

# YOUTH PARTICIPATION IN SUSTAINABLE PRODUCTION AND MARKETING OF MAIZE AND ITS INFLUENCE ON HOUSEHOLD POVERTY IN AFIJIO LOCAL GOVERNMENT AREA OF OYO STATE, NIGERIA.

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## Abstract

Youths are very important resources for every nation especially for sustaining agricultural productivity. They are stakeholders in the development process especially in view of their great resilience, resourcefulness and perseverance. However, youth unemployment is on the rise in Nigeria with 61.6% of youths unemployed. The study examined youth's participation in sustainable production and marketing of maize and its influence on household poverty in Afijio Local Government Area of Oyo State. Data were collected through structured questionnaires using a two-stage sampling procedure. Descriptive statistics, Foster, Greer and Thorbecke (FGT) Poverty index and Logit regression model were employed. With a poverty line of ₦21515.61 per annum, the incidence of poverty ( $P_0$ ) of the respondents in the study area was 0.683 indicating that 68.3% of the respondents in the area were below the poverty line and were therefore relatively consumption poor. The poverty depth ( $P_1$ ) was 0.274 for the respondents in the study area indicating that poverty is not only pervasive but also deeper. The poverty severity index ( $P_2$ ) was 0.266 for the households indicating worsened income distribution among the poor. In addition, age, household size, contact with extension agents positively influenced the poverty status of the household while education, access to credit, access to market negatively influenced youth participation and marketing of maize. Result further revealed that a unit increase in age, education, household membership, farm size, access to credit, contact with extension services, access to market and youth participation will reduce the likelihood of being poor. This is because as age rises above productive level, it leads to a reduction in the volume of farming operations with subsequent reduction in farming income and welfare. Farming households with larger farm holdings are expected to generate more income, which would enhance their consumption level and subsequently improve their household poverty status. Youth participation in production and marketing of maize was found to be statistically and significantly influencing household poverty. Also, households that had access to markets had lower probabilities of being poor than those that did not have, while those without access to market infrastructure had higher probabilities of being poor. Low level of production and entrepreneurship with decreasing involvement of youth in agriculture brought about low level of agricultural skills and limited access to financial resources. The study recommends that education at both primary and secondary level should be given utmost consideration as this will help in giving youths the requisite knowledge needed in the field to venture into the sector.

**Keywords:** Youth, Sustainable Agriculture, Poverty, Participation, Production, Marketing, FGT, Logit regression

## Introduction

Maize (*Zea mays*) is a member of the grass family (gramineae). It originated from South and Central America. It was introduced to West Africa by the Portuguese in the 10th century. Maize is one of the important grains in Nigeria, not only on the basis of the number of farmers that

engaged in its cultivation, but also in its economic value. Maize is a major important cereal crop being cultivated in the rainforest and the derived savannah zones of Nigeria. Maize has been in the diet of Nigerians for centuries. It started as a subsistence crop and has gradually become more important crop. Maize has now risen to a commercial crop on which many agro-based industries depend on as raw materials (Iken and Amusa, 2004). Maize is highly yielding, easy to process, readily digested and cost less than other cereals. It is also a versatile crop, allowing it to grow across a range of agro ecological zones (IITA, 2001). It is an important source of carbohydrate and if eaten in the immature state, provides useful quantities of Vitamin A and C. Maize thrives best in a warm climate and is now grown in most of the countries that have suitable climatic conditions. Rural youth are actively involved in agricultural production in Nigeria but the socioeconomic conditions have constrained them and they lack access to scientific and technological information that could enhance their production capacity.

Agriculture remains fundamental to poverty reduction and economic growth in the 21<sup>st</sup> century (World Bank, 2008). World Bank (2008) report further posits that 75% of the world's poor are from rural areas with majority being involved in farming - an activity which requires sustenance especially by the youth. Agriculture has been an important sector in the Nigerian economy in the past decades, and is still a major sector despite the oil boom. Basically it provides employment opportunities for the teeming population, alleviates poverty and contributes to the growth of the economy. Economic history provides us with ample evidence that agricultural revolution is a fundamental pre-condition for economic growth, especially in developing countries (Eicher and Witt, 1964; Oluwasanmi, 1966; Woolf and Jones, 1969). Ukeji (2003) submits that in the 1960s, agriculture contributed up to 64% to the total GDP but gradually declined in the 1970s to 48% and the decline continued until it was 19% in 1985 as a result of oil glut of the 1980s. Between the decade of 1990-1999, the trend of the sector's contribution to the nation's GDP hovers around 32.55% to 34.32% with a growth rate of 4.1%.

International Food Policy Research Institute (IFPRI) (2008), had noted that the declining importance of agriculture in the Nigerian economy can also be seen in the steady fall in the share of the population residing in rural areas, the share of the labour force employed in agriculture, and the share of the nation's export earning derived from agricultural commodity exports. Interestingly, the relative importance of agriculture declined even though private investment in the sector increased as a share of overall private investment in the country (Manyong et al; 2005). Between 1981 and 2000, aggregate domestic capital investment in agriculture, measured by gross fixed capital formation in the sector, steadily increased as a share of domestic capital investment across all sectors, rising from around 5% early in the period to around 14% during the later year (Manyong et al., 2005; IFPRI, 2008). Economists have traditionally identified three factors of production: land, labour and capital. Capital and labour were wedded to the land, and economic power belonged to those who could control its use. With the industrial revolution, capital became the critical economic factor. In the modern society, the role of labour as a factor of production is becoming increasingly important (Levitan et al., 1972).

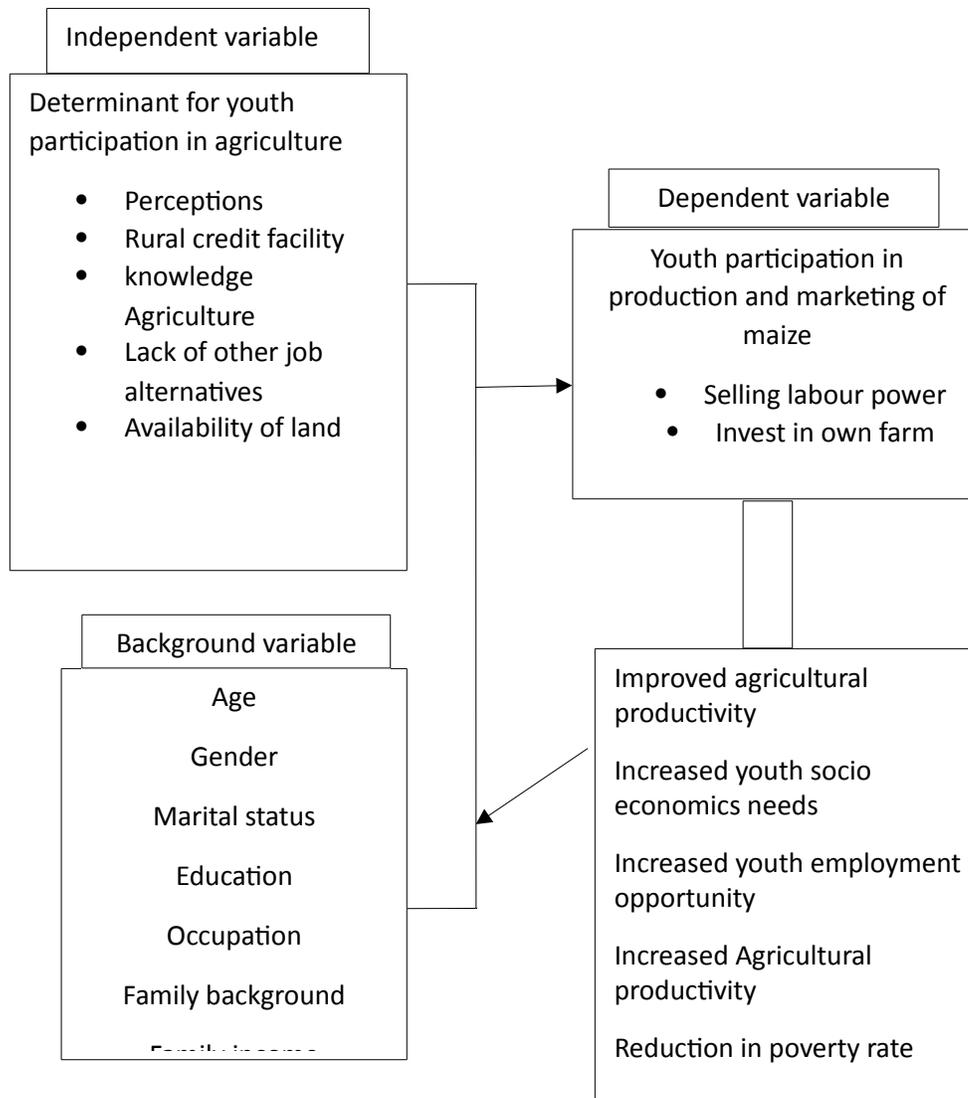
Farm labour is major source of employment opportunities for the rural labour force in Nigeria. Evidence abound that there has been a steady decline in the percentage of farm labour supply in Nigeria. Declining farm labour supply is compounded by the fact that the agricultural sector, with a few exceptions, has the worst poverty conditions (Ruben and van der Berg, 2001). Studies indicate that shortage in farm labour supply results in low farm productivity which eventually culminates in poverty among rural farming communities. This situation has been considered a major problem especially in developing countries like Nigeria (Gebremedhin and Switon, 2001). The size of labour force in a country is determined by the number of people in

the age group of 15-59 years as generally children below 15 years and old people above 59 years do not participate in production activity. According to Otumara (2000) as cited in Onemolease and Alakpa (2009), individuals between the age brackets of 18-40 years were considered as youths. Available evidence suggests an ageing farming population in Nigeria, with an average age of 47 years and life expectancy at 47-50 years in 2008 (NBS 2008 and Oboh et al., 2009).

Youths are very important resources for every nation especially for sustaining agricultural productivity, an important sector for development. The youth is a stakeholder in the development process especially in view of the great assets such as youth, resilience, resourcefulness and perseverance. Unfortunately, this category of people is virtually left out in policies and programmes considerations (FAO, 2009) even though this is a critical stage for this group of people since this is a period of transition into adulthood. For instance, the United Nations (2011) revealed that the unemployment rate of this group globally ranked 12.6% compared with 4.8% as the rate of the adults in 2010. This has the potential of tempting most youth to embark on migration especially to urban centres and beyond for accessing job opportunities. This group of people is over 1.8 billion in the world today, 90% of who live in developing countries, where they tend to make up a large proportion of the population and needs to be empowered since this is an important means of improving food security, youth livelihoods and employment. (FAO, 2009). However, their involvement and participation in this income generating enterprise is abysmally low.

## Conceptual Framework

In modeling youths' participation in production and marketing of maize and how it affects the poverty status of households, a number of variables interplay as depicted in Figure 1 below:



**Figure 1: Conceptual Framework on Youth Participation in Maize Production and Marketing**

## METHODOLOGY

### Study Area

This study was carried out in Afijio Local government area of Oyo state. Afijio is a local government area in Oyo state, Nigeria. It has an area of 722 km<sup>2</sup> and a population of 134,173 at the 2006 census. The population density of the area is 186 persons per square kilometre. Afijio Local Government Area consists of ten (10) wards and it came into existence after the Federal Government carved it from Old Oyo Local Government Area in 1989. The Administrative

headquarter of the Local Government is located at Jobele. It is bounded in the North by Oyo East Local Government Area, Akinyele Local Government Area in the South and Iseyin Local Government Area in the West. The Yorubas mainly dominate Afijo Local Government Area. The indigenes are mostly farmers who had taken the advantage of vast Agricultural land that favours the cultivation of food crops such as maize, guinea corn, yam, cassava, cowpea, soya beans, fruits, tomatoes and cash crops such as groundnuts, cocoa, oil-palm, kola nuts, coffee, orange and citrus. The Local Government Area is a home for one of the State Farm settlements – Ilora farm settlement. A number of tourists attraction centres located in the Local Government areas includes: Ese Oloja Hill (Ilora), Ifaniyi Hill (Oke Isemi), Obanikoro (Ilora), Erugun (Ilu-Aje), Sogidi Lake (Aawe) Igi Omo (Ilora), Odo Eegbe (Fiditi), Yemoja (Akinmorin), Kutanti Shrine (Aawe) among others.

### **Types and Source of Data**

Primary data was collected for the purpose of the study using a well-structured questionnaire which was administered to youth farmers within the age range of 18-35 years in the study area and also by personally interviewing the youth famers through Focus Group Discussion (FGD). Data were collected on socioeconomic characteristics of the respondents (such as age, sex, level of education, marital status, household size, occupation etc.), labour cost, household income, tractors, machines, consumption level of the household, access to credit and membership in groups, institutional factors (access to information and contact with extension workers), attitudinal factors such as lack of interest/passion in farming, quick money syndrome and stigmatization.

### **Sampling Technique and Sample Size**

A two-stage sampling technique was employed in the selection of the respondents for this study. The first stage was the purposive selection of five villages - Aawe, Fiditi, Ilora, Jobele, and Iware from the local government. The selection was based on the intensity of maize production and marketing in the areas. The second stage involved random selection of thirty (30) youth farmers between ages 15 and 35 years from each of the selected villages where maize production is predominantly practised. The reason behind equal number of respondents from the locations was because there was no significant difference in the population across the areas. In all, a total of one-hundred and twenty (120) respondents was recorded for this study.

### **Analytical technique**

A number of statistical tools were used in this study. They include: descriptive statistics, logit regression and summary tables.

#### **Descriptive statistics**

Statistics such as means, table, frequencies, and percentages were used to analyse, summarize and describe the socio economic characteristics of the respondents such as age, sex, level of education, marital status, household size, occupation etc.), labour cost, household income, tractors, machines, consumption level of the household, access to credit and membership in groups, institutional factors (access to information and contact with extension workers), physiological factors such as lack of interest/passion in farming, quick money syndrome and stigmatization.

#### **Logit Regression Model**

The logit regression model was used to analyze the influence of youth participation on household poverty. Logit regression model is based on the cumulative probability function and was adopted because of its capability to deal with a dichotomous dependent variable and a well-established theoretical background. Roopa, 2000 opined that logit regression is a multivariate technique which allows for estimating the probability that an event will occur or not

through the prediction of a binary dependent outcome from a set of independent variables. The logit regression model below was used in estimating the effect of livelihood diversification on poverty status of the households.

$$P_i = F(Z_i) = \frac{1}{1 + e^{-(\beta_0 + \sum \beta_i \chi_i)}} = \frac{e^{\beta_0 + \sum \beta_i \chi_i}}{1 + e^{\beta_0 + \sum \beta_i \chi_i}}$$

Where:

$X_i$  is a set of independent variable

$\beta_0$  is the intercept which is the constant

$\beta_1$  is the coefficient of the variables that influence household poverty as a result of youth participation in agriculture

### The Foster–Greer–Thorbecke (FGT) Measure

The poverty measure that will be used in this analysis is the class of decomposable poverty measures by Foster, Greer and Thorbecke (FGT). They are widely used because they are consistent and additively decomposable (Foster et al., 1984). The measures relate to different dimensions of  $P_0$ ,  $P_1$  and  $P_2$  which will be used for head count (incidence), depth and severity of poverty respectively. The head count index is the proportion of the population for whom income (or other measure of living standard) is below the poverty line. The three measures were based on a single formula but each index puts different weights on the degree to which a household or individual falls below the poverty line. The mathematical formulation of poverty measurement as derived from Foster, Greer and Thorbecke (1984) is estimated as:

$$(y_i, Z) = \frac{1}{n} \sum_{i=1}^q \left( \frac{Z - y_i}{Z} \right)^\alpha$$

Where;  $n$  = total number of households in population

$q$  = the number of poor households

$z$  = the poverty line for the household

$y_i$  = household income

$\alpha$  = poverty aversion parameter and takes on value 0, 1, 2

$$\left( \frac{Z - y_i}{Z} \right)^\alpha = \text{proportion shortfall in income below the poverty line}$$

$\alpha$  takes on value 0, 1, 2 to determine the type of poverty index.

When  $\alpha=0$  in FGT, the expression reduces to:

$$P_0 = \left( \frac{1}{n} \right) q = \left( \frac{1}{n} \right) q$$

This is called the incidence of poverty, describing the proportion of the population that falls below the poverty line.

When  $\alpha=1$  in FGT, the expression reduces to:

$$P_1 = \frac{1}{n} \sum_{i=1}^q \left( \frac{z - y_i}{z} \right)$$

and this is called the Poverty depth which is the proportion of the poverty line that the average poor will require to attain to the poverty line.

When  $\alpha=2$  in FGT, the expression becomes:

$$P_2 = \frac{1}{n} \sum_{i=1}^q \left( \frac{z - y_i}{z} \right)^2$$

This is called Poverty Severity index which is the percentage when multiplied by 100 a poor household's per capita expenditure should increase to push the household out of poverty.

### Construction of the Poverty Line

Poverty line has been defined as the minimum or the cut-off standard of expenditure on food or per capita income below which an individual or household is described as poor (Anyanwu, 1997). According to the Nigeria Living Standard Survey (2009/10), poverty line is a measure that divides the poor from non-poor. Using the mean per capita household expenditure one-third of it gives (separate) the extreme or core poor from the rest of the population while two-third of the mean per capita expenditure separate the moderate poor from the rest of the population. The cummulation of the core poor and moderate poor gives the poor population while the non-poor are the population greater than two-third of the population

In this study, per capita expenditure which is considered more appropriate in past studies because it is consistent and does not change over a period of time when compared to income will be adopted. Therefore, the poverty line will be defined as the two-thirds (2/3) of the mean value of per capita consumption expenditure in the study area. The farm households will be categorized into poor and non-poor group using the two-third mean per capita expenditure (Durojaiye, 1995; World Bank, 1996) as the bench mark. Households whose mean consumption expenditure falls below the poverty line are regarded as being poor while those with their expenditure above the benchmark are non-poor. The poverty line is calculated as below:

$$PCE = \frac{TCE}{HHS}$$

$$MPCHE = \frac{THHE}{TNR}$$

$$PL = \frac{2}{3} \times MPCHE$$

Where:

PCE = Per Capita Expenditure

TCE = Total Consumption Expenditure

HHS = Household Size

MPCHE = Mean Per Capita Household Expenditure

TNR = Total Number of Respondents

THHE = Total Households Expenditure

PL = Poverty Line

## RESULTS AND DISCUSSIONS

### Socio-economic characteristics of Youth farmers

Table 1 shows that majority of the youth farmers (7.4%) are less than 20 years of age. The average age is 28 years. The age range of the farmers varied, 79.3% of the household heads falls between 20-39 years of age, implying that in the study area maize production is done by active and energetic people in the middle age. 76.9% of the household heads in the study area are males while 23.1% of the household heads are females. The result shows that there are more male-headed households in the study area. This is typical of Nigeria households where majority of households is headed by male. The distribution of the level of education of the household heads in the study area showed that majority (43.3%) of the household heads has secondary education while 2.5% of the household heads has tertiary education. Majority (50%) of the respondents participate in farming, 5.8% works as a civil servant and 8.3% of them engages in petty trading while the remaining 15% of the respondents in the study area are artisans. About half (51.7%) of the youth farmers in the area has household size between the range of 6-10 members followed by 34.2% of the youth farmers with household members between 1-5. The average household size of respondents is 6 members.

**Table 1: Distribution of Respondent's Socioeconomic Characteristics**

Variable	Frequency	Percentage
<b>Age (Years)</b>		
< 20	9	7.4
20-39	96	79.3
40-59	11	9.1
≥ 60	5	4.2
<b>Gender</b>		
Male	92	76.7
Female	28	23.3
<b>Educational Level</b>		
No formal education	21	17.5
Primary	44	36.7
Secondary	52	43.3
Tertiary	3	2.5
<b>Primary Occupation</b>		
Civil servant	23	19.2
Farming	60	50
Student	9	7.5
Trading	10	8.3
Artisans	18	15
<b>Household Size</b>		
1-5	41	34.2
6-10	62	51.7
11-15	14	11.7
16-20	3	2.5
<b>Marital Status</b>		
Never married	55	46
Married	53	44
Divorced	8	7
Widowed	4	3
<b>Religion</b>		
Christian	67	56
Traditional	10	8
Islam	43	36

### Pattern of Youth Participation in Maize Production and Marketing in the Study Area

Table 2 shows that majority (72.5%) of the youth owns the land with which they cultivate while the remaining rely on rent or lease. About two-third (69.1%) of the respondents has farm size between the range of 1-10 acres, this shows that majority of the respondents are small scale farmers. As shown by the acre of land under cultivation, majority (44.2%) of the respondents operate small scale farming. About four-fifth (81.7%) of the respondents have access to market. This makes it very easy for them to perform their marketing functions along the value chain.

**Table 2: Pattern of Participation of Youth in Maize Production and Marketing**

Pattern	Frequency	Percentage (%)
<b>Land Ownership</b>		
Yes	87	72.5
No	33	27.5
<b>Farm Size (acres)</b>		
1-10	83	69.1
11-20	35	29.2
21-30	2	1.7
<b>Scale of Operation</b>		
Small	53	44.2
Medium	33	27.5
Large	34	28.3
<b>Nature of Production</b>		
Commercial Farmers	78	65.0
Subsistence Farmers	42	35.0
<b>Maize Seedlings Realization</b>		
Purchased	81	67.5
Free gift	5	4.2
From previous harvest	25	20.8
Others	9	7.5
<b>Access to Market</b>		
Yes	98	81.7
No	22	18.3

### Logit Regression of Factors Influencing Youth Participation in the Production and Marketing of Maize in the Study Area

The log likelihood of -505.5402 and Chi square value of 128.3300 which were both significant at 1% shows that the model fits the data well. About 61% of the variability in the dependent variables were explained by the independent variables included in the model. The variables of age, education, household size, parents' occupation, farm size and farm income exhibited positively significant relationship while youths' dependence status though significant was negatively related. These underscore the relevance of the variables in designing rural youths'

agricultural policies and programmes since they determine the participation of the youths in this enterprise.

Age had a positive coefficient and significant at 5%. The result of the marginal effect implies that a unit increase in age increases the probability of participating by 0.045. This agrees with the findings of Nnadi and Akwiwu (2005) who reported that participation in farming activities increases with age. Increased educational opportunities increased the predicted probability of participating in rural agriculture by the youths. Education informs decision making process. Thus increased education was associated with increased adoption of farm technologies by different researchers (Nnadi and Akwiwu, 2005; Ohajianya and Onu, 2005; Onu, 2005; Matthews-Njoku, 2005; Nkonya *et al.*, 1997). Farm size was positively significant at 1 percent. This implies that the larger the farm size, the greater the probability of participation of youth in agricultural labour among the youths in the study area. Since larger farm sizes have often been associated with higher output and profitability. This therefore, could be an attraction to participation in agriculture among youths. Household size had a coefficient of 0.8700574 and significant at 1%. The result of the marginal effect implies that a unit increase in household size increased the probability of participating by about 0.217. Households with more residents would have greater blocks to overcome; strive for food security and fulfillment of social needs. The result agrees with the finding that women from large households engage in more agricultural activities for survival (Shingi *et al.*, 1980). Parents' occupations had a positively significant relationship with youth participation. This result supports the view that youth whose parents are farmers have greater probability of participating in agriculture than youths whose parents are not farmers. Their parents' occupation is likely to influence their desires, interests and engagements.

On the contrary, the coefficient of income from non – agricultural sources was negatively significant at 1 percent. By implication, the result meant that as income from non- farm sources increases; the tendency of youth participation in agricultural enterprises reduces as they would opt for a more profitable venture. Off-farm employment of farm household members is an important phenomenon throughout the world and it seems to alter on-farm labour supply and engagement (Anderson 2002; Babikir & Babiker, 2007). The dependence status of youths had negative coefficient of -0.3018 and significant at 10%. The result shows that the higher the dependence status of the youths, the lower the probability of youth participation in agriculture. This could be explained by the low level of responsibilities associated with youths who are still tied to the parents/guardians for welfare provision as against youths whose needs are met by them.

**Table 3: Factors Influencing Youth Participation in the Production and Marketing of Maize**

Variables	Co-efficient	Marginal Effects	Z-value
Gender	0.793465	-0.014035	0.34
Age	0.1806965	0.0451685**	-2.19
Marital Status	-0.0233762	0.0058433	-0.62
Household size	0.8700574	0.2174874***	8.20
Education	0.4410295	0.1102437***	5.09
Use of tractor	-0.0806694	0.0201637	-0.49
Non-Farm income	-0.8932299	-0.2232798***	-4.52
Farm size	0.2475837	-0.0618882***	3.56
Access to Credit	0.3466117	-0.0866422	1.45
Extension Visits	0.4945857	-0.1230153	1.15
Types of maize variety	0.8932299	-0.1232798	1.52
Own land	0.145097	0.3290988	0.18
Parent occupation	1.92637	0.7869908**	2.36
Youth dependent status	-0.3018023	0.7896*	-1.71
Constant	-3.370225		-5.89

Number of Observations = 120  
 LR chi<sup>2</sup> (11) = 128.33  
 Pseudo R<sup>2</sup> = 0.6126  
 P-value = 0.0000  
 Log likelihood = -505.5402

Significance level: \*\*\*=1%, \*\*=5%, \*=10%

### Household's Poverty Status

This sub-section presents the relationship between households' characteristics, youth participation in the production and marketing of maize and poverty indices (i.e. poverty incidence, gap/depth and severity) using FGT. The relative poverty index (RPI) approach was adopted for this study. The RPI i.e. ₦21515.61 was computed as 2/3 of the monthly mean *per capita* expenditure of ₦32112.85. Any household with monthly expenditure below the poverty line (i.e. ₦21515.61) is classified as poor while those with expenditure of ₦21515.61 and above are classified as non-poor. Expenditure is known to play a very important role in the poverty level of household because it reflects the true level of actual income. Hence, expenditure is more preferable to income since incidental inflows like remittances and gifts, which do not occur regularly, are part of household income.

### Description of Household by Poverty status

Table 4 shows that 68.33% of the households surveyed were poor while 31.67% were non-poor. It implies that more households fell below poverty line in the study area.

**Table 4: Distribution of Household according to Poverty status**

Headcount	Frequency	Percentage
Non poor	38	31.67
Poor	82	68.33
<b>Total</b>	<b>120</b>	<b>100.00</b>

**Source: Field survey, 2015.**

#### **Summary of Poverty Indices among farming households in the Study Area**

With a poverty line of ₦21515.61, the incidence of poverty (Po) or poverty head-count of the respondents in the study area was 0.683. This is the proportion of the respondents that could not satisfy needs like food, non-food, judge the essential. The value indicated that 68.3% of the respondents in the area were below the poverty line and were therefore relatively consumption poor. The poverty depth (P1) was 0.274 for the respondents in the study area; this indicated that poverty is not only pervasive but also deeper. However, most of those who were poor were very deficient on spending i.e. greatly below the poverty line and require much improvement in spending to reach the poverty line. The poverty severity index (P2) was 0.266 for the households; this high value indicated that poverty is severe in the study area. The poverty severity index is 26.6% means that 32 households out of 120 respondents in the study area were extremely poor compared with the other household.

**Table 5: Summary of Poverty Indices among Farming Households in the Study Area**

Poverty level	Poverty index
Poverty incidence	0.683
Poverty depth	0.274
Poverty severity	0.266

#### **Logit Regression of Influence of Youth Participation in Maize Production and Marketing on the Poverty Status of Households**

Logit regression was used in this study to estimate the influence of youth participation in maize production and marketing on the poverty status of rural household in the study area. This method was adopted in line with other studies by Okurut et al. (2002), Alemayehu *et al.* (2005), Anyanwu (2010), Masood and Nasir (2010) and Adekoya, (2014). From the maximum likelihood estimates of the logit regression, the results show that the model fits the data well. The result of the analysis revealed a chi square value of 44.44 which was significant at 1% ( $p < 0.01$ ). The Pseudo  $R^2$  was 0.4655 and the chi-square value was estimated to be 44.44, suggesting strong explanatory power of the model. This also indicates that variation in poverty status is explained by the (maximum likelihood) estimates of the specified explanatory variables, suggesting that the model as specified, explained significant non-zero variations in factors influencing poverty in the study area. Age, Household size, years of education, farm size, Access to credit, extension visits, access to market, youth participation in maize production and marketing, gender, member of farmer association were all significant at varying level of significance.

Result from the analysis revealed that the coefficient of age (0.3717) was significant and positively influence the poverty status of the household. This implies that a unit increase in age will increase the likelihood that the household will be poor by 0.345. This is because as age rises above productive level, it leads to a reduction in the farming operations with subsequent reduction in income and welfare. This result is in line with apriori expectation as several studies (Rodriguez (2002) and Adekoya (2014)) have identified a positive relationship between age and poverty status. Household size was positively significant and found to influence household

poverty status. Household characteristics and composition play an important role to determine the poverty status of a household. The larger the household size, the poorer the household is likely to be. This is because of more dependants who are unproductive and yet take a big proportion of household income in terms of school fees, medical bills, food and clothing. As revealed by the marginal effect, a unit increase in the size of the farming household by an individual increases the probability that the farm households will be poor by 0.390. Similar finding was obtained by Anyanwu, (2010); Masood and Nasir, (2010); Oyekale et al., (2012); Adekoya, (2014); Ibitoye and Odiba (2015).

However, education which is vital for boosting the productivity of labour was found to be negatively significant to household poverty status. The value of the marginal effect shows that a unit increase in years of formal education reduces probability that maize farming household will be poor by 0.254. This may be attributed to the fact that highly educated household heads have the ability to diversify and adopt improved farming techniques better than the non-educated ones. This will in a way increase the productivity and income of the educated household heads with subsequent improvement in their welfare. Similar findings were reported by Apata *et al.*, 2010; Etim and Patrick (2010); Damisa *et al* (2011); Asogwa (2012). The coefficient of household membership of farmer association is -2.002. This means that household membership of farmer association would reduce poverty depth by 2.002. This implies that the intensity of poverty was lower in a household whose head was a member of a cooperative society or any other farmers' association than in one whose head does not belong to any organization. This might be as a result of various benefits accruable to members of cooperative societies, such as credit facilities, access to improved production inputs and access to information that could enhance their productive capacity. This is similar to the findings were reported by Amaza *et al.* (2007) and Umeh and Asogwa (2011). Furthermore, coefficient of farm size was negative (-3.4822). This implies that the increase in farm size of the maize producing households reduces the likelihood that they will be poor, on the other hand increases the probability that they will rise above the poverty line. The result of the marginal effect reveals that a unit increase in farm size by one hectare increases the probability of a maize farmer rise above the poverty line by 0.557. Farming households with larger farm holdings are expected to generate more income, which would enhance their consumption level and subsequently improve their household poverty status. This finding is in consonance with the findings of Damisa *et al.* (2011); Umeh and Asogwa (2011); Yusuf et al., (2011); Asogwa *et al.*, (2012). Access to credit had significant and negative relationship with poverty status among the respondents. This implies that an increase in access to credit decreases the likelihood that a particular maize producing household will remain poor. This finding is in line with the reports of Apata *et al.*, (2010); Yusuf *et al.*, (2011), Asogwa et al., 2012; 2012b; Adekoya, (2014). Also, the coefficient of access to market (-1.6269) was also found to be significant at 5%, negatively influencing poverty status of maize producing households. This implies that an increase in access to market will reduce the likelihood that maize producing households will be poor. This implies that households that had access to markets had lower probabilities of being poor. This might be because access to markets improves farmers' liquidity and the affordability of the inputs required for production (Tchale, 2009). Youth participation in production and marketing of maize was found to be statistically significant at 5%. The negative relationship with poverty status of households is an indication that the enterprise is capable of reducing poverty in the study area. By implication, youth participation in maize farming stands to be a strong poverty alleviation strategy. The finding of this study is in tandem with the study carried out by Nnadi and Akwiwu (2008).

**Table 6: Influence of Youth Participation on the Poverty Status of Maize Producing and Marketing Households**

Variables	Coefficient	Marginal Effects	Z-value
Gender	0.0562	-0.0140	0.34
Age	0.3717	0.3452***	-3.88
Youth participation	-2.4440	0.4170**	-2.49
Household size	2.4404	-0.3904***	3.60
Education	-1.5910	0.2545*	-1.84
Farmer association	-2.0002	0.5571**	-2.02
Farm income	-4.65e-07	1.16e-07	-0.97
Farm size	-3.4822	-0.5571**	2.42
Access to Credit	-1.2188	-0.0866**	2.15
Extension Visits	0.4946	-0.3304***	3.15
Access to market	-1.6295	-0.3151**	2.07
Constant	-3.3702		-5.89
Number of Observations = 120 LR chi <sup>2</sup> (11) = 44.44 Pseudo R <sup>2</sup> = 0.4655 P-value = 0.0000 Log likelihood = -25.5181			

Significance level: \*\*\*=1%, \*\*=5% and \*=1%

### Factors Militating against Youths Participation in Production and Marketing

Table 7 shows the distribution of factors militating against youths' participation in production and marketing of maize in the study area. From this table, majority (26.7%) of the respondent in the study area attribute the problem to lack of credit. 15% of the respondents attributed the low level of participation to land problem. This might be as a result of unfavourable land tenure system in the study area. In general, all the stated factors affect the high participation rate of youth in the study area. This is in agreement with the observations made by Njoku et al (1999) that youths are trendy and socially active and therefore find it difficult to adapt to the dull and drab existence in the rural areas.

**Table 7: Factors Militating against Youths Participation in Production and Marketing in the Study Area.**

Factors militating	Frequency	Percentage (%)
Cultural factors	2	1.7
Drought	7	5.8
Lack of credit	32	26.7
Lack of infrastructure	15	12.5
Lack of youth encouragement	2	1.7
Land problem	18	15.0
Transportation	8	6.7
<b>Total</b>	<b>120</b>	<b>100</b>

Source: Field Survey, 2015.

## Recommendations

The government should ensure that arable government land is only used for agricultural purpose, fairly distributed among young male and female farmers and that mechanisms to be put in place to help youth have sustainable agriculture. Promotion of land reforms and creation of laws that ensure young people's access to production resources that ensure equal opportunities for young men and women should be adopted. The government and other stakeholders can adopt laws and public policies relevant to young rural people involvement in production and marketing. Such laws and policies should facilitate access to credit by the youth and reduce inequalities in rural areas to ensure young people's access to land. There should be creation of more markets as this will help to reduce the poverty gap as households will spend less on transportation. Education was also found to be an important factor influencing youth participation in production and marketing of maize, hence it should be prioritized by the government. Education at both primary and secondary level should be given utmost consideration as this will help in giving youths the requisite knowledge needed in the field to venture into the sector.

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