

Original Research Paper

Analysis of the Rural Youth Engagement in IFAD Value Chain Development as a Panacea to Unemployment in Southeast Nigeria

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Abstract: Analysis of the rural youth engagement of IFAD value chain development program as a panacea (way-out) to unemployment in Southeast, Nigeria was the main aim of the study. The socioeconomic characteristics, value chain interventions, readiness of the youth to implement the skills acquired and factors hampering the youths' readiness to implement the skills acquired were looked into. The data was analyzed using statistical tools such as descriptive statistics, principal factor analysis and inferential statistics of paired sample t-test in order to arrive to a logical conclusion. The factors hampering the youth readiness to implement the skills were rotated into awareness factors such as: Sex (-0.747), inadequate market arrangement (0.687) and inadequate fund (0.896) and institutional factors such as; age (-0.426), level of education (-0.797), high cost of labor (0.882) and absence of local fabricators (0.891). Furthermore, Sex, Age, Year of formal learning, Household size and mean monthly income were the socioeconomic variable that influenced the youth's readiness to implement the skills acquired and the t-value of 10.5386** indicated that there was a significant difference in the mean income of the youths before and after their engagement.

Keywords: Rural Youths, Value Chain, Unemployment, Engagement, Panacea, Agriculture

Introduction

Agricultural programs aiming at poverty alleviation in the rural areas are now focusing more on the vulnerable group of which youths and women are part and in order to lift these set out of the poverty line, entrepreneurs trainings become important components in IFAD program. Thus, the IFAD Value Chain Development Program exposed young women (18-30 years) to confectionaries making such as Chips, Cake, Breads, Chinchin, Cassimoi (Moimoi made from provitamin A fresh cassava tubers), Combo-bite, among others from provitamin A cassava tubers (Obianefo, 2019). The rising rate of youth unemployment in Nigeria is a major concern of policymakers which becomes necessary to engage such group in entrepreneur development on provitamin A cassava variety in this troubled time of Nigeria. Despite programs put in place by the government to engage the youths positive and curb the high rate of unemployment, youth unemployment as in the third quarter of 2018 increased to 55.4% (NBS, 2019). Unemployment brings

about widespread criminality, societal ills and social vices (hooliganism, armed robbery and prostitution) and as such there is the urgent need for the government to tackle the alarming rate of unemployment among the youths in Nigeria (Kayode *et al.*, 2014).

Nigeria is currently ranked second in Africa with an unemployment rate of 36.50% and fifth in the world with an unemployment rate of 38.50%. Thus, AMI (2018) used the summation of the unemployment rate, inflation rate and bank lending rate and percentage change in the Gross Domestic Product (GDP) per capita to postulate this misery index which Nigeria ranked sixth miserable country to live in the world. 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 agriculture 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 through different innovation and adoption of modern agriculture technologies. It will reduce youth

rural-urban migration for greener pasture or white-collar jobs. For this to take place, agribusiness must be made attractive to youth who are always ready and willing to exploit new innovations and opportunities.

Nigeria is a member of the African Youth Charter that defined a youth as a person within the age bracket of 15-35 years of age. International Labor Organization statistics showed that there are about 1.3 billion youth aged 15–24 globally as of 2019 accounting for one out of every four people (17.6%) worldwide and about 200 million of this group live in Africa (IFAD, 2019). This is an increase of about 300 million youth population since 1999 (ILO, 2020). Thus, the need to develop jobs in both rural and urban areas is growing in urgency in Africa and is putting the government under pressure to create more and better jobs in response to the rapidly growing, young and more educated population in much of the region (Mueller and Thurlow, 2019). The Federal Government of Nigeria borrowed a credit from the International Fund for Agricultural Development (IFAD) towards implementing a 6-year assisted value chain Development Program in six States of Anambra, Benue, Ebonyi, Niger, Ogun and Taraba.

A value chain is the full range of activities starting from the raw materials which includes the design, production, marketing and distribution to bring a product or service from conception to delivery. As defined by Gloy (2005) the value chain can be thought of as a set of activities, services and products that lead to a product or service that reaches the final consumer. Value Chain Development Program (VCDP) focuses on enhancing market access to and productivity increase along commodity chains as well as add value to locally produced raw materials through improved processing and packaging (IFAD, 2013).

Statement of the Problem

The previous and present government over the years, has embarked on various program attempting to alleviate the problem of unemployment especially among the youth. Some of these programs included; National Poverty Eradication Program (NAPEP) and Youth Empowerment Scheme (YES). These programs have not benefitted the youths to a greater extent partly because of lack of access to raw materials input and the technologies needed to enhance the desired economic growth, reduce poverty and improve the livelihoods of the youths.

Objective of the Study

The broad aim of this study was to analyze the rural youth engagement on IFAD value chain development program as a panacea (a way-out) to unemployment in South-East, Nigeria.

Specifically, the objectives were to:

- i. Examine the socioeconomic characteristics of the youth participating in the IFAD value chain program in Southeast

- ii. Ascertain the level of readiness of empowered youth in implementing the skills acquired
- iii. Identify the factors hampering the youths' readiness to implement the skills acquired

Hypothesis

H_01 : Socioeconomic characteristics of the youth do not significantly influence their readiness to implement the skills acquired from the program in Southeast

H_02 : There is no significant difference in youth's monthly income before and after the training

Materials and Methods

Nigeria has 6 geopolitical zones of which southeast is one, southeast geopolitical zone is made up of 5 states which includes; Abia, Anambra, Ebonyi, Enugu and Imo States of which only Anambra and Ebonyi States are currently implementing IFAD assisted Value Chain Development Program. Southeast geopolitical zone is bounded by Akwa Ibom and Cross River States in the East, Benue and Kogi States in the North, Edo and Delta States in the West and Rivers and Bayelsa States in the South. The zone is located between Latitudes $5^{\circ}.45'$ and $0^{\circ}.30'$ N and Longitude $8^{\circ}.30'$ and $4^{\circ}.31'$ E respectively, with land area density estimated as $4000/\text{km}^2$ with an estimated population of about 40 million people (NPC, 2007).

Data Analysis

Statistical tools were employed to analyze the data that was collected in order to achieve the stated objectives of the study. The study utilized a combination of analytical tools of both descriptive, Mean threshold from 5-point Likert scale, Empowerment index, Tobit regression, Principal Factor Analysis (PFA) and inferential statistics. Objective 1 was achieved with the help of descriptive statistics which include mean, frequency table and percentage. Objective 2 and 3 were achieved from the mean threshold of 5 Point Likert scale, but objective 2 was further confirmed with empowerment index. Hypothesis one (H_01) was confirmed with the t-ratios produced from the Tobit regression on socioeconomic influence on youth's readiness to implement the skills acquired while Hypothesis two (H_02) was confirmed using the Principal Factor Analysis (PFA). Thus, models for the study were stated as follows:

- a). The descriptive statistic:

$$\bar{X} = \sum \frac{FX}{n} \quad (3)$$

where:

\bar{X} = mean

X = variable

N = sample size and F = frequency

- b). The mean threshold from the 5 Point Likert Scale is stated as follows:

where:

\bar{X} = Mean threshold

5 = Strongly empowered/strongly ready
4 = Empowered/ready
3 = Somewhat empowered/somewhat ready
2 = Fairly empowered/fairly ready
1 = Poorly empowered/poorly ready

c). Tobit Regression model:

$$R^* = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \dots + \beta_n X_n + e, \quad LL(1.0) \quad (5)$$

$R = R^*$ if $R^* >$ Lower limit (1.0)

where, R^* = latent youth readiness (No), R = Observed readiness (No), $\beta_0 \dots \beta_n$ = Parameter of estimate, X_1 = Sex (No; 1 Male, 0 = Female), X_2 = Age (years), X_3 = Farming experience (years), X_4 = Years of school (years), X_5 = Marital status (No: 1 = single, 2 = married, 3 = widow(er), 4 = separated/divorced), X_6 = Farm size, X_7 = Household size (No), X_8 = No of monitoring contact (No) and X_9 = Size of income (₦). e = error term.

d) Principal Factor Analysis (PFA) stated as:

$$X_{ij} = \delta_{i1}F_{i1} + \delta_{i2}F_{i2} + \dots + \delta_{jm}F_{iK} + e_{ij} \quad (6)$$

where:

X_{ij}	= Observation on variable X_j for the i th sample number
F_{iK}	= Score on factor FK ($K = 1, 2, 3 \dots m$)
F_{1-Fm}	= Common factors
E_{ij}	= The value on the residual variable E_j for the i th sample number
$\varphi_{ji}, \dots, \varphi_{jm}$	= Factor loading (regression weight)

The associated assumptions will be applied accordingly while the suitable number of factors will be subjectively selected based on varimax rotated factor matrix obtained using SPSS version 23.0 software. The explanatory techniques using PFA model with interactions and varimax rotation was adopted. The factor loading under constraint (beta weight) represented a correlation of the variables (constraints areas) factors that has the same interpretation as any correlation coefficient Kaiser's criterion using factor loading of 0.30 and above in naming and interpretation. At the end, the varimax was rotated into 3 factors which include; socioeconomic factors, economic factors and institutional factors.

Results and Discussion

This chapter summarized the result finding from the field work. Interpretation of the result helped to draw a logical conclusion for the study objectives.

Sex

Majority (65.93%) of the youths engaged in the IFAD-value chain development program in Southeast were male while the remaining 34.07% were female. The implication was that male youths were more engaged in the program than female youths. The result agreed with Akaninyene *et al.* (2022) that more male youths were involved in agribusinesses than the female counterparts.

Age

Table 1 and 2 above showed that majority (44.25%) of the rural youths engaged were between the age bracket of 25 -30 years, while the remaining 43.36, 9.73 and 2.65% were within the age bracket of 37 years & above, 31-36 years and ≤ 24 years respectively. The mean age was found to be 34 years. Thus, this implied that the people engaged were actually in their youthful age. This result agreed with Akaninyene *et al.* (2022).

Marital Status

Majority (57.52%) of the youths engaged were married, while the remaining 29.20, 10.62 and 2.65% were single, separated/divorced and widow(er) respectively. This agreed with Akaninyene *et al.* (2022).

Level of Education

The finding showed that majority (57.52%) of the rural youths engaged in the IFAD-value chain development program in Southeast attended secondary school, while the remaining 29.20 and 13.27% attended tertiary institution and primary school respectively. The implication was that the youths trained were literate and thus, comprehending what was taught did not pose much challenge. Likewise, its implementations. The result agreed with Akaninyene *et al.* (2022) that most of the youths in agriculture were literate.

Farming Experience

The result indicated that majority (45.13%) of the rural youths engaged in the program in Southeast were into farming for the past 7-12 years, while the remaining 30.97, 18.58 and 5.31% were in farming for the past 13-18, 19 years and above and ≤ 6 years respectively. The mean farming experience was found to be 13 years. This implied that the youths were experienced in agricultural activities.

Household Size

Majority (44.25%) of the rural youths engaged in the program in the study area had a household size within ≤ 5 persons, while the remaining 37.17 and 18.58% had a household size within the bracket of 6-10 persons and 11 persons and above. The mean number of the household size was found to 8 persons. Large family size supplies family labor for the farm activities while the money that would have been paid for hired labor was saved.

Farm Size

Majority (73.45%) of the youths engaged in the program in Southeast had a farm size of ≤ 2 hectares, while the remaining 21.24 and 5.31% of the youths had a farm size of 3-4 hectares and 5 hectares and above respectively. The mean farm size was found to be 2.29 hectares. Having a large farm size was an indication that commercialization of agriculture could be possible in the area. The result agreed with Akaninyene *et al.* (2022) that the youth involved in agribusiness were smallholder farmers.

Monthly Income before the Engagement

Information generated on the income of the rural youths before they were been empowered by the IFAD-value chain development program in Southeast showed that majority (29.65%) were within the income bracket of N10,001 – N20,000, while the remaining 26.99, 21.68, 12.83 and 8.85% were within the income bracket of N30,001 – N40,000, N20,001 – N30,000, \leq N10,000 and N40001 & above respectively. The mean income before the training was found to be N27,857.24 only.

Monthly Income after the Engagement

Equally, the finding shows that majority (34.51%) of the rural youths engaged in the program in Southeast had a monthly income between N30,001 – N40,000, while the remaining 21.24, 16.81, 14.16 and 13.27% were between N20,001-N30,000, N50,000 & above, N40,001 - N50,000 and \leq N20,000 respectively. The mean monthly income after the engagement was found to be N37,817.62. The difference in the mean income as a result of the engagement was found to be N9960.38. Thus, the engagement improved the rural youth's monthly income stream by 37.76%.

Number of Monitoring after Training

The rural youths engaged are being monitored for adherence and compliant as the finding showed that majority (44.25%) were monitored for ≤ 2 times, while the remaining 35.40 and 20.35% were monitored 3-4 times and 5 time and above respectively. The mean number of

times the rural youths were monitored after the engagement was found to be within 3-4 times. This was a noble effort as it helped put a deviated youth back on track and for ease of problem identification.

The mean rate of the youth's readiness to implement the activities they have been trained and empowered to execute were captured and subjected to 5-point Likert scale in order to obtain the mean threshold. This was later interpreted as greater than or equal to 3.0 as satisfactorily ready and less than 3.0 as poorly ready. The findings on youths' readiness produced a cluster mean of 3.86 which is an indication that majority of the youths were ready to implement the skills they were taught under the program in Southeast. Based on the eight (8) items of training captured, 7 had a mean threshold of 3.0 and above, while the remaining 1 had a mean threshold less than 3.0. Thus, the youths were ready to implement: Rice seed-preneur, Stem multiplication, Spraying gang, Pro vitamin A recipes, Rice flour recipes, Smart tractor and Power tiller.

Rotation Method

Varimax with Kaiser Normalization. Rotation converged in 4 iterations.

Table 3 showed the result of the principal component factor analysis done to ascertain the factors hampering the implementation of the skills acquired in IFAD value chain program in Southeast. The factors rotated in the model to determine the degree of relationship/effect of the factor using Varimax were categorized into three (3) components; Awareness factors, Institutional Factors and Socioeconomic factors. Based on the matrix or rotation and variables with the strongest positive or negative correlation in a column, the variables loaded under awareness factors included: Sex (-0.747), inadequate market arrangement (0.687) and inadequate fund (0.896), while the variables rotation under institutional factors included age (-0.426), level of education (-0.797), high cost of labor (0.882) and absence of local fabricators (0.891).

Test of Hypotheses

The Table 4 showed the result of the Tobit regression performed to determine the socioeconomic characteristics influence on youth's readiness to implement the skills acquired using Stata 14.0 had a Log likelihood of -180.04469. The more negative value of the Log-likelihood, the better the result to explain the influence of socioeconomic characteristic on youth's readiness.

The Likelihood Ratio (LR chi2) of 44.04 at 9 degrees of freedom with probability > chi 20.000 is an indication that the model was better fit to explain the socioeconomic influence than an empty model.

Table 1: Socioeconomic distribution of the respondents

Sn	Variable	Frequency (n = 226)	Percentage (100%)	Mean \bar{X}
1	Sex			
	Male	149	65.93	
	Female	77	34.07	
2	Age (years)			
	≤ 24	6	2.65	
	25-30	100	44.25	34
	31-36	22	9.73	
	37 and above	98	43.36	
3	Marital status			
	Single	66	29.20	
	Married	130	57.52	
	Widow(er)	6	2.65	
	Separated/Divorced	24	10.62	
4	Level of education			
	Primary	30	13.27	
	Secondary	130	57.52	
	Tertiary	66	29.20	
5	Farming experience (Years)			
	≤ 6	12	5.31	
	7-12	102	45.13	13.12
	13-18	70	30.97	
	19 and above	42	18.58	
6	Household size (No)			
	≤ 5	100	44.25	
	6-10	84	37.17	8.02
	11 and above	42	18.58	
7	Farm size (Ha)			
	≤ 2	166	73.45	
	3-4	48	21.24	2.29
	5 and above	12	5.31	
8	Monthly income before the training (₦)			
	$\leq 10,000$	29	12.83	
	10,001-20,000	67	29.65	
	20,001-30,000	49	21.68	27857.24
	30,001-40,000	61	26.99	
	40,001 and above	20	8.85	
9	Monthly income After the training (₦)			
	$\leq 20,000$	30	13.27	
	20,001-30,000	48	21.24	
	30,001-40,000	78	34.51	37,817.62
	40,001-50,000	32	14.16	
	50,001 and above	38	16.81	
10	Number of monitoring after training			
	≤ 2	100	44.25	
	3-4	80	35.40	3.19
	5 and above	46	20.35	

Source: Field survey data, May 2019

Table 2: Distribution of the respondents' readiness to implement the skills acquired in the IFAD value chain development program

Sn	Training type	Mean threshold	Std. Dev.	Decision
1	Rice seed-preneur	4.02	0.8879	Ready
2	Stem multiplication	4.00	0.9015	Ready
3	Spraying gang	4.45	0.6984	Ready
4	Pro vitamin A recipes	3.81	1.2221	Ready
5	Rice flour recipes	4.12	1.5022	Ready
6	False bottom technology	2.45	1.0757	Poorly ready
7	Smart tractor	3.98	1.1253	Ready
8	Power tiller	4.05	1.5298	Ready
	Cluster mean	3.86		Satisfactorily ready

Source: Field survey data, May 2019

Table 3: Factors hampering the respondents' readiness in implementing the skills acquired

Sn	Factors	Rotated components matrix ^a		
		Awareness factor	Institutional	Socioeconomic
1	Age			-0.426*
2	Sex	-0.747*		
3	Marital status	-0.499		-0.493
4	Household size	-0.309		0.805
5	Income size	0.699	0.332	
6	Level of education		-0.797*	
7	High cost of labor		0.882*	
8	Inadequate fund	0.896*		
9	Absence of local fabricators		0.891*	
10	Inadequate market arrangement	0.687*		
11	The products are not accepted in the community	-0.429		-0.715
12	Low knowledge of rural people in the use of the products	0.666	0.575	

Source: Field Survey Data, May 2019

Table 4: Socioeconomic factors influencing respondents' readiness to implement the skills acquired

level of readiness	Coeff.	Std. Err.	t	Number of Obs. = 226		
				LR Chi ² (9) = 44.04	Prob > Chi ² = 0.000	Pseudo R ² = 0.1090
Tobit regression						
Log likelihood = -180.04469						
2.Sex (X ₁)	0.2862	0.0714	4.01**	0.0000	0.14540	0.4268
Age (X ₂)	-0.0147	0.0075	-1.94*	0.0530	-0.02960	0.0002
Experience (X ₃)	-0.0013	0.0084	-0.16	0.8740	-0.01780	0.0152
Year of formal learning (X ₄)	0.0198	0.0097	2.04*	0.0420	0.00070	0.0389
Marital status (X ₅)	0.0468	0.0537	0.87	0.3850	-0.05900	0.1525
Household size (X ₆)	-0.0333	0.0148	-2.26*	0.0250	-0.06250	-0.0042
Farm size (X ₇)	0.0257	0.0150	1.71	0.0880	-0.00390	0.0552
Mean income (X ₈)	-8.74e-06	4.25e-06	-2.06*	0.0410	-0.00002	-3.70e-1
Monitoring (X ₉)	-0.0236	0.0260	-0.91	0.3640	-0.07480	0.0275
_cons	4.2232	0.3126	13.51	0.0000	3.60750	4.8389
/sigma	0.4944	0.0220		0.4510	0.53770	

Source: Field survey data, May 2019. 0 left-censored observations, 252 uncensored observations and 0 right-censored observations

Table 5: The income of the respondents before and after the training

Variable	Obs.	Mean	Std. Err.	Std. Dev.	[95% Conf. Interval
Income after	226	37817.620	656.9749	10429.15	36523.7300
Income before	226	27857.240	682.2714	10830.72	26513.5300
Diff.	226	9960.381	945.1305	15003.48	8098.9840
mean(diff) = mean (after – before)					t = 10.5386
Ho: Mean(diff) = 0				Degrees	Of
Ha: Mean(diff) <0				Ha: Mean(diff) = 0	Ha: Mean(diff) >0
Pr(T <t) = 1.0000				Pr(T > t) = 0.0000	Pr(T > t) = 0.0000

Source: Field survey data, May 2019

The Pseudo R² of 0.1090 implied that 10.90% variation in youth's readiness were explained by the joint actions of socioeconomic characteristic influence. Thus, the equation fits:

$$\begin{aligned}
 R^* = & 4.2232 + 0.2862X_1 - 0.0147X_2 - 0.0013X_3 \\
 & + 0.0198X_4 + 0.0468X_5 - 0.0333X_6 + 0.0257X_7 \\
 & - 8.74e-06X_8 - 0.0236X_9 + ll(1.0) + 0.4944
 \end{aligned}$$

The predicted value of youth's readiness to implement the skills acquired was positive and significant at 1% level

of probability. The male youths engaged were 0.2862 units more ready to implement the acquired skills than their female counterparts. Generally, the youths were ready to implement the skills acquired in the program in Southeast, but the male youths showed more zeal/readiness to implement than the female youths in the study area. Thus, sex had 28.62% influence on youth's readiness to implement the skills acquired in the program.

The coefficient of Age was negative and statistically significant at a probability level of 5%, which indicated that a unit increased in age reduced the youth's readiness

to implement the skills acquired by 0.0147 units. There is therefore the need to concentrate trainings on farmers in their youthful age. The older the farmers, the less willing they tried new skills. Thus, age had 1.47% influence on the youth's readiness to implement the skills acquired in the program.

The coefficient of Farming experience was negative and not statistically significant at either probability level of 5 or 1%, this implied that a unit increase in farming experience had no influence on youth's readiness to implement the skills acquired in the study area. The skills the program had impacted on the rural youths was new in the area and this, justified the none significant nature of farming experience in the study.

The coefficient of Years of spent in formal education was positive and statistically significant at probability level of 5%. This was an indication that a unit increase in the years the rural youth spent in school increased their readiness to implement the skills acquired by 0.0198 units. Thus, years of formal education had 1.98% influence on the youth's readiness to implement the skills acquired in the program.

The coefficient of marital status was positive and statistically not significant at either 5 or 1% level of probability. This implied that marital status did not influence youth's readiness to implement the skills acquired in the program in Southeast.

The coefficient of household size was negative and statistically significant at 5% level of probability, this was an indication that a unit increased in family size caused a reduction in youth's readiness by 0.0333 units. By a-priori expectation, large family size was expected to provide labor but, in this case, as the number of dependent persons increased, there was possibility that resources mapped out for the implementation of the skills were diverted to cater for family needs. Thus, household size exerts a negative influence on readiness by 3.33%.

The coefficient of farm size was positive and statistically not significant at either 5 or 1% level of probability. This implied that farm size had no significant influence on youth's readiness to implement the skills acquired in the program in Southeast.

The coefficient of monthly income was negative and statistically significant at 5% level of probability, this was an indication that a unit increased in the monthly income of the youths engaged, there was 8.74 units reduction in their readiness to implement the skills acquired. The implication was that as the income of the youths increased, there was tendency that they diverted their attention away from agriculture. Thus, monthly income exerts negative influence on youth's readiness to implement the skills.

The coefficient of monitoring was negative and not statistically significant at either 5 or 1% level of probability. There was an urgent need for the program to increase their supervision on the implementation after the training.

Therefore, hypothesis one was accepted based on the socioeconomic variable that were not significant: Farming experience, Marital status, Farm size and Monitoring after the training. While the hypothesis was equally rejected based on the socioeconomic variable that were significant: Sex, Age, Year of formal learning, Household size and mean monthly income.

Hypothesis Two (H_02)

There is no significant difference in the income of the youths before and after the training.

The result of the paired sample t-test for hypothesis two was shown in Table 5 above. The mean income difference after the training was ₦9,960.38 (37.7% increase in monthly income of rural youths as a result of the program impact in Southeast). The null hypothesis (H_0 : Mean (diff) = 0) assumed equal monthly income before and after the engagement, but the t-value of 10.5386** was significant at probability level of 0.000. Thus, hypothesis two was rejected, hence there was a significant difference in the monthly income of the rural youths before and after the IFAD engagement in Southeast.

Conclusion

The importance of rural youth engagement in IFAD value chain development program in Southeast Nigeria as a panacea to rural unemployment cannot be overemphasized judging from the alarming 35.6% unemployment rate in Nigeria and the rising unemployment rate in Africa and the world at large. Findings from the study provided a comforting guide to policy-makers in the country. There is a need for various government administration to adopt the IFAD value chain development template for rural poverty alleviation programs.

Some key evidence like the mean monthly income before the engagement was found to be ₦27857.24 and ₦37,817.62 after the engagement respectively. Also, the difference in mean monthly income was ₦9,960.36 which is exactly 37.76% increase in the youth's monthly income stream. Thus, the monthly income after the engagement was above the ₦30,000 approved minimum wage in Nigeria. This called for a sensitization to increased youth inflow in the agricultural sector. Thus, there is an urgent need for the government and policy-makers to:

1. Make adequate and sincere structured market or off-takers arrangement for the youth's agricultural produce
2. Make available farm machines at an affordable or subsidized price in order to reduce the cost borne by manual labor
3. Make necessary infrastructural facilities such as electricity, good roads and other institutional process that will help to encourage the presence of local fabricators

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Okeke Chinyere: Considerable contributions to conception and designed, and/or acquisition of data, analysis and interpretation of data authors contribute in drafting the article or reviewing it critically for significant intellectual content, and authors give final approval of the version to be submitted and any revised version.

Obianefo Chukwujekwu: Considerable contributions to conception and designed, and/or acquisition of data, analysis and interpretation of data.

Nwigwe Cecilia: Contributed in draft the article or reviewing it critically for significant intellectual content.

Obot Akaninyene: Contributed in drafting the article or reviewing it critically for significant intellectual content, and authors give final approval of the version to be submitted and any revised version.

Ethics

This article is original and contains unpublished material. The corresponding author confirms that all of the other authors have read and approved the manuscript and no ethical issues involved.

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