



IMPACT OF ANCHOR BORROWER'S PROGRAMME ON FOOD SECURITY STATUS OF SMALLHOLDER RICE FARMERS IN KANO STATE, NIGERIA

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ABSTRACT

The study was to assess the impact of anchor borrower's program on food security status of rice farmers in Kano State, Nigeria. Primary data was used for this study. Multi stage sampling procedure was used where power analysis software was used to arrive at the accurate sample size of 606 ABP rice farmers with actual power of 0.95 at two tail tests. The data was analyzed using z-statistics to comparing between food security status of beneficiaries and non-beneficiaries in the study area. Based on this power analysis, the farmers were stratified into beneficiaries and non-beneficiaries of ABP. Data were collected from 303 beneficiaries and 303 non-beneficiaries' farmers through the use of interview schedule. The result shows that majority of the two groups were Low food secured with 284 (93.4%) and 252 (83%) respectively. that there were no significance differences in the food security status between the two groups. In conclusion, Majority of the rice farmers were low food secured It was recommended that. Majority of the rice farmers were low food secured. It is therefore recommended that all stakeholders should consider these as major problems and look for way out because it has reciprocal effect in community which could lead to social verses among the people. It was also recommended that proper measures should be taken in implementing an important program like this.

Keywords: Anchor Borrower's Program, Smallholders Rice Farmers. Food security.

INTRODUCTION

Food security issues have been a key concern globally over the last four decades as the global population continues to grow. It is estimated that the world population will reach between 8 and 9 billion people by 2050 (Abbas, 2016). One of the pressing challenges facing the global population is food insecurity, which currently impacts five and twenty five percent of the population in developed and developing countries, respectively. In the last decade, attention has been focused on means of eliminating food insecurity and hunger worldwide. Hence, the Sustainable Development Goal (SDG) 2 is about creating a world free of hunger by 2030. In 2020, between 720 and 811 million persons worldwide were suffering from hunger, roughly 161 million more in 2019. Also, in 2020 a staggering 2.4 billion people or above 30 per cent of the world's population were moderately or severely food-insecure, lacking regular access to adequate food. The figure increased by nearly 320 million people in just one year. Globally, 149.2 million children under 5 years of age, or 22.0 per cent, were suffering from stunting (low height for their age) in 2020, a decrease from 24.4 per cent in 2015 (Sustainable development goal report, 2022).

In Nigeria, food security hangs on a very delicate balance of domestic food production and volatile food imports, as asserted by many experts. Although the number of people faced with the problem of acute starvation in the country may not be alarming at the moment, like it



is in some parts of the world. A jolt on Nigeria's food supply system could push the country into a hunger challenge of adverse proportion. Nigeria's current food security is by no means sustainable. The most populous black nation on earth became a net importer of food, squandering \$11 billion importing basic food commodities including rice on which Nigeria spent ₦356 billion annually, amounting to about ₦1 billion per day. Although Nigeria is not currently enmeshed in famine, extreme lack of food or starvation, it is mainly for one reason only, and that is because every day, it still sells enough crude oil to purchase sufficient food to salvage its population from the brink of starvation. But this clearly is not a sustainable way to feed about 170 million people (Message, 2022). Nigeria is the largest producer of rice in West Africa but the second largest importer of rice in the world, accounting for 25% of the continent's import. Local production is done on 2.8 million hectares of farmland (Central Bank of Nigeria, 2015). Nigeria produces 2.55 million metric tons of the estimated 6.1million metric tons it consumes annually. It was further projected that Nigeria's rice consumption will rise to 35 million metric tonnes by 2050, increasing at the rate of 7% per annum due to estimated population growth (CBN, 2015). Considering the rate at which the country's population increases, there is the need to match the population increase with food production; hence increase in rice production is one way of realizing this dream.

The Government of Nigeria has implemented several initiatives and programmes to address the situation including Anchor Borrowers' Programme scheme (Umeh and Adejo, 2019). The ABP was established in 2015 by the Central Bank of Nigeria (CBN) in line with its developmental function. This was done in order to curb the high cost been incurred by the government on the importation of food crops or agricultural products that can be produced within the country. According to the CBN (2015), Nigeria's agricultural commodities and food import bill has averaged over N1trillion in the past two years. Food products like milk, sugar, rice, wheat and fish accounted for N901billion or 93.5% and N788billion or 88.71% of this total in 2013 and 2014, respectively. These figures are exclusive of the activities of smugglers. The import bill of rice and wheat was estimated at N428billion in 2013 and N307billion in 2014. These huge amounts were expended on items that the country has the potential to produce locally with the attendant loss of employment generation and wealth creation opportunities. Furthermore, the allocation of foreign exchange to the importation of these items has continually depleted Nigeria's foreign reserve, which has been on a steady decline in recent times (Umeh and Adejo, 2019).

METHODOLOGY

Study Area

Kano State is located between Latitudes 100 3' and 120 37' North and Longitudes 70 3' and 90 694 695 5' East of the Greenwich meridian. Kano State is the commercial nerve centre of Northern Nigeria. It has a total land area of 20,760 square kilometers with 1,754,200 hectares of fertile agricultural land, of which 86,500 is exclusively Fadama land. Administratively, the State was divided into 44 Local Government Areas. Kano State is the second most populous state in Nigeria with a population of 11,383,682 (NPC, 2011), and the projected population to 2022 is 15,140,297. The major crops grown in the state include rice, millet, maize, cowpea, vegetables and groundnut. The main livelihood of the people is agriculture of which rice is among the most important crop both in production and in consumption (NAERLS, 2012).

Sampling Procedure and Sampling Size

Multi stage sampling procedure was used in the study. In the first stage, ADP administration three (3) zones was also used. In the second stage, the list of LGAs that are intensively involved in rice production was selected. These LGAs are; Kura and Garin malam in zone 1, Shanono and Bagwai in zone 2 and Dawakin kudu and Warawa in zone 3, thereafter, two villages were purposively selected in each LGA based on the participation in anchor borrower program, this gave a total of twelve (12) villages. During a reconnaissance survey of the study areas in 2022, the list of benefiting rice farmers in the chosen villages was compiled (554) with the help of the managers of rice farmers association of Nigeria (RIFAN), power analysis software was used to arrive at the accurate sample size of 606 ABP rice farmers with actual power of 0.95 at two tail test. Based on this power analysis, the farmers were stratified into beneficiaries and non-beneficiaries of ABP.

Data Collection and Analysis

Primary data was collected through the administration of structured interview schedule. Data was analyzed using both descriptive and inferential statistics (z-statistics). Descriptive involved the measures of central tendency such as mean, frequency distribution, percentage, standard deviation, coefficient of variance and inferential statistics. Food security status classification was used to determine food security status of beneficiaries and non-beneficiaries in the study area. Coding Responses and Assessing Households' Food Security Status:

Responses of "often" or "sometimes" on questions HH3 and HH4, and "yes" on AD1, AD2, and AD3 are coded as affirmative (yes). Responses of "almost every month" and "some months but not every month" on AD1a are coded as affirmative (yes). The sum of affirmative responses to the six questions in the module is the household's raw score on the scale.

Food security status is assigned as follows:

- Raw score 0-1—High or marginal food security (raw score 1 may be considered marginal food security, but a large proportion of households that would be measured as having marginal food security using the household or adult scale will have raw score zero on the six-item scale).
- Raw score 2-4—Low food security.
- Raw score 5-6—Very low food security.

For some reporting purposes, the food security status of households with raw score 0-1 is described as food secure and the two categories "low food security" and "very low food security" in combination are referred to as food insecure

Model specification

Z-statistic

The model will also be used to achieve the comparing between food security status of beneficiaries and non-beneficiaries in the study area. The Z - statistic is expressed as follows: Where;

Z = calculated Z

\bar{x}_1 = mean of yield for participating farmers in rice production,

\bar{x}_2 = mean of yield for non-participating farmers in rice production,

s_1 = standard deviation of participating farmers in rice production,

s_2 = standard deviation of non-participating farmers in rice production,

n_1 = number of programs participating farmers in rice production

n_2 = number of non-program participating fanners in rice production.

RESULT AND DISCUSSION

Food Security Status of Beneficiaries and Non-Beneficiaries

Result on the food security status of beneficiaries and non-beneficiaries of ABP is presented in the table below, the food security status categories were defined as: food security, low food security, very low food security (USDA, 2016). The result shows that majority of the two groups were low food secured with 79% and 93.4% respectively. Where 21% and 6.6% were very low food secured for the two groups and both of the groups were not food secured. This indicated that both beneficiaries and non-beneficiaries of ABP were not food secured. The result therefore, implied that the ABP did not totally removed the participants out of food insecurity status. The result is in line with the finding of Adetomiwa *et al.* (2020), who revealed that the participation in Fadama III program was yet to completely lifted the participants out of food insecurity status but it had narrowed the resource gap for participants of Fadama III program. Thus, ABP had the potential to gradually improve their consumption level and help them be out of the food insecurity. In another study by Uma and Akukwe (2020), where they investigated on household food security (food accessibility) and its determinants in agrarian communities of Southeastern Nigeria. The study revealed that, majority of farm households were faced with the serious food insecurity problems, microcredit still remains a great tool with the potential of alleviating food insecurity among the poor.

Table 1: Distribution of Beneficiaries and Non-Beneficiaries by Food Security Status

Categories	Row score	Beneficiaries		Non-beneficiaries	
		F	%	F	%
Food security	1 – 0	0	0	0	0
Low food security	2 – 4	283	93.4	252	83
Very low food security	5 - 6	20	6.6	51	17

Source: Field Survey, 2024

T-statistic result showed the mean value of the two groups were 2.991854 and 2.763477. This shows there is a difference in the average mean of the two group, mean of the beneficiaries is greater than the non-beneficiaries. If the P- value is less or equal to the significance level, the decision is to reject the null hypothesis and if the P- value is greater than the significance level, the decision is to accept the hypothesis. In this result the P- value was 0.009 and significant at 0.05 level, so the P- value was less than the significance level. Therefore, the decision is to reject the hypothesis and conclude that, there are differences between in the food security status of the two groups. This is in line with the finding of Aiyede (2021), who revealed that, access to credits enhance food security. Empowering farmers with access to credit not only enable them to make informed decision but also addresses insecurities, leading to an improvement in their household standard of living.



Table 2: Distribution of Beneficiaries and Non-Beneficiaries by Comparing their Food Security Status

t-Test: Two-Sample Assuming Unequal Variances		
	Beneficiaries	Non-beneficiaries
Mean	2.991854	2.763477
Variance	1.34362	1.494921
Observations	302	302
Hypothesized Mean Difference	0	
Df	000	
t Stat	2.355641	
P(T<=t) one-tail	0.009406	
t Critical one-tail	1.647397	
P(T<=t) two-tail	0.018812	
t Critical two-tail	1.963926	

Source: Field Survey, 2024

CONCLUSION AND RECOMMENDATION

It was found out that there were no significance differences in the food security status between the two groups. Majority of the rice farmers were low food secured. It is therefore recommended that all stakeholders should consider these as major problems and look for way out because it has reciprocal effect in community which could lead to social verses among the people.

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