POST COVID-19 ALTERNATIVE LIVELIHOOD INDUCED STRATEGIES AMONG SMALL SCALE FARMERS IN WUKARI LOCAL GOVERNMENT AREA, TARABA STATE.

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ABSTRACT

The study Assessed Post Covid-19 Alternative Livelihood Induced Strategies among Small Scale Farmers in Wukari Local Government Area, Taraba State. The research used primary data collected from 100 small scale farmers. Frequency, percentages, Likert scale and ordinary Least Square regression was use in data analysis. The results indicated an R value of 0.66, showing a strong correlation between the independent variables and induced strategies adopted respondents during the covid-19. The study predicted about 43 per cent of the induced strategies adopted by respondent and the F-value was statistically significant ($p<0.05$). It was revealed that the educational qualification ($t = 3.06$), marital status ($t = 4.13$) and years of experience in crop farming ($t = -4.28$) were significant at 5% level of significance. The study further revealed that majority (42.7%) fall within the age category of 36-40, 59.1% were male, 42.8% attended Secondary School, 28.3% had between 2-5years farming experience, 41.8% had 2-5household size, 28.2%, 56.4% were married respectively. Also, majority (53.3%) earns 50,000 and above with ₦32,806.000 as average annual income from fishing while 18.1% earns ₦6,337.000 with an average annual income of ₦62,767,6.4% from cropping. Only 1.8% earns ₦3, 554.500 with an average of ₦3, 554.500 annual income from services. 0.9% earn ₦34, 900 with a total annual income of ₦2, 690.112 from trading/business. Sales of household asset perception was identified as the critical problem with mean score of 2.6111 and ranked 1st. the study recommend that Public assistance programmed must be modified and augmented in order to better reach small scale farmer and innovative policy tools for supporting small scale farmers are critical.

DOI:10.5281/zenodo.12778775

Manuscript ID # 154

INTRODUCTION

A severe highly contagious and infectious respiratory disease, COVID-19, emerged in December 2019, with the first incidence reported in Wuhan city, Hubei province of China (Chakraborty & Maity, 2020). The COVID-19 pandemic ravaged humanity and brought the world economy to a standstill as had been warned by WHO that the pandemic was going to touch every sector (Aday & Aday, 2020). Nigeria as part of the global community was not spared, with the Government of Nigeria, declaring the pandemic a national disaster, and a formidable epidemic disease on the 17th of March and 20 May 2020, respectively. As of 17 January 2021, Nigeria had recorded cumulative totals in excess of 7,203 confirmed cases and at least 713 deaths, with typical daily new cases of up to 74 and with at least 2 deaths per day (WHO, 2021).

In response to the COVID-19 pandemic, the GoZ promulgated public health regulations in form of the Statutory Instrument 77 of 2020 in a bid to prevent and contain the spread of COVID-19 as recommended by WHO (Aday & Aday, 2020). Measures of containment and prevention of COVID-19 as stipulated in the Statutory Instrument 77 of 2020 included prohibition of gatherings for any purpose, restrictions on public traffic and movement of people in local authorities. Agriculture is one of the backbone of Nigeria's economy (Maiyaki, 2010). The primary pillar for Nigeria economic development is the agricultural sector and it is the major source of livelihoods for the majority (70%) of the country's population (Nigeria Agricultural Society, 2019). Most manufacturing industries rely more on raw materials and ingredients from the agricultural sector (Nigeria Agricultural Society, 2019). Prohibition on public gatherings hindered the provision of adequate agricultural extension services such as farmer trainings, agricultural input distribution, field visits, field schools and district agricultural shows. The restrictive measures have deprived most urban communities in the informal sector of their main source of livelihoods (Dzobo et al., 2020). The COVID-19 outbreak leaves the agriculture sector in an adverse food supply situation from 2020 and beyond (Parwada, 2020). Therefore, food security issues should be urgently addressed using appropriate alternative measures to ensure that as nations fight the COVID-19 pandemic, populations are not exposed to hunger as a result of lockdown restrictions.

According to Andam et al. (2020) the agricultural sector suffered a 13.1% loss in output ($1.2 billion) and households lost on average 33% of their income. The measures restricted people's and labour mobility, reduced economic activity, impacted food systems, impacted livelihoods, disrupted transportation and logistics networks both locally and internationally and also caused some economies including the Nigerian economy to go into recession which could lead to the emergence of food and nutrition crisis.

Therefore, this paper discusses some of the roles that these commissioners can play in mitigating the negative impact of COVID 19 on agricultural livelihoods and systems. This is critical if the nation must achieve sustainable development. Like in many developing countries, the effect of COVID-19 on agriculture in Nigeria has been enormous due to the limited mechanization and high labor intensity in agriculture in the country. Over one-third (35%) of the country's total labour force is employed in the agricultural sector (World Bank, 2020).
Due to shocks to income and weakened livelihoods, the impact of the corona virus disease (COVID-19) pandemic is growing everyday on the poor small scale farmers. Although there are many extensive reports on the effects of Covid-19 on the global economy and Nigeria's economy in particular, especially that of the small and medium sized enterprises and food production and supply chain, but there has been little work on the effects of the global pandemic on the livelihood of small scale farmers in Wukari Local Government area of Taraba State and hence, the need to carry out this research work

MATERIALS AND METHODS

Study Area

The study was conducted in Wukari local government area of Taraba State. The Wukari people are predominantly farmers, hunters and partly fishermen, while some are civil servants (Anyeze, 1983). Geographically, Wukari local government is situated in the southern part of Taraba state. Ibi local government area borders it to the north, east by Gassol local government area, from the south by Donga local government area of Taraba State, and to the west by Ukum local government area of Benue State. The local government area has a total area of 4,308 km2 (1,663 Square mile), located between latitude 7°51′ N 9°47′ E and longitude 10°E and 12°E. According to 2006 National population Census figures, Wukari has a population of 241,546 people (Danjuma, 2005), projected to 350,731 people in 2017. Wukari lies on the Guinea Savannah zones vegetation, which is marked by mainly forest and tall grass. The plain and fertile land and the consistent annual flood of the rivers and streams within the area make the land conducive for seasonal farming and grazing, and all seasons fishing. These activities informed the distribution of cultural and natural resources of the area, and also make Wukari a very rich agricultural land.

3.2 Sampling Procedure

Multiple random sampling techniques was used to collect data in the study area. In the first stage include random sampling of seven wards out of the ten (10) wards (Hospital wards, puje ward, Avyi ward Kente ward, Jibu ward, Akwana ward, Rafin-kada ward, Bantaje ward, Tsukundi ward and Chunku ward). The second stage will involve random selection of 10 small-scale farmers from each of the council ward in the study area making a total of 100 respondents

3.3 Data collection

Data were collected by administering a well-structured questionnaire used to elicit information from the farmers to accomplish the objectives of study.

3.4 Validity and Reliability of the research instrument

The data for this study was validated by passing the research instrument through expert
In the Department of Agricultural Economics and Extension, Federal University Wukari to ensure that it possesses both face and content validity.
The Cronbach's back alpha was used to determine the reliability of the research instrument. It is a measure of internal consistency, that is, how closely related a set of items are as a group. It is considered to be a measure of reliability

3.5 Data Analysis Techniques

Descriptive statistics such as percentages, means and frequency distributions, was use to achieve objectives of the study. These tools summarized socio-economic variables such as age, educational level, years of farming experience, level of adoption, house -hold size, Access to road etc.
Egwu (2004) adopted the use of Likert 4-point scale model express as:

$X=\sum \frac{x}{n}$

X= we ıean (mean score)

X = Likert value

∑= Summation

n = total respondents/ sample size

The decision rule that serve as basic for acceptance or rejection will be determined. Thus, decision rule (DR) of 4-point Likert scale = (4+3+2+1) / 4=2.5 that is >2.5 is accepted as factor while <2.5 is rejected.
Multiple regression analysis will be used to determine the relationship between such socio-economic characteristics of the respondents and level of strategic adoption.
The regression analysis will be used in estimating the contribution each variable to the dependent variable so as to determine the best variables that best predict adoption of strategies by small-scale farmers. Multiple regressions will be used to test the hypothesis for this study.
The general model for the multiple regression analysis it will be a linear form as given below;

Y = f(X1,X2, X3, X4,X5, X6, X7, e……..……(1)
Where;

Y = Livelihood induced strategy

X_1 = age (number)

X_2 = Gender (male=1 and female=0)
X_3 = level of education (years of formal learning)
X_4 =Years of farming experience (number)
X_5 = household size (number)
X_6 = marital status (Married = 1, otherwise =0)
X7=Annual income (in Naira)
e = error term

RESULTS AND DISCUSSION

4.1 Socioeconomic characteristics of farmers

The socioeconomic characteristics considered in the study were age, gender, highest level of education, years of farming experience, household size, marital status and annual income of the respondents. The distribution of small scale farmer by gender in table 1 showed that most of the respondents were male (59.1%) while others were female (40.9%). This implies that small scale farmers are predominately male. The distribution of small scale farmer by age revealed that 19.1% of them fall within the age category of 20-25years, 20.0% of them fall within the age category of 26-30years, 16.4% of them fall within the age category of 31-35years, 42.7% fall within the age category of 36-40 while 1.8% fall within the age category of 41years and above. The distribution of small scale farmer by marital status indicated that majority (56.4%) were married, 2.4% were single, 13.7% were widowed while few (5.5%) were divorced. The distribution of small scale farmers by years of farming experience in table 1 showed that the average years of farming experience was approximately 10-15years, 28.3% were between 2-5years farming experience, 26.4% were between 5-10years of farming experience, 22.7% were between 20 years and above meaning that small scale farmers have acquired appreciable years of experience in small scale farming activities. The distribution of small scale farmer by level of education indicates that a little over a quarter (27.3%) had no first leaving school certificate, implying that the majority are educated with B.SC/B.A/B.Ed (42.8%), Secondary education (14.5%) and NCE/ND(29.1%). The distribution of small scale farmer by annual income earned from small scale farming was 50,000 and below representing 53.6% of the respondents, 51,000-100,000 representing 28.2% of the respondents, 101,000-200,000 representing 13.6% of the respondent and 201,000 and above representing 4.6% of the respondents this shows that farming for the small scale farmers is more profitable than other ventures through which money is earned in the study area. The distribution of household size farmer by household size showed that 41.8% of the respondents had 2-5household size, 28.2% of the respondents had 5-8household size while 30.0% of the respondents had 8 and above household size.

Table 1: Respondents demographic profile

Variable	Frequency (n =217)	Percent
Gender		
Male	65	59.1
Female	45	40.9
Age		
20-25years	21	19.1
26-30years	22	20.0
31-35years	18	16.4
36-40years	47	42.7
41years and above	2	1.8
20-25years	21	19.1
Marital status		
Married	62	56.4
Single	27	24.5
Widowed	15	13.7
Divorced	6	5.5
Farming experience		
2-5years	31	28.2
5-10years	29	26.4
10-15years	25	22.7
20years and above	25	22.7
2-5years	31	28.2
Educational level		
FLSC	15	13.6
O'Level	16	14.5
NCE/ND	32	29.1
B.SC/B.A/B.Ed	47	42.8
FLSC	15	13.6
O'Level	16	14.5
NCE/ND	32	29.1
Income		
50,000 and below	59	53.6
51,000 – 100,000	31	28.2
101,000 – 200,000	15	13.6
201,000 and above	5	4.6
House hold Size		
2-5	46	41.8
5-8	31	28.2
8 and above	33	30.0

4.2 Adaptation strategies of small-scale farmers to the challenges faced by farmers

Table 2 shows the distribution of respondents based on income generated from livelihood activities. The result shows that all the respondents were in to fishing with total annual income of ₦32, 806.000 and average annual income of ₦66, 705 derived from fishing activities. Crop production is the second largest activity with about

18.1% of the respondents involves in crop production apart from fishing and the respondents generates a total annual income if ₦6, 337.000 with an average annual income of ₦62, 767, 6.4% of the respondents are in to Livestock production with a total annual income of ₦5, 962.900 and an average annual income of ₦37, 415. Only 1.8% of the respondents were in to services with total annual income of ₦3, 554.500 and average annual income of ₦34, 900. Trading/business is the least among the categories of activities with only 0.9% participation rate which gives a total annual income ₦2, 690.112 with an average annual income of ₦28, 316 from trading/business activities.

Table 2: Distribution of the respondents based on income generated from livelihood activities

Livelihood activities	Number of respondents adopted	Percentages	Total Amount generated by all respondents (₦)	Average amount per annum(₦)
Fishing	80	72.7	32,806,000	66,705
Crop production	20	18.1	6,337,000	62,767
Livestock	7	6.4	5,962,900	37,415
Services	2	1.8	3,554,500	34,900
Trading/Business	1	0.9	2,690,112	28,316

4.3 Perceived effect of covid-19 lockdown on market to sale/buy product of the small scale farmers in the study area

Perception is often refers to as conscious understanding of certain situation or something usually from experience. Different individuals have different ways of understanding issues, depending on so many parameters like, age, knowledge, experience etc. Table 3 shows that Sales of household asset perception as the critical problem with mean score of 2.6111, they also perceived Borrow money at interest rate as very serious problem with mean score of 2.5463, Reduce in demand for farm produce have a mean score of 2.5049and was perceived as a problem by the respondents, expensive farm input has a mean score of 2.3333each and also perceived as less problem, difficulty in feeding and inadequate seed for planting has a mean score of 2.2778and was perceived as not problem, transportation limitation were perceived as not a problem with mean score of 2.1468, no market to sale/buy product were perceived as not a problem with the mean score of 2.0550respectively. The respondents perceived sales of household asset as critical problems with 1st on the rank with little variations in the mean scores except difficulty in feeding which were perceived as not a problem and was ranked 5th. The implication is that all the variables except difficulty in feeding have unfavorable outcome as perceived by the respondents.

Table 4: Distribution of the Respondents According to Perceived effect of covid-19 lockdown on market to sale/buy product of the small scale farmers

Perception	Mean score	Rank	Remark
No market to sale/buy product	2.0550	7th	Not a problem
Transportation limitation	2.1468	6th	Not a problem
Reduce in demand for farm produce	2.5049	3rd	Problem
Expensive farm input	2.3333	4th	Less problem
Sales of household asset	2.6111	1st	Critical problem
Borrow money at interest rate	2.5463	2nd	Very serious problem
Difficulty in feeding	2.2778	5th	Not a problem
Inadequate seed for planting	2.2778	5th	Not a problem

Source: Field survey, 2022

≥2.6 is critical problem
2.54-2.53 is very serious problem
2.50-2.40 is problem
2.33-2.30 is fewer problems
≤ 2.2-2.0 is not a problem

4.5 Factor influencing the adoption of the alternative induced livelihood

Table 4 reveals the Ordinary Least Square regression results of socioeconomic characteristics against induced strategies adopted by small scale farmers during the covid-19. An R value of 0.66 showed that there was a strong correlation between the independent variables and induced strategies adopted by small scale farmers during the covid-19. The model predicted about 43 per cent of the induced strategies adopted by small scale farmers during the covid-19 and the F-value was statistically significant ($p<0.05$), showing that the model has a good fit. It was noted that the educational qualification ($t = 3.06$), marital status ($t = 4.13$) and years of experience in crop farming ($t = -4.28$) were significant at 5% level of significance, these implying that these four variables significantly determine the farmers' adaptation strategies employed against challenges faced during the COVID-19 lock down period.

Table 5. Multiple regression results on socioeconomic characteristics against induced strategies adopted by small scale farmers during the covid-19

	Coef.	Std. Err.	T	P>|t|	Remarks
(Constant)	-446219.747	451084.908	-0.989	0.325	NS
Age of the respondents	-49610.109	88659.299	-0.560	0.577	NS
Gender	529566.122	164069.987	3.228	0.002	S
Highest level of education	93664.302	76873.846	1.218	0.226	NS
Years of farming experience	257314.288	114884.731	2.240	0.028	S
Household size	-230398.253	144832.977	-1.591	0.115	NS
Marital status	137151.095	94206.637	1.456	0.149	NS
R = 0.661					
R-squared= 0.4393					
Adj R-squared = 0.3949					

Source: field survey, 2022 multiple regression

CONCLUSION AND RECOMMENDATION

Small-scale farmers in the study area were relatively young and they were still within the economically active age to perform farming activity, the average household size of 8 persons, meaning that small scale farmers have do not have enough to carter for their family. The implication shows that all the variables except difficulty in feeding have unfavorable outcome as perceived by the respondents.

5.3 Recommendation

It is recommended that Public assistance programmed must be modified and augmented in order to better reach small scale farmer, many of whom do not have access to formal, contributory social insurance systems. This will require both financial resources and investments in systems for identifying and targeting those in need. Indeed, the local government that responded the quickest and most effectively to the pandemic were those that already had in place well-developed social safety net programmes and systems that allowed them to quick scale up and scale out assistance. In the context of farm households, a combination of flexible cash plus interventions to support and strengthen food and input markets can help reduce reliance of short-term, adverse coping strategies, while also enabling productive investments in farm activities that have been hindered by the pandemic. Innovative policy tools for supporting small scale farmers are critical. For informal businesses this may involve cash grants provided through public safety net systems. For more formal enterprises, financial tools such as low interest loans or tax credits may be more appropriate and feasible.

The research also recommend development of policies and programmes aimed at addressing multiple dimensions of food security in rural spaces. Well targeted and adequately funded support for farmers spaces are necessary for recovery efforts that can foster a more equitable and inclusive development pathways. For this to happen, farmers spaces must play a central part of efforts to build back better.

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