



## **Factors Affecting the Involvement of Women in Income Generating Activities in Sabon-Gari Local Government Area of Kaduna State, Nigeria**

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### **Authors' contributions**

*This work was carried out in collaboration between all authors. Authors HAY, KJN, HS, HOY and OY jointly designed the study, managed the collection of data and performed the statistical analysis. All authors read and approved the final manuscript.*

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### **ABSTRACT**

This study examines factors affecting the involvement of women in income generating activities. Data for this study were obtained by the use of structured questionnaire. A total of 120 respondents were interviewed consisting of 60 women involved in income generating activities and 60 women control. The logit regression model was used to analyze the data collected. The result of the analysis revealed that age of the respondent (X1) and level of education (X3) significantly affects the involvement of women in income generating activities at 5% level of probability while family size (X4), access to credit (X5) and membership of an association (X6) significantly affects it at 10% level of probability. The study recommends that women should be sensitized on the importance of involving in income generating activities as this will help them to be self-reliant. It also recommended that women should be encouraged to attend adult literacy classes as this will help in better organizing and carrying out of income generating activities. In order to improve on their performance, the local government should assist women by linking them with financial institutions so as to acquire loan and women should be encouraged to form cooperative groups for easier access to loans.

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## 1. INTRODUCTION

Income generation simply means gaining or increasing income or money that an individual or business receives in exchange for providing a good or service after investing capital. It can also be defined as small scale projects that create an income source to individual beneficiaries or beneficiary group whilst promoting; the principal right of self-determination and the objectives of integration, reputation and re – integration [1]. The notion of income generation can relatively be used to cover a term for a wide variety of activities such as small and medium enterprise development, local economic development, micro-credit, skills and vocational or competency based training, business training, cash or food for work (asset creation) schemes. In the strict sense of the term, income generation aims at creating a financial income, however, may also aim at positive effects in terms of self-reliance, household satisfaction, empowerment and community development as a whole. Most individuals gain income through earning wages by working and/or making investments into financial assets like stocks, bonds, real estate or engaging in Small Medium Enterprises.

Women are responsible for about 50 per cent of the world's food production and in some countries of sub-Saharan Africa (including Nigeria) [2], women provide between 60 and 80 per cent of the food for household consumption [3]. Women's contribution to agricultural production varies from country to country, crop to crop and task to task [4]. On the basis of available evidence and statistics, the role of women in agricultural production in Nigeria cannot be trivialized. They perform crucial roles in the domestic and economic life of the society. Rural and national development can hardly be achieved with the neglect of this important and substantial segment of the society [5].

The role of women in income generating activities is of paramount importance to economic development in Africa. More importantly, recognizing and supporting this is crucial and vital for the development or growth of women and the fulfillment of their economic potentials, while they are often hidden, silent and not appreciated, rural women represent probably the world's most powerful untapped natural resources [6]. The dynamic changes in development process over the past twenty years

have neither reduced poverty as expected nor have they reduced women vulnerability situation.

The assumptions that the only place for women is the kitchen, the belief that women are subordinate, and their husband's property have not only impeded their status but also handicapped their contribution to wealth creation and economic development. Underlying the assumption is the lack of recognition that in the household, women have distinct rights and obligation as well as distinct functions with regards to economic activities. Their situation is determined by their multiplicity for the care and wellbeing of their families and communities, household tasks, farm and non-farm income generating activities that cannot readily be monetized [7].

Most of the activities which women engaged in their livelihood strategies are not defined as 'economically active employment in national account systems, yet are crucial to the wellbeing of household members [1]. Much of women work is also under valued because it is typically under remunerated and often confined to the domestic or household realm [8]. Caring for children, the elderly and the ill, collecting water and fuel for cooking and heat, and maintaining households and preparing food are the responsibilities which are mostly taken up by women and girls [8].

In developing countries including Nigeria, national development depends on a wide range of factors such as natural resource endowments, cultural and socio-economic environment and historical factors. The backbone of agricultural sector has been attributed to the women accounting for about 50% (world), 61% (developing countries) and 79% (least developing countries) of agricultural labour and responsible for over 80% agricultural and food production [1]. In addition, [9] stated that both women and men play critical roles in agriculture throughout the world, producing, processing and providing the food we eat. Women make up half the rural population and they constitute more than half of the agricultural labor force. Rural women in particular are responsible for half of the world's food production and produce between 60 and 80 percent of the food in most developing countries. Yet, despite their contribution to global food security, women farmers are frequently underestimated and overlooked in development strategies. According to [1], world statistics;

women generally make up two-third of the work force in agriculture. Despite all these, women are still perceived as mothers and house-keepers due to tradition.

According to [10], various researches conducted on the contribution of women to agricultural development in the country (Nigeria) suggest that women contribution to farm work is as high as between 60 and 90% of the total farm task performed. The contribution of the women ranges from such tasks as land clearing, land-tilling, planting, weeding, fertilizer/manure application to harvesting, food processing, threshing, winnowing, milling, transportation and marketing as well as the management of livestock. Yet women's substantial contribution continues to be under-valued in conventional agricultural and economic analyses and policies, while men's contribution remains the central, often sole focus of attention [11].

Worldwide, resilient and resourceful rural women engage in a multitude of ways through different livelihood strategies to lifting their families and communities out of poverty. They work as unpaid and own-account or self-employed by engaging in weaving, knitting, on-farm and non-farm labourers, as non-farm wage labourers for others in agriculture and agro-industry, as entrepreneurs, traders and providers of services; as leaders, researchers and developers and as caretakers of children and the elderly [7]. Although, the conditions of women in urban areas are better than those of the rural women, yet the old traditions and religious restraints have hindered the independent and free movement of the women and in spite of unfavorable and strict cultural norms and values, some rural women have done a great job in the society [12]. There is the need for transformation that fully includes women. What is required is more than adjustment in their situation as they also constitute a significant proportion of labour in their family farm whether producing for household consumption, for enterprise or both [13].

Women have always worked in the production of food and other products in the rural areas, however, official statistics are determined by reporting in line with official definition of agricultural work which tends not to recognize women contribution to agricultural activities, despite efforts to improve gender differentiate data in agricultural census and household surveys [14,15]. Various studies have concluded

that social constitutional constraints faced by women in terms of equal access to economic opportunities and productive resources such as; land, credit (loan) technology and market information tend to make them even more vulnerable [1].

By large amount of misunderstanding, myths, ignorance, lack of education, traditional prejudices and so on, this is correct considering the situation of women in the global economic environment. They are neglected to the background with little or no say in the society. What is needed is a gender pro-active approach due to current thinking which assumes gender neutrality. A gender pro-active approach takes into accounts both men and women as unique economic situations.

Earlier studies have concentrated on development of women through income generating activities as a way of women economic empowerment. This study will provide valuable information to policy makers and planners about the factors affecting their involvement in income generating activities and provide possible suggestions that will form basis for improving women contribution to the economic development of the area. Based on this background, the study aims at determining the factors affecting women involvement in income generating activities in the study area.

## **2. METHODOLOGY**

### **2.1 Study Area**

The study was carried out in Sabon-gari Local Government Area of Kaduna State. The area is located between latitude 11° to 12° North and longitude 7° to 8° east of the equator. It is of 686 meters above sea level [16]. It has an estimated population of more than 291,358 [17]. The area lies in the Northern Guinea Savannah ecological zone with woodland vegetation and underlying grass species [16]. It is characterized by two seasons; the dry and wet season. The annual rainfall in the study area range from 1,000mm to 1300mm. The rainfall duration is about 5months, beginning in May and ending around October after the dry season begins that end around May/June. The mean maximum temperature of the area range from 27.2°C to 35°C in April. Farming and trading are the major occupation of the people of the area. The area is predominantly rural and socio politically made up of many ethnic

groups though dominated by the Hausa and the Fulani tribes.

## 2.2 Sampling Procedure and Sample Size

Purposive sampling was used to select three wards from the Local Government Area based on their active participation in income generating activities. The wards are Samaru, Bomo and Basawa. A sample frame of 151 was identified for those involved in income generating activities (comprising of 56 from Samaru, 43 from Bomo and 52 from Basawa) and 150 for those that are not involved in income generating activities (comprising of 55 from Samaru, 45 from Bomo and 50 from Basawa). A total of 120 respondents were randomly selected which included 60 women engaged in income generating activities and 60 women as control. These represented 40% of the sample frame of each group. The number of respondents chosen from those involved in income generating activities were; 22 from Samaru, 17 from Bomo and 21 from Basawa. While for the control group, 22 respondents were chosen from Samaru, 18 from Bomo and 20 from Basawa. Primary data were used for this study and they were collected using structured questionnaire.

## 2.3 Data Analysis

Data was analyzed using the logit model. This is a technique that is used in estimating the probability of an event that can take one or two values. In other words, it is a predictive model that can be used when the target variable is a categorical variable with two categories (binary or dichotomous variable), i.e. yes or no. It measures the relationship between a categorical dependent variable and one or more independent variables, which are usually (but not necessarily) continuous, by using probability scores as the predicted values of the dependent variable.

The logit model is based on the cumulative logistic distribution function as expressed by [18]. The formula is expressed as follows:

$$Y = \alpha + B_1X_1 + B_2X_2 + B_3X_3 + \dots + B_6X_6$$

Where, Y is a dependent variable from the equation above and it stands for involvement in

income generating activities. Since Y is a dichotomous variable, it takes the value of 0 and 1. Hence,

$$Y = 1 \text{ if the respondent is involved in income generating activities.}$$

$$Y = 0 \text{ if not involved.}$$

The variables  $X_1 - X_6$  are the factors affecting women involvement in income generating activities and they are the independent variables that were obtained from the field.

- $X_1$  = Age of the respondent (in years)
- $X_2$  = Religion (numbers)
- $X_3$  = Level of education (in years)
- $X_4$  = Family size (number)
- $X_5$  = Access to credit (1 = Yes, 0 = No)
- $X_6$  = Membership of an association (1 = Yes, 0 = No)
- $B_1 - B_6$  = coefficients,  $\alpha$  = constant

## 3. RESULTS AND DISCUSSION

### 3.1 Factors Affecting Women Involvement in Income Generating Activities

The result of the logit regression estimates (Table 1) shows that the age of the respondent ( $X_1$ ), level of education ( $X_3$ ), the family size of the respondent ( $X_4$ ), access to credit ( $X_5$ ) and membership of association ( $X_6$ ) of the respondent significantly affects the involvement of women in income generating activities.

The coefficient of age ( $X_1$ ) of the respondent was observed to be positive (1.34932) and was significant at 5% level of probability. This implies that an increase in age of the respondents will lead to increase in their involvement in income generating activities (IGA). In other words, as women age, majority will likely involved in income generating activities and vice-versa. Moreover, level of education ( $X_3$ ) too showed positive coefficient (0.5578) and was also significant at 5% level of probability. This indicates that a unit increase in level of education of the respondents will result to higher likelihood of engagement in IGA. This may be because with formal education, women will be able to understand their activities better and effectively.

**Table 1. Logit estimates of the factors affecting women involvement in income generating activities**

<b>Variables</b>	<b>Coefficients</b>	<b>Standard error</b>	<b>T – value</b>
Age (X <sub>1</sub> )	1.34932	0.60910	2.1460**
Religion (X <sub>2</sub> )	0.0318	0.2344	0.13567 <sup>NS</sup>
Education (X <sub>3</sub> )	0.5578	0.23488	2.3751**
Family size (X <sub>4</sub> )	-0.72949	0.41022	-1.7780*
Credit (X <sub>5</sub> )	0.79262	0.42097	1.8231*
Association (membership) (X <sub>6</sub> )	0.9127	0.5364	1.70153*
Constant	-3.908	2.198	-1.77798
Sample size = 120			
Log-likelihood function = -26.583			
Chi – square value = 62.23			
Degrees of freedom (df) = 5			
Percentage predicted correct = 90			

*Note: \*statistically significant 10% level, \*\*statistically significant 5% level, Number of observations =120*

which may eventually lead to increase in their income. Family size (X<sub>4</sub>) of the respondents showed negative coefficient (-0.72949) but was significant at 10% level of probability. Meaning that an increase in family size will lead to decrease in women involvement in income generating activities. This could be because the larger the family size, the more responsibility for the women to bear which mostly hinders their engagement in income generating activities. Access to credit (X<sub>5</sub>) had positive coefficient (0.79262) and was significant at 10% level of probability. This implies that a unit increase in this factor could lead to increase in women involvement in income generating activities. This may be because their access to credit is likely to facilitate them to invest more on their activities. Similarly membership of an association (X<sub>6</sub>) showed positive coefficient (0.9127) and was significant at 10% level of probability. This indicates that an increase in number of respondents in an association is likely to increase involvement in IGA. This is because being members of an association with certificate of membership; they have more chance of receiving training and assistance from government that will help to improve their performance in income generating activities. Variable such as religion (X<sub>2</sub>) was not significant. The chi – square value represent R-squared value (R<sup>2</sup>) and it was found to be 62.23%. This implies that 62.23% of the independent variables jointly contributed to the dependent variables. The percentage of accurate prediction was 90% while the log likelihood function was 26.58% (Table 1).

#### 4. CONCLUSION AND RECOMMENDATIONS

The findings of this study indicated that factors such as age of the respondent, level of education, access to credit and membership of an association directly and significantly affects the involvement of women in income generating activities, while family size inversely but significantly affects their involvement in income generating activities. The study recommends that women should be sensitized on the importance of involving in income generating activities as this will help them to be self-reliant. It also recommended that women should be encouraged to attend adult literacy classes as this will help in better organizing and carrying out of income generating activities. In order to improve on their performance, the local government should assist women by linking them with financial institutions so as to acquire loan and women should be encouraged to form cooperative groups for easier access to loans.

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#### COMPETING INTERESTS

Authors have declared that no competing interests exist.

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