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ORIGINAL ARTICLE

YOUTH PARTICIPATION IN RICE VALUE CHAIN ACTIVITIES IN RURAL COMMUNITIES IN WESTERN AGRICULTURAL ZONE OF NASARAWA STATE, NIGERIA

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Abstract

The study examined factors influencing youth participation in rice value chain activities in Western Agricultural Zone of Nasarawa State, Nigeria, with a focus on young individuals engaged in various enterprises along the rice value chain. A sampling method involving multiple stages, was employed to select 220 respondents for the study. Data were collected using a structured questionnaire, and the analysis encompassed both descriptive statistics and a Poisson regression model. The results revealed 36 years as the mean age of the respondents, majority (77%) were married. About 91% of the respondents had one form of education or another with nearly all (96%) and 68% of them having access to extension services and credit facilities, respectively. The variables that significantly and positively influenced youth participation in rice value chain activities, were age 3.13($P<0.01$), access to extension service, 4.15($P<0.01$) and access to credit, 3.97($P<0.01$). The study identified several key challenges faced by youths participating in the rice value chain activities to include inadequate finances (ranked first), exclusion of youth from policy dialogues affecting them (ranked second), limited access to markets for rice products and services (ranked third), weak market connections (ranked fourth), insufficient youth-focused programmes (ranked fifth), and unfavorable attitudes among youths toward agribusiness enterprises (ranked sixth). To enhance youth participation in the rice value chain, it could be recommended that high interest rate on loans to youths engaged in farming, needs to be reviewed through government policies in order to facilitate access to loans for rice value chain activities. Subsidies for agricultural inputs, promotion of youth participation in policy dialogues, programme formulation and implementation and establishment of a robust market infrastructure is highly needed to develop interest of youths in rice value chain activities.

Keywords: Youth, Participation, Rice, Value Chain activities

Introduction

Agriculture is an important sector in the economy of most developing countries of the world. In Sub-sahara Africa, it accounts for 23% of total Gross Domestic Product but its full potential is yet to be exploited (China Global Television Network, 2020). In Nigeria, agriculture provides employment and generates income to about 70% of the rural population as well as 21.65% of the Gross Domestic Product (NBS, 2018). It specifically provides food for the people, raw materials for the industries and foreign exchange for the country. Youth labour is required to enhance the economic development in the rural communities and also to enhance income that rural farmers receive from agriculture. According to Chikezie, (2012) with fewer youth into agriculture, the long term future of agriculture sector is in question, because even though the youth have the desired qualities that can promote agriculture, their apathy toward it has led to mass unemployment and unsustainable livelihood amongst youth.

Rice (Oryza sativa) is a staple food of great significance for the large population of people around the world (Ogunsumi et.al, 2013). It stands as one of the key crops within multi-value chains, making significant contributions to food security, employment, income generation, and serving as a fundamental source of raw materials for agro-industries. Annually, approximately

496 million tons of rice are processed worldwide (Shahbandeh, 2021) with China and India alone accounting for 50% of the global rice production and consumption.

The participation of youth in activities along the rice value chain holds the potential to not only address the demand and supply gap for rice within Nigerian markets, but also to boost the socioeconomic status of rural communities. This participation also facilitates the training of rural youth in agriculture. Furthermore, Youth participation in the rice value activities will enable them to have access to myriad of incentives provided by government, NGOs, agricultural agencies that are available in the country. Most of these incentives are yet to be tapped due to insufficient participation of youths in the activities of rice value chain.

If the agricultural sector remains an essential income generating avenue and employer of labour for developed and developing economies, including countries like Nigeria. Youth participation in agriculture is therefore a key factor in the growth of the agricultural sector as they possess innovative mindsets, enhanced physical capabilities and a rapid learning process. However, according to Rutta, (2012), factors such as perceptions of greater job opportunities, poor physical infrastructure and social amenities in rural areas and general lack of interest in agriculture, hinder the participation of youths in agriculture. Considering these, different strategies and pro youth interventions such as youth rural entrepreneur and land fund programme, short-term land lease for youth, distribution of hillside land to landless youths, reclaiming desert land for young graduates, rebranding agriculture in school, employment of ICTs for extension services, ICT solutions for agriculture, as well as distance learning for young farmers, have been implemented by different nations across the world to empower youths in agricultural sectors. More recently, the government of Nigeria has been collaborating with international organizations such as World Bank, International Food Policy Research Institute and International Fund for Agricultural Development to implement programmes with particular interest on youths and the rice value chain to encourage youths participation in agricultural value chain activities. Despite all these interventions by the government and stakeholders, youth engagement, particularly along agricultural value chains, remains low. Given the foregoing, and the scarcity of information on the factors influencing youth participation in the rice value chain, the purpose of this research was to identify the factors influencing youth participation in rice value chain activities in Nasarawa State's Western Agricultural Zone.

Methodology

The study was conducted in the Western Agricultural Zone of Nasarawa State. The Western Zone comprises four local government areas namely: Keffi, Karu, Nasarawa and Toto. The zone lies within the guinea savannah climate with annual rainfall ranging between 10001500mm. The zone is located between latitude 8˚51' and 8˚53' N of the equator and longitude 7˚50' and 7 ˚51' E of the Greenwich Meridian. The zone has a mean annual temperature ranging from 23ºC – 37ºC (NADP, 2017). The population for this study was youth entrepreneurs in rice value chain in the Western Agricultural Zone of Nasarawa State. A multi-stage sampling technique was used to select youth (the respondents) entrepreneurs along rice value chain. The first stage was the purposive selection of three local government areas out of the four local government areas in the Western Agricultural Zone of the state namely: Keffi, Nasarawa and Karu based on the prominence of rice value chain activities. The second stage was the purposive selection of four major villages where youths participate in rice value chain activities from each of the three Local Government Areas and in the third stage, a simple random selection of youths participating in rice value chain from twelve villages across the three Local Government Areas was done proportionately. Twenty (20%) percent of the respondents in each of the villages were randomly selected from the population to give a total sample size of two hundred and twenty respondents for the study. The data were collected using questionnaires that were administered to the respondents and were analyzed using

descriptive statistics (such as percentages, mean scores, frequency, ranking) and Poisson regression.

Results and Discussion

Socio-economic characteristics of the respondents

The results of the socio-economic characteristics of the respondents are presented in table 1 and discussed as follows:

Age distribution:

The result revealed the average age of the respondents to be 29 years and that majority (54%) of them were between the ages of 30-35years, 36% were between 24-29 years and 10% were between the ages of 18-23years implying that majority of the respondents were young, energetic and actively participating in rice value chain activities. This result agrees with that of Olotu and Abah, (2018) who in their study conducted on 'Value Chain Development and Growth of Rice Farm Enterprises' revealed that majority of the respondents were young, energetic and actively participated in rice farm enterprises.

Marital status:

The analysis of marital status shows that majority (77%) of the respondents were married while 23% were single. This is so because they are saddled with the responsibilities of catering for their families, so they tend to participate more in the rice value chain activities. The result is similar to those of Kagbu et.al, (2016) and Effiong et.al (2015) which showed that married respondents were more into rice activities.

Level of education:

The result on educational attainment revealed that only 9% of the respondents had no formal education, 26% had primary education, 49% had secondary education while 16% had tertiary education. This means that majority (91%) of the respondents had one form of education or another in the study area which is the cause of the desired changes in mindset, aptitude, and understanding of people and an important factor in the recognition and utilization of rice value chain activities. This result is similar to that of Samarpitha et al. (2016) on the Socio-economic Characteristics of Rice Farmers in the Combined State of Andhra Pradesh who observed that majority of the respondents had formal education which is essential for farmers to comprehend and access pertinent information, regulations and notifications that can have a significant effect on their productivity.

Extension contact:

The results showed that 96% of the respondents in the area had access to an extension service, 50% had contact 0-5 times, 47% had contact 6-10 times, and only 3% have contact 11-15 times per year. This means that 97% of the respondents had frequent access to an extension which is the backbone of the dissemination of information and advanced technologies along the rice value chain.

Access to credit facilities:

The result revealed that majority (68%) of the respondents had access to credit facilities while 32% had no access to credit facilities. This could be ascribed to the adequacies of the cooperative society and extension services rendered.

Table 1: Distribution of the respondents according to their socio-economic characteristics

Factor	Frequency	Percentage	Mean
Age			
18-23	21	10	
24-29	80	36	
30-35	119	54	29 Years
Marital status			
Married	170	77	
Single	50	23	
Education attainment (Level)			
No formal education	20	9	
Primary	56	26	
Secondary	109	49	
Tertiary	35	16	
Access to extension services			
Yes	212	96	
No	8	4	
Access to credit facilities			
Yes	149	68	
No	71	32	

Source: Field survey, 2021

Perceived benefits of youth participation in the selected rice value chain

The result in table 2 revealed the perceived benefits of participation in rice value chain activities by the youth and it showed that majority (87%) of the respondents benefitted from capacity building on business management, 84% benefitted by having access to certified seeds for planting, 83% of the respondents benefitted from value addition technology and trainings on infrastructure management, 79% benefitted from quality control standard, 77% benefitted by having access to market information while 75 % benefitted from processing waste management. This implies that the respondents had very high benefit from the activities of rice value chain however, more trainings need to be organized in the areas of quality control, having access to market information and waste management. This observation concurs with Okeke et al. (2021) who identified increased access to certified rice seeds, adequate trainings on improved technologies, increase in technical know-how, and ease in marketing produce among others. Contrary to this finding, Okeke et. al. (2021) revealed that value addition was not beneficial to the respondents. This findings concurs with the report of Adika (2017) on Niger state value chain development programme who also identified market information, quality control standard, value addition technology, access to certified seeds, training on infrastructure management, capacity building on business management and waste processing management as the benefits enjoyed by the respondents in the study area.

Table 2: Distribution of Respondents based on Perceived benefits of Youth in Rice Value Chain Enterprises

Variables	Frequency	Percentage
Capacity building on business management	190	87
Certified seeds	182	84
Value addition technology	181	83
Training on infrastructure	181	83
Quality control standard	174	79
Market information	168	77
Processing waste management	165	75

Source: Field survey, 2021 **Multiple Responses**

Effect of respondents' socioeconomic characteristic on the level of participation along rice value chain

Poisson regression analysis as shown in table 3 was used to determine the effect of socioeconomic characteristics on the level of youths' participation along rice value chain in the study area. The result from the Poisson regression analysis showed that the variable of age was found to be positive and significant at 1% level of significance. This implies that increase in the age of the youth would probably increase participation. Younger generations tend to be more involved in the rice value chain activities. Hence, increase in age of the youth will bring about increase in participation in the activities. This observation is similar to that of Mgbanya et. al. (2016) which also showed that the respondents were in their youthful age and were committed to participating in rice activities. Access to credit was also found to be positively significant at 1%. This means that the more the accessibility to credit, the more the youth tend to participate in rice value chain activities. Access to credit will boost participation in rice value chain activities. The results concur with Bello et. al. (2014) finding that access to credit was positively and significantly associated with youth participation. The result further revealed that access to extension service was positive and significant at 1% level of significance which implies that increase in extension contact will bring about increase in participation of the youth in rice value chain activities. Extension contact is a major source of agricultural information and technologies for enhanced agricultural practices. Therefore, having access to extension services would increase the level of participation in rice value chain activities since extension agents play critical role in increasing adoption of new ideas by the youths. This result disagrees with that of Bello et. al. (2014) who stated a negative but significant relationship between the youth participation and the extension workers which indicated no contact and this could reduce the probability of youth participation. Education and household size were found to be negatively significant at 10% level of significance. Formal education is a necessity for farmers to understand and read relevant news, rules and notices which can affect productivity significantly. Contrarily, this study revealed education to be significant but negative. This implies that the more the youth have access to formal education, the less their participation in rice value chain activities. So also, the larger the household size, the less the participation.

Table 3: Regression analysis of effect of the respondents' socioeconomic characteristic on the level of participation along rice value chain

Explanatory Variables	Co-efficient	Std. Error	t-statistics	Probability
Constant	1.242	7.169	0.17	0.863
Gender	2.206	1.678	1.31^{NS}	0.190
Age	0.789	0.252	3.13 ***	0.002
Marital status	0.822	2.391	0.34^{NS}	0.731
Household size	-0.769	0.415	-1.85*	0.065
Education	-1.632	0.885	-1.84*	0.067
Farming experience	-0.028	0.205	-0.14^{NS}	0.888
Income	6.06e-06	9.79e-06	0.62^{NS}	0.537
Years spent in society	0.191	0.384	0.50^{NS}	0.619
Access to extension service	15.522	3.744	4.15***	0.000
Access to credit	6.071	1.531	3.97 ***	0.000
F-statistic	8.55***			0.000
R^2=0.2903				

Source: Regression analysis, 2021; Note: * = Significant at 1%,* = Significant at 10% and NS = Not significant**

This result contradicts that of Mgbanya et al. (2016) who reported a positively significant relationship between the variables (education and household size) and youth participation in rice activities. Furthermore, the result revealed the R^2 value to be 0.290 which implies that 29% of the variables (independent) explain the factors influencing participation (dependent variable).

Constraints faced by the Respondents

The result in table 4 revealed the constraints faced by the youths along rice value chain in the study area. The major constraints revealed by this study in the order of severity were inadequate finance (93%) which was ranked first followed by exclusion of youth from policy dialogue affecting them (90%), inadequate access to market for rice products and services (88%), weak market connections (87%), insufficient youth focused programmes (81%) and unfavorable attitudes among youths towards agribusiness enterprise (74%).

While the lesser constraints were identified as reluctance of financial service providers to work with youths who have limited trading records and security (52%), lack of awareness about business opportunities along rice value chain (51%), inadequate vocational training on rice value chain (44%), lack of specifically tailored financial products (39%), inadequate access to extension services (37%) and restriction in legal and regulatory environments (37%). The implication is that the more the youth are constrained by these factors, the lesser they tend to participate in rice value chain activities. This result is in line with that of Bello et al. (2014) who identified inadequate capital, inadequate farm inputs, inadequate farm land, inadequate storage facilities and inaccessibility to information practices as their major constraints. This is line with

Effiong et al. (2015) who in their study reported inadequate finance, low level of infrastructure and low government participation in rice as their major constraints.

Table 4: Distribution of constraints faced by the respondents

Constraints	Frequency	Percentage	Ranking
Inadequate finance	204	93	1st
Exclusion of youth from policy dialogue	197	90	2nd
Inadequate access to market for rice products and services	193	88	3rd
Weak market connections	191	87	4th
Insufficient youth focused programmes	179	81	5th
Unfavourable attitudes among youths towards agribusiness	162	74	6th
Reluctance of financial service providers to work with youths who have limited trading records and security	115	52	7th
Lack of awareness about business opportunities along rice value chain	112	51	8th
Inadequate vocational training on rice value chain	96	44	9th
Lack of specifically tailored financial products	86	39	10th
Inadequate access to extension services	82	37	11th
Restriction in legal and regulatory environment	82	37	11th

Source, Field survey, 2021 **Multiple Responses**

Conclusion

Based on these findings, the average age of the respondents was 29 years old. Majority of them had one form of education or the other with the majority being married. The variables of age, access to credit and access to extension services were found to significantly influence the level of participation in rice value chain in the study area. The major constraints identified by the youths were inadequate finance, exclusion of youth from policy dialogue affecting them, inadequate access to market for rice products and services, weak market connections, insufficient youth focused programmes and unfavorable attitudes among youths towards agribusiness enterprises.

It could be recommended therefore, that youths participating in rice value chain and other commodities value chain should form cooperative societies and pool their resources together for them to gain easy access to funds for matching grant in order to address the issue of finance which hinders their participation. The government and other agricultural financing schemes should priotize the participation of youth by involving them in policy dialogue, program design and implementation of agricultural programs as a means of encouraging them to participate in rice value chain activities. Agricultural extension services should be made available and accessible to youths participating in agricultural value chain, so that they can be informed about best practices and opportunities in rice value chain as well as other agricultural commodities. Good market infrastructure such as road, telecommunication network and water among others should be provided by government as this will encourage them to participate more in rice value chain activities.

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