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ORIGINAL ARTICLE

COMPARATIVE ANALYSIS OF YOUTH PARTICIPATION IN VALUE CHAIN DEVELOPMENT PROGRAMME IN BENUE AND NASARAWA STATES, NIGERIA

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Abstract

Comparative analysis of youth involvement in Value Chain Development Programme (VCDP) in Benue and Nasarawa States, Nigeria was carried out. A multistage sampling procedure using structured questionnaire, to obtain information from 404 youths was adopted in the study. Descriptive and inferential statistics were used to analyse the data. In Benue State, youth level of participation in growing rice was 77.8%, cassava production (73.6%) and rice marketing was 73.2%. The results in Nasarawa State showed that more youths participated in cassava production (80.8%); rice production (72.5%) and rice processing (71.0%). Coefficient of determination (R^2) value for Benue and Nasarawa States were 0.593 and 0.540, respectively. The variables of years of participation in VCDP activities, years of membership of cooperative society and number of extension visits had a positive coefficient at t = 3.616, t = 2.875 and t = 3.955, respectively in Benue State, while level of education, years of involvement in VCDP programs, annual income as well as frequency of extensionists visits, had a positive coefficient at t = -2.278, t = 3.952.875 t = 3.101 and t = 2.041 respectively in Nasarawa State. In Benue State, the serious limitations to efficient youths' involvement in VCDP were difficulty in accessing capital and loan (□=3.35)‾, insecurity (□=3.25)‾and high cost of inputs (□=3.12)‾. In Nasarawa State, serious constraints faced by youths were difficulty in accessing capital and loan (□=3.29)‾, inputs (□=3.28)‾as well as labour (□=3.24)‾. It was concluded that participation levels of rice grower, cassava producer and rice marketer was high in Benue State, whereas in Nasarawa State, youths' participation in cassava and rice production as well as rice processing was high. It could be recommended therefore, that financial institutions including lending groups may work out modalities for credit opportunities to smallholder crop producers especially youths in Benue and Nasarawa States.

Keywords: Comparative analysis, Youth participation, Value chain, Development programme

Introduction

The Value Chain Development Programme (VCDP) is a six-year programme of the Federal Government of Nigeria funded by the International Fund for Agricultural Development (IFAD). The programme aims to improve incomes and food security of poor rural households engaged in production, processing and marketing of rice and cassava on sustainable basis. It was originally implemented in six states of Anambra, Benue, Ebonyi, Ogun, Niger and Taraba. As a result of the programme success, VCDP received additional finance in 2019 for expansion into three states of Kogi, Nasarawa and Enugu making a total of nine participating states in additional financing 1 (AF 1) phase of the programme (Sallawu et al., 2019).

The programme takes a holistic and demand-driven approach to addressing constraints along cassava and rice value chains. It does so through an inclusive strategy, strengthening the capacity of actors along the chain including producers and processors as well as public and private institutions, service providers, policy makers and regulators (Okeke et al., 2022). At the same time, the programme strongly emphasizes the development of commodity specific Value Chain Action Plans at the local government level, which serve as the basis for rolling out sustainable activities to reduce poverty and accelerate economic growth. The programme strategy is anchored in a longer-term vision of value chain development for poverty reduction and accelerated economic growth, setting the foundation for fundamental organizational and functional capacity of key actors in the agricultural sector. The goal of the programme according to Sallawu et al. (2019) is to reduce rural poverty, increase food security and accelerate economic growth on a sustainable basis.

Youths are the essential resources for every nation, especially for sustaining agricultural productivity as an important sector for a nation's development. Youth involvement in VCDP is beneficial to the economic growth of a nation, where it will reduce unemployment and curb crime rate. Moreover, it will ensure increase in agricultural productivity and reduce youth rural-urban migration for greener pasture or white-collar jobs. While there are no universally accepted definitions of adolescence and youth, the meaning of youth and how society perceives youth is subject to variations of time, space and societies. Youth is defined by the United Nations (2012) as those between the ages of 15 and 24 years (Jessta, 2014). This definition is provided by the UN General Assembly, and is not legally binding hence, age definition of youth vary from one country to another and one organisation to another. Youth in Nigeria are identified as all young males and females within the age bracket of 18-35 years, who are citizens of the Federal Republic of Nigeria (NNYP, 2019).

The agricultural sector has the potentials of job creation opportunities for the poor who dwell in the rural areas, in order to explore the huge potentials of agriculture in the country. There is the problem of youth unemployment, poverty and food security in rural areas in Benue and Nasarawa States. Youths' participation in agricultural activities can serve as a means of employment, source of income, provide food security for their families and reduce their poverty level. Youths are constrained in participating agricultural activities by a host of challenges including limited access to productive assets and inputs; inadequate support services (extension); limited access to rural financial services; inadequate market and rural infrastructure; post-harvest losses and a constrained enabling environment (NBS, 2018). International Fund for Agricultural Development programmes in Nigeria deals in value chain activities of cassava and rice enterprises on a sustainable basis, which provides participants with inputs, capital supports, and adequate support services such as extension services, and adequate market for cassava and rice products. The aims are to improve incomes and

food security of poor rural households engaged in production, processing and marketing of rice and cassava on a sustainable basis. It was not known if youths were taking advantage of the presence of IFAD-VCDP programme in the study area. Hence, the assessment of youths participation in IFAD-VCDP, level of youths participation in the programme, socioeconomic factors influencing the level of participation in the VCDP activities by the youth; and the constraints to effective participation of respondents in the VCDP in the study area. The finding of this study hoped to be of great importance to the states and national government policy makers, as well as development partners and youth agribusiness financiers, to help enlighten them on the factors influencing the participation of youth in agricultural value chain activities in the study area. This would inform them in the design of policies and programmes, as well as implementation of projects, aimed at enhancing youth participation in agricultural value chain activities, with the goal of employment creation and enhancing food security in Benue and Nasarawa States and Nigeria as a whole.

Research Methodology

Study Area

The study was conducted in Benue and Nasarawa States, north-central Nigeria. Benue State lies between Longitude 8° 50.1766'E and Latitude 7° 21.0496'N of the equator (Wikipedia, 2022). There are three agricultural zones in the state which are zone A, B and C. The state has rainy season in middle of March and October and dry season in October and March with a mean temperature of 29.38ºC (BADP, 2016). Nasarawa State is located within latitude 7º and 9^0 N and longitude of 8^0 and 32^0 E. It has land area of 27,117km^2 (Wikipedia, 2022). It has temperature of about 25^0C in October, 36^0C in March, rainfall of 137.3 – 145mm (NADP, 2021). Nasarawa State is divided into 3 Agricultural Zones (Southern, Central and Western). The inhabitants of Benue and Nasarawa states are notably agrarians and one of the largest producers of yam in Nigeria.

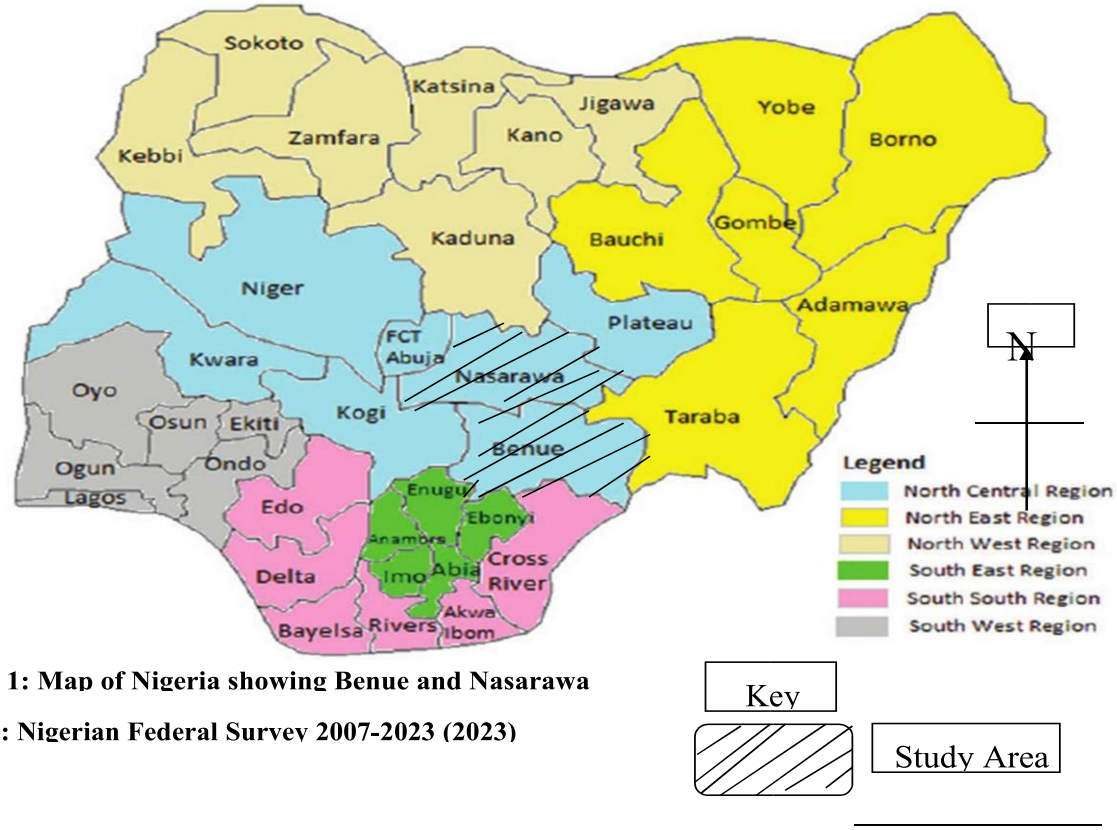

Figure 1: Map of Nigeria showing Benue and Nasarawa States
Source: Nigerian Federal Survey 2007-2023 (2023)

Sampling Technique and Sample Size

A multi stage sampling technique was used to select respondents, from the population, for the study. Stage one was random selection of 4 LGAs in Benue, and 3 in Nasarawa given total of 7 LGAs, that were used for the study. Stage two was purposive selection of 3 communities in Benue state and 3 communities in Nasarawa state amounting to 12 communities in Benue state and 9 in Nasarawa state, making a total of 21 communities. Stage three was random selection of 235 youths from 461 registered youths in Benue state. In Nasarawa State 169 youths out of 332 registered youths given a total of 404 youths. The sample size was obtained using Taro Yemeni formula at 0.05 level of error tolerance and Bourley formula as presented in sample frame in Table 1.

Taro Yemeni formula:

n = N/ 1+ N(e)2 Where,

n = the required sample size from the population under study N = the whole population that is under study

e = the precision or sampling error which is usually 0.05

Table 1: Sample selection

State	**LGA**	**Community**		**Number of youths/Community**		**Sample selected**	
		Rice	**Cassava**	**Rice**	**Cassava**	**Rice**	**Cassava**
Benue	Guma	Guma	Guma	18	22	9	11
		Mbawa	Mbawa	17	21	9	11
		Iye	Iye	20	20	10	10
	Gwer East	Ikpayongo	Ikpayongo	21	18	11	9
		Anginde	Anginde	22	17	11	9
		Mbavende	Mbavende	19	22	10	11
	Logo	Igyor	Igyor	21	18	11	9
		OnovTuran	OnovTuran	18	19	9	10
		KasevIkyoky	KasevIkyoky	20	17	10	9
	Gwer West	Naka	Naka	18	18	9	9
		IkpeNagi	IkpeNagi	20	20	10	10
		Mbawerekem	Mbawerekem	17	18	9	9
	4	**12**	**12**	**231**	**230**	**118**	**117**
Nasarawa	**Doma**	EhoWodu	EhoWodu	18	21	9	11
		Rutu	Rutu	20	20	10	10
		Atandura	Atandura	15	18	8	9
	Wamba	Kwarra	Kwarra	21	21	11	11
		Sisimbaki	Sisimbaki	22	18	11	9
		Jidda	Jidda	20	20	10	10
	Nasarawa	Madaki 1	Madaki 1	15	18	8	9
		Laminga	Laminga	14	15	7	8
		Angwankifi	Angwankifi	18	18	9	9
	3	**9**	**9**	**163**	**169**	**83**	**86**
Total	**7**	**21**	**21**	**394**	**399**	**201**	**203**

Source: From Benue and Nasarawa States VCDP Offices (2023)

Method of Data Collection

Primary data were obtained through structured questionnaire which were given to the participating youths in FG/IFAD VCDP.

Method of Data Analysis

The data obtained were analyzed using both descriptive and inferential statistics. such as frequency, percentages, means and rank order. Multiple regression model as prescribed by Okeke et al. (2021 was also used.

Model Specification

The multiple linear regression model used is expressed as:

$Y = a + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \beta_4X_4 + \beta_5X_5 + \beta_6X_6 + \beta_7X_7 + \beta B_8X_8 + e$ Where:

Y= Respondent's level of participation in VCDP. (Number of VCDP activities participated in /total number of VCDP activities available in the study area X 100) a= Constant term β_1 β_2---- β_8 = Regression coefficients

X_1=Age (Years),

X_2=Sex (Male = 1, Female = 0),

X_3= Level of education (No. of years spent in formal schooling),

$X_{4=}$ Years of experience in participation in VCDP (number of years)

X_5=Annual income (in naira)

X_6= Membership of Association/Cooperative (Number of years spent in the association)

X_7 = Amount of credit accessed (in naira)

X_8 = Extension contact (Average number of visits per year)

E = Error term

Results and Discussion

Level of Youths Participation in VCDP Activities in Benue and Nasarawa States

The distribution according to youths' participation in VCDP activities is expressed in Table 2. It showed that there was high level of participation in rice production (77.8%), cassava production (73.6%), rice marketing (73.2%), and rice processing (71.9%) in Benue State. In Nasarawa State, cassava production (80.8%), rice production (72.5%), rice processing (71.0%), cassava marketing (71.0%), rice marketing (63.9%) displayed high level of participation.

This implies that youths had high level of participation in a lot of VCDP activities but, at varying degree of interest to them. Youth participation in VCDP events in Benue and Nasarawa states, can be attributed to the programme offering skill development opportunities, empowering youths with valuable agricultural and entrepreneurial skills. This finding is in line with the finding by Okeke et al. (2022) in their study on analysis of the rural youth engagement in IFAD Value Chain Development in Southeast Nigeria revealed that youths were highly involved in rice seed production (M=2.88), rice processing (M= 2.72), cassava stem production (M= 2.68), rice marketing (M= 2.05), cassava processing (M=1.86), cassava marketing (M=1.55) and water supply and irrigation schemes (M=1.51).

Table 2: Youths Participation Level in VCDP Activities in Benue and Nasarawa States

VCDP Activities	Freq.	Percent. (%) Benue	Freq.	Percent. (%) Nasarawa
Rice production	182	77.8**	121	72.5**
Cassava production	173	73.6**	135	80.8**
Rice marketing	172	73.28**	108	63.9*
Rice processing	169	71.9**	120	71.0**
Cassava processing	162	68.9*	88	52.1*
Cassava marketing	160	68.1*	120	71.0**
Training on enterprise production	160	68.1*	90	53.3*
Good agronomical Practices training	160	68.1*	92	54.4*
Training on market links	87	37.0	75	44.4
Nutritional value addition	84	35.7	70	41.4
Training on climate smart agriculture	81	34.5	67	39.6

Source: Field survey, 2023 **multiple responses**

Influence of Youths' Socioeconomics Status on Participation Level in VCDP Activities in Benue and Nasarawa States

Multiple linear regression analysis of socioeconomic status of youths' participation in VCDP events in Nasarawa and Benue is presented in Table 3. It showed that coefficient of determination (R^2) values were 0. 593 and 0. 540 in Benue and Nasarawa thus, the independent variables explained 59.3% of the variability of the dependent variables. The variables of years of participation in VCDP activities, years of membership of cooperative and number of extension visits had a positive coefficient at t = 3.616, t = 2.875 and t = 3.955 respectively, in Benue State. The variables of level of education, years of participation in VCDP events, annual income and extension visitation had a positive coefficient at t = -2.278, t = 3.952.875, t = 3.101 and t = 2.041 respectively in Nasarawa State. Though level of education for Nasarawa State was significant, it was inversely significant.

Years of experience in participating in VCDP activities was significant at (P<0.01) for both Benue and Nasarawa State hence, years of experience in VCDP activities may result in high youth participation in VCDP activities. Years of experience in any enterprise plays an important role, due to the ability of youth to effectively manage their decision on VCDP agricultural activities. Therefore, there is a likelihood of better productivity and better decision taking in farming activities. Number of extension visits had positive coefficient that was significant at P<0.01 (Benue State) and at P<0.05 (Nasarawa State) thus, buttressing positive coefficient (0.283) significant at 1% reported by Abdullahi et al. (2015) in IFAD-community based agricultural and rural development project in Katsina State. It was reported that farmers accessed extensionists about 14 times hence, participated more in the projects. It was opined that farmers that contacted extensionist more, benefited tremendously from training, improved technologies, inputs and good agronomical practices among other benefits (Prince et al., 2013).

Years of cooperative membership was significant at P<0.05 with positive coefficient in Benue State, implying that years of cooperative membership may boost youth's participation in VCD activities, implying that membership of cooperative, would lead to high participation in VCDP activities. Also, it demonstrated that membership of cooperative, may probably increase youths' participation in

VCDP activities, conforming to apriori expectation that youths acquire experiences in agricultural activities especially, if participation is through informal networking and cooperative registration. The coefficient of years of level of education was negative but was statistically significant at P<0.05 in Nasarawa State, conforming to the report of Prince et al. (2013) in agricultural projects executed in Ghana. It was revealed that participating in agricultural projects may possibly reduce marginally with (2%). Prince et al. (2013) opined that educated farmers may not depend solely on agricultural activities because, the resources and time allocated to other engagements may constrain participating in agricultural activities.

Annual income from VCDP activities had positive coefficient and statistically significant at (<P0.01) thus, may increase income leading to high participation in VCDP activities in Nasarawa State. This suggests that income realised from VCDP activities is a driving force of young people participation in value chain activities in Nasarawa State. It has been established that capital increases scale of production, translating to increase in output. This finding lends more credence to the observation of Okeke et al. (2021), that the more income/gain realized by the participant, the higher their level of participation in programme's activities.

Table 3: Influence of Youths' Socioeconomic status on Participation in VCDP Activities in Benue and Nasarawa States

Table 3: Influence of Youths' Socioeconomic status on Participation in VCDP Activities in Benue and Nasarawa States

Benue State			
Explanatory variable	**β- value**	**Standard error**	**t-value**
Constant	6.769	1.909	3.546
Age	- 0.060	0.067	- 0.891
Sex	0.083	0.069	1.196
Level of education	0.007	0.012	0.587
Years of participation in VCDP activities	0.849	0.235	3.616**
Years of Membership of cooperative	1.331	0.463	2.875*
Number of extension visits	0.624	.158	3.955**
Annual income	9.928E-8	0.000	.260
Access to credit	0.040	0.070	0.571
Nasarawa State			
Constant	6.330	2.338	2.707
Age	-0.035	0.082	- 0.428
Sex	-0.048	0.066	- 0.729
Level of education	-0.662	0.290	-2.278**
Years of participation in VCDP activities	0.206	0.052	3.982***
Years of membership of cooperative	0.235	0.244	0.963
Number of extension visits	1.142	0.560	2.041**
Annual income	0.550	0.133	3.101***
Access to credit	0.004	0.088	0.050

Source: Field survey, 2023

Y=Dependent Variable (No. VCDP of activities youth are involved-in, in percentage /total number of agricultural enterprises in the study area x 100)

R^2 for Benue State=0.593 R^2 for Nasarawa State=0.540

Note: ***= Significant at 1%, **= Significant at 5%

Constraints to Effective Youths' Participation in VCDP activities in Benue and Nasarawa States

The distribution of constraints to effective youths' participation in the VCDP activities in Benue and Nasarawa States is shown in Table 4. In Benue State, it shows that the serious constraints to effective youths participation in VCDP, were difficulty in accessing capital and loan (X=3.35); insecurity (X=3.25); inputs high cost (X=3.12); climate change (X=3.10); high labour cost (X=3.08); and late input supply (X=2.65). In Nasarawa State, it was shown that difficulty in accessing capital and loan (X=3.29); inputs high cost (X=3.28); high cost of labour (X= 3.24); insecurity (X= 3.21); effects of climate change (X= 3.10); late input supply (X= 2.86); and poor access to storage facilities (X= 2.30), were the serious constraints affecting effective participation in VCDP activities. The results on constraints imply that youths in Benue and Nasarawa states used mainly their personal savings due to difficulty in accessing capital and loan. Difficulty in accessing capital and loan and high cost of inputs, were probably the reasons why IFAD-VCDP youths found it difficult to raise the matching fund which is supposed to be provided by the youths themselves, as a result of lack or insufficient collateral to access capital and credit from financial institutions besides insecurity.

Table 4: Constraints to Effective Participation of Youths in the VCDP activities in Benue and Nasarawa States

	Benue State		**Nasarawa State**	
Constraint	**Total (3+2+1)**	**Mean**	**Total**	**Mean**
Difficulty in accessing loan to pay for matching grant	788	3.35*	557	3.29*
Insecurity	765	3.25*	543	3.21*
High cost of inputs	735	3.12*	555	3.28*
Effects of climate change	730	3.10*	525	3.10*
High cost of labour	726	3.08*	549	3.24*
Late input supply	623	2.65*	485	2.86*
Poor access to storage facilities	453	1.92	389	2.30*
Poor market linkage	412	1.73	284	1.68
Pest and disease attack on crops	357	1.51	253	1.49
Poor rural network	302	1.28	232	1.37

Source: Field survey, 2023; Decision rule: (Any mean ≥ 2.0 = serious constraint, while < 2 = low constraint) *signifies serious constraint

Conclusion

From the observations, it could be concluded that youth involvement level in VCDP activities displayed high level of participation in rice seed production; cassava stem production; rice marketing; and rice processing in Benue State. In Nasarawa State, youths' involvement in cassava stem production; rice seed production; rice processing; cassava marketing; and rice marketing were at high levels. Difficulty in accessing capital and loan; insecurity; high cost of inputs; and high labour cost were the serious problems youths faced. Therefore, financial institutions and lending agencies should work out modalities to ease credit facilities accessibility to farmers. There should be collaboration with security agencies to facilitate cooperation between farmers, local

communities, and security agencies to ensure a coordinated effort to address insecurity issues. More importantly, inputs high cost requires implementing targeted subsidies or support programme for essential needs like seeds, fertilizer and pesticides to significantly reduce the farmers' financial burdens. Thus, youths are encouraged to be members of cooperatives and other agricultural activities, to reduce money spent on hired labour.

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