poverty among which are; inadequate access to employment opportunities, inadequate physical assets, inadequate access to markets, destruction of natural resources, lack of power to participate in the design of development programmes and inadequate access to assistance for those living at the margin. Loewen (2009) however, had a different view of the causes of poverty. He believes that one of the things that makes poverty such a complex subject, is that there are widespread differences in how the causes of poverty are understood. Most people will include all of the definitions within their own understanding of the causes of poverty, but with substantial variances on which of the causes they will emphasize. In line with this, he believes that poverty results when:

i. Individuals are less well adapted to the demands of the society in which they live, don't work hard enough, make bad choices or are in some other ways deficient, they become poor.

ii. Individuals that are marginalized within mainstream society, they develop a set of institutions, values, norms and behaviours which perpetuates rather than counters poverty.

iii. Poverty results from one or more events or circumstances that prevents the attainment of (middle-class) economic or social goals e.g. divorce, job loss, death of a spouse, illness, lack of access

to education, training or other important services like child care or transportation.

iv. Poverty is due to economic, political and social systems that provide unequal access to resources and opportunities.

On the consequences of poverty, Aku*et al.* (1997) opined that there is general loss of confidence in a society stricken by poverty and this renders government policies ineffective. At individual level, poverty contributes to physical weaknesses of people through lack of food, small/weak body, and malnutrition leading to low immune response; inability to pay for health services, isolation because of the inability to pay the cost of schooling, as well as powerlessness due to lack of wealth (Chamber, 1983). Poverty also results in increasing the fragility and vulnerability of members of society to external influences. Furthermore, poverty makes production remains largely subsistence due to lack of capital needed for expansion. Labour becomes intensive and marginal productivity remains low (Aku*et al*., 1997).

2.4 Poverty Situation in Nigeria

Poverty, a global phenomenon that is complex and multi-dimensional, is not easy to define. One of the major challenges facing developing and under-developed countries of the world is poverty. Although the level and extent of poverty and unemployment has been observed to be different within and across nations, it still remains the major obstacle to the optimum utilization of human resources for both social and economic development of the nations (Misango and Ongiti, 2013).

According to African Foundation for Population and Development (AFPD) (2005), Nigeria is the tenth most populous country in the world and the largest in sub-Saharan Africa. It is one of the fastest growing nations in the world. The Nigerian population had more than doubled since she attained nationhood in 1960. Going by the data obtained from past censuses, the country's population increased sharply from fifty-four (54) million in 1963 to Eighty eight (88) million in 1991. Currently, the country's population has reached one hundred and forty-four (144) million according to the 2006 population and housing census. With an annual population growth rate of 2.9 percent, which is nearly the same with the annual GDP growth rate (3.5 percent), Nigeria's population will double in the next twenty-five years (AFPD, 2005). According to the report, Nigeria,though rich in natural resources, is currently ranked among the 13 poorest countries in the world. With per capita income falling significantly to about $300 (below the sub-Sahara average of $450) approximately more than 90 million of Nigeria's 144 million people are living in absolute poverty i.e. in less than one dollar a day.

Also, available data from the Federal Office of Statistics (FOS, 1999), indicates that majority of the poor are located in the rural areas of Nigeria. This is indicated by the low social status and poor living conditions of the inhabitants. The problem has been made worse over the years by the development pattern which has favoured the urban modern sectors to the detriment of the traditional rural sectors (World Bank, 1996). In 1985, for instance, 49.9% of the population in rural areas were poor, declining to 46.1% in 1992, only to rise to 67.85 in 1996. Nigeria is a country blessed with vast tracks of arable land, abundant human and natural resources. Therefore, Nigeria and poverty should be strange bed fellows. But that is not the case (Tell, February 2, 2009 p. 53). According

to the magazine, Nigeria was regarded as the promising country in the commonwealth ahead of India, Malaysia and Singapore. But, while these countries have made appreciable progress in most indices of growth, Nigeria is still struggling at the bottom of the ladder with most of her citizens unable to meet their basic necessities of food, clothing and shelter.

2.5 Measures to Alleviate Poverty in Nigeria

Poverty has been recognized as a universal social problem that must be eradicated if the world is to be stable and just. Poverty reduction/alleviation is any process which seeks to reduce the level of poverty in a community or amongst a group of people or countries. Poverty reduction programmes may be aimed at economic or non-economic poverty. Some of the popular poverty reduction methods are education, economic development and income distribution. Poverty reduction efforts may also be aimed at removing social and legal barriers to income growth among the poor. Ogwumike (2004) reported that the reduction of poverty is the most difficult challenge facing any country in the developing world where on the average majority of the population is considered poor. Evidence in Nigeria shows that the number of those in poverty has continued to increase.

Nigeria over the years has embarked on various health, educational, economic, political, social and cultural reforms either on its own initiative or as a response to internationally agreed plans on poverty eradication. The United Nations Development Project, the International Fund for African Development and the World Bank have assisted various states to execute poverty reduction projects by way of self-employment or increased food production. For instance, global 2000 and other NGOs have achieved over 98%

guinea worm eradication success as of 2003 and assisted in sinking boreholes for safe drinking water. Nigeria has equally established specialized ministries at the federal and state levels for the environment; women and youths and has liberalized participation of women in all levels of governance. First ladies at all levels have equally engaged themselves in poverty alleviation programmes through their work with the girl child, rural women empowerment, prevention of prostitution and trafficking among young unemployed girls and abuse through genital mutilation. The Federation of International Women Lawyers Association (FIDA) has also defended the rights of widows and other women who are poor and defenseless. More classrooms are also being built through the UBE and school enrolments have doubled in most states of the federation.

Other programmes and policies initiated to alleviate poverty include: the Directorate of Foods, Roads and Rural Infrastructure (DFFRI), Better Life Programme (BLP), Directorate of Employment (NDE), Peoples Bank of Nigeria (PBN), Community Banks (CB), Family Support Economic Advancement Programme (FEAP), Poverty Eradication Programme (PEP), National Poverty Eradication Programme (NAPEP), and National Economic Empowerment Development Strategy (NEEDS). The programmes were initiated to ameliorate the suffering of the people by providing them employment and access to credit facilities to enable them establish their own businesses (Esemee*t al*., 2009).

However, all efforts in poverty eradication/programmes were essentially adhoc. A number of government programmes initiated in the past were also not specifically targeted towards the poor, though they affected them (Obadan, 2004). Poverty

alleviation efforts therefore need to be properly focused on the poor. This requires proper identification of the poor and their unsatisfied needs.

2.6 Socio-Economic Characteristics of Rural Women in Small Scale Business Enterprises

Many researchers while studying rural women involved in small business enterprises have described their socio-economic profile in Nigeria, Africa and across the continent. Below are the results of empirical studies on socio-economic characteristics of the rural women.

2.6.1 Age

Results of a study conducted by Onwurafor and Enwelu (2013) on rural women agro-food processors in Enugu State, Nigeria have indicated that a greater proportion (41.0%) of the women were in the age bracket of 39-48 years, about 27% and 19% were in the age brackets of 49-58 years and 29-38 years respectively. The average age of the women was 44 years. Edward (2011), Okoro and Odebode (2009) and Abdullah *et al.* (2014) in their separate studies had made similar findings. Ifelunini and Wosowei (2013), on their part, found that majority (57.0%) of such women in South-South Nigeria were below the age of 31 years while about 37.0% were between 31-50 years and only 6.0% were above 50 years. Another study by Nwosu and Okon (2013) revealed that most (70.0%) of the women in Ika LGA of AkwaIbom State of Nigeria were between 26 and 45 years and is similar to findings of Sani and Danwanka (2011) and Abonge (2012).

2.6.2 Marital status

Researchers (Okoro and Odebode, 2009; Onwurafor and Enwelu, 2013; Abdullah *et al.*, 2014; Iyiola and Azuh, 2014) in separate studies have reported that over 70.0% of rural business women were married. Other researchers (Abonge, 2012; Pharm and Sritharan, 2013; Sani and Danwanka, 2011; Ifelunini and Wosowei, 2013) in their own separate studies have however, found that between 60-70% of their respondents were married. Nwosu and Okon (2013) similarly showed that a dominant proportion (58.0%) of business women were married.

2.6.3 Household size

Pertaining to household size of the rural women, 55.0% of respondents had household size of 5-8 persons, 24.0% had above 12 persons and the average household sizewas nine people (Onwurafor and Enwelu, 2013). Ifelunini and Wosowei (2013) similarly realized that about 67.0% of their respondents had between 5-9 people in their households while 6.7% of the respondents had minimum of ten people. Okoro and Adebode (2009) reported that almost of their respondents (49.0%) had 4-6 members, 34.0% had 7-9 members, 12.5% had 1-3 members and 4.5% had nine members. Another study by Nwosu and Okon (2013) revealed that about 32% of women had the highest household size of 7-9 persons. Other researchers (Emodi, 2008; Enwelu, 2011; Ajani, 2011; Sani and Danwanka, 2011) have observed that households in Nigeria are characterized by large family size.

2.6.4 Educational qualification

Okoro and Adebode (2009) in a study in Niger Delta region of Nigeria reported that about 49.0% of their respondents had no formal education, 34.0% of respondents had between 1-6 years of formal education while 13.5% of respondents had between 7-12 years of formal education. In a similar finding by Abonge (2012) the educational background of respondents shows that most (80.0%) women entrepreneurs have barely finished primary education or are school drop outs. Pharm and Sritharan (2013) also found about 6.0% of their respondents to be illiterate. In other studies (Onwurafor and Enwelu, 2013; Abdullah *et al*., 2014; Ifelunini and Wosowei, 2013; Okoro and Adebode, 2009; Nwosu and Okon 2013; Nor, 2011) contrary findings were reported where majority of respondents were found to have undergone formal education at different levels.

2.6.5 Experience in business

Nor (2011) reported that majority (71.0%) of women in income earning activities have between 1-10 years of experience in business. Similarly Sani and Danwanka (2011) reported majority (81.5%) of their respondents to have between 3-10 years of business experience, 6.5% have 11-18 years and 12.0% have more than 18 years. Nwosu and Okon (2013), in their own study however, found about 41.0% of respondents to have 1-10 years of experience, while 42.0% have between 11-20 years and almost 18.0% had more than 20 years in their business.

2.6.6 Membership of social organisations

Onwurafor and Enwelu (2013) have found majority (75.0%) of rural women they studied to belonging 1-4 social organisations while the rest of them were non-members. In contrast, Negi and Upadhyay (2012) in their paper titled: "assessment of the

Strengths, Weaknesses, Opportunities and Threats (SWOT) of selected entrepreneurial activities undertaken by the rural women in Uttarakland State, India", stated that more than half (66.66%) of respondents had no organizational membership.

2.6.7 Household headship

Edward (2011) found 25.0% of rural women involved in entrepreneurial activities to be heads of their households. Similarly, Okoro and Odebode (2009) also found 28.5% of his female respondents to be household heads.

2.7 Characteristics of Small Scale Business Enterprises of Rural Women

2.7.1 Size of labour employed in production

Sani and Danwanka (2011) have reported that majority (52.0%) of rural women entrepreneurs they studied had up to 5-6 persons employed, 40.0% had 3-4 persons while 8.0% had just 1-2 persons. In the contrary, Abonge's study (2012) revealed that majority (93.4%) of women's enterprises employed 1-5 employees.

2.7.2 Sources of finance

When women entrepreneurs were asked how they sourced money for running their businesses in a study by Abonge (2012), 45.0% attested that their source was from personal savings, 33.3% got loan and 21.7% received help from friends and relatives. Sani and Danwanka (2011) also found about 60.0% of women they studied to source money through personal savings, 22.0% from family aid, 10.0% from friends and relatives, 7.5% from daily contribution while only 1.0% got their finance from loans. Onwurafor and Enwelu also stated that the major (74.4%) source of fund for their business was through personal savings. Other sources include: thrifts (*Isusu*) (40.0%),

family and friends (18.8%), money lenders (3.85%), banks (1.9%) and cooperatives (1.2%).

2.7.3 Ownership structure and nature of involvement

Sani and Danwanka (2011) have found 63.0% of their female respondents run their businesses in partnership with their husbands and 37.0% as sole proprietors. In relation to nature of involvement, majority (65.0%) were into the businesseson full-time basis while 35.0% were on part-time basis.

2.8 Profitability of Groundnut Processing

Profitability is the ability of a business to earn a profit. A profit is what is left of the revenue a business generates after it pays all expenses directly related to the generation of the revenue. It is the primary goal of all business ventures (Iliyasu*et al.,* 2008). Without profitability the business will not survive in the long run. Profitability is measured with income and expenses. Income is money generated from the activities of the business while expenses are the cost of resources used up or consumed by the activities of the business.

A study by Iliyasu*et al*. (2008) conducted in Maiduguri Metropolitan Council of Borno State on profitability of groundnut processing showed that groundnut constituted the highest (86.83 %) variable cost while pepper was the least (0.38%). Furthermore, groundnuts oil gave the highest return of ₦90.24/kg (59.71%) while groundnut cake contributed 40.29% (₦60.88/kg) to gross revenue of the production under study. The gross margin of ₦43.34 was realized in every 1 kg of groundnut used in the production of groundnut cake and groundnut oil. The return on investment in groundnut cake and groundnut production was estimated as 40%.

In North Central Nigeria, Ibrahim *et al*. (2010) realized that the average total cost of processing groundnut in a production cycle (about four days and an average of 154.5kg of raw groundnut) was ₦20,250.9, which was dominated by the variable cost of processing which accounted for 90.7% of the average total cost. The fixed cost component, on the other hand, accounts for only 9.3% of the average total cost of processing. The cost of raw groundnut dominated the variable cost by accounting for 79.6% of the total variable cost. The study further showed that in terms of returns, an average gross returns of ₦30,817.6 per processing cycle was obtained from groundnut processing. The average gross returns was dominated by the return from groundnut oil which accounted for 56.3% of the average gross returns while groundnut cake (*kuli-kuli*) accounts for 43.7% of the average gross returns. And, lastly, the study showed that the average net return of ₦10,586.6 per processing cycle of about four days was obtained in groundnut processing by rural women in the study area. A similar finding was made by Hamidu*et al.* (2007).

2.9 Contributions of Women to Household Welfare and Poverty Reduction

Business enterprises have increasingly become the mainstay of poor women who are compelled to operate these enterprises for household provisioning and as a means of creating employment for themselves (Abonge, 2012). Through the running of their micro enterprises, women are able to make substantial contributions in sustaining their livelihood and that of their families. Women are considered to be more altruistic and express a greater propensity to spend more of their income earned on welfare needs of family members and children (Batliwala and Dhanraj, 2004; Kevane and Wydick, 2001;

Mayoux, 1995). The provision of basic household needs is typically a woman's responsibility in most households. Women constantly provide for the family's needs and are able to provide support and supplement the needs of children, either neglected or not met by men. Thus, the contribution of women to the survival and livelihood of their families cannot be over emphasised. Women supply food, clothing, health needs and even education, which is more likely the man's responsibility, principally because they are involved in entrepreneurial activity (Mayoux, 2000).

Edward (2011) contended that income generating activities of women help the poorest women save, pay their children's school fees, buy school uniform, provide clothing and also improve their nutritional status of the family food basket. They are self-confident, creative, and have self-respect, as well as developed social networks and leadership skills. He further stated that the women could afford some of the basic necessities that were unattainable due to lack of a source of income.Edward (2011) reported that 69% of women he studied in Northern-Region of Ghana used some of the profit generated from their business enterprises to pay children's fees, buy school uniforms, school materials, and give pocket money.About 69% of respondents said their enterprises has enabled them to buy and stock adequate foodstuff during the harvest period or to directly invest in food production during the farming season to guard against shortages and to ensure all-year-round food security for the family. Also, his results show that 66% of respondents achieved personal growth and development through their enterprises. About 40% take part in community meetings and 3 respondents serve as unit committee members.

Matthews-Njoku and Adesope (2007) reported the most serious impact of women's productive activities to include ability to feed adequately, buy or rent land for farming, and access to improve health care and education. Abonge (2012), in his findings from an in-depth interview, reported that all women respondents indicated a change in living standards as a result of the running of a micro enterprise. The entrepreneurs reported the use of income earned from their enterprises to meet basic survival needs of food, oil, salt, soap and other basic daily household needs. They also contribute in paying their children's healthcare bills, fees, books and other school needs. Specifically, he found all (100%) the respondents to use part of the income from their enterprises for basic food needs, 90% for children's education, 80% for health purposes, another 80% save part of their income, 75% the use income for clothing, 60% buy some household assets and 48% reported that they reinvest part of the their income.

The above is evidence of women's contributions and the fact that women enterprises are set out to provide for basic household consumption needs. The distribution of roles and the contribution of women in meeting household needs affirm the centrality of women and their business activities in achieving and ensuring better living standards for household members. Thus, operating micro- and small-scale enterprise activitiestherefore has a trickledown effect on the survival and welfare needs of other household members, particularly children.

2.10 Socio-Economic and Institutional Factors Influencing Women Income

Lhing*et al*. (2013) studied the factors influencing household income of beneficiaries of a microfinance empowerment programme in Kyaukpadaungtownship in Myanmar and found that independent variables such as sex, marital status, education, household size,

land holding, number of crops, and establishing new enterprises were positively correlated with household income. However, two variables, age of the head of household and change in farming practices, are negatively correlated with household income. In terms ofsignificance, the sex of head of household, educational level, and establishing new enterprises, were positively significant factors influencing household income while age of the head of household has a negatively significant influence on household income. Similarly, Kudi*et al*. (2009), who studied the impact of the UNDP microfinance programme on poverty alleviation among farmers in selected local government areas of Kaduna State, Nigeria, found that a unit increase in age would reduce household income by 31.5%.

Islam (2003), Sarkar (2005) and Rahman (2006) in separate studies found age to have significant and positive effect on women household income. Also, Fakir (2008) and Sheheli (2012) found higher participation of middle-aged women in incoming generating activities compared to older women. Oluwasola (2010) reported that a positive and significant relationship exists between level of education and net income of women. Women's participation in cooperative societies was reported by Rahman and Naoroze (2007) to be positively related to the women income.

2.11 Empirical Reviews of the Impact of Empowerment Programmeson Poverty Alleviation

Nawaz (2013), in her field survey, found that most of the beneficiaries of an empowerment programme did not have livestock before joining the programme. Only 25% and 15% had cows and goats respectively before taking a loan from NGOs and only a further 10% had both cows and goats. The remaining 50% had no livestock. The data revealed however that the situation changed dramatically after the respondents

received financial assistance from NGOs with 50% and 30% of them having cows and goats respectively and a further 20% having both cows and goats. There was also a significant increase in the ownership of furniture and household articles following financial assistance from the Bangladesh Rural Advancement Committee (BRAC).

Sarumathi and Mohan (2011) conducted research on the role of microfinance in women's psychological, social and economic empowerment. The study was carried out in the Pondicherry region of India. The results from the focus group discussions revealed that the women experienced a gradual improvement in all the three elements of empowerment examined following their participation in the self-help groups associated with the microfinance programme. In another study in Bahawalpur, Pakistan, Nawaz *et al.* (2012) found that microcredit drives women's empowerment in a positive direction because women are becoming empowered at personal, economic and family levels after using microcredit in various income generating activities. Thus, empowerment of women at an economic level further drives empowerment in other levels.

Again, Das (2012) conducted a research on self-help groups (SHGs) in India and examined the influence that membership of the groups had on women's decision making capacity within the family, women's position within a patriarchal social system and leadership qualities. He found that SHGshad a positive impact on women members particularly in their empowerment. He tried to rank the indicators of empowerment and he found that participation in decision making ranked first followed by economic empowerment. Awareness and capacity wereboth ranked third while the indicator of entitlement ranked fourth and so on. He considered SHG as a beneficial empowerment model. Sanyal (2009) suggests that women's membership in microfinance groups may

improve their individual capacity and facilitate their collective empowerment. Similarly, Hashemi*et al.* (1996) argue that microcredit reduces domestic violence**.**

Mensah and Benedict (2010) conducted a desk research and quantitative analysis from the poorest regions of South Africa to find out the impact of government initiative for alleviating poverty through entrepreneurship development. They found out that the training in entrepreneurship and provision of other facilities could give poor owners of micro and small enterprises opportunities to grow their businesses and get themselves and others out of poverty.

Shariff*et al.* (2010) examined government policy as a moderating effect on the relationship with entrepreneurial values, firm financing, management, market practices and growth performance of small- and medium-scale enterprises(SMEs) in Cambodia. They used survey questionnaires from 220 SME owner-managers in the City of Phnom Penh in Cambodia and used hierarchical multiple regression method in analyzing the data. They found that there was a positive relationship between entrepreneurial values, firm financing, management, market practices and SME growth performance.

Okpara (2011) examined factors that obstruct the growth and survival of small businesses in Nigeria. He used a survey method to gather data from 211 small business owners and managers located in selected cities in Nigeria. He conducted several statistical analyses to identify the factors constraining the growth and survival of SMEs in Nigeria. He found that the most common constraints are lack of financial support, poor management, corruption, lack of training and experience, poor infrastructure, insufficient profits, and low demand for product and services.

Tende (2013) examined government initiatives toward entrepreneurship development in Nigeria and evaluates the job creation capacity of the entrepreneurship development programme on Nigerians. Random samples of 1,159 beneficiaries were selected from six geo-political zone and structured questionnaires were used to obtain information from the selected beneficiaries. He found that government credit policies have no significant effect on the development of entrepreneurial activities in the country and mostly the beneficiaries do not derive maximum satisfaction from government programme and policies.

Ali and Ali (2013) identified the relationship between empowerment and poverty reduction at Benadir region in Somalia. They used a correlation research design which comprised of 80 participants of micro and small enterprises in Benadir region. The study found that there was weak positive correlation between empowerment and poverty reduction.

From the forgoing, it is evident that empowerment programmes had contributedto changing livelihood of beneficiaries especially poor women and has made poverty reduction possible in Nigeria and other parts of the world. However, other studies have shown a negative relationship between some empowerment programmesand poverty alleviation especially in the area of provision of credit (microfinance) (Almamum*et al.*, 2013; Clement and Terande, 2012; Yusuf *et al.*, 2013). Additionally, some studies indicated a neutral relationship between microfinance and poverty alleviation (Karlan and Zinman, 2010; Rooyen*et al*., 2012; Karlan and Valdivia 2011).

2.12 Strengths, Weaknesses, Opportunities and Threats (SWOT) Analysis

A SWOT analysis is a strategic planning method used to evaluate the Strengths, Weaknesses, Opportunities and Threats involved in a project or in a business venture (Negi and Upadhyay, 2012). Some authors credit SWOT to Albert S Humphrey who led a convention at the Stanford Research Institute in the 1960s and 1970s using data from Fortune 500 companies. SWOT analysis of external opportunities and threats as well as the internal strengths and weaknesses of enterprises is important for strategy formulation and development. Strengths refers to the characteristics of the business or project that give it advantage over others; Weaknesses are those characteristics that place the business or project at a disadvantage relative to others; Opportunities are elements that the project could exploit to its disadvantage; and Threats are elements in the environment that could cause trouble for the business or project (Negi and Upadhyay, 2012).

The purpose of the analysis of external opportunities and threats is to evaluate whether an enterprise can seize opportunities and avoid threats when facing an uncontrollable external environment, such as fluctuating prices, political destabilization, social transition, change in the rule of law, etc. The purpose of the analysis of internal strengths and weaknesses is to evaluate how an enterprise carries out its internal work, such as management, work efficiency, research and development, etc. Further, SWOT analysis helps in other ways i.e. it is a source of information for strategic planning, builds organization's strengths, reverse its weaknesses, maximize its response to opportunities, overcome the organization's threats, helps in identifying core competencies of the firm, helps in knowing the past, present and future so that by using past and current data, future plans can be charted out. It is not simply enough to identify

the strengths, weaknesses, opportunities, and threats of a company. In applying the analysis it is necessary to minimize or avoid both weaknesses and threats. Weaknesses should be looked at in order to convert them into strengths. Likewise, threats should be converted into opportunities. Lastly, strengths and opportunities should be matched to optimize the potential of a firm (Negi and Upadhyay, 2012). Applying SWOT analysis in this fashion can obtain leverage for a company (Ferrell *et al*., 1998). In order to know experiences of entrepreneurial activities operated by women, this study has made efforts to conduct a SWOT analysis of their entrepreneurial activities.

CHAPTER THREE

THEORETICAL FRAMEWORK

3.1 Social Change Theory

Social change is an ever changing phenomenon in any society (Robinson and Philip, 1982). The specific meaning of social change depends on the social entity considered. It involves a movement from old ways or manners of doing things to new techniques or approaches that offer greater gain or ease. Moore (1963) conceptualized social change to mean the transformation of traditional societies into types of technology and associated organization that characterized the advanced, economically prosperous and relatively politically stable nations. In this context, social change is visualized as the introduction of attitudinal, behavioral, technological, institutional and material change into a society by presenting alternative ideas, practices or chances to change or supplement existing ones.

However, Rogers (2003) defined social change as the process through which alterations occur in structure and function of a social system. Zaltman*et al.* (1973) describe social change as a term used to describe change in social and economic life style and values of people, technological innovation and social institutions. Conversely, Horton and Hunt (1980) defined social change as the transformation of social structures and social relationship in society. Social change therefore assumes the introduction of change materials into a society by the presentation of alternative ideas, practices or choices to change or supplement the existing ones.

The theory of social change has its root in the social behaviorism and focuses more on the individual, the society and the resultant interaction between the individual and the society. The theory assumes that the individual is the ratio of society and the society is the sum of the individual and his action. Since the individual is the product of the society, he/she have a role which enables him/her to function in the society. Furthermore, the theory assumes that society is in transition and as it grows it undergoes changes (Rogers 2003). Thus, in order for a society to cope with changes, it has to create and adopt new forms of structures/institutions which would enable the society and individual in the society to function.

Social change assumes the introduction of "change material" into a society by the presentation of alternatives ideas, practices or choices to change or supplement the existing ones. Information and the communication sources, channels, media and methods by which it is brought to the farmers are of crucial importance in facilitating wide adoption of improved practices as well as fostering the new attitudes involved in the desired change (Zaltman*et al*., 1973). Hodgdon and Singh (1964) argued that another aspect of social change and one which has been neglected by many social science researchers in developing countries, relates to what they called situational (individual), local and external factors which together form the total context in which farmers operate. These factors affect farmers differently. They are of two types, permissive and restrictive, i. e., some tending to motivate the farmer to adopt new practices as well as to enable him to act, while others present disincentives that make it difficult for him to try out new ideas or practices.

3.1.1 Process of social change

Social change has been viewed to be brought about mainly through five perspectives (Rogers, 2003):

i. Discovery:this is the shared human perception of an aspect of reality which already exists.

ii. Invention: referring to the process by which new ideas are developed and created. It is the new use of existing knowledge. Inventions can be classified as material (farm implements) and social (decision-making process, adoption behavior).

iii. Diffusion: referring to the process of transmission or communication of ideas. It is the spread of ideas or cultural traits from group to group or region.

iv. Problem-solving: attention to situations or felt needs that demand intervention.

v. Consequences: referring to changes that occur within the social system as aresult of adoption or rejection of an innovation.

3.1.2 Planned and unplanned social change

The impetus for change may be planned series of efforts or unplanned sequence of events. Unplanned change is a result of natural, dynamic and unintended causes of the interactive forces in a society. It is a change that happens suddenly (usually through the act of nature) thereby affording man no chance to plan before it occurs (Moore, 1963).

Planned social change, on the other hand, comes within a specific set of objectives to alter an undesirable situation. It entails a direct human intervention in the shaping and

direction of change toward some predefined goals. According to Moore (1963), planned change is the active and purposeful intervention of individuals or groups into the technological, sociological and ideological practices of other people. In other words, this involves an underlying intention to cause change. For Zaltman*et al.* (1973), planned social change refers to deliberate efforts by change agents to affect a change in a target system or individuals.

Social change theorists believe that for change to take place, societies have to move from the traditional to modern level. Thus, for the society to develop, it has to undergo changes. So, to enhance development of the individual and society, services have to be created, hence the creation of social programmes (Zaltman*et al.,* 1973). The aspect of social change theory relevant to this study therefore is the planned social change, an interventionist perspective that seeks to empower women groundnut processors in order to achieve set goals.

Fliegel and Kivlin (1966) in their view, explained that the achievement of the desired goal of a planned change programme, like that of modernizing agriculture, would depend on the attributes of the innovation such a cost, the return to investment, the efficiency of the innovation, the risk involved, availability of the innovation and the socioeconomic features of the clients. These attributes act as incentives or disincentives to adoption. Thus, Agbonifo (1974) advised that any agricultural innovation that is being introduced to the farmers must not only be compatible with existing farming traditions but also with existing social structures and institutions in the country. Williams (1978) andAbalu and D'Silva (1980) observed that when farmers find recommended farm innovations not to be technically feasible, economically viable and

culturally compatible, they often reject such innovations. If these innovation attributes are ignored, the diffusion and adoption of agricultural practices by farmers becomesdifficult.

Social change theory was therefore used in this study to examine the impact of empowering women groundnut processors for poverty alleviation. Empowerment is a planned change that creates opportunity for the women to improve their financial status which would bring about improvement in their welfare and consequently reduce household poverty.

3.2 Social Empowerment Theory

The theory is based on the perspective of Kanter. Kanter's (1993) theory of structural empowerment includes a discussion of organizational behavior and empowerment. According to this theory, empowerment is promoted in work environments that provide employees/beneficiaries with access to information, resources, support, and the opportunity to learn and develop. Kluska*et al*. (2004) have noted that psychological empowerment includes feelings of competence, autonomy, job meaningfulness, and an ability to impact the organization. Employees who are empowered are more committed to the organization, more accountable for their work, and better able to fulfill job demands in an effective manner (Degner, 2005). As noted by Erickson *et al*. (2003), empowerment is thought to occur when an organization sincerely engages people and progressively responds to this engagement with mutual interest and intention to promote growth. Empowerment develops over time as employees gain greater control over their lives and increasingly take part in decisions which affect them. The findings of Erickson *et al*. (2003) have suggested that participation in WIA programme increased the

participants' sense of empowerment and fostered self-growth and organizational development.

According to the theory, the principles associated with four guiding concepts support successful shared governance structures. These concepts include: equity (the integration of roles to achieve common goals and willingness of each member to contribute collectively toward a common goal), ownership (recognition by the individual of the connection between his or her individual job performance and the success of the organization), partnership (development of relationships to promote mutual respect, enhanced communication, and collaboration to achieve organizational objectives), and accountability (willingness to invest in decision making and sharing a sense of responsibility for individual and collective outcomes) (Batson, 2004; Porter-O'Grady *et al.*, 1997). When principles related to these concepts are incorporated into individual and team behaviors, the workforce is empowered to achieve the outcomes of the organization (Batson, 2004).

3.3 Conceptual Model for the Study

The conceptual model depicts a diagram that shows the relationship(s) between variablesunder study. Figure I illustrates the conceptual model for the study using objective (v) of the study. The model identified the factors influencing the level of income of women groundnut processors under WIA programme. It depicts the independent variables which were proposed to influence the dependent variable to lead to a likely outcome. The independent variables were socio-economic characteristics of the women (age, years of formal education, household size, number of dependents, marital status, headship status and years of experience), institutional factors (number of extension visits, amount of credit and years of membership in cooperative societies) and

characteristics of the processing activity (nature of involvement, ownership structure, number assistants and market access). The dependent variable was income while the likely outcome was change in income.

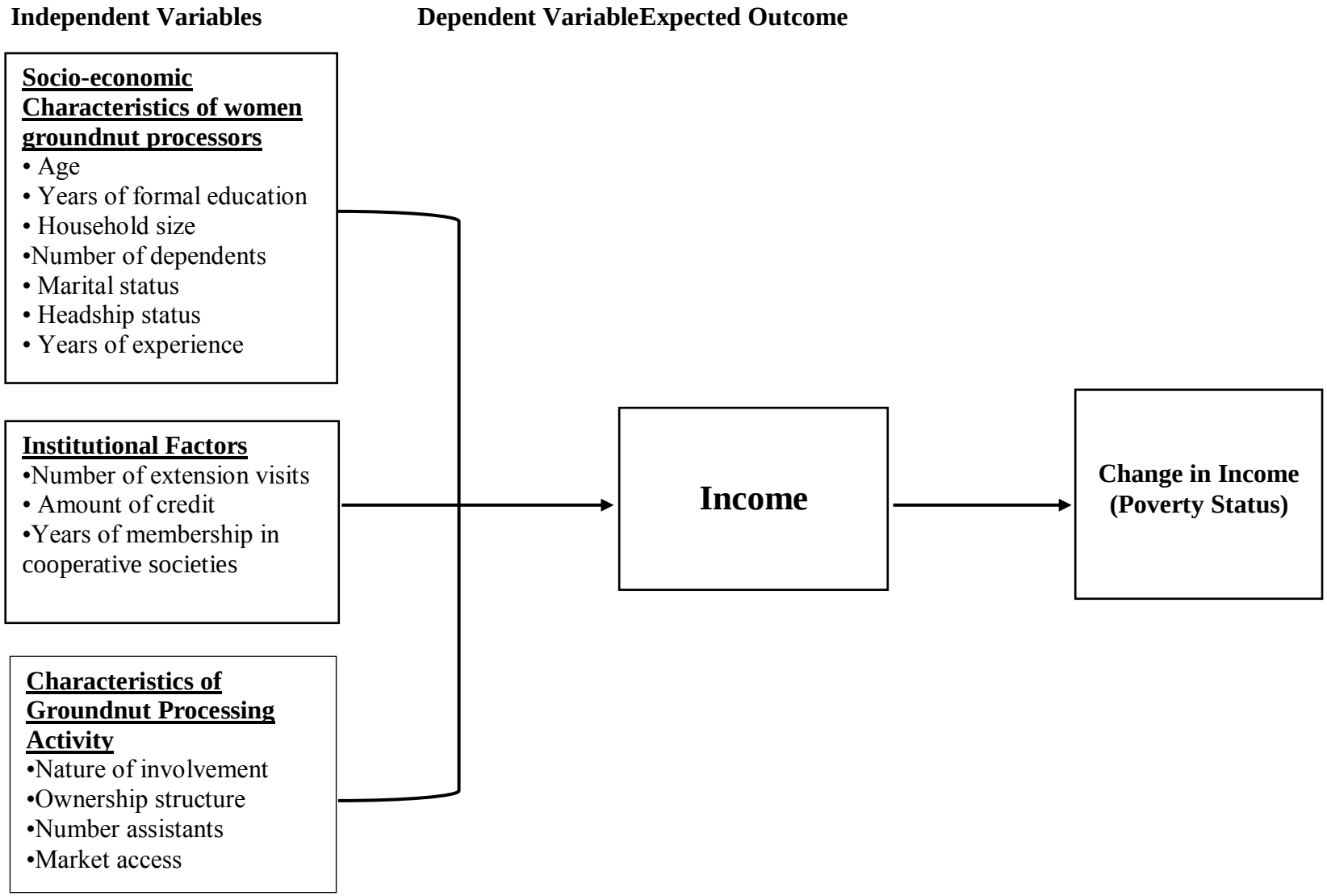


Figure I: Conceptual model of socio-economic, institutional factors and groundnut processing characteristics influencing the level of income of women groundnut processors.

CHAPTER FOUR

METHODOLOGY

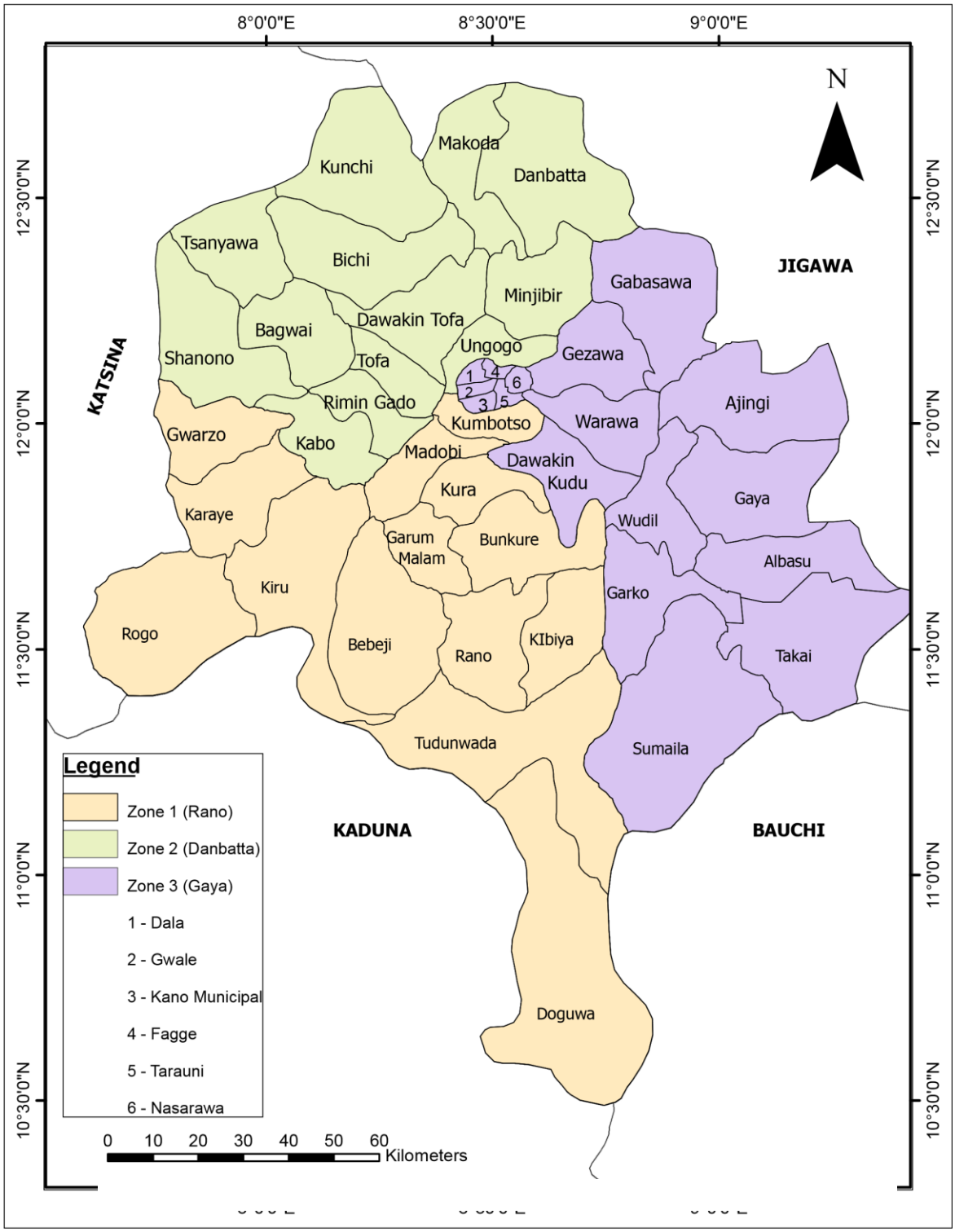
4.1 Description of the Study Area

Kano State is located in North-Western Nigeria. The State was created along with eleven other States and formally came into being on May 27, 1967. In 1991 Jigawa State was created and curved out of the old Kano State. Kano State is situated in a semi-arid region located between latitudes $10^{o}30'$ and $13^{o}02'$ north of the equator and longitude $7^{o}40'$ and $10^{o}39'$ east of the Greenwich meridian. The State is located at 472 meters above sea level and covers a land area of approximately 20,760 square kilometer, consisting of 1,754,200 hectares of agricultural land and over 75,000 hectares of forest vegetation and grazing land. It is bordered by Jigawa State to the north-east, Bauchi State to the south-east, Kaduna State to the south-west and Katsina State to the north-west. Kano State has 44 local government areas. The State is noted for its fairly stable climate and relatively minor changes in temperature and humidity (Kano State Government of Nigeria, 2010).

Kano State has a 2015 projected population (based on the 2006 National Population Census)of 10,067,208 people with an almost equal distribution of males (51%) and females (49%) (National Population Commission, 2006). About 77% of male children in the state have access to education compared to 23% for female; 38% have access to portable water supply; 75% have access to health services; and 75% of the population live in the rural area. Kano State has a 35% literacy rate and the average school enrolment rate is 90% for primary education, 80% for secondary school education and 60% for tertiary education. However, female enrolment stands at 40%, 35%, and 20%

for primary, secondary and tertiary institutions respectively. This shows a gap of approximately 45% between male and female enrolment, which could have significant consequences for women education, equality and access to economic and social facilities in the State and the country in general. Majority of the people of Kano State are Hausa/Fulani while other ethnic groups constitute the minority (Kano State Government of Nigeria, 2010).

Agriculture is the mainstay of the economy involving at least 75% of the rural population. Before the oil boom of 1970s, Kano State was the main producer of groundnut (producing at least 50% of the country‘s total output). Other important crops produced in the State are cotton, guinea-corn, maize, cowpeas and a variety of vegetables. In the ’60s to ’90s, modern manufacturing enterprises involving the processing of basic raw materials such as groundnut milling and other demand-based industries like tanneries, metal work, confectionery, textile goods and garment-making were established. In addition to the formal industrial sector, there are small-scale industrial and commercial activities that make up the Kano State’s economy. There are also household based production activities such as soap making, candle making, sewing and design that contribute significant portion to the GDP of Kano State as well as provide employment for people especially women (Kano State Government of Nigeria, 2010).



Kano State Showing The Three Agricultural Zones & Local Govt. Areas

Figure II: Kano State showing the three Kano State Agricultural and Rural Development Authority (KNARDA) zones and Local Government Areas

4.2 Sampling Procedure and Sample Size

There are three zones under KNARDA namely; Zone 1 with head-quartersatRano, Zone 2 with head-quartersatDanbatta and Zone 3 with head-quartersat Gaya. In each zone, two groups (each consisting of 25 members) of women groundnut processors benefitted from WIA programme. The two groups in each of the three zones were purposively selected. This gave a sample size of 150 women across the State. For non-beneficiaries, equal number of samples were randomly selected from the three zones to give a sample size of 150. However, two questionnaires from the non-beneficiaries could not be retrieved,which reduced the number of the non-beneficiaries to 148. This gave a total sample size of 298 respondents.

4.3 Method of Data Collection

Primary data was used for the study. The data was collected using a structured questionnaire which was administered to the respondents by the researcher with the help of trained enumerators between February and April, 2015. The data collection took place after a reconnaissance survey in December, 2014. However, after the construction of the questionnaire, the instrument was subjected to face and content validation by two Professors of Agricultural Extension and Rural Sociology and an Associate Professor of Agricultural Economics all in the Department of Agricultural Economics and Rural Sociology, Ahmadu Bello University, Zaria. Each expert independently gave his opinion on the relevance and adequacy of the items vis-à-vis the objectives of the study. Furthermore, a pre-test with 10 selected rural women in the study area was also conducted. The pre-test was helpful in knowing the ease with which the responses provide the required reliable information and identifying faulty questions and statements in the draft. Thus, necessary additions, deletions, modifications and adjustments were made in the questionnaire on the basis of experiences gained from the pre-test.

Information on socio-economic characteristics of the respondents, institutional factors relating to the respondent, characteristics of groundnut processing activities of the respondents, variable inputs for groundnut processing with corresponding outputs, level of contribution to household income from the processing activities, the poverty status of both beneficiaries and non-beneficiaries was collected and the strengths, weaknesses, opportunities and threats in groundnut processing activities.

4.4 Analytical Techniques

Data collected for the study wasanalysed using both descriptive and inferential statistics. Means, frequencies, percentages and standard deviation as descriptive statistics were used to achieve objectives (i) - describe the socio-economic, institutional and groundnut processing characteristics of the respondents in the study area, (iii)- to ascertain the level of contribution of the women groundnut processing activities to household income and (vii) -to identify and describe the strengths, weaknesses, opportunities and threats for rural women groundnut processors in the study area. Gross Margin analysis was used to achieve objective (ii) – to determine the profitability of groundnut processing in the study area. The Foster, Greere and Thorbecke Poverty index was used to achieve objective (iv) – to determine the poverty status of women groundnut processors.Furthermore, Z-test statistics was used to achieve objective (vi) – to assess the impact of the programme on the poverty status of women groundnut processors in the study area and to test the second hypothesis - empowering women in groundnut processing does not have any significant impact on their poverty status.And finally, multiple regression analysis was used to achieve objective (v) – to determine the socio-economic and institutional factors influencing the level of income of the women groundnut processors in the programmeand to test the first hypothesis - Socio-economic

and institutional factors have no significant influence on level of income of the women groundnut processors in the Women-in-Agriculture programme.

4.5 Description of Models

4.5.1 Gross margin analysis

Gross margin analysis was used to determine the profitability of groundnut processing. The technique was used under the assumption that the fixed cost component is negligible as in the case with small-scale businesses (Olukosi and Erhabor, 1988). For this study, it was realized that the respondents use between 2-3 days for every processing cycle. Therefore, an average of about 10 cycles was obtained in a month. This means that profit from every processing period is multiplied by 10 to get the monthly gross margin. The model is expressedwas used to achieve objective (ii) - to determine the profitability of groundnut processing in the study areaand is expressed as:

GM = TR – TVC ……(1)

Where:

GM = gross margin (₦/month)

TR = total revenue

TR = (Qc*x* Pc + Qo*x*Pou)

Qc = quantity of groundnut cake produced

Pc = price of groundnut cake

Qo = quantity of oil produced

Pou = Price of oil per unit

TVC = Total variable cost

4.5.2 Return on investment (ROI)

The return on investment (ROI) was also used to assess the profitability of the enterprise. It estimates how much money the enterprise earns in return for every one naira invested (UNDP, 2001). The return on investment was computed using the formula;

$$\text{ROI} = \frac{\text{TR} - \text{TVC}}{\text{TVC}} x\ 100 \quad \text{.....(2)}$$

4.5.3 Foster, Greer and Thorbecke Poverty Index

The Foster, Greer and Thorbecke (FGT) Index is a poverty measure developed by Eric Thorbecke and Joel Greer of Cornell University and James Foster, a Professor of economics at Vanderbilt University. The formula is used by economists to measure how income is distributed below the poverty line (Foster *et al*., 1984). What it does, Fosterexplains, is to help measure how really poor the poor are and it was used to achieve objective (iv) - to determine the poverty status of women groundnut processors of the study. Poverty measurement among the women was carried out using income poverty measurement. The poverty status of the processors was measured based on their monthly income level.

The general formula for the FGT poverty measure is:

$$P_\alpha = \frac{1}{N} \sum_{i=1}^{q} \left(\frac{Z - y_i}{Z} \right)^\alpha \quad \text{.....(3)}$$

Where:

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

N= the sample size for each group,

y_i =the per capita income of the respondent

Z = the poverty line using 2/3 of mean per capita income from groundnut processing in the study area.

Three poverty measures are calculated based on three values of α.

When α = 0, this gives the headcount ratio or the incidence of poverty which is the percentage of women that are classified as poor or have income less than the poverty line in the study area.

When α = 1, the poverty index gives the depth of poverty by taking into account how far the average poor person's income is from the poverty line.

When α = 2, the poverty index gives the squared poverty gap or the severity of poverty and this averages the squares of the poverty gap relative to the poverty line.

4.5.4 The Z-statistic

The poverty status of the women was compared to see the impact of empowering women groundnut processors (objective vi) - to assess the impact of the programme on the poverty status of women groundnut processors in the study area and, test the first hypothesis - empowering women in groundnut processing does not have any significant impact on their poverty status.

The model is expressed as follows:

$$Z = \frac{X_1 - X_2}{\sqrt{\frac{\delta_1^2 + \delta_2^2}{n_1 + n_2}}} \quad \text{.....(4)}$$

Where:

Z = calculated Z-value

X_1 = mean score of poverty status for empowered women.

X_2 = mean score of poverty status for non-empowered women.

δ_1^2 = standard deviation of poverty status for empowered women.

δ_2^2 = standard deviation of poverty status for non-empowered women.

n_1 = sample size of empowered women.

n_2 = sample size of non-empowered women.

4.5.5 Multiple regression model

This was used to achieve objective (iv) -to determine the socio-economic and institutional factors influencing the level of income of the women groundnut processors' in the programme and, test the second hypothesis - Socio-economic and institutional factors have no significant influence on level of income of the women groundnut processors in the Women-in-Agriculture programmeand the model is explicitly specified as:

$Y = \beta_o + \beta_1 X_1 + \beta_2 X_2 + \ldots\ldots\ldots\ldots\ldots\ldots + \beta_{14} X_{14} + u$ ……(5)

Where:

Y = level of income of the women groundnut processors in the programme (naira).

$X_1 – X_{14}$ = are independent variables defined as:

X_1 = age of woman (in years)

X_2 = years of formal education

X_3 = household size (number)

X_4 = Number of dependents

X_5 = marital status (married =1, otherwise=0)

X_6 = Headship status (Female headed = 1, Male headed = 2)

X_7 = extension visit per year (number)

X_8 = years of experience in groundnut processing (years)

X_9 = amount of credit received (naira)

X_{10} = years of membership in cooperative associations

X_{11} = nature of involvement(part-time = 1, full-time = 2)

X_7 = average monthly income from other activities (naira)

X_{12} = ownership structure (sole owner = 1, in partnership = 2)

X_{13} = number of people assisting

X_{14} = market access (Difficult = 1, Fair = 2, Good = 3)

β_o = constant

$\beta_1 - \beta_{14}$ = coefficients or standardized partial regression coefficients

u = error term

4.6 Operationalization and Measurements of Variables

4.6.1 Dependent variable

The dependent variable in the model is level of income of the women groundnut processors in the WIA programme.

4.6.2 Independent variables

i. **Age (X_1)** = this denotes the actual period a respondent has lived. This was measured by the respondent's number of years from birth as reported during data collection. Women in their prime and active age will possess more energy needed to carry out groundnut processing as compared to elderly and aged women, thus they earn higher income.

ii. **Years of formal education (X_2)** = this refers to the number of years a respondent spent in formal education. It was measured by total number of

years of schooling. More educated women are likely to have better managerial skills which will enhance income from the processing activity.

iii. **Household size (X_3)** = this refers to the total number of people in the household which includes children, husband and dependents who reside within the same household. It was measured by the total number of people in the households. All things being equal, women with more household members will have more hands to help in carrying out groundnut processing activities leading to reduced labour cost thus more revenue. At the same time, in situations where large households have many dependents, the women will be burdened with their responsibility which consequently reduces the income to be earned.

iv. **Number of Dependents (X_4) =** this denotes the individuals in a house that are either below or above economic active age i.e children or aged people. It was measured by the number of children or aged people that cannot contribute positively to the income of the women. The larger the number of dependents in a household, the more the women will be burdened with their responsibility thus reducing their income.

v. **Marital status (X_5)** = this is the character which signifies whether the respondent is single (0) or married (1). On one hand, husbands of married women may assist them with loans or gift in form of money to refinance their activity thus, increasing income realized. On the other hand, married women may be over burdened with household responsibilities which may limit the income they will realize from groundnut processing.

vi. **Headship status (X_6) =** this denotes the sex of the household head, that is whether male or female. It was measured as female =1, male =2. It is expected that respondents that have male household heads do not have to solely provide for their needs thus in a better position to have more income.

vii. **Extension visits (X_7)** = this is the number of visits the respondents received from extension workers. It was measured based on the number of visits a respondent has reported to have with the extension officer with regards to groundnut processing. It is expected that the more visits an individual has the more she will be enlightened about better processing techniques and other managerial skills which may make her to earn more income.

viii. **Years of experience in groundnut processing (X_8)** = it is the actual length of time the respondent has been engaged in groundnut processing activities. The variable was scored in years according to the number of years for each respondent. More experience in groundnut processing will make the women more conversant with intricacies of the activity. This will make them take advantage of opportunities available and avoid taking wrong steps, thus increasing options for increasing income.

ix. **Amount of credit received (X_9)** = this refers to total amount of loan received in cash for processing activities. It was measured in naira. Credit, if properly used, also means more money for refinancing, thus more income.

x. **Years of membership of cooperative association (X_{10})** = this was measured by asking the respondent the number of cooperative groups she belongs to. Cooperative societies are avenues for lots of benefits such as advice, loans, link to better markets and cheaper inputs. All these are positively related to more output and consequently more income.

xi. **Nature of Involvement in business (X_{11}) =** this indicates the nature of how the women run their business. It was measured as part-time = 1, full-time = 2. This means that women in processing activity as full-timers would earn more income.

xii. **Ownership structure (X_{12})** = this denotes whether the respondent is in the business on part time or full time basis. It was measured as part-time (1) and full-time (2). It is expected that an individual in business on full-time basis basis will be more dedicated to the business thus realizing more income.

xiii. **Number of people assisting (X_{13}) =** this denotes the number of people that assist in running groundnut processing activity. This could indicate whether the activity is small-scale or otherwise. The more the people assisting (especially free family labour) the less the cost incurred and consequently the more the income of the women.

xiv. **Access to market (X_{14})** = this denotes ease of access to market outlets by the respondent. It was measured on a three point Likert scale of easy (3), fair (2), and difficult (1). Easy access to market means faster sale, which may generate more income.

4.6.3 The Likert Scale

The perception of the women as regards the strengths, weaknesses, opportunities and threats of groundnut processing was captured with the help of a 5-point Likert scale (Likert, 1932), a method which is now one of the dominant scale used in measuring people's attitudes, views and experiences (Taylor and Heath, 1996). The respondents rated the statements based on scores ranging from a minimum of 1 to a maximum of 5, whereby Strongly Agree (SA) = 5, Agree (A) = 4, Undecided (U) = 3, Disagree (D) = 2

and Strongly Disagreed (SD) = 1. The Mean Weighted Score (MWS) is then calculated for each statement thus:

$$MWS = \frac{[(fSA*5) + (fA*4) + (fU*3) + (fD*2) + (fSD*1)]}{N}$$

Where:

MWS = Mean Weighted Score

f = frequency

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

N = Sample Size

CHAPTER FIVE

RESULTS AND DISCUSSION

5.1 Socio-Economic Characteristics of Respondents (Objective i)

The socio-economic characteristics of the women groundnut processors examined in this study are presented in this section. The variables considered include age, marital status, household size, number of dependents, headship of household, years spent in formal schooling and years of membership of associations.

5.1.1 Age

The age distribution of the respondents is shown in Table 5.1. The results show that about 41% of the respondents were between the age range of 31-40 years. This was followed by 32% that was between the range of 41-50 years while only 1% were above 60 years. The average age of the respondents was recorded to be 40 years with beneficiaries being older (42 years) when compared to non-beneficiaries (38 years). This means that the respondentsare still in their active and productive age thus possess the energy needed to carry out income earning activities for improved household welfare. Another implication is that the groups of women were capable of learning how to use modern processing technologies since age have influence on people's attitude, skill and aspiration (Onwurafor and Enwelu, 2013). The result conforms to the findings of Edward (2011), Okoro and Odebode(2009), Abdullah *et al*. (2014). However, Ifelunini and Wesowei (2013) found that majority (57%) of women from South-South geopolitical zone of Nigeria involved in income earning activities were below the age of 31 years.

Table 5.1: Age distribution of the respondents

Age (years)	Beneficiaries	Non-Beneficiaries	Pooled
	Frequency	Frequency	Frequency
21-30	14(9.3)	34(23.0)	48(16.1)
31-40	60(40.0)	62(41.9)	122(40.9)
41-50	57(38.0)	38(25.1)	95(31.9)
51-60	15(10.0)	114(9.5)	29(9.7)
above 60	4(2.7)	0(0.0)	4(1.3)
Mean	42	33	40
Total	**150(100.0)**	**148(100.0)**	**298(100.0)**

Figures in parentheses are percentages

5.1.2 Marital status

Majority (94%) of the respondents were married, 3% were each widowed and divorced respectively while less than 1% were single (Figure III). This high percentage could be attributed to a recent massive marriage of widows and divorcees by *HISBA* Board of Kano State Government under the leadership of Sheikh AminuDaurawa. Also, marriage is considered as a pride for the parents and a sign of responsibility (Ango*et al*., 2011). The implication of the result is that the respondents are settled and in a better position to concentrate on their business. Many researchers (Abonge, 2012; Nwosu and Okon, 2013; Abdullahi*et al*., 2014), in separate studies have reported that majority (ranging from 50-95%) of rural women agro-processors were married. The Figure further showed that there were more beneficiaries (96%) married as against non-beneficiaries (92%).

This may be a departure from the notion that marriage is an impediment to women participation in empowerment programmes.

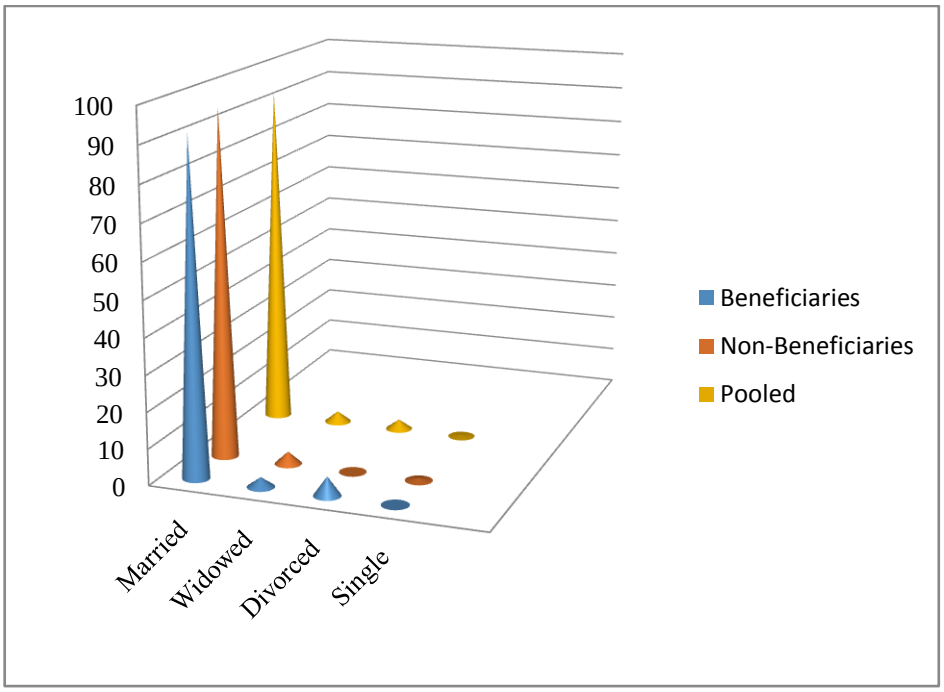


Figure III: Marital status of the respondents

5.1.3 Household size

Results in Table 5.2 revealed that the respondents had household size in range of 6-10 members (36%) and 11-15 members (28%). The results further showed that only about 11% had 1-5 members while about 25% of the respondents had above 15 members. A mean household size of 12 members was recorded for the entire respondents. The findings is similar to that of Jamilu*et al.* (2014) who found rural households in Kaduna State to have an average of 11 members. This means that the study area is characterized by large householdswhich is not unexpected in this part of the country where many polygamous homes exist.It was therefore not surprising that some of the respondents recorded more than 20 members in their households.

In contrast, the findings of Nnadi*et al*. (2014), Dimelu*et al*. (2014) and Chah (2014) from southern part of Nigeria that is mostly dominated by monogamous households havereported an average of 5 members per households. This implies that the women groundnut processors in the study area might have the advantage of family labour availability if many household members assist in the processing business. The assertion is supported by Adegbite*et al*. (2007), who indicated that large household size provide more labouron the farm and other household activities. However, according to Okoruwa and Adebayo (2006), large family size does not necessarily translate to higher use of family labour because some of the young, able-bodied family members may prefer other jobs.

Table 5.2: Household size distribution of the respondents

Household size	**Beneficiaries**	**Non-Beneficiaries**	**Pooled**
	Frequency	Frequency	Frequency
1-5	20(13.3)	14(9.5)	34(11.4)
6-10	44(29.3)	64(43.2)	108(36.2)
11-15	43(28.7)	40(27.0)	83(27.4)
16-20	32(21.3)	16(10.8)	48(16.1)
above 20	11(7.3)	14(9.5)	25(8.4)
Mean	12	12	12
Total	**150(100.0)**	**148(100.0)**	**298(100.0)**

Figures in parentheses are percentages

5.1.4 Number of dependents

The distribution of the respondents based on number of dependents in the household is shown in Table 5.3. The results revealed that about 63% of the total respondents have between 1-10 dependents (both children and aged individuals). Though some households had no dependents, some had up to 15 dependents in their household. The average dependents per household for all respondents was five with beneficiaries having higher (6) number of dependents than non-beneficiaries (4). This could be the reason for the beneficiaries' participation in WIA programme for improved livelihood activities to meet the pressing need of their family members.

Table 5.3: Distribution of respondents by number of dependents

Number of Dependents	**Beneficiaries**	**Non-Beneficiaries**	**Pooled**
	Frequency	**Frequency**	**Frequency**
None	24(16.0)	49(33.1)	73(24.5)
1-5	40(26.7)	57(38.5)	97(32.6)
6-10	61(40.7)	30(20.3)	91(30.5)
11-15	22(14.7)	8(5.4)	30(10.1)
16-20	3(2.0)	4(2.7)	7(2.3)
Mean	6	4	5
Total	**150(100.0)**	**148(100.0)**	**298(100.0)**

Figures in parentheses are percentages

5.1.5 Household headship status

Figure IV depicts the household headship status of the respondents. Majority (94%) of the respondents live in a male headed household. This indicates that majority of groundnut processors in the study area were not the sole providersof the socio-economic

and physiological needs of their families but may only complement the efforts of their male heads. This was corroborated by Okoro and Odebode (2007) and Edward (2011) who stated that household headship attracts the responsibility of providing the household needs, a responsibility that is equally saddled by the female heads of the households. The implication of theresults is that members of householdswith male headship may be better off when compared to the remaining 6% that are female-headed. This is because for the female-headed households, the women are the sole providers of their families and the profits from their small-scale business ventures will be used to provide for the whole needs of their households. Some of the respondents have also confirmed that this was one of the main reasons why they have to engage in other economic activities to supplement their income. Okoro and Odebode (2009) however, found that about 29% of women in various livelihoods activities in Eastern Obolo Area of Niger Delta region of Nigeria were heads of their various households.

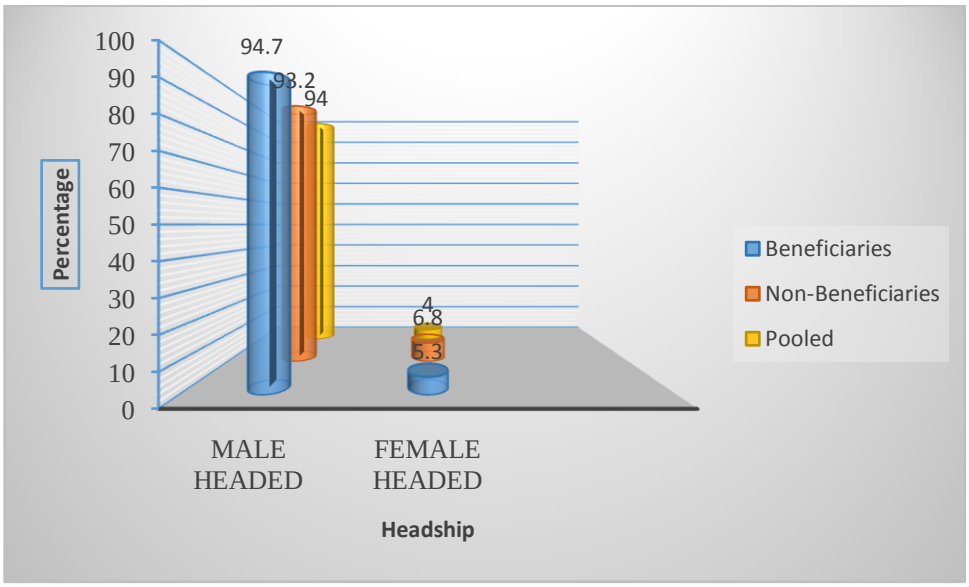


Figure IV: Headship status of the respondents

5.1.6 Years spent in formal schooling

The study further reveals that majority (64%) of the respondents do not have any form of formal education, but 26% and 10% had between 1-6 years (primary level) and 7-12 years (secondary level) of formal schooling respectively (Table 5.4). The results further show that there are more non-educated beneficiaries (72%) than non-beneficiaries (54%) in the study area. This contradicts the findings ofOkwoche and Obinne (2010) who found that the average years of schooling of beneficiaries (12 years) was more than that of non-beneficiaries (9 years) of cooperative societies. The mean years of formal schooling of all the respondents was 2 years (Table 5.4). This indicates that there is very low level of formal education among the women groundnut processors. This is a common occurrence in northern part of Nigeria as confirmed by studies. For instance, Shuaibu*et al*. (2013) found that about 78% of women in income earning activities do not have formal education in Kaduna State. Also, Vasanka*et al.* (2010) and Okoro and Odebode (2009) also found that 41% and 49% of women engage in micro-enterprises do not have formal education in Taraba State and Niger State respectively. Shitu (2012) found that only 13% of girls in North Central Nigeria go to school. Other studies conducted in Cameroon (Fonchingong, 2005; Abonge, 2012) and Zimbabwe (Muzvidziwa, 2000) also confirmed that female micro-entrepreneurs and self-employed women in general and specifically in developing countries have relatively low levels of education with very few women in the sector who have attained some post-secondary education. Conversely, Nwosu and Okon (2013) found that a high proportion (85%) of women oil palm processors in AkwaIbom State of Nigeria were educated.

Education is key for efficient and successful running of an enterprise. It is believed that with formal education, the women will be able to improve on their enterprises, can easily source for fund, and organize themselves into cooperative societies and become

more efficient (Kabir*et al*., 2012). Education creates awareness and need for seeking more useful source of information on relevant improved technology. This view was supported by Okoye (2004) who said that literate farmers are expected to be more receptive to innovations that will increase farm efficiency.

Table 5.4: Years of formal education of respondents

Years of formal educ.	Beneficiaries	Non-Beneficiaries	Pooled
	Frequency	Frequency	Frequency
No. educ.	108(72.0)	82(55.4)	190(63.8)
1-6	18(12.0)	60(40.5)	78(26.2)
7-12	24(16.0)	6(4.1)	30(10.0)
Mean	2	3	2
Total	**150(100.0)**	**148(100.0)**	**298(100.0)**

Figures in parentheses are percentages

5.1.7 Membership of cooperative association

Almost 80% of the respondents belong to one cooperative association or the other with varying years of membership ranging from 1 year to 20 years (Table 5.5). The results also show that all beneficiaries are members of associations especially those related to groundnut processing while about 39% of the non-beneficiaries are not members of any cooperative association. This is in line with the findings of Etuk*et al*. (2012) and Ogbonna*et al*. (2014) that empowerment programmes work with people through cooperatives. The results further indicate that majority (81%) of the groundnut processors in the study area are members of associations. Onwurafor and Enwelu (2013) also found that majority (75%) of rural women belong to social organizations. Cooperative associations provide avenue for access to resources and information

sharing among the women thereby enhancing diffusion of any possible innovations and improvement in their production. Another implication is that, it will be easy to reach these women in groups for purposes of information dissemination and new women's empowerment programmes that may be introduced in the area.

Table 5.5: Distribution of respondents by years of membership of cooperative

Years of membership	Beneficiaries	Non-Beneficiaries	Pooled
	Frequency	Frequency	Frequency
None	0(0.0)	57(38.5)	57(19.1)
1-5	11(7.3)	3(2.0)	14(4.7)
6-10	84(56.0)	73(49.4)	157(52.7)
11-15	52(34.7)	15(10.0)	67(22.5)
16-20	3(2.0)	0(0.0)	3(1.0)
Mean	10	6	8
Total	**150(100.0)**	**148(100.0)**	**298(100.0)**

Figures in parentheses are percentages

5.2 Institutional Factors Related to the respondents (Objective i)

Institutional factors (such as extension visits, accessibility to credit, amount and source of credit) that relate to the respondents are discussed in this section.

5.2.1 Number of Extension Visits

Table 5.6 shows that extension visits were low since up to 43% of the total respondents were not visited within the last one year while half (50%) had just one visit and about 7% had 2 visits. Lack of extension visits was even more pronounced among the non-

beneficiaries as up to 60% were not visited at all as compared to the proportion of the beneficiaries (26%) that were not visited. The average extension visit to the respondents was once in a year. The result is similar to the findings of Dimelu*et al*. (2014) and Famuyiwa*et al*. (2014). The recommended visit schedules of village extension agents under the T&V system is two extension visit per month (Salau*et al*., 2012). This confirms that extension service delivery to women groundnut processors is far below the recommended schedules. The findings may be attributed to several reasons. Firstly, there is increasingly low extension-farmer ratio in Nigeria's extension system (Agbamu, 2011) which could result to low coverage and inefficiency in service delivery. Also, extension outfits in the country particularly the public extension system, are constrained by poor funding, inadequate extension professionals, poor infrastructural facilities and several other institutional and administrative bottlenecks (Dimelu*et al*., 2014). The low level of extension visits has negative implication on the productivity of the women as lack or poor access to extension services deprives them the opportunity of embracing new improved technologies/practices and access to useful information. Contact with extension agents exposes individuals to information on new ideas and technologies and on the importance and application of new innovations through counseling and demonstrations by extension agents on a regular basis.

Table 5.6: Distribution of respondents by number of extension visits

Number of visits	**Beneficiaries**	**Non-Beneficiaries**	**Pooled**
	Frequency	**Frequency**	**Frequency**
No visit	39(26.0)	89(60.1)	129(43.3)
1	92(61.3)	57(38.5)	149(50.0)
2	19(12.7)	2(1.4)	20(6.7)

Mean	1	0	1
Total	**150**	**148**	**298**

Figures in parentheses are percentages

5.2.2 Access to credit

Results in Table 5.7 show that about 90% of the respondents had no access to credit to finance their activities in the last five years. Though there was higher percentage of non-beneficiaries (91%) than beneficiaries (88%) that did not access credit from any source, one could see that the gap is not much as the WIA programme seldom grants any financial credit to participants. This situation is unfortunate as the women processors need credit to expand or commercialize their enterprises. The low access to credit facilities may be responsible for the low mean income of the respondents and their low level of production. Other studies (Sheheli, 2012; Umar *et al*., 2014; Chah*et al*., 2014) had similarly revealed that majority of small-scale farmers and women in micro-enterprising do not have access to credit. The low access to credit may be due to complexity of the procedure for obtaining credit especially in formal financial institutions as most of the respondents do not have formal education.

The results further revealed that only an average of ₦12,563.87 was accessed by the respondents. This is not surprising as out of the total 31 respondents that had access, only about 26% were able to source fund from formal micro-finance banks while majority (about 65%) obtained loans from friends and relatives and 10% from their various cooperative societies (Table 5.7). The major source of credit for respondents (friends/relatives) are most often poor resource persons struggling to make ends meet so they may not provide loan to those in need in sufficient quantities. The low level of women that obtained loans from formal sources could be because getting loans from

formal credit institutions is complex with lengthyprocedures which women, especially non-literate ones, may not understand. This probably discourages the women from even putting any loan applications. Badiru (2011) further reported that the ratio of rural branches to total branches of formal credit institutions is low compared to informal and semi-formal institutions and this constitutes a limitation.

Table 5.7: Distribution of respondents by Access to Credit

Category	**Beneficiaries**	**Non-Beneficiaries**	**Pooled**
	Frequency	**Frequency**	**Frequency**
Access			
No access	132(88.0)	135(91.2)	267(89.6)
Had access	18(12.0)	13(8.8)	31(10.4)
Total	**150(100.0)**	**148(100.0)**	**298(100.0)**
Amount of credit (naira)			
1-20,000	13(72.2)	13(100.0)	26(83.9)
20,001-40,000	4(22.2)	0(0.0)	4(12.9)
above 40,000	1(5.6)	0(0.0)	1(3.0)
Mean	18,127.8	7,000	12,563.9
Total	**18(100.0)**	**13(100.0)**	**31(100.0)**
Source			
Cooperative	3(16.7)	0(0.0)	3(9.7)
Micro-finance bank	5(27.8)	3(23.1)	8(25.8)
Friends and relatives	10(55.5)	10(76.9)	20(64.5)
Total	**18(100.0)**	**13(100.0)**	**31(100.0)**

Figures in parentheses are percentages

5.3 Characteristics of Groundnut Processing Enterprises (Objective i)

5.3.1 Years of experience

A greater proportion (53%) of the respondents were found to have 11-20 years of experience in groundnut processing, about 10% had between 20-30 years of experience while only 36% had less than 10 years of experience (Table 5.8).The results also show that a mean experience of 13 years was recorded for all the respondents. This indicates that the respondents have many years of processing experience. This could have positive implication for the business as it is expected that the higher the women's years of experience the better their productive capacity because of the knowledgeaccumulated by the women on the pros and cons of the business over the years. Similarly, Nwosu and Okon(2013) found that women palm oil processors in AkwaIbom State had many years of experience ranging from 6 to 35 years.

Table 5.8: Distribution of respondents by years of experience in groundnut processing

Years of experience	Beneficiaries	Non-Beneficiaries	Pooled
	Frequency	Frequency	Frequency
<10	46(30.7)	60(40.5)	106(35.6)
11-20	90(60.0)	69(46.6)	159(53.4)
21-30	10(6.7)	19(12.9)	29(9.7)
31-40	4(2.6)	0(0.0)	4(1.3)
Mean	14	12	13
Total	**150(100.0)**	**148(100.0)**	**298(100.0)**

Figures in parentheses are percentages

5.3.2 Business ownership

About 86% of the respondents attested that they are sole owners of their groundnut processing businesses with only about 14% running the business under partnerships (Figure V). A contrasting result was however recorded by Sani and Danwanka (2011) who found that 63% of women in soap making business in Kaduna State run their businesses in partnerships with their husbandswhile 37% operated under sole proprietorship.

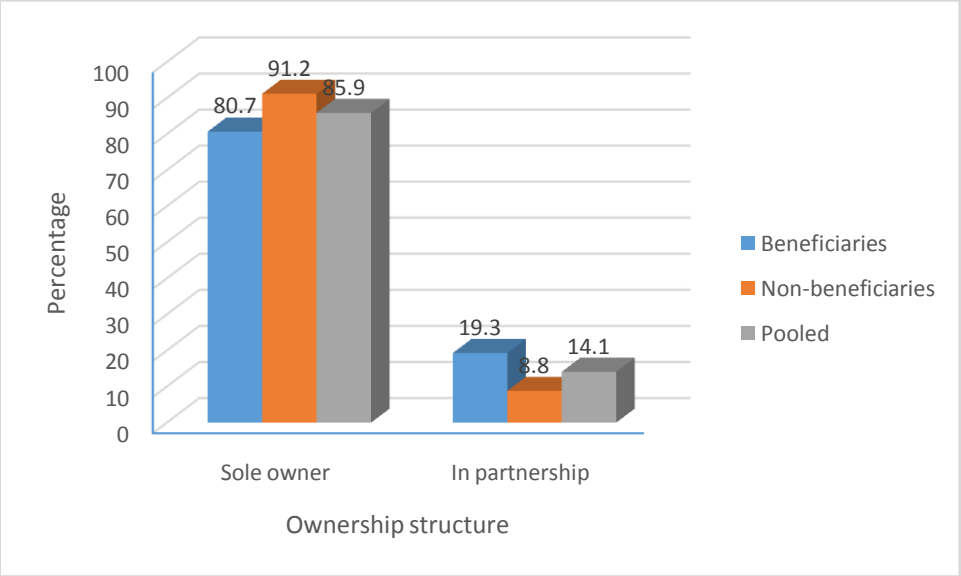


Figure V: Distribution of the respondents by nature of ownership structure of groundnut processing enterprise

5.3.3 Nature of businesspartner

Results in Table 5.9 however, show that about 74% of groundnut processors that run their enterprises under partnerships, had family members(such as sons, daughters, parents and so on) as partners, 14% were in partnership with friends while about 12% were in partnership with their husbands. Sani and Danwanka (2011) revealed that women in partnership are mostly those that got money from the people they are in partnership with. This could mean that husbands, friends and other members of the

family make financial contributions to the women on the condition that they are accepted partners in business, even if dormant ones.

Table 5.9: Distribution of the respondents by natureof business partners

Nature of Partner	**Beneficiaries**	**Non-Beneficiaries**	**Pooled**
	Frequency	**Frequency**	**Frequency**
Husband	1(3.4)	4(30.8)	5(11.9)
Friend	3(10.4)	3(23.1)	6(14.3)
Other family member	25(86.2)	6(46.1)	31(73.8)
Total	**29(100.0)**	**13(100.0)**	**42(100.0)**

Figures in parentheses are percentages

5.3.4 Nature of involvement in groundnut processingbusiness

Fifty two percent of the women were engaged in groundnut processing on full time basis while 48% were part-timer processors (Figure VI). This indicates that majority of the respondents will be more committed and dedicated to their groundnut processing businesses as they do not have other businesses that will take their time.

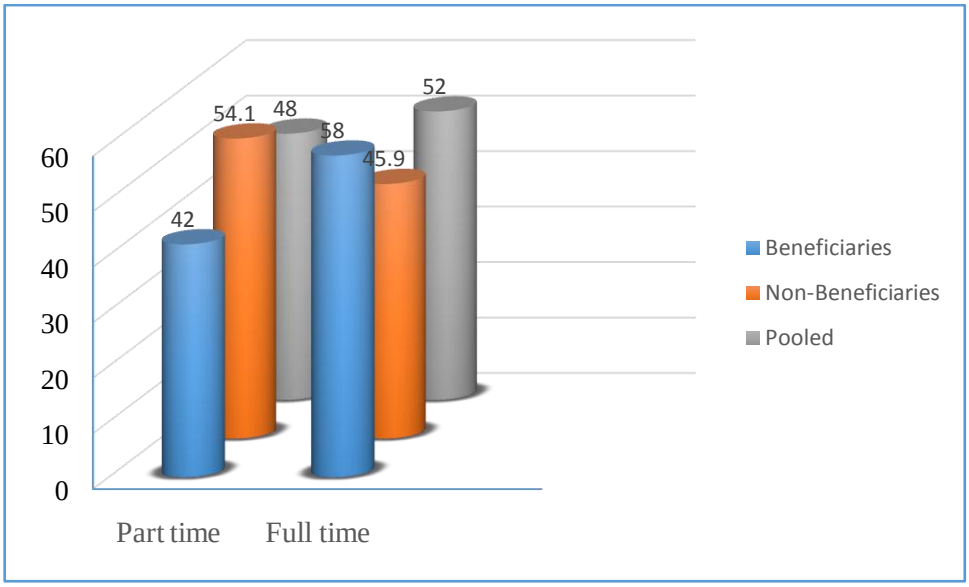


Figure VI: Distribution of respondents by nature of involvement in groundnut processing business

5.3.5 Number of assistants

Results in Table 5.10 revealed that 32% of the respondents had no assistant(s)/employee(s) in theirgroundnut processing businesses, 67% had 1-3 assistants and less than 1% had up to 4 assistants. Abonge (2012) corroborated these findings and stated that majority (93%) of women's enterprises concentrated in the 0-5 continuum of assistants/employees. Vosanka (2010) also found 73% of women enterprises having 1-4 assistants. Sani and Danwanka (2011) however, have found majority (52%) of women entrepreneurs with 5-6 employees and 48% with less than 5 employees. The low employment of assisstants by the processors could be due to the fact that most of the businesses are at the micro-level and are therefore not large enough to warrant engagement of many assistants/employees. This is in consonance with World Bank's (1990) definition of micro/small-scale enterprises as business establishments involving less than 10 people in their operations. The results further show that there was equal mean value (1) of number of employees of beneficiaries and non-beneficiaries.

This indicates that both beneficiaries and non-beneficiaries were small-scale business operators.

Table 5.10: Distribution of respondents by number of assistants in groundnut processing business

Number of Assistants	Beneficiaries	Non-Beneficiaries	Pooled
	Frequency	Frequency	Frequency
None	50(38.3)	45(30.4)	95(31.0)
1	40(26.7)	43(29.1)	83(27.8)
2	36(24.0)	27(18.2)	63(21.1)
3	22(14.7)	33(22.3)	55(18.5)
4	2(1.3)	0(0.0)	2(0.7)
Mean	1	1	1
Total	**150(100.0)**	**148(100.0)**	**298(100.0)**

Figures in parentheses arepercentages

5.3.6 Sources of finance

Figure VII shows the sources of funds used by rural women in groundnut processing. The major source of fund was personal savings (95%). Other sources were thrifts (adashi/isusu) (23%), banks (4%), money lenders (4%), help from friends/relatives (3%) and loan from relatives (1%). Ogunleye*et al.* (2010) and Akinnagbe and Ajayi (2010), in separate studies, found that not only women but more than 90% of male farmers use personal savings to finance their farming enterprise. The use of personal savings for processing could imply that a greater number of the women used their personal savings for processing business at the expense of providing household needs.

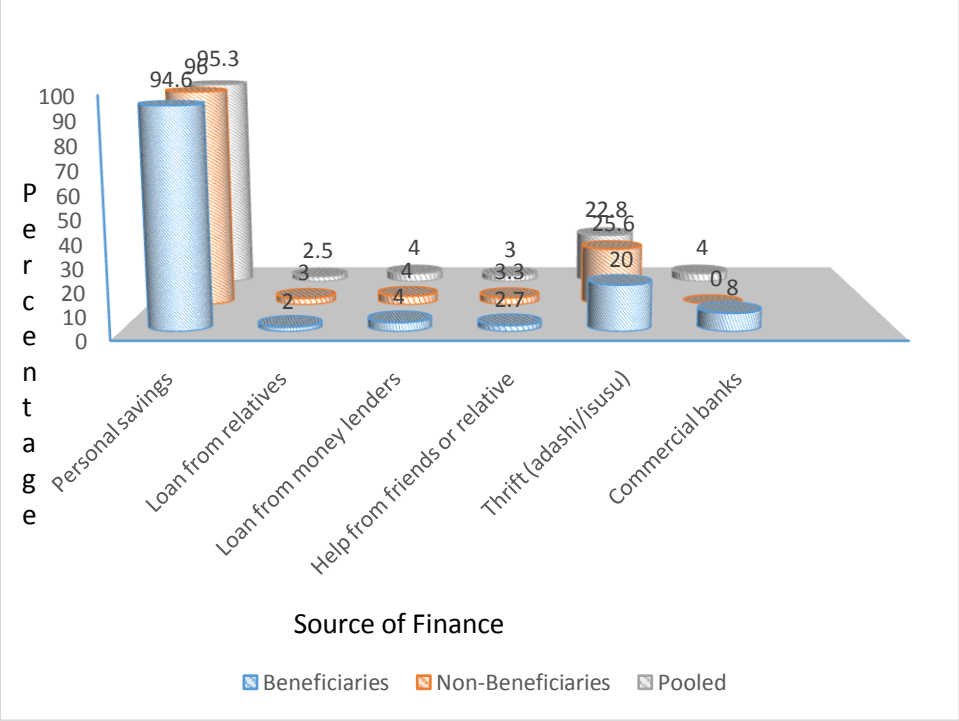


Figure VII: Distribution of respondents by source of finance

5.3.7 Market access

Figure VIII represents the market access of the respondents in the study area. Slightly above half (53%) of the respondents attested that they have easy access to market for their products. About 38% have fair access and 8% find it difficult to have markets for

their products. But while 76% of the beneficiaries had easy access, only about 30% of the non-beneficiaries had easy access. This implies that the beneficiaries found it easy to dispose their products without much difficulty compared to non-beneficiaries. This is a favourable condition that could motivate the women. According to Sani and Sani (2005), a well-defined market outlet contributes to easy access of consumers and easy disposal of finished products by women.

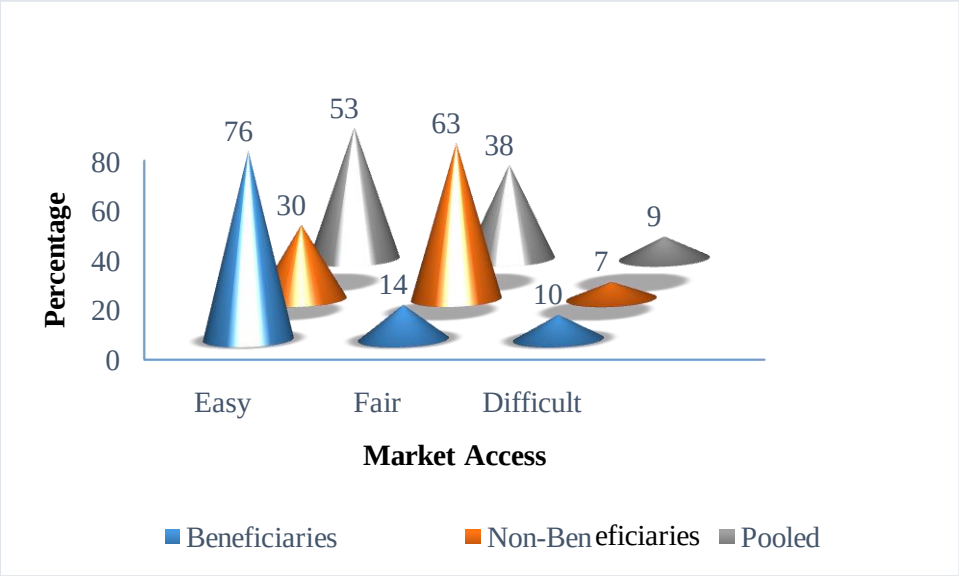


Figure VIII: Distribution of respondents by market access

5.4 Profitability of Groundnut Processing (Objective ii)

5.4.1 Inputs and outputs in groundnut processing

Table 5.11 shows inputs used and outputs realized in groundnut processing the respondents. The inputs used include raw shelled groundnut, water, pepper, sugar, salt, firewood, kerosene and labour. In a processing cycle of about 2-3 days, the mean quantity of groundnut processed was 37.5kg. The average quantities of water, pepper and firewood were 11.25 litres, 0.03kg and 0.94 bundles respectively. The result further shows that some respondents do not use pepper, sugar, salt and kerosene. For the

outputs, an average of 24.8kg groundnut cake and 17.6 litres of groundnut oil was obtained in every cycle of 2-3 days.

Table 5.11: Inputs and outputs in groundnut processing

Variable	Minimum	Maximum	Mean
Inputs			
Raw groundnut(kg)	12.5	62.5	37.5
Water(l)	10	30	11.25
Pepper	0	0.5	0.03
Sugar(kg)	0	2.5	1.5
Salt(kg)	0	0.5	0.375
Firewood(bundle)	1	3	0.94
Kerosene(l)	0	0.38	0.21
Labour(man-day)	1	3	1.20
Outputs			
Groundnut oil(l)	8.5	17.0	17.6
Groundnut cake(kg)	12	27.5	24.8

5.4.2 Profitability of groundnut processing (Objective ii)

In order to determine the profitability of groundnut oil and cake production in the study area, the various inputs and outputsas well as the corresponding costs incurred and returns received were estimated. The result for the costs and returns analysis is presented in Table 5.12. The average total cost of processing was ₦9,219.05 and it was dominated by raw groundnut (₦7,125.00) that accounted for about 77% of the total variable cost. This was followed by labour cost (9.8%), then grinding and extraction cost (4.4%), while pepper had the least cost (₦1.8) accounting for 0.02% of total cost incurred in groundnut processing. The above result is expected since raw groundnut is the major input in the production of groundnut oil and groundnut cake (*kulikuli*) while pepper is a spice that may be included only if desired in groundnut cake and in very small quantities. Iliyasu*et al*. (2008) and Ibrahim *et al*., (2010) had similar findings.

In terms of returns, an average revenue of ₦11,619.72 per processing cycle was obtained from groundnut processing. Groundnut oil gave higher returns of ₦6,160.0 accounting for 53.0% of the average gross returns while groundnut cake (*kuli-kuli*) accounts for the remaining percentage. Revenue from groundnut oil accounts for 67% of the total variable cost of processing. This implies that for the processors to make sufficient profit, they have to sell both groundnut cake and groundnut oil. Iliyasu*et al.* (2008) also found that groundnut oil gave the highest returns of 60% while groundnut cake gave 40%. This indicates that groundnut oil is the major source of revenue in groundnut processing enterprise. The result further shows that an average gross income of ₦2,400.67 per processing cycle of about 2-3 days was obtained in groundnut processing by the women. This means that in a month that has on the average 10 processing cycles, a revenue of about ₦24,006.7 was obtainable. Ibrahim *et al.* (2010)

however, found that women engaged in groundnut processing in a rural area in North Central Nigeria realized an average gross margin of ₦74,106.20 per month.

Furthermore, from the estimated gross income and the total variable cost of production, the average return on investment was 26%, indicating that for every ₦1 invested in groundnut processing by the women, a return of ₦0.26 kobo was made. Thus, it could be concluded that groundnut processing in the study area is profitable though the profit is low. Although groundnut cake and oil production from the foregoing analysis is profitable, the level of return (profit) is low when compared to the findings of Iliyasu*et al*. (2008) and Ibrahim *et al*. (2010) who revealed that the returns on investment of women groundnut processors were 40% and 67% respectively. The reason for low profitability could be as a result of low price paid for the products coupled with high cost of raw groundnut (Table 5.12). The high cost of groundnut which is a cash crop, has been attributed to the decline in its production due to negligence by the government since the discovery of petroleum in the 60's (Rahman, 2003, Taluwar*et al*., 2003).

Table 5.12: Costs and returns analysis from groundnut processing

Cost/returns components		**Unit**	**Quantity**	**Cost/unit**	**Cost (₦)**	**%**
A.	Variable Cost	₦				
i.	Raw groundnut	kg	37.5	190	7,125	77.3
ii.	Firewood	bundle	0.94	150	141	1.5
iii.	Pepper	kg	0.03	60	1.8	0.02
iv.	Sugar	kg	1.5	240	360	3.9
v.	Water	l	11.25	1	11.25	0.1
vi.	Transport	-	-	-	200	2.2
vii.	Grinding &extraction	-	-	-	400	4.4
viii.	Labour	man-day	1.2	250	900	9.8
ix.	Kerosene	l	0.21	200	42	0.5

x.	Salt	kg	0.38	100	38	0.4
B.	Total Variable Cost	₦	-	-	9,219.05	100
C.	Revenue					
i.	Revenue from cake	kg	23.8	229.4	5,459.72	47.0
ii.	Revenue from oil	l	17.6	350	6,160.0	53.0
D.	Gross Revenue (Ci + Cii)	₦	-	-	11,619.72	100
E.	Gross Margin (D-B)	₦	-	-	2,400.67 (24,006.7/month)	

Return on Investment = 26%

5.4.3 Comparative Analysis of Profitability between Beneficiaries and Non-beneficiaries

Table 5.13 shows the average gross income of beneficiaries (₦27,982.80) and non-beneficiary (₦20,030.60) with a mean difference of ₦7,952.2 in groundnut processing. A test of significance of the mean difference shows a T-value of 6.02 that is significant at 1% level of probability. This means that statistically, beneficiaries earn higher profit from groundnut processing than non-beneficiaries. This could be attributed to benefits the beneficiaries derived from the WIA programme.

Table 5.13: Comparative analysis in level of profit between beneficiaries and non-beneficiaries

Groups	N	Mean	Mean diff.	SD	Z-cal	Df	Sig
Beneficiaries	150	27,982.80	7,952.2	12,382.18	6.02***	246	0.000
Non-Ben.	148	20,030.60		11,845.63			

***P<0.01

5.5 Level of Contribution of Women Groundnut Processing to Household Income (Objective iii)

Table 5.14 shows the level of contribution of the women groundnut processing activities to their income. The results revealed that the respondents have an average household monthly income of ₦25,526.78while average monthly income from groundnut processing was ₦24,006.70. When income from groundnut processing activities of the women was compared against the total income, it was realized that groundnut processing contributed about 94% to the income of the women. The result therefore indicates that groundnut processing is a major source of income for the respondents. Even though the contribution to income was higher for non-beneficiaries (95%) as

compared to beneficiaries (93%), the average income from groundnut processing and average women income of the beneficiaries were found to be higher than those of non-beneficiaries (Table 4.14). The difference in income between the two groups could be attributed to the effect of empowerment which the beneficiaries received from the WIA programme.

The Centre for Policy Dialogue (CPD) (2004) had similarly reported that rural women in Bangladesh contribute considerably to household income through farm and homestead production and wage labour. In another study by Hoque and Itohara (2009) and Sheheli (2012), it was reported also that the personal income of rural women through participation in various income earning activities significantly contributes to an increase in their household income which is consistent with the present study.

Table 5.14: Level of contribution of women groundnut processing to theirincome

	Beneficiaries		**Non-Beneficiaries**		**Pooled**	
	Women income	**Income from processing**	**Women income**	**Income from processing**	**Women income**	**Income from processing**
Minimum	6,000.00	6,000.00	2,000.00	2,000.00	2,000.00	2,000.00
Maximum	60,000.00	55,000.00	52,000.00	50,000.00	60,000.00	55,000.00
Mean	30,032.33	27,982.80	21,069.59	20,030.60	25,550.96	24,006.70
Std. Dev.	14,427.03	12,382.68	13,000.95	11,845.63	14,887.11	12,817.79
% contribution of processing to women income	93.2		95.1		94.0	

5.6 Poverty Status of Women Groundnut Processors (Objective iv)

To determine the poverty level of women groundnut processors, a common baseline was established for each group. This baseline is known as the poverty line. The poverty

line was determined using the two-third mean income of the women groundnut processors. Thus, a relative poverty line of ₦20,021.56 was established for WIA beneficiaries (Table 5.15). This implies that beneficiaries having an average monthly income above ₦20,021.56 were considered non-poor, those with income of between ₦10,010.78 and ₦20,021.56 were considered moderately poor while those having average monthly income of less than ₦10,010.78 were considered very poor. For non-beneficiaries, a relative poverty line of ₦14,046.40 was conversely established. This implies that beneficiaries having an average monthly income above ₦14,046.40 were considered non-poor, those with income between ₦7,023.20 and ₦14,046.40 were considered moderately poor while those having less than ₦7,023.20 were considered very poor.

The results in Table 5.15 revealed that 68% of beneficiaries and 59% of non-beneficiaries were non-poor while 32% of beneficiaries and 41% of non-beneficiaries were poor.This results implies that majority of the respondents are not poor. The poverty gap analysis revealed that the poverty gap index for benefitting poor processors was 0.123. This simply means that anadditional 12.3% of their average income was required to bring the poor beneficiaries up to the poverty line of ₦20,021.60.The implication is that beneficiaries from poor women processors would require a 12.3% increase in their mean income to rise to the poverty line. For non-beneficiaries the poverty gap analysis revealed that the poverty gap index for non-beneficiaries that were categorized as poor processors was 0.296. This simply means that a 29.6% increase in their average income was required to bring these poor beneficiaries up to the poverty line of ₦10,010.78. The implication is that non-beneficiaries that were poor would require a 29.6% increase in their meanincome to rise to the poverty line.

The poverty severity index of benefitting groundnut processors was 0.108. This implies that 10.8% of these processors constitute the poorest among the group.That is 10.8% of the beneficiaries are the poorest. In a similar vein, poverty severity index for the non-beneficiarieswas 0.282. This implies that 28.2% of non-benefitting women were extremely poor in the group. This indicates that poverty is more severe among poor non-beneficiaries. These results therefore show that there were more poor beneficiaries among the non-benefitting processors compared to thosebenefitting from WIA programme. This result is consistent with findings of Oladele (2011) on contribution of indigenous vegetables and fruits to poverty alleviation in Oyo State, Nigeria who reported that the degree of poverty among vegetable farmers was marginally more severe among the respondents.

Table 5.15: Poverty analysis

Category	**Total income**	**Average income**	**Poverty line**	**Poverty Incidence (p0)**	**Poverty Depth (p1)**	**Poverty Severity (p2)**
Beneficiaries	₦4,504,850.0	₦30,032.33	₦20,021.56	32.0	12.3	10.8
Non-Beneficiaries	₦3,118,300.0	₦21,069.59	₦14,046.40	40.5	29.6	28.2

5.7 Socio-economic, Institutional and Groundnut Processing Characteristics Influencing Level of Income of Women Groundnut Processors (Objective v)

The results of the multiple regression analysis of the influence of some variables on household income of women groundnut processors in WIA programme areshown in Table 5.16. The results show that the R-square value was 0.546 indicating that 54.6% of

the variation in household income could be accounted for by the combined effect of the variables included in the model while the other 45.4% remained unexplained. The adjusted R-square also supported the claim with a value of 0.499 or 49.9%. It implies that the independent variables explain the change in the dependent variables at 49.9% level of confidence. The model was well fitted to the data since the F-ratio value (11.602) was highly significant ($P<0.01$). This implies that the joint effects of all the included variables influence on the income of the beneficiaries and the regression result was statistically reliable.The results of the regression analysis indicates that age, household size, dependency, years of formal schooling, years of membership in cooperative societies, nature of involvement in enterprise, ownership structure and access to market significantly influenced the level of income of the women groundnut processors in WIA programme (Table 5.16). The details of this influence are described below.

Table 5.16: Socio-economic, institutional and groundnut processing characteristics influencing level of income of women groundnut processorsin WIA programme

Variables	**Coefficients**	**Std. Error**	**t-value**	**Sig.**
Constant	12042.287	12172.122	0.989	0.324
Age(X_1)	165.822**	81.894	2.025	0.044
Years of formal education(X_2)	-2016.520***	428.073	4.711	0.000
Household size(X_3)	464.540***	155.676	2.984	0.003
Number of dependents(X_4)	-732.52**	318.304	-2.301	0.023
Marital status(X_5)	-1355.099^{ns}	9099.882	-0.149	0.882
Headship status (X_6)	2913.374^{ns}	4725.765	0.616	0.539
Number of extension visits(X_7)	632.422^{ns}	1485.624	0.426	0.671
Years of experience(X_8)	-44.469^{ns}	215.83	-0.206	0.837
Amount of credit(X_9)	0.074^{ns}	0.126	0.585	0.564
Years of membership in cooperative societies (X_{10})	610.86*	312.009	1.958	0.052
Nature of involvement(X_{11})	5002.815***	1853.771	2.699	0.008
Ownership structure(X_{12})	-5064.77**	2413.046	-2.099	0.038
Number of assistants (X_{13})	-59.939^{ns}	822.682	-0.073	0.942
Market access(X_{14})	3009.693**	1420.377	2.119	0.036
R^2=0.546				
R^{-2}=0.499				
F-ratio = 11.602***				

* = P<0.10, ** = P<0.05, *** = P<0.01, ns = not significant

5.7.1 Age

The regression analysis revealed that age of the rural women had positive relationshipwith their income with a coefficient value of 165.82 ($P<0.05$). The result indicates that the women's income increases with increase in age.This indicates that the women's income increases by₦165.82 with every one year increase in their age. The result is similar to previous studies (Islam, 2003; Sarkar, 2005; Rahman, 2006) where it was found that age has significant and positive effect on women'sincome.

Age is a major socio-economic factor that significantly affects the performance of individuals in any activity. Thus, the low income at early age by the rural women might be related to the demands of child bearing and rearing, taking care of husbands and other family members, which prevents rural women from getting fully engaged in income generating activities. Also, early marriage is a common phenomenon in the study area. After getting married, young women usually face some problems of adjustment with their husbands or family members, but with the passage of time, most of them become able to cope with these problems. Fakir (2008) and Sheheli (2012) found higher participation of middle-aged women in income generating activities (implying more income) compared to old women. This is more likely to be the case as old women may like to engage themselves in family care and after-life or religious matters. Furthermore, old women often get less involved in income generation as they usually have grown up children who take care of their welfare needs.However, Kudi*et*

al. (2009) and Lhing*et al*. (2013) found a negative relationship between age of empowerment programmes' clients and their income.

5.7.2 Household size

A significant positive relationship was found between the women's household size andtheir income. This implies that as the household size increases, the income will also increase. The women's income increased by ₦464.54 with an increase of one family member. Groundnut processing is a highly labour intensive venture and a large household has the opportunity of providing free family labour (as labour constitutes the second largest percentage of total variable cost), thereby reducing cost incurred in the business. Family members usually work as unpaid labour in any family business venture (be it agriculture or not) which decreases the cost of production and increases the benefits derived. Therefore, household members are treated as assets, since every member, after attaining a certain age, can contribute to income. Therefore, family size is an important socio-economic indicator that affects the income of the women.

5.7.3 Years spent in formal schooling

The regression results are somewhat contrary to expectation because years of formal schooling for the women in WIA programme was found to have a significant ($P<0.01$) but negative influence on the women's income.This means that an increase in years of formal school of the beneficiaries leads to a decrease in household income. This implies that for every additional year spent in formal schooling by the women, ₦2,016.52 of her income will be reduced. The expectation is that increase in formal schooling will lead to an increase in income since educated women are more likely to have better managerial

skills which will enhance income from the processing activity resulting to increased income. One possible explanation is that school attendance will reduce time the women can commit to processing. Another explanation is that when women acquire more education, they are likely to quit processing business and go for better paying jobs. The findings contradict the findings of Oluwasola (2010) who studied the stimulation of rural employment and income for cassava processing farming households in Oyo State, Nigeria. The author found that a unit increase in the level of education increased the net income of clients by 29.5%.

There is a general agreement that education is associated with receiving, absorbing and utilization of information. Education is also believed to increase the ability of individuals to obtain, process and analyze information and helps them make appropriate decisions (Tadesse, 2008). The ability to understand and be aware of the situation in which women live increases significantly with education (Rahman and Naoroze, 2007). These outcomes of education might empower women to demand and protect their rights in order to change and improve their existing situations. Therefore, literacy skills of women groundnut processors is necessary (to a reasonable extent) for a beneficial impact on their household income.

5.7.4 Number of dependents

The number of dependents in the household (both children and old people) also influenced the income of the women. A significant but negative relationship ($P<0.05$) between number of dependence and women income implies that for every unit increase in number of dependents, the women's income decreases by ₦732.52. This conforms to *a priori* expectation that more dependents means more mouths to feed with little or no

free family labour to supplement for high cost of labour. Thus, more dependents will lead to a decrease in income of the women.

5.8 Institutional Factors

5.8.1 Years of membership in cooperative societies

The coefficient for years of cooperative membership (610.86) was positive and significant at 10% level of probability. Thisrelationship implies that the income of the women willincrease with increase in years of membership of cooperatives. Thus, participation of rural women in cooperative societies positively contributes to income. This is because participation in cooperative societies providesan avenue for access to information among the women, thereby enhancing diffusion of any innovations and improvement in their production.

Furthermore, according to Hoque and Itohara (2009), when a rural woman uses loan obtained from cooperative societies for the purpose of boosting her business, she will contribute more to her household income. A study by Rahman and Naoroze (2007) has similarly revealed that rural women's participation in cooperative societies for income generation allows them to gain more control of the economic and social returns. It also makes them to be self-reliant thereby enhancing their socio-economic status within the family as well as society in general. From the above, it may therefore be said that the more the number of years spent in cooperative societies by the women the more the opportunities to increase their income as well as livelihood situation.

5.9 Characteristics of the Business Enterprise

5.9.1 Ownership structure

The ownership structure of the groundnut processors also influenced the income of the women. A significant but negative relationship (β= -5064.77, p<0.05) was,however, recorded between this variable and income of the women. The implication of the relationship is that the of women groundnut processors increases as the women move from being sole owners of their businesses to being in partnership. The reason for this could be attributed to the popular saying that "two heads are better than one". When there is more than one woman in a business, the different partners will each give their contribution either financially or otherwise. For example, when one partner has limited funds to contribute, another partner may have. These could positively influence their enterprise, consequently increasing their income.

5.9.2 Nature of involvement in processing

A significant and positive relationship (β = 5002.815, P< 0.01) was observed between the women's nature of involvement in processing business and the income of the women. This means that as the women move from being in the business as part-timers to full timers, their income will increase. A possible reason for this could be that as full timers in their enterprises, the women are more committed and more focused on their businesses than part-timers that may have other activities diverting their attention them from the businesses. More commitment could mean more profit, which will consequently enhance income.

5.9.3 Market access

Lastly, the results in Table 5.16 reveal that access to groundnut product market had significant and positive influence on the women's income (β = 3009.693, P<0.05). This

means that the higher the access to market, the more the women's income. This is in accordance with *a priori* expectations. When women have easy access to markets where their products will easily be sold off at good prices, they will be able to easily go into the next cycle of production thereby increasing total monthly revenue earned from the enterprise. All things being equal, this could mean increased income.

5.10 Test of Hypothesis on relationship between women's income and socio-economic, institutional factors and characteristics of the business enterprise (Hypothesis i)

The hypothesis which states that socio-economic, institutional factors and characteristics of the business enterprise have no influence on level of income of the women groundnut processors in WIA programme is rejected at $p<0.1$ level of significance. This is because some of these factors/characteristics were found to be significant determinants of thewomen's income at $p<0.01$, $p<0.05$ and $p<0.1$ and are therefore, not equal to zero. Also, the F-statistics which is a measure of significance of the regression model is significant at $p<0.01$. This led to the acceptance of the alternate hypothesis that socio-economic, institutional factors and characteristics of the business enterprise influence the level of income of women groundnut processors in WIA programme. The implication is that various combinations of the determinants of women's income accounts for the income level of the beneficiaries.

5.11 Impact of WIA Programme on Poverty Status of Women Groundnut Processors(Objective vii)

5.11.1 Impact of WIA programme on poverty status of beneficiaries

A Z-test was conducted to analysethe impact of WIAprogramme on poverty status of the beneficiaries using income as a proxy. The results indicated that there was

significant difference between income of beneficiaries of the programme and the income of non-beneficiaries (Table 5.17). From the results, the average income of beneficiaries was found to be ₦30,032.33while that of non-beneficiaries was ₦21,069.594. The calculated t-value was 5.59 and it exceeds the critical value of 1.97 at $p<0.01$ level of significance. Therefore, the result of the analysis indicates that the programme had a significant impact on the beneficiaries.

Table 5.17: Analysis of differences in poverty status of beneficiaries and non-beneficiaries

Parameter	Income of beneficiaries	Income of non-beneficiaries
Mean	30,032.33	21,069.59
Variance	22,566.12	15,814.79
Observations	150	148
Hypothesized Mean Difference	0	
DF	288	
Z-Stat	5.587568893	
P one-tail	2.66784E-08	
Z Critical one-tail	1.650161656	
P two-tail	5.33567E-08	
Z Critical two-tail	1.968235174	

5.11.2 Impact of WIA programme on poverty status of non-poor beneficiaries

Another independent sampleZ-test was conducted to assessand compare the impact of WIA empowerment on income of non-poor beneficiaries. The resultsin Table 5.18 show that there is significant difference between the income of non-poor beneficiariesand that

of non-poor non-beneficiaries at p< 0.05. The average income of the non-poor beneficiaries was ₦38,381.37 while that of non-poor non-beneficiaries was ₦28,690.91.The calculated Z-value was 6.33 and it exceeds the critical value of 1.97.Therefore, these suggest a significant difference between the income of non-poor beneficiaries and that of non-poor non-beneficiaries.Therefore, the result of the analysis indicates that the programme had a significant impact on the non-poor WIA beneficiaries in the study area.

Table 5.18: Analysis of difference in poverty status of non-poor beneficiaries

Parameter	Income of non-poor beneficiaries	Income of non-poor non-beneficiaries
Mean	38,381.37	28,690.91
Variance	10,249.78	11,754.41
Observations	102	88
Hypothesized Mean Difference	0	
DF	180	
Z- Stat	6.334031345	
P one-tail	9.27635E-10	
Z Critical one-tail	1.653363013	
P two-tail	1.85527E-09	
Z Critical two-tail	1.973230823	

5.11.3 Impact of WIA programme on poverty status of poor beneficiaries

A z-test was also conducted to determine the difference between income of poor WIA beneficiaries and poor non-beneficiaries. Results in Table 5.19 indicate that there was difference between the incomes of the two groups. The average income of poor

beneficiaries was ₦12,290.625while that of poor non-beneficiaries was ₦9,891.666. Thedifference was tested using a z-test. The calculated z-value was 3.14 and it exceeds the critical value of 1.99 at $p<0.01$ level of significance.Therefore, the result of the analysis indicates that the programme had a significant impact on the poor beneficiaries in the study area because their income was significantly higher than that of non-beneficiaries.

The results in Tables 5.17., 5.18 and 5.19 are consistent with findings of Adofu and Akoji (2013), Ali and Ali (2013), and Okpara (2011) that revealed positive impact of empowerment on poverty. The positive impact could be attributed to the various assistance the beneficiaries derived from the programme. Contrarily, studies of Almamum*et al*. (2013), Clement and Terande (2012) and Yusuf *et al*. (2013)showed a negative relationship between empowerment programmeand poverty alleviation. A neutral or no impact of empowerment on poverty alleviation has also been reported by Karlan and Zinman (2010), Rooyen*et al*. (2012) and Karlan and Valdivia (2011).

Table 5.19: Analysis of difference in poverty status of poor beneficiaries

Parameter	**Income of poor Beneficiaries**	**Income of poor non-beneficiaries**
Mean	12,290.62	9,891.67
Variance	22,389.75	70,038.27
Observations	48	60
Hypothesized Mean Difference	0	
DF	70	
t Stat	3.141376956	
P(T<=t) one-tail	0.001232198	

t Critical one-tail	1.666914479
P(T<=t) two-tail	0.002464397
t Critical two-tail	1.994437112

5.11.4 Test of hypothesis on impact of WIA programme on poverty status of beneficiaries (Hypothesis ii)

The hypothesis that empowering women in groundnut processing does not have any significant impact on their poverty status is rejected at $p<0.01$ level of significance. This is because the differences in income between all WIA beneficiaries and all non-beneficiaries, between non-poor beneficiaries and non-poor non-beneficiaries, as well as between poor beneficiaries and poor non-beneficiaries were all significant at $p<0.01$. This led to the acceptance of the alternate hypothesis thatempowering women in groundnut processing has significant impact on their poverty status.

5.12 Strengths, Weaknesses, Opportunities and Threats in Groundnut Processing (Objective vii)

5.12.1 Strengths in groundnut processing

Data in Table 5.20 show the strengths in groundnut processing enterpriseperceived by the respondents. The strongest point revealed by the respondents was ‘location of enterprise is good’ (MWS=4.31) and both beneficiaries (MWS=4.39) and non-beneficiaries (MWS=4.23) of WIA programmes attested to this. This was followed by ‘activity work is feminine in nature’ (MWS=4.24), then ‘good family business background’ (MWS = 3.98). Besides these, respondents perceived ‘high family support’ (MWS=3.96) as strength in groundnut processing as family members helped the respondents in every step of the business enterprise.

The perception that the location of the enterprise is good could be because Kano state is a high production area for groundnut, therefore the major input for the enterprise is at the 'doorstep' of the respondents thereby making input procurement easy. Also, Kano State has some cottage industries like pomade making industry that utilizes groundnut oil for production. Even though these industries are not many, they could be the reason for the relative high mean score recorded for the statement "there is high volume of sale" (MWS=3.87).

For the feminine nature of the enterprise, the reason could be because it is an enterprise that can be undertaken within the compounds of the respondents as only grinding and at times oil extraction (if machines are used) take the women out of their houses. And to ameliorate the situation, a grown up child or other members of the household could take the groundnut for grinding and oil extraction. Furthermore, the products are easily sold at home as most of their customers (*tsire* makers or those that turn the *kulikuli* into powder) go to their houses to buy. When this is not the case, young household members take the products to the market for sale. Good family business background means that majority of the women have been into groundnut processing since childhood because they inherited it from their parents or relations. This could imply long years of business experience, full-fledged knowledge and expertise in the field.

Table 5.20 also revealed that the least strengths perceived by the respondents were 'high management skills' (MWS=2.82) and 'high quality of technology used for production' (MWS=2.73). This is not surprising as majority of the respondents do not have formal education (Table 5.4) which could have improved their managerial skills. Also, as most

of the respondents operate at micro- and small-scale levels and are usually resource poor, they do not have the capital to purchase improved technology for their enterprise.Thus most of them rely on local methods of processing in carrying out the business. This is however, more pronounced among non-beneficiaries (MWS=2.13) than beneficiaries (MWS=3.34). This could be because beneficiaries are more resource endowed (less poverty level – Table 5.17) and had access to improved technologies from the WIA programme.

Table 5.20: Mean weighted scores (MWS) of strengths perceived by the respondents in groundnut processing

	Statement	**Mean Weighted Scores***		
		Beneficiary	**Non-Beneficiary**	**Pooled**
i	Location of enterprise is good	4.39(1.02)	4.23(1.25)	4.31(1.14)
ii	Activity work is feminine in nature	4.19(1.23)	4.29(1.13)	4.24(1.18)
iii	There is good family business background	4.25(1.41)	3.71(1.51)	3.98(1.46)
iv	There is high family support	3.85(1.52)	4.07(1.50)	3.96(1.51)
v	There is high volume of sale	3.98(0.95)	3.75(1.10)	3.87(1.03)
vi	Product is very effective in meeting customers' needs	3.45(1.09)	3.62(1.29)	3.54(1.22)
vii	Level of product reputation among customers is high	3.49(1.28)	3.41(0.93)	3.45(1.12)
viii	I have enough customers for my business	3.41(1.29)	3.45(1.24)	3.43(1.27)
ix	Weight of problems and complaints of customers is low	3.18(1.27)	3.48(1.29)	3.33(1.29)
x	Product is differentiated from competitors' ones	3.06(1.27)	3.14(1.12)	3.10(1.19)
xi	There is high employee efficiency	2.99(0.84)	3.11(1.13)	3.05(0.99)
xii	There is high management skills	2.51(1.17)	3.14(1.32)	2.82(1.28)
xiii	Quality of technology used is very high	3.34(1.17)	2.13(1.15)	2.73(1.20)

Figures in parentheses are standard deviations

5.12.2 Weaknesses in groundnut processing

Data in Table 5.21 depicts the weaknesses in groundnut processing in the study area. Respondents had high perception that 'profit margin is low' (MWS=4.37). This

corroborates the profit calculated from groundnut processing businesses of the respondents (Table 5.12)and it could be attributed to high cost of raw materials (raw groundnut) and subsequent low returns from the products (*kuli-kuli* and groundnut oil). The results also reveal that 'high cost of raw materials' (MWS=4.12) is another major weakness associated with groundnut processing.The respondents said that the major raw material in groundnut processing enterprise (raw groundnut) is very expensive in spite of their being situated in a major production area of the raw material.

Another major weakness perceived by the respondents is 'inadequate cash to sustain the business (MWS=3.94). The finding is a common characteristic of most enterprises that are ran by rural women especially when compared to their male counterpart. Many studies (Haruna*et al*., 2006; Ibrahim *et al*., 2010; Sani and Danwanka, 2011) confirm this finding in separate studies. However, the respondents believe that their processing enterprises were not highly indebted (MWS=2.90). This could be because the enterprisesare small scale and thus not too large for the women to manage with the little money they have, without encountering any debt.

Table 5.21: Mean weighted scores (MWS) of weaknesses perceived by the respondents in groundnut processing

S/N	Statement	Mean Weighted Score		
		Beneficiary	Non-Beneficiary	Pooled
i	Profit margin is low	4.23(1.02)	4.51(1.11)	4.37(1.07)
ii	There is high cost of raw material	4.11(1.01)	4.13(1.31)	4.12(1.20)
iii	There is adequate cash to sustain the business	3.61(1.40)	4.28(1.19)	3.94(1.34)
iv	I do not have new ideas to make my business more innovative than my competitors'	3.67(1.26)	3.55(1.50)	3.61(1.41)

v	There is low creativity of product	3.08(1.11)	3.12(1.22)	3.10(1.17)
vi	My business is highly indebted	2.71(0.90)	3.09(1.22)	2.90(1.08)

Figures in parentheses are standard deviations

5.12.3 Opportunities in groundnut processing

Perusal of Table 5.22 reveals the opportunities in processing activities perceived by the respondents. It was found that the strongest point perceived by the respondents is 'provision of loan/credit with low interest rate will improve their enterprises' (MWS=3.88). This could be because majority (90%) of the respondents have indicated that they did not have no access to credit in the last five years (Table 5.2). Other studies (Sheheli, 2012; Chah*et al*., 2014) had similar findings. Therefore, if credit with low interest rates and less bureaucracy and complexity are made available to the women, it will help in improving their enterprises and possibly lead to expansion. Another strong point perceived by the respondents is that 'industries should be established to utilize their products' (MWS=3.82). This will serve as an outlet for their products and enhance their revenue. Even though about 53% of the respondents revealed that they had easy access to market (Figure 6), when industries are established the scope of production can be expanded to meet the needs of the industries all thing being equal.

The results further revealed that 'ban on importation of vegetable oil will increase their volume of sale' (MWS=3.65). Vegetable oil nowadays dominates the market and at cheaper cost when compared to groundnut oil. Thus, people prefer to purchase vegetable than groundnut oil. If ban is imposed on importation of vegetable oil, people will be forced to purchase groundnut oil and this will lead to increased revenue for the women's enterprises.

Table 5.22: Mean weighted scores (MWS) of opportunities perceived by the respondents in groundnut processing

S/N	Statement	Mean Weighted Score		
		Beneficiary	Non-Beneficiary	Pooled
I	Loans with low interest rates will improve my enterprise	3.99(1.34)	3.77(1.40)	3.88(1.38)
ii	Industries should be established to utilize my product	3.87(1.37)	3.76(1.25)	3.82(1.31)
iii	Ban on importation of vegetable oil will increase my volume ofsale	3.85(1.11)	3.44(1.25)	3.65(1.20)
iv	There are many possibilities for strategic partnerships	3.73(1.30)	3.43(1.21)	3.58(1.27)
V	My business is not constrained by seasonality of raw material	3.15(1.21)	3.40(1.21)	3.28(1.21)
vi	Demands for my product is high	3.15(1.05)	3.31(1.32)	3.23(1.19)
vii	There are opportunities for expansion of business	3.21(1.12)	3.21(1.22)	3.21(1.17)
viii	It is very easy to access information as regards customers' tastes for my product	3.25(0.85)	3.12(1.12)	3.19(1.00)
ix	Product (oil and cake) from my activity has unique quality compared to international competitors'	2.88(1.00)	3.10(1.03)	2.99(1.02)
X	Raw material for production is readily available	2.77(1.08)	2.75(1.12)	2.76(1.10)
xi	I have very high competency compared to my competitors	2.03(1.00)	2.14(1.22)	2.08(1.12)

Figures in parentheses are standard deviations

5.12.4 Threats in groundnut processing

Table 5.23presents the threats in groundnut processing enterprise. The respondents perceived 'seasonality of demand for product' (MWS=3.98) as the strongest point that poses a threat to their businesses. They said that there is higher demand for their products (especially groundnut oil) during festive period (*Sallah*, Christmas and wedding ceremonies) while sale of products is very low outside these periods. They also

perceived ‘insecurity situation experienced in northern part of the country’ as serious threat to their businesses (MWS=3.82). This is because most of the states affected by the insurgency (Borno, Yobe and Adamawa States) are major consumers of groundnut products. So due to the insecurity, there was serious reduction of sale in that end. The respondents further perceived ‘weak government policies to support their enterprises as another threat (MWS=3.70). The respondents said that they do not have facilities for marketing and storage as well as reliable source of information for their products. Finally, ‘tough competition by other processors’ was reported as a threat by the respondents (MWS=3.61). The respondents believe that vegetable oil imported in the country in mass quantities poses a threat to their enterprises.

Table 5.23: Mean weighted scores (MWS) of threats perceived by the respondents in groundnut processing

S/N	Statement	Mean Weighted Score		
		Beneficiary	Non-Beneficiary	Pooled
i	Market demand for products is seasonal	3.99(1.32)	3.97(1.27)	3.98(1.29)
ii	Insecurity situation experienced in the country has affected production	3.71(1.28)	3.94(1.27)	3.82(1.28)
iii	There are weak government policies to support my business	3.51(1.47)	3.88(1.30)	3.70(1.39)
vi	There is tough competition by other processors internationally	3.76(0.95)	3.45(1.28)	3.61(1.13)
v	There is no price war with competitors	2.85(0.94)	2.67(0.88)	2.76(0.91)
vi	There are few changes threatening my business	2.61(1.04)	2.77(1.30)	2.69(1.17)

Figures in parentheses are standard deviations

CHAPTER SIX

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

6.1 Summary

The broad objective of the study was to assess the impact of WIA groundnut processing programme on poverty alleviation of beneficiaries in Kano State, Nigeria. The specific objectives were to: describe the socio-economic, institutional and groundnut processing characteristics of the respondents in the study area; determine the profitability of groundnut processing in the study area; ascertain the level of contribution of the processing activities engaged by the women groundnut processors to their income; determine the poverty status of women groundnut processors; determine the socio-economic, institutional factors and groundnut processing characteristics influencing the level of income of the women groundnut processors; assess the impact of the programme on the poverty status of women groundnut processors in the study area; identify and describe the strengths, weaknesses, opportunities and threats faced by the women groundnut processors in the study area.

Two groups (each consisting of 25 members) of women groundnut processors that benefitted from the WIA programme were purposively selected from the three zones of the State. This gave a sample size of 150 women across the State. For non-beneficiaries,

equal number of samples were randomly selected from the three zones. However, the questionnaires for two respondents in this category could not be retrieved. This gave a total sample size of 298respondentsi.e 150 beneficiaries and 148 non-beneficiaries. The tools of analysis employed in data analysis include descriptive statistics such as means, frequencies, percentages, range and standard deviation, gross margin analysis, Foster, Greere and Thorbecke Poverty index, Z - test statistic and multiple regression analysis. A 5-point Likert-type scale was used to capture the perception of the women on the strengths, weaknesses, opportunities and threats of their processing businesses.

The findings of the study revealed that a monthly gross income of about ₦24,006.7 was obtainable with an average return on investment of 26% from processing of groundnut into cake and oil. When the women's income from groundnut processing was compared against the total income, it was realized that groundnut processing contributes about 94% to the household income of the women. The poverty analysis revealed that 68% of the beneficiaries and 59% of the non-beneficiaries were non-poor while 32% of the beneficiaries and 41% of the non-benefitting were poor. The indices further showed that there was a poverty gap of 0.123 and 0.296 for beneficiaries and non-beneficiaries respectively while the severity was 0.108 for beneficiaries and 0.282 for non-beneficiaries.

The results of the regression analysis indicate that age ($\beta = 165.822$, $P<0.05$), household size ($\beta = 464.540$, $P<0.05$), number of dependents ($\beta = -732.52$, $P<0.05$), years of formal education ($\beta = -2016.520$, $P<0.01$), years of membership in cooperative societies ($\beta = 610.859$, $P<0.10$), nature of involvement in enterprise ($\beta = 5002.815$, $P<0.01$), ownership structure ($\beta = -5064.657$, $P<0.05$) and access to market ($\beta = -3009.693$,

P<0.05) significantly influenced the level of income of women groundnut processors in WIA programme. For the assessment of the impact of the programme on the poverty status of the women, the calculated z-value for the mean difference of their income was 6.33 and it exceeds the critical value (t-critical two tail) of 1.97 at p<0.01 indicating that the programme had significant impact on the beneficiaries at 1% probability level.

For the SWOT analysis, the strongest strengths perceived by the respondents were 'location of enterprise is good' (MWS=4.31), 'activity work is feminine in nature' (MWS=4.24), 'good family business background' (MWS = 3.98) and 'high family support' (MWS=3.96). The weakness were 'profit margin is low' (MWS=4.37), 'high cost of raw materials' (MWS=4.12) and 'inadequate cash to sustain the business' (MWS=3.94).The opportunities were 'provision of loan/credit with low interest rate will improve my enterprise' (MWS=3.88), 'industries should be established to utilize my products' (MWS=3.82) and 'ban on importation of vegetable oil will increase my volume of sale' (MWS=3.65).The threats were 'seasonality of market demand for product' (MWS=3.98), 'insecurity situation experienced in northern part of the country' (MWS=3.82), 'weak government policies to support their enterprises (MWS=3.70) and 'tough competition by other processors' (MWS=3.61).

6.2 Conclusions

From the findings of the study, it was concluded that processing of groundnut into cake and oil was profitable in the study area and contributes significantly to the household income of the respondents. Also, it was concluded that some socio-economic and institutional factors influenced the income of the women. And finally, WIA programme had significantly impacted on the poverty status of women groundnut processors.

6.3 Recommendations

On the basis of the findings, the following recommendations are put forward:

i. The women perceived low profit margin and high cost of raw materials as major weaknesses of their enterprise. The two are related, as high cost of raw material could result to low profit margin. The government is therefore advised to set up policy that will buy off the major raw material (raw groundnut) of the enterprise from farmers and sell to the processors (in this case the processors) at subsidized rate. This would help to increase profit margin of the women and encourage them to produce more.

ii. The study had positively impacted on the poverty status of the beneficiaries. It is therefore recommended that the programme should be widened in scope so that more women can be empowered.

iii. The study revealed that majority of the respondents did not have access to credit. Therefore, WIA programme should improve on meeting one of its objectives of assisting in linking women to sources of credit so as to make more credit available to them.

iv. The Women are encouraged to form cooperatives for better access to credit, improved tools, finances, equipment and information for groundnut processing so as to enhance the ease of production.

v. The result showed that there was very low level of formal education in the study area. The respondents are therefore advised to attend formal schooling because of its importance.

vi. WIA programme is also advised to improve on the managerial skills of the women since the women do not perceived low managerial skills as a strength.

6.4 Contribution to Knowledge

The study has made the following contributions to knowledge:

i. Groundnut processing into cake and oil by rural women was profitable in Kano State with an average monthly gross income of about ₦24,006.7 andreturn on investment of 26%.

ii. Groundnut processing was a major source of income for the women as it contributes about 94% to the household income of the women.

iii. The poverty indices revealed that 68% of the benefitting households and 59% of non-beneficiaries' households were non-poor while 32% of benefitting and 41% of non-benefitting households were poor. The indices further showed that there was poverty gap of 0.123 and 0.296 for beneficiaries and non-beneficiaries respectively while the severity was 0.108 for beneficiaries and 0.282 for non-beneficiaries.

iv. Age ($\beta = 165.822$, $P<0.05$), household size ($\beta = 464.540$, $P<0.05$), dependency ($\beta = -732.52$, $P<0.05$), years of formal education ($\beta = -2016.520$, $P<0.01$), years of membership in cooperative ($\beta = 610.859$, $P<0.10$), nature of involvement in enterprise ($\beta = 5002.815$, $P<0.01$), ownership structure ($\beta = -5064.657$, $P<0.05$)

and access to market (β = -3009.693, P<0.05) are the socio-econimic and institutional factors influencing household income of women in WIA programme.

v. WIA programme had significantly impacted on the poverty status of the women, as the calculated t-value (5.59) for the mean income difference between tested groupsexceeds the critical value (t-critical two tail) (1.97) at p<0.01.

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APPENDIX

DEPARTMENT OF AGRIC. ECONOMICS AND RURAL SOCIOLOGY,

FACULTY OF AGRICULTURE, AHMADU BELLO UNIVERSITY, ZARIA.

Dear Madam,

I am a post graduate student of the aforementioned department carrying out a research on the topic: **assessment of the impact ofwomen-in-agriculture(WIA) groundnut processingprogrammepoverty alleviation in Kano State, Nigeria**. Please answer the following questions to the best of your knowledge. Information provided will be treated confidentially.

Best regards,

MrsHajaraShuaibu

SECTION A: SOCIO-ECONOMIC VARIABLES

1. ADPZone…….…….....

2. Name of Groundnut Processing Group (for WIA participants)…….

3. Agein years…….

4. Marital Status (a) Married [ ] (b) Widowed [ ] (c) Divorced [ ] (d)Single [ ]

5. Household size…….

6. Number of dependents below 15 years…….

7. Number of dependents above 65 years…….

8. Household headship (tick as appropriate)

(a) Female headed [ ] (b) Male headed [ ]

9. Years spent in formal schooling……..

10. Average monthly income from other income activities

Income Activity	**Amount (naira/annum)**
1.	
2.	
3.	
4.	

SECTION B: INSTITUTIONAL VARIABLES

11. Do extension agents visit you?

a) Yes [ ] b) No [ ]

12. If Yes how many times were you visited by extension agents in the last one year?

..... times

13. Provider of extension services

a) ADP [ ] b) NGO [ ]

c) Private extension provider [ ] d) others (specify)…….

14. Did you obtain credit in the last one year?

a) Yes [ ] b) No [ ]

15. If Yes how much credit did you obtain? ₦…….

16. Main source of credit

a) ADP/government [ ] b) NGO [ ]

c) Cooperative [ ] d) Commercial bank [ ]

e) Agric bank [ ] f) microfinance bank [ ]

g) friends/relatives [ ] h) others (specify)……

17. Are you a member of cooperative?

a) Yes [ ] b) No [ ]

18. For how many years have you been a member? ……. years

19. Are you an official of your cooperative?

a) Yes [ ] b) [ ]

SECTION C: GROUNDNUT PROCESSING ACTIVITIES

20. For how long have you been processing groundnut? …….. years.

21. Are you the sole owner of your business?

a) Yes [ ] b) No [ ]

22. If No who is your partner?

a) Husband [ ] b) Friend [ ] c) Other members of the family [ ]

23. On what basis do you run your business?

a) Part-time [ ] b. Full-time [ ]

24. How many people assist you in running your business? ……people.

25. What is your main source of finance for the business?

a) Personal savings [ ]
b) Loan from relatives [ ]
c) Loan from commercial bank [ ]
d) Loan from agricultural bank [ ]
e) Loan from cooperatives [ ]
f) Loan from money lenders [ ]
g) Help from friends/relatives [ ]

26.Please fill the following Table per processing cycle

	Quantity	**Cost/Quantity**
Inputs		
Raw groundnut (kg) Water (l)		

Pepper Sugar (kg) Salt (kg) Firewood (bundle) Kerosene (l) Labour (manday) **Outputs** Groundnut oil (l) Groundnut cake (kg)		

27. What ratio of income realized from groundnut processing do you spend on the following household items per month?

Item	**Ratio(in % of income from processing)**
Food	
Clothing	
School fees	
Medication	
Others (specify)	

28. Please rate the market accessibility of your products

a) Easy [ ] b) Fair [ ] c) Difficult [ ]

29. Please fill the following Tables for Strengths, Weaknesses, Opportunities and threats of your groundnut processing activities.

a. Strengths

S/N	Statement	SA	A	U	D	SD	Reason
i	Quality of technology used is very high						
ii	Product is differentiated from competitors' ones						
iii	Level of product reputation among customers is high						
iv	Weight of problems and complaints of customers is low						
v	Product is very effective in meeting customers' needs						
vi	There is high volume of sale						
vii	Activity work is feminine in nature						
viii	There is high management skills						
ix	There is high employee efficiency						
x	Location of enterprise is good						
xi	There is good family business background						
xii	There is high family support						
xiii	I have enough customers for my business						

SA = STRONGLY AGREED, A = AGREED, U = UNDECIDED, D = DISAGREED, STRONGLY DISAGREED

b. Weaknesses

	Statement	SA	A	U	D	SD	Reason
i	There is low creativity of product						
ii	There is high cost of raw material						

iii	Profit margin is low						
iv	There is adequate cash to sustain the business						
v	My business is highly indebted						
vi	I do not have new ideas to make my business more innovative than my competitors'						

SA = STRONGLY AGREED, A = AGREED, U = UNDECIDED, D = DISAGREED, STRONGLY DISAGREED

c. Opportunities

S/N	Statement	SA	A	U	D	SD	Reason
i	Ban on importation of vegetable oil will increase volume of my sale						
ii	Industries should be established to utilize my product						
iii	Loans with low interest rates will improve my enterprise						
iv	Raw material for production is readily available						
v	Demands for my product is high						
vi	Product (oil and cake) from my activity has unique quality compared to international competitors'						
vii	There are opportunity for expansion of business						
viii	My business is not constrained by seasonality of raw material						
ix	It is very easy to access to information as regards customers' tastes of my product						
x	I have very high competency compared to my competitors						
xi	There are many possibilities for strategic partnership						

SA = STRONGLY AGREED, A = AGREED, U = UNDECIDED, D = DISAGREED, STRONGLY DISAGREED

d. Threats in groundnut processing

S/N	Statement	SA	A	U	D	SD	Reason
i	There is tough competition by other processors internationally						

ii	There are weak government policies to support my business						
iii	Market demand for product is seasonal						
iv	There are few changes threatening my business						
v	Insecurity situation experienced in the country have affected production						
vi	There is no price war with competitors						

SA = STRONGLY AGREED, A = AGREED, U = UNDECIDED, D = DISAGREED, STRONGLY DISAGREED

SECTION E: QUESTIONS ON WIA PROGRAMME (FOR BENEFICIARIES)

30. For how long have you been a registered member of WIA programme?

……years

31. How did you learn about WIA?

a) Extension agents [ ]

b) Radio [ ]

c) Television [ ]

d) Print media [ ]

e) Cooperative [ ]

f) NGOs

g) Neighbours/Friends/Family members [ ]

h) Others (specify)……..

32. List from the most severe to the least severe, the constraints you experience in WIA programme.

a. ……

b. …….

c. ……

d. ……

e. ……

33. What in your opinion are the potentials for improving on the above listed constraints?

a. ……

b. ……

c. ……

THANK YOU FOR YOUR COOPERATION

LIST OF PLATES



Plate I: Shelled raw groundnut



Plate II: Pre-cleaning of twigs, dirts and stones



Plate III: Groundnut is lightly roasted



Plate IV: Roasted groundnut is broken down to remove skin



Plate V: Skin is blown out manually



Plate VI: Unskinned roasted groundnut



Plate VII: Groundnut paste (after grinding into paste) is turned in local mortar and pestle to remove oil



Plate VIII: Groundnut cake



Plate IIX: Groundnut cake and oil



Plate X: Groundnut cake is moulded into different shapes



Plate XI: Groundnut cake is being fried



Plate XII: Fried groundnut cake