



## **THE DETERMINANTS OF YOUTH PARTICIPATION IN RICE PRODUCTION IN YAMALTU-DEBA LOCAL GOVERNMENT AREA OF GOMBE STATE, NIIGERIA**

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### **ABSTRACT**

The study analyzed the determinants of youth's participation in rice production in Yamaltu-Deba Local Government Area of Gombe State, Nigeria. Primary data were collected using structured questionnaire from 110 respondents through multi-stage random sampling techniques. The data were analysed using descriptive statistics such as frequency, percentages and inferential statistics (regression analysis). The study showed that 34.5% of the respondents were in their active age 15– 19 years, most (97.3%) of the youths was male, 2.7% were female and 59.1% had primary education. The finding further revealed that occupational distribution of respondents indicated that majority (86.4%) of the farmers are civil servant and 83.6 % of them are married while 80.91% had less than <5 hectare of land for production of rice in the study area. The result indicated that 39.1%, 29.1% of the respondents had been in rice farming for between 5 – 9 years and 10 - 14 years, respectively. Regression analysis revealed an  $R^2 = 0.77$  which implies that the estimated variables included in the model explained 77% of variation in years of farming experience in rice production and F-value is significant at 1% level of probability. The major constraints agree by the respondents were inadequate incentives to youths farmers (90.9%), inadequate credit facilities (82.7%) and inadequate training and extension services (89.1%). The study recommended that provision of needed resources, provision of soft loan and the extension agents should be motivated to improve their work in the study area.

**Keywords:** Agriculture, Participation, Variation, Youths.

### **INTRODUCTION**

Globally, youth is described as the period in an individual's life that runs between the end of childhood and entry into the world of work (Onuekwusi and Effiong, 2007). Youth is seen as universal stage of development. According to Nigeria's National Youth Development Policy (2007), the youth comprises all young persons of ages 18 – 35 who are citizens of the Federal Republic of Nigeria. Some writers focus on youths from the point of view of behavior, arguing that some young people behavior do manifest themselves through anti-social attitudes and activities which is a threat to society (Onuekwusi and Effiong, 2007). The United Nations defines youth as persons between the ages of 15 – 34 years. When dealing with youth employment, youth includes those persons between the minimum ages at which work is allowed, according to national laws. It is estimated that this group makes up 18% of the global population and 25% of the total working age population (Skuzza, 2005). During World Food Day (FAO, 2008), the theme youth against hunger was given considerable attention together with the significant role that youth can play in food security. An important message of this event is that given adequate training, education and support, young people can be active partners in helping to meet the World Food Summit of harboring the number of hunger by the year 2020. Youths programs play a vital role as a technology transfer mechanism (FAO, 2008).



Skuza (2005) stated that youth is an important and vital segment of human resources which not only today but in future will have to shoulder the responsibility for the development and agricultural activities. Youth are not only the future leaders but is also the present. To produce enough food for the world's 6 billion inhabitants couple with the aim of giving a voice to the world's 1 billion youth (15–24 years old) who if given a better opportunities for education, trainings and employment could funnel their youthful idealism, energy and determination into a positive force for change in Nigeria as a developing country where various agricultural activities is part of the mainstay of its economy. Onuekwusi and Effiong (2007) Nigerian contribution to GDP is nearly about 20.9 and 43.4% and the total employment is generated from agriculture. This sector not only fulfils the daily living requirement of population of the country but is also the main feeder of raw materials to all industries.

Ferry (2006) believed that the interdependence of family, school and community played critical role in shaping the youth's occupation selection. Agriculture as a career choice is burdened with misperceptions and a lack of information and awareness. This is mostly due to uncompetitive wages, the physical aspects associated with work in the sector and the lack of awareness of what careers in the agriculture sector have to offer to youths (Onuekwusi and Effiong, 2007). Youth participation in rice production has been described as a very important structure for land and agrarian reform which will go a long way towards promoting the interest of youth in the agricultural sector of the economy (Olujide, 2008). Skuza (2005) describes youth as the constituent of a potential agricultural development. Skuza (2005) opined that in Nigeria, youth formed a very significant proportion for rural communities for which their existence and potentials are well known. They constitute a large component of a country's population and contributed a lot to the development of the nation and in particular their local communities. Ife (2010) describes that Nigerian rice production as still being carried out through the use of physical strength, which declines with age. This, according to him, has been observed as one of the major constraints to rice production in Nigeria. Participation of youth in agriculture especially staple foods production such as rice is vital to facilitate the production of food and the improvement of nutrition (Ife, 2010).

According to Ife (2010), the roles of mobilization to youth's participation in rice production can never be over emphasizes because rural youths can be made productive both to themselves and to their communities. He argues that such rural mobilization could enhance the orientation of the mind of young rural people by promoting positive attitude towards the worth and dignity of labour. It would also promote the status of farming by giving young people opportunities, profitable enterprises and improving the lot of the community through service projects. Evidence has however, showed that a number of factors militate against youth participation in rice production efforts to ensure transformation in behavior as well as their participation in rural community development activities (Ife, 2010). Due to the enormous potential known to be considerably underutilized, it becomes obvious to identify where youth participation in rice production could be utilized for a desired change in the rural areas and the country at large. Youth with sound physical and mental health are the active population of any nation. Hence, their participation in agricultural activities goes a long way in shaping the developmental height of the nation (Dadu *et al.*, 2009). One of the major setbacks of rice production programs is attributed to the inability of the federal government to integrate youths into the mainstream of the numerous rice production activities implemented over the years (Dadu *et al.*, 2009).

For a country to attain economic stability the agricultural sector must be vibrant and the youths encouraged in imbibing farming activities as a noble profession (Dadu *et al.*, 2009). Youths have the potential to overcome some of the major constraints to expanding rice



production activities in developing countries such as pest control, genetic improvement and fertilizer supply because they are often more open to new ideas and practices than adult farmers. They play an important role in awareness rising on different subjects Ferry (2006) mobilizing the youths for national development is a common phenomenon amongst the Western and developing countries. In such countries as Great Britain, Netherlands, Denmark, Germany, the United State of America and Tanzania, the participation of youths in agricultural production activities through youth programs had contributed significantly to agricultural development and empowering the citizenry and youths to always meet the full needs and deep seated aspiration to be self-sufficient in food production (Dadu *et al.*, 2009). Indeed, since the youths are the future of any country, it is useful to develop them into patriotic citizens, future progressive farmers and better citizens. Rice is an important food and cash crop in Nigeria. Rice serves multipurpose roles. It immensely contributes to internal and external African sub-regional trade as well as food security for the nation. Rice contribution in Nigeria has been on the increase over the year (Ferry 2006; World Bank, 2004). As a result of urbanization, rice constitutes a major portion of the expenditure on cereals based diets of most Nigerians.

Rice production over the years has been inadequate to bridge the demand/supply gap, thereby causing the country to result to imports. The rising import value of rice resulted in compelling government to place an embargo on its importation in 1985, after the lifting of the embargo in 1995, Ferry (2006) reported that 34.4 billion naira was spent on rice imports between 1995 and 1999. Rice production predominantly occurs in the guinea savannah zone of the country sometimes referred to as the middle belt region. It is also reported that average yield of upland and lowland rain-fed in Nigeria is 1.8 ton/ha while that of the irrigation system is 3.0 ton/ha. This appears low compared with 3.0 ton/ha for upland and lowland system and 7.0 ton/ha for irrigated system in countries like Cote d'Ivoire and Senegal (Skuza, 2005).

The broad objective of the study was to examine the youth's participation in rice production in Yamaltu-Deba Local Government Area of Gombe State. The specific objectives are to: describe the socio-economic characteristics of youth participating in rice production; determine the effects of socio-economic factors on youth participation in rice production; identify the constraints affecting youth participation in rice production.

## **MATERIALS AND METHODS**

### **The Study Area**

Yamaltu-Deba local Government Area (LGA) is located in central part of Gombe State about 26km away from Gombe town and lies between Longitude  $11^{\circ}15'$  west and  $11^{\circ}35'$  East, Latitude  $10^{\circ}35'$  south and  $10^{\circ}45'$  North of the equator. It covers an estimate land area of 2840.51km<sup>2</sup> and has a population of 248,134. The major economic activity of the area is agriculture, which include both crop and livestock production and crop mainly grown include maize, sorghum, millet, rice and groundnut while animal reared in the area include cattle, sheep and poultry (GSADP, 2011).

### **Sampling Techniques**

Multi-stage sampling procedure was used for the selection of villages and respondents. In the first stage, 11 wards of Yamalt-Deba LGA are considered. In the second stage, one village was purposely selected from each ward that cultivated rice and also easily accessible. In the third stage, 10 youths were randomly selected in each village. A total of 110 respondents were used as the sampling size.

### **Method of Data Collection**

The respondents of this study are youth's farmers from Yamaltu-Deba (LGA). The primary data used for this analysis were collected by means of structured questionnaire



administered to respondents for the purpose of this study. Only areas that were easily assessable was consider, the reason for this decision were to pay attention to those who were more interested and concerned by the incidence of poor participation of youths in rice production.

### **Tools of Analysis**

Descriptive statistics such as frequency and percentage was used to analyze objectives one and three while inferential statistics: regression model to analyze objective two.

The regression model used is express as follows:

$$\text{Logit (p)} = \ln \frac{p}{1-p} \quad \dots(1)$$

where;

$$\frac{p}{1-p} = \frac{\text{probability of event occurring}}{\text{probability of event not occurring}} = \text{the odds ratio} \quad \dots(2)$$

The model is therefore:

$$\text{Logit (p)} = a + b_1X_1 + b_2X_2 + b_3X_3 + \dots + b_9X_9 + e \quad \dots(2)$$

where;

Y = level of Participation paddy rice farming (average score);  $\alpha_0$  = Constant;  $\alpha_1 - \alpha_8$  = Parameters to be estimated;  $X_1$  = Age (years);  $X_2$  = Sex (0=Female, 1=Male);  $X_3$  = Level of education; (1=primary, 2=secondary, 3=tertiary);  $X_4$  = Farming experience (years);  $X_5$  = Size of farm income (hacters)  $X_6$  = Access to land (1=yes, 0 = no);  $X_7$  = Secondary occupation (0=none agriculture, 1=agriculture);  $X_8$  = Number of Extension visit;  $X_9$  = Current level of capital (₦); e = Random error term

## **RESULTS AND DISCUSSION**

Table 1 the study reveals that the age of the respondents 25.5%, 34.5% were between 10 – 14 years and 15 – 19 years, respectively, and only 7.3% of the respondents had 25 and above years. The findings reveal that majority of the youths were at the productive age where their energies could be harnessed and utilized for productive venture in agriculture especially rice production. Thus, it could be concluded that the youth in Yamaltu/ Deba LGA were full of life and vigour and can contribute their efforts; physically, mentally and otherwise to boost rice production (Adebayo, 2006). The study further revealed that majority (97.3%) of the respondents was male while 2.7% were female. According to Adebayo (2006) gender had no barrier to active participation in rice production activities. However, Oladeji *et al.* (2003) observed that it is generally believed that males are often more energetic and could readily be available for energy demanding jobs like rice farming. The low percentage of the female youth participating in rice production could be attributed to the fact that female in the study area usually participated in several other activities outside farming like food vendoring, hair dressing etc. The marital status indicated that 16.4 % of the respondents were single while majority (83.6%) is married. Since most of the respondents were married, they could have more time to learn new skills as well as save enough money for rice production (Oladeji *et al.*, 2003). The educational status showed that 59.1%, 24.5% and 16.4% had primary, secondary and higher education respectively. The implication of education in agricultural production according to Arnon (2007) is that education is an important socio-economic variable and a form of human capital for agricultural development. Similarly, Ogunbameru (2001) noted that education will likely enhance the adoption of modern farm technologies by youth and thereby sustaining a virile farming population. Ojuekaiye (2001) posited that education is an important socio-economic factor that influences farmer's decision because of its influence on farmer's awareness, perception, reception and the adoption of innovation that can bring about increase in production. Since a high percentage of the youth were educated, their education is expected to enhance adoption of recommended rice production practices in the study area. Household





size indicated that 41.8% of the respondents had 1 - 5 people in their family, 30.9%, 16.4% of them had 6 – 10 people and 11 - 15 people in their families respectively. This goes in line with Ogunbameru (2001) that majority of the respondents had low household size is understandable because they are youth and since they have latent energy, rice production will increase and food security is assured. The occupational distribution of respondents indicated that 86.4% of the respondents are civil servants who combine their job with farming and goes in line with Bakare (2003) stated that civil servant had advantage of combining their work with farming, thus are innovator in terms of adaptation to new technologies. The result further indicated that 10.0% of the respondents had been in rice farming for less than 5 years while 39.1%, 29.1% of the farmers had been in rice farming for between 5 – 9 years and 10 - 14 years respectively. With the above farming experience of the respondents, it is expected that the respondents will be able to make sound decisions as regards resource allocation and management of their rice farms. One area where youth contribute greatly is in the area of leadership and politics. Youth have been noted to be less conservative in their nature. This gives credence to their being more receptive to change according to (Adesope, 2009).

Table 2 indicated that the double – log function were found to be the best fit and therefore chosen as the lead equation with  $R^2 = 0.77$  which implies that the estimated variables included in the model explained 77% of variation in the margins of respondents years of youths participation while the rest 23% of the variation were due to error or is not captured in the model. The F-value of 9.32 was significant at 1% level of probability. Result of the analysis further revealed that age, farm size, years of secondary occupation, output per kg, sex, number of extension visit, years of education and current level of capital had positive coefficient related to the years of youths participation in rice production and all the variables except household size were significant at 1% level of probability. The study further, indicated that 0.145, 0.189, 0.073, 0.063, 0.029, 0.034, 0.048 and 0.014 unit increase in  $x_1$ ,  $x_3$ ,  $x_4$ ,  $x_5$ ,  $x_6$ ,  $x_7$ ,  $x_8$  and  $x_9$  respectively will bring about one unit increase in respondents years of youths participation in rice production. On the other hand, household size had negative coefficient related to years of youth's participation and statistically not significant, implying that household size has no significant effect on the years of youth's participation in rice production in the study area. These goes in line with Adebayo (2006) stated that age was positively significant at 5% level of probability, implying that younger youths tend to participated in rice production than the older ones. This result agrees with the works of Brown (2002) who reported that young farmers tended to be more flexible in their decision, participated in adoption of new ideas more readily because of anticipated longer life span within which the investment in new technology would pay off. Hence, the expectation was that many young farmers would be adopters while the older farmers would be non - adopters. The regression results showed that access to source of capital was positive and significant at ( $p < 0.01$ ). This infers that accessibility to capital would encourage youths' participation in rice production.



**Table 1:** Socio-Economic Characteristics of the Respondents

| Variable                           | Frequency | Percentage |
|------------------------------------|-----------|------------|
| <b>Age</b>                         |           |            |
| < 10                               | 24        | 21.8       |
| 10 – 14                            | 28        | 25.5       |
| 15 – 19                            | 38        | 34.5       |
| 20 – 24                            | 12        | 10.9       |
| 25 and above                       | 8         | 7.3        |
| <b>Sex</b>                         |           |            |
| Male                               | 107       | 97.3       |
| Female                             | 3         | 2.7        |
| <b>Marital Status</b>              |           |            |
| Married                            | 92        | 83.6       |
| Single                             | 18        | 16.4       |
| <b>Educational Status</b>          |           |            |
| Primary                            | 65        | 59.1       |
| Secondary                          | 27        | 24.5       |
| Tertiary                           | 18        | 16.4       |
| <b>Occupation</b>                  |           |            |
| Trading                            | 95        | 86.4       |
| Civil Servants                     | 15        | 13.6       |
| <b>Household Size</b>              |           |            |
| 1 – 5                              | 46        | 41.8       |
| 6 – 10                             | 34        | 30.9       |
| 11 – 15                            | 18        | 16.4       |
| 16 – 20                            | 9         | 8.2        |
| 21 and above                       | 3         | 2.7        |
| <b>Years of Farming Experience</b> |           |            |
| < 10                               | 11        | 10.0       |
| 10 – 19                            | 43        | 39.1       |
| 20 – 29                            | 32        | 29.1       |
| 30 – 39                            | 18        | 16.4       |
| > 39                               | 6         | 5.4        |
| Total                              | 110       | 100        |

Source: Field survey, 2015

According to Nwagbo (2001) reviewed that high volume of capital, would readily attract adoption of more of the technologies involving extra costs. Years of experience was positive and significant ( $p < 0.01$ ) implying that the more years of participation in rice production the greater the level of experiences. According to Chidebelu (2001) opined that the variable of years of experience was positively related to youths participation at 1%, implying that the more the farming experience, the more the youths participated in rice production in the study area.



**Table 2: Socio-economic Factors that affects Youths Participation in Rice Production**

| Variables                                 | Coefficients | St Error | t                   |
|---|--------------|----------|---------------------|
| Constant                                  |              | .139     | 3.007               |
| Age (X <sub>1</sub> )                     | 0.145        | .2498    | 1.723*              |
| Household size(X <sub>2</sub> )           | 0.377        | .8939    | 2.371**             |
| Farm size (X <sub>3</sub> )               | 0.189        | .3557    | 1.882*              |
| Years of sec Occupation (X <sub>4</sub> ) | -0.073       | .1204    | -1.649*             |
| Output/Kg (X <sub>5</sub> )               | 0.063        | .1031    | 1.637*              |
| Sex (X <sub>6</sub> )                     | 0.29         | .0856    | 0.295 <sup>NS</sup> |
| No. of Ext. visit (X <sub>7</sub> )       | 0.034        | .0793    | 2.333**             |
| Years of experience (X <sub>8</sub> )     | 0.48         | .2299    | 0.479 <sup>NS</sup> |
| Capital (X <sub>9</sub> )                 | 0.014        | .0328    | 2.341**             |
| R <sup>2</sup> =                          | 0.77         |          |                     |
| F =                                       | 9.32***      |          |                     |

Source: Field Survey, 2015; \*\*\* = Significant at 1 %; NS = Non- significant.

Table 3 showed that the constraints agree by the respondents include inadequate incentives to youths farmers (90.9%), inadequate credit facilities (82.7%), inadequate training and extension services (89.1%), lack of capital (67.3%) and lack of infrastructure in rural area (63.6%). Other problems were poor returns on investment (54.5%), non-lucrative nature of agriculture (57.2%) and transportation problems (51.8%) while majority of the respondents disagree that they parent will not support them (91.82%), poor agricultural insurances (95.5%) and lack of access to tractors (95.5%) in the study area. These problems can be a serious barrier to rice production outputs because all the respondents were small-scale farmers in supporting the above findings Adekunle *et al.* (2009) said there are economic, social and environmental factors reducing rural youth participation in agricultural production. Economic factors such as low farming profit margins, lack of agricultural insurance, initial capital and production inputs. Social factors include public perception about farming and parental influence to move out of agriculture etc. Environmental issues include inadequate land, continuous poor harvests and soil degradation. These findings are largely in agreement with the results obtained from the interviews conducted with selected youth leaders. The results further reveal that economic based constraints seem to be the most important factor. Also this supports the generalization that youth whose parents are farmers have greater predicted probability of participating in agriculture than youths whose parents are not farmers. The background and orientation of the youths by virtue of their parents' occupation would influence their desires, interests and engagements. This implies that participation in rural agricultural activities increased by 0.2% with a unit increase in parents' income. High income from farming could overwhelm youths into developing much interest in farming (Karki and Bauer, 2004).



**Table 3:** Constraints of Rural Youths Participation in Rice Production

| Constraints                      | Strongly Agree |      | Agree |      | Disagree |       | Strongly Disagree |      | Undecided |   |
|----------------------------------|----------------|------|-------|------|----------|-------|-------------------|------|-----------|---|
|                                  | F              | %    | F     | %    | F        | %     | F                 | %    | F         | % |
| Agriculture non-lucrative.       | 40             | 30.4 | 63    | 57.2 | 7        | 6.43  | -                 | -    | -         | - |
| My parent will not support me.   | 3              | 2.73 | 2     | 1.82 | 101      | 91.82 | 4                 | 3.63 | -         | - |
| Lack of initial capital.         | 36             | 32.7 | 74    | 67.3 | -        | -     | -                 | -    | -         | - |
| Poor returns on investment.      | 50             | 45.5 | 60    | 54.5 | -        | -     | -                 | -    | -         | - |
| Poor basic farming knowledge     | 15             | 13.6 | 45    | 40.9 | 50       | 44.5  | -                 | -    | -         | - |
| Inadequate incentives to youth   | 10             | 9.1  | 100   | 90.9 | -        | -     | -                 | -    | -         | - |
| Poor Agricultural Insurances.    | -              | -    | -     | -    | 105      | 95.5  | 5                 | 4.5  | -         | - |
| Lack of access to tractors. -    | -              | -    | -     | -    | 105      | 95.5  | 5                 | 4.5  | -         | - |
| Transportation problems.         | 57             | 51.8 | 53    | 48.2 | -        | -     | -                 | -    | -         | - |
| Inadequate credit facilities.    | 10             | 9.1  | 91    | 82.7 | 9        | 8.2   | -                 | -    | -         | - |
| Poor storage facilities.         | -              | -    | 8     | 7.3  | 100      | 90.9  | 2                 | 1.8  | -         | - |
| No future in rice production.    | -              | -    | -     | -    | 98       | 89.1  | 12                | 10.9 | -         | - |
| Farmers are not respected.       | -              | -    | 7     | 6.3  | 95       | 86.4  | 8                 | 7.3  | -         | - |
| Insufficient land.               | 10             | 9.1  | 5     | 4.55 | 91       | 82.7  | 4                 | 3.64 | -         | - |
| Lack of infrastructure           | 34             | 30.9 | 70    | 63.6 | 6        | 5.5   | -                 | -    | -         | - |
| Inadequate training & Extension. | 9              | 8.2  | 98    | 89.1 | 3        | 2.7   | -                 | -    | -         | - |

Source: Field survey, 2015

## CONCLUSION AND RECOMMENDATIONS

The study concluded that the rural youth's participation in rice production was not encouraging in the study area. Also, youths participation were determined by such factors as age, education, marital status, family size, occupation, extension visit and source of capital and the regression analysis revealed  $R^2$  value of 77% (variation in years of youths participation in rice production) meaning that the socio-economic factors used in the model affects youths participation in rice production directly.

Based on the findings of the study, the following recommendations were proffered; the youths participated in rice production should be helped and be encouraged by relevant authorities through the provision of needed resources to alleviate the constraints. Soft loan should be made available to young rice farmers. The rural banking scheme as well as other micro-credit agencies should be encouraged. The extension agents should be motivated to improve their work in terms of more coverage in the studied area. Social amenities such as road, electricity and water etc. should be provided by government in the study area.

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