Research Article

Assessment of the Impact of Government Intervention on Rice Production in Nigeria

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Abstract: The study assesses the impact of government Anchor Borrower Program (ABP) on rice production in Kano state. Simple probability sampling techniques with a total number of 118 respondents were utilized. Descriptive statistics and logistic regression were employed. The descriptive statistics show that Kano state Government ABP impacted positively on the increase in rice production in Kano state. The logistic regression result shows that income of farmer, government loan, technology and farm size have positive relationship with output of rice produce, while labour has negative relationship with output of rice produce in Kano state. The study recommends that government should expand the Anchor Borrower programme in a way that multiple of rice farmers can benefit in order to increase the rice production in the country at large, interest rate charge on the programme should be reduced or remove for more farmers to benefit, loan or inputs should be provided at the right time to farmers and government should also import, more sophisticated machines and sale at the affordable prices to farmers for easy and maximum capacity utilization of the available resources.

Keywords: Government's intervention, Output of rice, rice farmers, income of farmers.

INTRODUCTION

Rice production has become a lucrative farming in Agricultural sector locally and internationally. Nigerian government has come with a new agricultural policy name Anchor Borrower Programme (ABP) in order to supplement the production of agricultural outputs in the country at large and excess for exports. The policy aims to create economic connections between smallholder farmers and well-known large-scale processors, increase bank financing to the agricultural sector, decrease importation of agricultural output to create foreign exchange reserves, increase capacity utilization of agricultural firms, create new generations of farmers and employment, and reduce the level of poverty among smallholder farmers in the nation, among other objectives. The second-biggest importer of rice worldwide, Nigeria accounts for 25% of the continent's imports while being the greatest producer of rice in West Africa. There are around 2.8 million hectares of farms in the United States (CBN, 2015). Of the expected 6.1 million metric tonnes of annual consumption, Nigeria produces 2.55 million metric tonnes. It is further predicted that Nigeria's rice consumption will increase to 35million metric tonnes by 2050, rising at the rate of 7% per annum due to estimated population growth (CBN, 2015).

This situation in the Nigerian agriculture industry has been linked to a number of issues that hinder the sector's efficient performance.

Prominent among them are: small size of farms, low level of mechanization and input use, poor infrastructure, high level of post-harvest losses due to pests and diseases, and poor transport, processing and storage facilities (Ojo and Evbuomwan, 1997; Evbuomwan, 2016; Magaji and Musa, 2015).

Over the years, Nigeria has continued to be the top importer of agricultural goods. These include the vast majority of foods that can be produced domestically, such as wheat, rice, raw cane sugar, whole milk powder, and fish and fish products. The Food and Agricultural Organization of the United Nations (FAO) projected that Nigeria imported more than 7.5 million tonnes of cereals in 2015, predominantly rice and wheat, making Nigeria the largest importer of rice in Africa. Various financing policy initiatives have been instituted to increase the performance of small scale farmers in Nigeria and transform the agricultural sector (Evbuomwan, 2016). However, due to a few unique characteristics of smallholder farmers, the expected objectives have not been met. Prominent among these are their poor access to finance and lucrative markets to dispose of their products, which have left them in a vicious cycle of poverty (Evbuomwan, 2016, magaji, Musa, Yekeen and Eke, 2022). In order to address these two issues facing Nigeria's smallholder farmers, the Federal Government and Central Bank of Nigeria launched the Anchor Borrowers Program (ABP) in that year.

Past Nigerian governments have made institutional financing available to small-scale farmers a

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top priority. The first attempt at the injection of financial capital into the agricultural subsector in Nigeria was made by the Federal Government in the 1962 – 1968 Development Plan with the provision of six million naira (N6m) for the advancement of that sector of the economy (FMED, 1981). Following this, bank credits to the agricultural sector in nominal terms over the years raised from N230 million in 1978 to over N262 billion in 2005 (CBN, 2010). This is in realization of the fact that to sufficiently increase food production and employ new agricultural technologies and innovations, there is the need for farmers to borrow money from lending institutions (Obasi, Onyenweaku, and Njoku, 1995). Federal and State governments increased efforts to enhance agricultural development through the implementation of a variety of agricultural loan schemes as a result of the need to limit dependence on the oil sector for economic growth as well as the goal to reduce import dependency.

These programs include the Special Emergency Agricultural Loans Scheme (SEALS) established in 1984, the Supervised Agricultural Credit Scheme (SACS) established in 1979, the Agricultural Credit Support Scheme (ACSS) established in 2006, and the Agricultural Credit Guarantee Scheme Fund (ACGSF) established in 1978. The Commercial Agricultural Credit Scheme (CACS), the Small and Medium Scale Enterprise Credit Guarantee Scheme (SMECGS), and the Nigerian Incentive based Risk Sharing system for Agricultural Lending (NIRSAL) were all established during the tenure of Sanusi Lamido Sanusi as Governor of the Central Bank of Nigeria. Though not a scheme per se, these initiatives encourage farmers to purchase insurance.

The main objective of the paper is to examine the impact of government intervention on rice production in Kano state Nigeria. The novelty of this paper can be seen as; to the best of my knowledge none of these studies is conducted in Kura local Government area, Kano state before. With the exception of Sambe et al. (2020), Olanrewaju (2019), and Ayinde et al. (2018), who used advanced econometrics models such the probit and logit model, the majority of the literatures analyzed used descriptive statistics in their research. Given the foregoing, the impact of the Anchor Borrower Program (ABP) in Kura Local Government Area, Kano State, is explicitly examined in this article. The second section of the paper is a review of the literature. The third section discusses a methodology that could be used to accomplish the research's goals. The fourth section presents and analyzes the empirical data, and the paper is finally

EMPIRICAL LITERATURES

A number of studies in the literature, employed different variables and methodology, have examined the impact of Central bank of Nigeria (CBN) Anchor borrower programme (ABP) on rice production in

different state and Nigeria at large, among them are: Sambe, Koma and Yaga (2020) investigate the impact of Anchor Borrower Programme on Rice production in Kwande Local Government Area, Benue state using cross sectional data. The paper administered 78 questionnaires and employed logistic regression. The logistic regression results showed that age and education had significant effects on access to ABP, while sex, marital status and occupation did not significantly affect access to the programme.

Bitrus, Sulumbe, Ibrahim and Yakubu (2020) assess the scale efficiency of rice production among beneficiaries of anchor borrowers programme (ABP) in Adamawa State, Nigeria. The study designed 139 questionnaires and used the following variables which include Seed, fertilizer, farm size, labour, herbicides and yield. The result show that mean efficiency observe was 59% out of the rice farm studied 78% were scale inefficiency as they operated under increase return to scale and decrease return to scale.

Olanrewaju (2019) assesses the awareness and adoption of Anchor Borrowers Programme (ABP) among rice farmers in Kaduna state, Nigeria. The study administered 240 questionnaires for analysis and adopted probit model, variables used includes Adoption ABP, AGE ABP awareness, marital status, access to credit, own land, membership of cooperative, expected market price, years of farm experience, membership of Savings and Credit group. Only around 40% of the respondents, according to the findings, were aware of ABP. The outcome of the probit model also shows that participation in off-farm jobs, access to credit, and membership in cooperative societies were crucial for ABP adoption. In particular, the study found that ABP adoption is strongly influenced by rice farmers' awareness of the practice. Furthermore, adopting ABP was more common among rice farmers who worked off-farm. Years of farming experience also had a negative correlation with ABP adoption, suggesting that rice farmers with a lot of farming experience may be risk-averse and decide to stick with traditional rice farming methods.

Umar, Hali and Bunza (2019) examine the factors stimulating adoption of improved rice production technology (IRPT) under Anchor Borrower Programme (ABP) that was established in Kebbi State in the year 2015. The study administered four hundred and eighty (480) questionnaires for analysis, the study also used variables like experience, accessibility to credit, farm size, complexity of technology, household size, membership of cooperative, farm machinery ownership, years of education, age and relative advantage. The finding in the study indicates that year of education, farming experience, access to credit, farm machinery ownership, complexity of the technology and contact with extension agents had significantly positive effects on adoption of improved rice variety, while age had significantly negative effect.

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Umeh and Adejo (2019) investigate the effects of Central Bank of Nigeria's Anchor Borrowers' Programme (ABP) on rice farmers in Kebbi State, Nigeria. The study employed both Cross sectional data and time series data for the analysis, 226 questionnaires were administered of rice farmers which divided in to two (113 beneficiaries and 113 non-beneficiaries of ABP), The variables included in the study included the yield of rice per hectare (kg/ha), farm size (hectares), seed rate (kg/ha), labor (mandays/ha), fertilizer rate (kg/ha), and herbicide and pesticide use per hectare (litres/ha). The study's conclusions showed that the amount and price of Nigeria's rice imports fluctuated over time. When compared to non-beneficiaries, who had a mean technical efficiency of 0.81, beneficiaries were 17% more productive.

Okeke, Mbanasor, and Nto (2019) assess the impact of Anchor borrower programme among rice farmers in Benue state. The paper employed cross sectional data and adopted Endogenous Switching Regression Model (ESR). Finding in the study reveal that beneficiary rice farmers owned lesser productive assets than what a random rice farmer from the sample would have earned while non-beneficiary rice farmers acquired more productive assets than what a random rice farmer from the sample would have earn.

Omoregie, Ikpesu, and Okpe (2018) investigates the impact of credit supply on rice output (RO) in Nigeria within the periods 1981–2016 using time series data, variables employed in the study include rice output, money supply, inflation rate, credit supply, investment, and labour and adopted vector error correction model approach (ECM). The findings indicates that an increase in loan availability would result in an increase in RO. The study also showed that a shock to investment and labor would result in a drop in RO, whereas a shock to the nation's money supply and inflation rate would result in an increase in RO.

Abur and Iyoho (2018) examine the effect of profitability and technical efficiency among rice farming households' beneficiaries of BOA loan scheme in Benue state using cross sectional data. The study use the following factors: gender, age, marital status, educational attainment, number of years of experience, and farm size. It discovered that many farmers had formal educations despite having many years of experience, and that farmers were operating on 1-3 hectares of land because large-scale production was not adequately financed by loans.

Ayinde, Fatigun, Ogunbiyi, Ayinde and Ambali (2018) assess anchor borrower's programme central bank of Nigeria's intervention on rice production in Kwara State, Nigeria using Cross sectional data, the study employed House hold size, level of education, farm size, membership of cooperative, number of extension visit and income as variables for analysis and adopted logistic regression. The findings show that 88.1% of the beneficiaries broke the terms of the contract and refused to deliver their harvest to the Anchor Borrowers' Programme for a variety of reasons; the average estimated yield of paddy rice per hectare for all beneficiaries was 3.94 metric tons per hectare. The recipients' income increased as a result of the Anchor Borrowers' Programme.

Ajibola, Adeniji, Olaleye, and Ojo (2017) examine the impact of Urea Deep Placement (UDP) technology on paddy fields as a panacea to address the issue of low yield amongst rice farmers in the North Central Nigeria using the following variables such as Utilization of Urea Deep Placement, farm size, labour, seeds, herbicides, and NPK. The study structured 392 questionnaires among from rice farmers and adopted ordinary least square (OLS) model. The results showed that UDP technology was positive and significant at 1% probability level to paddy yield in the study area.

The literature is available on the impact of government intervention on rice farming but not specific on ABP in Kano state and this is the gap this study seeks to bridge.

METHODOLOGY

Sources of Data

This research work explores factors that motivate rice farmers in Kura local government to increase their rice production. Basically, the data that is used here comes from primary source, in other words, the study uses questionnaire data. The use of primary data in this work is necessary because the nature of the problem at hand requires first-hand information from different participants that enjoy the Anchor borrower programme or otherwise.

Sampling Method

This study uses simple random sampling techniques as its sampling approach. Every unit in the study population has a known and equal chance of being picked for the sample using a basic random sampling approach. In the case of this research, any rice farmer Kura local government that is come across is being selected. This is done to ensure adequate as well as fair representation of the population.

Sample size

To ensure adequate representation of the population, the study share 120 questionnaires among rice farmers in Kura local Government, Kano state but fortunately 118 questionnaires were returned.

Analytical technique

The study used descriptive and inferential statistical techniques, including percentage and mean, binary logistic regression, and the five-point Likert scale.

Binary Logistic Regression

The Logistic model is a univariate binary model. The dependent variable is a dummy, which takes a value of zero or one. In the case of this paper the behaviour of the dependent variable is categorical in nature whereby we have the output of rice of beneficiaries of ABP and output of rice of non-beneficiarie of ABP which is coded 1 and 0.

The logit model is specified as

$$p = \wedge (x^i \beta) =$$

$$\frac{e^{x\ \beta}}{1+e^{x\ \beta}} \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots$$
$$\ldots\ldots\ldots\ldots\ldots\ldots.. \ (3.1)$$

where $\wedge (\cdot)$ is the logistic cdf with $\wedge (z) = e^z/(1 + e^z) = 1/(1 + e^{-z})$.

the logit madel is simplify as

$$\sum_{i-1}^{N}(y_i - \wedge (x^i_i\ \beta)\ x_i\ = 0)$$
$$\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots$$
$$\ldots\ldots. \ (3.2)$$

since $\wedge^i (Z) = \wedge (z) [1 - \wedge (z)]$. So the raw residual $y_i - \wedge (\mathbf{x}^i\boldsymbol{\beta})$ is orthogonal to the regressors

$$Z = \log \left[\frac{P}{1-P}\right] = \log Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5\ \mu \ldots\ldots\ldots\ldots\ldots\ldots\ldots \ (3.3)$$

Where Z = probability output of rice, beneficiaries of ABP = 1; non beneficiaries of ABP = 0

β = regression coefficient explaining changes in Z as a result of changes in the independent variables.

The empirical model can be specified as

$$outputr\ \log \left[\frac{P}{1-P}\right] = \log Y\ \alpha + \beta_1 gen_1 + \beta_2 ag_2 + \beta_3 ms_3 + \beta_4 le_4 + \beta_5 yf_5 + \beta_6 lb_6 + \beta_7 gl_7 + \beta_8 tech_8 + \beta_9 fs_9 +$$

$$\mu \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots$$
$$\ldots\ldots \ (3.4)$$

Where

$outputr\ =\ output\ of\ rice$
$gen_1\ \ \ =\ gender$
$age_2\ \ \ =\ age$
$ms_3\ \ \ =\ marital\ status$
$le_4\ \ \ \ =\ level\ of\ education$
$yf_5\ \ \ \ =\ income\ of\ farmer$
$lb_6\ \ \ \ =\ labour$
$gl_7\ \ \ \ =\ govt\ loan$
$tech_8\ \ =\ technology$
$\ \ \ \ \ \ \ \ \ \ fs_9\ \ \ \ \ \ \ =\ farm\ size$

RESULTS AND DISCUSSIONS
Descriptive Statistics

Table 1. Descriptive statistics

Variables	Mean	St. deviation	Min	Max	Skweness	Kurtosis
Output of rice	4.59322	0.5428209	2	5	-1.179925	5.238982
Yf	4.686441	0.4659179	4	5	-0.8037284	1.645979
Wb	4.305085	0.4624068	4	5	0.8466417	1.716802
Alb	4.364407	0.4833157	4	5	0.5634886	1.317519
Ky	4.271186	0.4464679	4	5	1.029365	2.059593
Col	1.228814	0.529651	1	2	3.642666	23.07386
Kbenf	1.161017	0.4886811	1	2	4.781564	33.96386
Govtloan	3.372881	1.703674	1	5	-0.2395449	1.26494
Mmf	1.79661	1.324066	1	5	1.154241	2.470406
Mf	4.237288	0.6226215	1	5	-1.915522	13.27486
Benfm	4.279661	0.4871966	3	5	0.5284443	2.338165
Lf	4.618644	0.8955683	1	5	-3.048401	12.18745
Lfabp	1.389831	0.9340098	1	5	2.882642	10.80018
Rl	3.415254	0.974374	1	5	0.974374	3.322598

Source: Authors` Computation using Stata version 14 (2021).

Table 4.1 shows the average output of rice is about 5 bags far hectare, this means that on average every rice farmer in Kano state is capable to obtain 5 bags of rice at the end of harvesting season far hectare. Furthermore, income of farmers in Kano state has a minimum value of 4, this indicates that rice production in Kano state has increase the income of farmers with a wide margin. The table also shows that the wellbeing of farmer is averagely 4 units with a minimum value of 4, this means that the wellbeing of a rice farmer will increase at average of 4 units as a result of Anchor borrower programme. We can conclude that the ABP has impacted positively on rice farmers in Kura local government, Kano state.

Table 4.1 also shows the average of additional labour as a result of Anchor borrower programme (ABP) in Kano state which is about 5 units of labour, this implies that on average at every acre of land is capable to accommodate 5 units of additional labour and consequently the quantity of rice will increase. The average loan of Anchor borrower programme in Kano is 3 with minimum value of 1, this means that the means not majority of rice farmers are not beneficiaries of Anchor borrower programme (ABP) in Kano state.

Table 4.1 also indicates that the average adoption of mechanize farming is 4 with a maximum value of 5, this implies that all things being equal if all rice farmers can employ mechanize farming the output

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of rice will increase by 4 bags on average far acre. Furthermore, the table also indicates that the average farm size is 4 with a maximum value of 4, this means that on average those with large farm can harvest 4 bags of rice far acre of land.

Table 4.1 also indicates Skweness of the distribution, it shows negative values in output of rice, rice production, income of farmers, government loan, mechanize farming, and large farm while positive values and greater than zero in well being, additional labour, and rented land, this shows that all the variables are not

normally distribution, because their values are greater than zero. For Kurtosis in the result shows that all the variables are not normally distributed except for rented land because its value is neither greater than 3 nor less than 3.

Demographic distribution of the respondents
A total of 118 responses are collected out of the total of 120 questionnaires that were distributed. The respondents are classified based on gender, age, marital status and level of qualification. Below we present the demographic distribution of the collected data.

Table 2. Demographic distribution of the respondents

Characteristics	Frequency	Percentages	Cumulative frequency
Gender			
Male	87	73.73	73.73
Female	31	26.27	100.00
Age			
20-35	16	13.56	13.56
36-51	41	34.75	48.31
52-66	50	42.37	90.68
67 and above	11	9.32	100.00
Marital status			
Single	6	5.08	5.08
Married	112	94.92	100.00
Level of education			
Primary	10	8.47	8.47
Secondary	60	50.85	59.32
Tertiary	48	40.68	100.00

Source: Authors` Computation using Stata version 14 (2021).

The socio-demographic details of the respondents are shown in Table 4.2. The Table depicts that majority of the respondents (73%) are males. This is because, according to the culture of the people in the research area, men are typically in charge of the household and are in charge of meeting the family's basic needs. As a result, men were more involved in the production of rice than women. Furthermore, in relation to age distribution, (13%) falls within the range of (20 - 35 years), 34% are within the range of (36 - 51 years), (42 %) are within the age of (52 – 66 years), and (9%) are within the age of 67 and above, this show that most of the people involved in rice production were more than 50 years. The table also shows that 94% of the respondents are married. This as a result of married people is regarded as responsible for overseeing the family affairs in the study area. Furthermore, level of

education attainment of the respondents shows that those that attended primary school constitute 8%, secondary school has the highest percentages of 50% while those that attended tertiary institution are 40%.

Descriptive Statistics of Beneficiaries and non-Beneficiaries of ABP
The dependent variable of the model estimated is output of rice in Kura local Government area, which categorized into two; beneficiaries of Anchor borrower programme and non-beneficiaries of Anchor borrower programme. The beneficiaries are coded 1 represented by output of rice of Anchor borrower programme (Oben) and non-beneficiaries are coded 0, represented by output of rice of non-Anchor borrower programme (Onben) and this can be shown in the following table.

Table 3. Descriptive Statistics of Beneficiaries and non Beneficiaries of ABP

Output of rice	Frequency	Percentages	Cumulative frequency
Onben	45	38.14	38.14
Oben	73	61.86	100.00
Total	118	100.00	

Source: Authors` Computation using Stata version 14 (2021).

Table 4.3 indicates descriptive statistics of output of both beneficiaries and non beneficiaries of

Anchor borrower programme (ABP) Kura local government area. The table shows that the output of rice

of beneficiaries of Anchor borrower programme (ABP) is 61.86% compare to non beneficiaries of Anchor borrower programme (ABP) which stands at 38.14%, this implies that the Anchor borrower programme (ABP) contributes toward to the increase in rice production in Kano state since the output of rice of beneficiaries

Anchor borrower programme (ABP) is much higher than the non-beneficiaries. If every rice farmer will be a beneficiary of Anchor borrower programme (ABP) the output of rice will increase by a wide margin not only in Kura local Government area in Nigeria at large.

Table 4. Logistic regression *Output of rice (dependent variable)*

Variables	Coefficient	Stand error	Z	P-value
Gender	-0.039372	0.5308451	-0.07	0.941
Age	-0.2896389	0.3258405	-0.89	0.374
Marital status	-0.174343	0.392521	0.84	0.399
Level of education	0.583337	0.3923928	1.49	0.137
Income	0.599904	0.6094416	2.63	0.009
Labour	-0.156554	0.475806	-2.43	0.015
Govt loan	0.2289159	0.1621403	1.41	0.158
Technology	0.4300112	0.3508411	1.23	0.220
Farm size	0.145215	0.2788459	0.52	0.603
Cons	-3.165038	6.140883	-0.52	0.606
Log likelihood				-64.402772
LR chi2				27.10
Prob > chi2				0.0044
Pseudo R2				0.1738

Source: Authors` Computation using Stata version 14 (2021).

Table 4. indicates logit regression of output of rice, the results shows that income of farmer has positive and statistically insignificant effect on output of rice produce in Kura local Government area, Kano state, this means that if income of rice farmer increase in Kura local government by (0.599904) the output of rice produce by a farmer will increase. This is in similar with apriori expectation that the higher of the income of a farmer the more and more quantity of rice will be produce, it can be inferred from this that farming require adequate funds, the positive finding is in line with the findings of Okeke et al. (2019) and Ayinde et al. (2018). From the table also additional labour as a result of Anchor borrower programme indicates negative relationship with output of rice produce in Kura local Government, Kano state, by implication when quantity of labour is increase the output of rice produce will decrease, the negative finding counter the findings of Bitrus et al. (2020), Umeh and Adejo (2019), Omoregie et,al (2018) and Ajibola et al. (2017). Furthermore, the result indicates that Government loan (access to credit) has a positive and statistically insignificant effect on output of rice produce, if Government loan (access to credit) increase by (0.2289159) the output of rice produce will also increase, this is similar with economic theory that government loan (credit) impacted positively on quantity of rice produce, the positive finding is in line with the findings of Olanrewaju (2019), Umar et,al (2019) and Omoregie et,al (2018). Technology indicates positive effects on quantity of rice produce, if a farm adopt mechanize farm up to (0.4300112) the output of rice produce will increase by the same amount. It has been confirmed empirically that technology has positive impact on output of rice produce. The positive finding is similar with the findings of Umar et,al (2019). Furthermore, farm size shows

positive and statistically insignificant effect on output of rice produce, by implication if farm size increase by (0.1096933) the output of rice produce will also increase, in other wards the larger the land the more output of rice will be produce, the positive finding is similar with the findings of Umeh and Adejo (2019), Ayinde et,al (2018), and Abur and Iyoho (2018). The Probability value chi-square indicates that the independent variables are significant enough to explain the dependent variable (output of rice), the Pseudo R^2 is 17.38 %, this indicates that 17.38% variation in output of rice is accounted for by the variations of income of farmer, labour, government loan, technology and farm size, this suggesting that the model has explanatory power on the changes in output of rice.

CONCLUSION AND POLICY RECOMMENDATIONS

The study examines the impact of government intervention on rice production in Kano state a case study of Kura local Government. Variables employed in the study include output of rice, income of farmer, labour, government loan (access to credit), technology, and farm size. The descriptive statistics of the variables employed were checked which includes; mean, standard deviation, minimum, maximum, Skeweness and Kurtosis. The finding indicates that Anchor borrower programme (ABP) has impacted positively on wellbeing of rice farmers in Kura local government, Kano state. Demographic distribution of the respondents was also checked which include; characteristics of the variables, frequency, percentages and cumulative frequency. The descriptive statistics also show that the Anchor borrower programme (ABP) contributes toward to the increase in

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rice production in Kano state. The logistic regression result shows that income of farmer has positive and statistically insignificant effect on output of rice produce, labour has negative relationship with output of rice produce, government loan (access to credit) has positive and statistically significant effect on output of rice produce, technology has positive effects on quantity of rice produce in Kura local Government, Kano state, farm size has positive effect on output of rice produce in Kura local Government, Kano state.

The study recommends that Government should expand the Anchor Borrower programme in a way that multiple of rice farmers can benefit in order to increase the rice production in the country at large, interest rate charge on the programme should be reduced or remove for more farmers to benefit, loan or inputs should be provided at the right time to farmers. Government should provide some watch dogs in each state in order to ensure that real farmers are the only beneficiaries of the programme. Government should also import more and more sophisticated machine and sale at the affordable prices to farmers for easy and maximum capacity utilization of the available resources. If Nigerian government can sustain the programme and ensure that real farmers are only beneficiaries of ABP, the employments opportunities that is provided by the agricultural sector will increase because more and more man power will be employ in the sector via this demand will increase and this will bring about increase in investment and national income will increase through multiplier effects and there is maximum likelihood for the country to be a major exporter of rice in African continent.

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