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DETERMINANTS OF YOUTH PARTICIPATION IN FOOD CROPS PRODUCTION IN SONG LOCAL GOVERNMENT AREA OF ADAMAWA STATE, NIGERIA

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Abstract

The study examined the Determinants of Youth Participation in Food Crops Production in Song Local Government Area of Adamawa State, Nigeria. The specific objectives were to describe the socio-economic characteristics of the youth, examine the determinants of youth participation in food crops production and identify constraints faced by the respondents. Data were collected with the aid of a structured questionnaire administered to 121 randomly selected respondents. Analytical tools used in the analysis of data were descriptive statistics and logit regression. Results showed that 55.38 %, of the respondents were in the range of 18 – 29 years with mean age of 27 years, 58.68% were married with the mean household size of 3 people respectively. Also, 95.87 % were literate and attained one form of formal education or the other with mean annual income of ₦185,911. Furthermore, 87.60% participated in food crops production, 71.69 % of the respondents had 1 to 5 years of experience with mean farming experience of 7 years, 75.47 % cultivated less 3.44 hectares of farm land with an average farm size of 2.5 ha. Logit regression result revealed that 82.27 % of the variations in the participation of youths were explained by the variables in the model. Marital status, farm size, income and education were the major determinants of youth participation in food crops production. Inadequate capital, poor government attention on agricultural sector, poor roads and rural infrastructure and inadequacy of inputs at the right time were the major constraints to youth participation in food crops production. Agricultural sector be given priority attention by government, re-introduction of subsidy on inputs and formation of viable cooperative groups to facilitate access to farm credit were recommended in the paper.

Key words: *Youth participation; Food Crops production, logit Adamawa State*

INTRODUCTION

In Sub Saharan Africa, agriculture suffered a relative neglect in terms of government expenditure and volume of developmental assistance for two decades. The sector is seen to play a key role in poverty reduction and food security with great potential for impacting on nutrition and unemployment, but who wants to farm?[19]. Factors pushing many nations to pursue national policy goals on food security include the rising unemployment among the youth, the dwindling prospects of the sector where much of the World's food is produced by conservative ageing small-scale farmers [12]. Young people constitute a high and increasing population of the African continent with around 70 percent of the total population under 30 years[16]. According to International Labour Organization, [15], 60% of African unemployed people are youth. Nigeria is largely an agrarian society and like many countries of Sub-Saharan Africa, it has a predominantly young population much of which resides in the rural areas. The current Nigerian unemployment rate remain high at 19.7% with the youth accounting for 75 %, about three times the average for Sub-Saharan African countries and the global average of 12% [20].

Agriculture possess significant untapped development and employment creation potential, but despite this ample potential to provide income generating opportunities for the youth, challenges related to their participation in this sector and more importantly, options for overcoming them are not extensively documented [12].

Participation defies a single definition; it is the act of taking part in an activity or event, it is the process during which individuals, groups and organizations are consulted about or have

the opportunity to become actively involved in a project or programme of activity. The term is premised on the basic need approach and varies according to the perspective applied, this study adopted the social movement perspective which identified participations primary goal as one of a process which an individual or group involves in an activity or event from a thorough, conscious decision making process to handle challenges and influence the direction of their own lives. An empirical study of youth's involvement in food crops production is necessary because the agricultural sector is at risk, it is confronted with a critical need for new hands and use of modern techniques of farming over the current ageing farmer population that is fast depleting and the youths who are supposed to replace them are either withdrawing or reluctant to go into farming as a profession, [6].

The term 'youth' is often understood to be the period of transition from childhood to adulthood encompassing process of sexual maturation and growing social and economic autonomy [16].

For operational purposes the term is usually defined with reference to age bracket; the United Nations Organization, UNO applies the age bracket of 15 to 24 years for their work on youth, the Commonwealth uses 15 - 29 years while Nigeria uses the age category of 18 - 35 years [21], [23].

Literature on the socio-economic characteristics of youth indicates a prevailing trend by which rural youth assumes adult responsibilities much earlier than their urban counter- parts.

Youth in food crops production has not been a popular subject for review in the past, current interest is stimulated by the compelling need to solve the ever increasing rate of youth unemployment [3]. A study by Adebayo, (2010) [2] on Constraints to Participation in Income Generating Enterprises among Youth in Birnin-Gwari Local Government Area of Kaduna State, Nigeria revealed that most of the participants were male with only 40 % in full time participation while 60 % participated part time. Age, sex and extent of participation were the significant variables influencing participation in agricultural activities. Inadequate capital, poor storage facilities, high price of inputs, poor market outlets, absence of good roads and land tenure system as some of the major constraining factors to youth participation in agricultural activities; other factors include inadequate credit facilities, poor return to agricultural investment and lack of insurance for produce during glut or natural disaster and negative perception on farming as some of the major problems hindering youth's involvement in agricultural activities[14].

Young people in Africa are increasingly reluctant to pursue agriculture based livelihood due to a combination of factors including the de-skilling of rural youth, the downgrading of farming and rural life, the chronic neglect of small scale agriculture, rural infrastructure and the problem that young rural people increasingly have in getting access production resources while still young[24].

Considerable researches conducted in Africa on youth revealed that only 6 % addressed agriculture, livelihood and unemployment or child labour[19]. In Nigeria, data on rural youth participation in agriculture are scarce, the few studies available on food crops production focused mainly on their parents while the youths who constitute a large proportion of the productive force were neglected [9]. This dearth of data on youth production activities leaves a huge gap which necessitates this study on Determinants of Youth Participation in Food crops production in Song Local Government Area of Adamawa State, Nigeria. The specific objectives were to describe the socio-economic characteristics of youth in the study area; examine determinants of youth participation in food crops production and identify constraints faced by respondents in food crops production in the study area.

MATERIALS AND METHODS

The study was conducted in Song Local Government Area of Adamawa State, Nigeria. It is situated in the North-eastern part of the state and shares boundaries with Gombi and Hong Local Government Areas to the north, Maiha to the east, Girei and Fufore to the south

and Demsa and Shelleng Local Government Areas to the west. It has (6) districts namely, Zumo, Song, Mboi, Waltadi. Suktu and Ditera respectively.The people of the area are predominantly farmers with significant number engaged in trading. The major food crops grown in the study area are maize, cowpea, sorghum, millet, rice and cassava [1]. The data were collected from primary source and were obtained through the aid of structured questionnaire administered to the respondents in the selected communities of the study area.

For the study, three out of the six districts of the Local Government Area were selected purposively due to high agricultural production activities.

From each of the three districts, three villages were selected based on high participation in food crops production activities. A list of 458 youth was obtained from the village youth leaders in the nine villages out of which one hundred and thirty (130) were randomly selected in proportion to their population in each of the villages; however 121 of the questionnaires were returned and used for analysis. Data collected were analyzed using descriptive statistics and inferential statistics (Logit regression). The descriptive statistics was used to address objectives (i) and (iii).The logit regression model was used to analyze objective ii of the study. Logit regression is a qualitative response model used widely to investigate factors affecting an individual's choice from among two or more alternatives [11], [23]. The model is specified as:

$$Pi = P(Y = \frac{1}{Xi} = \beta 0 + \beta i Xi, \mu i$$
$$= 1,2 \ldots . n \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots (1)$$

where:

$Pi = P(Y = \frac{1}{Xi}$ is the probability of the i^{th}youth participating in food crops production and

$Y = 1$ means participation; $Y = 0$ means otherwise

Xi = explanatory variables,

β_0 = the intercept

βi = the corresponding coefficient and

Ui = error term

n = sample size

Variables and their expected coefficients is contained in Table 1.

Table 1. Variables used for the Logit Regression, their Units and expected Signs

Variable		Unit	Expected sign
Dependent variable	(Y)	Dummy 1 = participated, 0 = otherwise	
Primary occupation	(X_1)	1=farming, otherwise=0	+
Marital status	(X_2)	1= married, 0=otherwise	+
Education	(X_3)	Years of schooling	+
Household size	(X_4)	number of people	+
Farm size	(X_5)	Hectare	+
Income	(X_6)	Naira	+

Source: Field survey 2016

RESULTS AND DISCUSSIONS

Socio-economic Characteristics of Respondents

Socio-economic characteristics of any society helps in understanding the type and nature of their livelihood and social life for ease of decision making [13]. The results in Table 2 showed that 55.38 %, of the respondents were in the range of 18 – 29 years, 44.63% were in the age bracket of 30 - 35 years with mean age of 27 years respectively. The result revealed that respondents were in their active years an advantage for providing quality labour as they are more efficient in labour tasking jobs, and have greater propensity and willingness to explore new ideas, concepts and technologies. The result is in agreement with the works of [5], [22] and [18] and who reported the propensity of young farmers to technology adoption of innovations in agriculture. The result also revealed that 58.68% were married, 39.66 % were single and 1.65% were divorced respectively. The high participation in food crops production by married youth can be attributed to the concern for household welfare

and food security following marital responsibilities. Youth especially those from rural areas enjoy earlier and greater involvement in work roles and have opportunity of becoming economically independent earlier than their urban counterparts [17]. On household size, 81% of the respondents had 1 to 5 persons and 19% had above 6 people with the mean household size of 3 people. The moderate household size might be that, respondents were still young and relatively have few dependents. Educational level of respondents revealed that 95.87.% were literate, with those who had post-secondary education accounting for 52.89%, secondary education (38.01%), 4.97% had primary education while 4.13% had no formal education. This implied that most of the respondents had moderate knowledge necessary for understanding modern farming techniques, adoption of innovations and application. The income distribution of respondents as shown in Table 2 revealed that majority 49.58% had income ranging from ₦300- ₦400,000, and 33.88% earned less than ₦ 300,000 income, while 16.52% had income above ₦400,000. The mean income of the respondents was ₦185,911, an indication that the respondents derived some economic benefit which helped in sustaining their livelihoods.

Table 2. Socio-economic characteristics of Respondents

Variable	Frequency	Percentage	Mean
Age			
18 -23	25	20.67	
24 – 29	42	34.71	
30 – 35	54	44.63	27
Marital status			
Married	71	58.68	
Single	48	39.67	
Divorced	2	1.65	
Total	**121**	**100**	
Household size			
1 -5	98	81	
6 – above	23	19	3
Total	**121**	**100**	
Educational level			
Non-formal	5	4.13	
Primary	6	4.97	
Secondary	46	38.01	
Tertiary	64	52.89	
Income in Naira			
<300,000	41	33.89	
300 – 400,00	60	49.58	185,911
400,000 – above	20	16.53	
Total	**121**	**100**	

Source: Field Survey, 2016

Participation in Food Crops Production by Respondents

The distribution of respondents based on participation in food crops production is shown in Table 3 indicated that 87.60% participated in food crops production and 12.40% of the respondents did not.

The high participation may be due to quick turn over from crops production partly as a result of early maturing varieties and ready market for crop produce.

The result conforms to [8] and [14] who reported youth who were engaged in farming were mostly involved in food crops production. On farming experience, the result showed that 71.69 % of the respondents had up to 1 to 5 years of experience, 28.31 % had above 6, with the mean farming experience of 7 years.

This may be attributed to the fact that most of them have rural farming background and had noted economic benefits derived from farming from their parents. Farm size distribution of the respondents showed that 75.47 % cultivated between less than 1 to 3.44 hectares of farm land while25.53% cultivated above 3.5 ha with an average farm size of 2.5 ha.

This study showed that youth participation in food crops production was on small-scale basis.

Determinants of Youth Participation in Food Crops Production

Factors influencing youth participation in food crops production was evaluated using Logit regression. VIF test result and estimated logit result with Diagnostic statistics are contained in Tables 4 and 5.

The estimated VIF with respect to each variables was greater than unity but less than the threshold level of 10 (Table 4).

The result suggests that the explanatory variables specified in the model do not cluster together or exhibit multicollinearity tendencies. This implies that the estimates of the model to an appreciable extent are consistent and unbiased, stable over time.

Table 3. Respondents participation and associated Characteristics

Variable	Frequency	Percentage	Mean
Participation in food crops production			
Yes	106	87.60	
No	15	12.40	
Total	**121**	**100**	
Farm experience(years)			
1 -5	76	71.69	
>6	30	28.31	7
Total	106	100	
Farmsize in hectares			
<1	17	16.04	
1.5 – 2.44	23	21.69	
2.5 – 3.44	40	37.74	2.5
3.5 – 4.44	17	16.04	
4.5 – above	9	8.49	
Total	**106**	**100**	

Source: Field Survey, 2016

Table 4. Variance Inflating Factor(VIF) Test Result

Variable	VIF estimate
Primary occupation	1.085802
Household size	1.434467
Farm size	1.466137
Literacy	1.156370
Income	1.120925
Marital status	1.256062

Source: Field Survey, 2016

The diagnostic statistics of the estimated model (Table 5) revealed that the loglikelihood ratio of 9.8982228 is significant at 1% probability level. This indicates that the specified logit model has a strong explanatory power. The pseudo R^2 of 0.8227 showed that implying that 82.27 % of the variations in the dependent variable were explained by the variables in the model. Furthermore, Hosmer- Lemeshow test was not significant (model is correctly specified), goodness of fit was also significant and the model correctly explained 97.52%.

All the estimated coefficients carried the expected positive signs, all the variables except occupation were statistically significant at various probability levels. Marital status was significant at 10%level and a unit increase will increase the odd of participation by 3.825%.

Marriage imposes the responsibility on household heads to cater for the needs of their families in the provision of food, shelter and clothing. Food crops production provided for such opportunity in the study area. Productivity and the efficiency of the

household through couples' specialization in specific skills and duties in addition to the fact that married couples may be more easily able to draw on relatives for help like farm credit. The findings is in tandem with [4], [7] and [23]. The coefficient for education was significant at 5%. A unit increase in education will increase participation by 20.51% in food crops production by youth holding other factors constant. The explanation for this might be that, the farm serves as a platform to practice theoretical knowledge acquired from schools. Household size was positive and significant at 1% and increases participation by about 4.08%. A large household will mount pressure on a responsible youth to participate in food crops production for family food security, income and other social requirements. The result agreed with [10] and [7]. Farm size was significant at 5% and increases participation in food crops by 48.09%. Farm size has been found to be a critical factor in production and adoption of technologies in agriculture. This implied that a youth with larger farm size is expected to obtain higher income from their productive activities. Similarly, a youth with larger farm size stands a greater chance of access to farm credit and getting more income. The result lay credence to the findings of [18] who reported that land is a critical factor of production among smallholder food crops farmers in Adamawa State. Income was significant at 5% and has the potential to increase participation by 25.19%. Technologies developed are capital intensive and farmers with sufficient income can purchase inputs and expand their scope of production than those with low income. The explanation for this might be that a reasonable proportion of income from food crop production would serve as a sufficient inducing factor in absence of a viable alternative. This finding conforms to [23], who reported that most youths participate in farming activities as the last alternative to earn income.

Table 5. Estimate of Logit Regression on Determinants of Youth participation in Food crops Production

Variable	Coefficient	Standard error	Marginal effect	Z - values
Primary occupation (X_1)	0.0000622	0.0000879	3.21e-09	0.71
Marital status (X_2)	7.415602	4.303626	0. 03825	1.72*
Education (X_3)	0.3974259	0.1765123	0. 20513	2.25**
Household size (X_4)	0.7890218	0.2943665	0. 04075	2.68 **
Farm size (X_5)	6.389776	2.744929	0. 48095	2.33**
Income (X_6)	0.486538	0.2482654	0.25194	1.96**
Constant	-18.3093	7.055263	-	-2.60**
Diagnostic statistics				
Log likelihood = 9.8982228				
Pseudo R^2 = 0.8227				
LR chi2(6) = 91.88***				
Specification test				
_hat	1.033981	.3345732		3.09***
_hatsq	.055712	.0543866		1.02
Goodness-of-fit test				
Pearson chi2(114) = 27.40***				
Correctly classified : 97.52%				

Source: Field Survey 2016 *** 1 % significance, ** 5 % significance, * 10% significance

Table 6. Distribution based on constraints to participation in food crops production

Constraints	Freq.	Percentage	Mean
Inadequate capital	86	81.13	0.8113
Poor government attention on the agriculture sector	76	71.69	0.7169
Poor rural roads / infrastructure	59	55.66	0.5566
Inadequate inputs at the right time	57	53.77	0.5377
High cost of inputs	52	49.06	0.4906
Poor market outlet for produce	44	41.51	0.4151
Pest and diseases infestation	38	35.85	0.3585
It is energy-sapping	30	28.30	0.2830
Inadequate knowledge of modern crop production process	28	26.42	0.2642
Low respect for farmers by the society	24	22.64	0.2264
Inadequate land	23	21.70	0.2170
Grand mean			**0.443391**

Source: Field Survey,2016

Constraints to youth participation in food crops production

The constraints to participation in food crops production is shown on Table 6. The results revealed that majority 81.13% of the respondents were constrained by inadequate capital. Insufficient capital compounded by poor access to credit has been a major limiting factor in various agricultural production activities.

This is followed by poor government attention on agricultural sector (71.60%), poor roads and rural infrastructure (55.66%) and inadequacy of inputs at the right time accounted for 53.77%. The grand mean for the constrain to participation was 0.44 and any mean value equal to or greater than the grand mean is a significant constraints to participation. The findings agreed with [25] who found out poor infrastructure as having a serious cost implications on production as well as sales of produce from the farm gate usually located in the rural areas far from standard markets.

CONCLUSIONS

Based on the findings of the study, it is concluded that there was moderate level of participation of youth in food crops production in the study area that were mostly male.

Marital status, educational level, farm size and income were the main determinants of youth participation in food crops production. Inadequate capital and poor government attention were the major constraints to youth participation in food crops production.

Government should design adequate policies and legislation for improved funding, easier access to productive resources targeted at the youth to encourage more interest and participation in food crops production. Stakeholders in print and electronic media should provide more sensitization programmes to promote and stimulate positive view on farming.

Youths should form viable cooperatives for easy access to farm credit facilities that would improve and enhance their productive abilities.

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