ASSESSMENT OF THE PERFORMANCE OF ANCHOR BORROWERS PROGRAMME (ABP) BENEFICIARY AND NON-BENEFICIARY RICE FARMERS IN BADAGRY LOCAL GOVERNMENT AREA, LAGOS STATE, NIGERIA

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ABSTRACT

This study assessed the performance of Anchor Borrowers Programme (ABP) beneficiary and non-beneficiary rice farmers in Badagry LGA, Lagos State, Nigeria. Two-stage sampling procedure was used to elucidate information from 100 ABP and non ABP beneficiary rice farmers during 2019 planting season. Data were analysed using descriptive statistics, budgeting analysis and Probit regression model. Results reveal that rice farming was dominated by male farmers with average age 47.2±6.2 years. Also, the percentage of ABP beneficiaries was skewed towards the male farmers, while the inclusion of younger and youthful farmers in the programme was marginal. The mean household size of farmers was 7.2±2.6 members and most farmers (94.0%) were educated. The average farm size was 1.99±1.44 ha while non-beneficiaries had larger farm size compared to the beneficiaries of ABP. The mean profit of the ABP beneficiary and non-beneficiary rice farmers were ₦631, 177.99 and ₦447, 092.20 respectively. This result reveals that ABP beneficiary rice farmers had a higher profit than non-beneficiaries. The result shows that the major constraint of the farmers' participation in the programme was non-membership of cooperatives. Majority (94.2%) of the beneficiaries benefited from subsidized inputs supply. The results of regression indicate that the extension visit, cooperative membership, gender and farm size significantly influenced farmers' participation in Anchor Borrowers' programme. The study recommends farmers joining cooperatives to enable them benefit from programmes channeled through groups. All stringent conditions limiting access to agricultural land should be minimized to encourage not just youth and women participation but acquisition of more land for the beneficiaries.

Keywords: Anchor Borrowers' Programme (ABP), ABP non-Beneficiaries, ABP Beneficiaries, Budgeting Analysis, Profit margin.

INTRODUCTION

Rice (*Oryza sativa L*) is an important cash crop and a major source of livelihood for smallholder farmers, who consume 20% of their total production (Okpiaifo et al. 2020). It is one of the widely produced and consumed food crops in Nigeria (FAO, 2017). It can be described as a family staple, gracing all the dining tables despites the social strata. The increasing domestic demand for rice in Nigeria has been attributed to consumer preferences, increasing incomes, rising urban population, among others (Osabuohien et al., 2018).

Lagos is one of the largest markets for rice in Nigeria due to a large consumers' population. However, the large population of the state, necessitated the heavy reliant on the external

supply of rice. To redress the situation and boost local production of rice in the state in 2015, it entered into a partnership with Kebbi state aimed at enhancing rice production and boosting the capacity of the state to become self-sufficient in food security.

However, its production has been constrained by several factors such as lack of access to credit facilities, lack of organization by farmers, production inefficiency, low technological know-how, lack of industrial drive due to poor government policy and high cost of production (Mohammed et al,. 2019, Osabuohien et al., 2018). Present and successive governments in Nigeria have implemented several programmes targeted at increasing agricultural productivity and self-sufficiency most especially rice production and other staples such as maize sorghum, millet and wheat through the adoption of improved packages of production technology and extensive cultivation of crops (Aiyede, 2021).

Efficient and effective credit provision and access is a veritable tool for enhancing the agricultural productivity in developing countries like Nigeria (Osabohien et al., 2020). Credit facilitates the efficient provision of the farm inputs needed to enhance the productivity of small-scale farms. (Qurat et al, 2016). The Anchor Borrowers' Programme is a Federal Government of Nigeria initiative with the objective of bridging the gap between small scale farmers and the financial sector in the country (CBN, 2016; Ayinde et al, 2018).

The broad objective of this study is to Assess the performance of Anchor Borrowers Programme (ABP) beneficiary and non-beneficiary rice farmers in Badagry Local Government Area, Lagos State, Nigeria. The specific objectives are to: identifies various benefits and constraints of rice farmers' participation in Anchor Borrowers Programme, estimate the profit level of rice farmers (beneficiaries and non-beneficiaries), and determine the factors influencing rice farmer's participation in Anchor Borrowers' Programme,

Conceptual Framework

Concept of profitability

The farm profitability reflects the measuring of effects materialized in revenues with the efforts involved materialized in expenditure (Bumbescu, 2015). The economic efficiency principle requires that any economic activity to achieve an increase of net economic effects in a higher level of the efforts needed to obtain them. The most important effect is the profit, especially the net profit, which remains at the disposal of the farmers.

Agricultural productivity is the measurement of the quantity of agricultural output produced for a given quantity of input or set of inputs (Mozumdar, 2018). Farm profitability is very crucial to a farmer, a farm is termed to be profitable if it is able to generate enough money to pay employees and bills, repay loans, and provide the farmer with enough earnings to make a living (Pinto &Torres, 2017). Profitability is the therefore a measure of a firm's overall success at a particular period in time usually measured in years (Nishanthini & Nimalathasan, 2013). It reflects the measuring of effects materialized in revenues with the efforts involved materialized in expenditure (Bumbescu, 2015). Profitability is not a constant and static phenomenon that remains unaffected by changes in its determinants but to a great extent, a changing and varying one. Changes

in its determinants result in a change in profitability Calculating farm profitability is a decision-making tool that creates an avenue for farmers to assure financial sustainability.

The Anchors Borrowers' Programme was launched by President Muhammadu Buhari on November 17, 2015, to create a linkage between anchor companies involved in the processing and smallholder farmers (SHFs) engaged in the production of identified commodities across the country. The Anchor Borrowers' Programme (ABP) is in line with the Central Bank of Nigeria (CBN) developmental function. The thrust of the programme is the provision of farm inputs in cash (for farm labour) and kind to smallholder farmers to boost production of these commodities, stabilize input supply to agro-processors and address the country's negative balance of payments on food. The implementation of the Anchor Borrowers' Programme is based on a three-pronged support: out-grower scheme capacity building for stakeholders and credit firms to organize the out-growers and the risk mitigation component (CBN, 2016; Badejo and Adekeye 2018; Saheed et al, 2018). In order to ease administration, the disbursement of the loan is made to SHFs who are members of farmers' groups/cooperative(s) of between 5 and 20 members. At harvest, the SHF supplies his/her produce to the Agro-processor (Anchor) who pays the cash equivalent to the farmer's account (CBN, 2016). Thus, loan repayment is with the harvested produce which is equivalent of the loan principal and interest, which must be delivered to the Anchor at designated collection center in line with the provisions of the Agreement signed (CBN, 2016). This arrangement is an outgrower contract and prohibits side selling by the farmers (Evbuomwan and Okoye, 2017).

LITERATURE REVIEW

Badejo and Adekeye (2018) observed some anomalies in the ABP implementation stages, particularly at the loan disbursement stage, citing the National Treasurer of the Rice Farmers Association of Nigeria (RIFAN), Sadiq Daware displeasure that many rice farmers were either unable to access loan or were not given the right amount proposed under the programme. Also, some of the 13 participating institutions through whom the CBN disbursed N43.92 billion to farmers frustrated the efforts of the farmers in accessing the facility while some were not farmer friendly due to complicated transaction procedures and non-consideration of gestation periods of crop growing. Agro-input distribution was observed to be haphazard, while some farmers were given fertilizers others were denied. Also, going by the interaction with some stakeholders, focus seems to have been more on funds disbursement and recovery, with little attention on the revolving nature of loan after recovery; commercial banks opted out of the programme, because it was not considered profitable (Ibekwe 2018).

Irrespective of the criticism of the programme, positive impact of the programme on rate of adoption of improved rice varieties by farmers, and its attendant increase in income of the beneficiaries, is the evidence that the programme has achieved the set objective (Umar et al. 2019; Ayinde et al 2018). Evbuomwan and Okoye (2017) also commended the ABP for increasing the success, popularity and consumption of

locally grown rice which was apparent in the partnership between the Lagos and Kebbi State Governments to package the brand name Lake rice. The success of the ABP for rice production prompted the CBN to expand the coverage to include other crops and livestock.

MATERIALS AND METHODS

Study area

This study was carried out in Badagry Local Government Area (LGA), Lagos state, Nigeria. The Local Government Area is situated on the south-west coast of Nigeria, bordered by the Gulf of Guinea to the south, along the bank of inland lagoons and creeks. The waterways are navigable to Lagos and Port Novo. The LGA covers an area of 441m^2 with coordinates 6º25'N Latitude and 2º53'E Longitude. Thomas (2017), projected that the LGA harboured a projected population of 327400 inhabitants in 2016. The climate is tropical with two distinct seasons; the wet season lasting from April to October and the dry season lasting from November to March. The mean annual rainfall is between 200 and 2200mm. Maximum temperature is 32.5^{0}c and relative humidity at 79.9%. The major occupations in the area are fish farming, salt extraction and arable crops production. The Badagry LGA is one of the communities covered under the ABP, because of the thriving smallholder rice farms (Nwoke, 2016).

Sampling Technique

Two-stage sampling technique was used to select respondent rice farmers in the study area. In the first stage, four farming communities, Ibereko, Oke oko, Ajara, and Gbaji, were purposively selected from the LGA because they are prominent for rice production and among the chosen ABP communities in the state. The second stage was the random selection of 15 ABP participants and non-participants respectively from each community. In all, a total of one hundred and twenty (120) rice farmers/respondents (ABP beneficiaries and non-beneficiaries) were randomly selected from the four communities and interviewed using structured questionnaire However, 83.3% of the questionnaires comprising of 52 questionnaires from the ABP beneficiaries and 42 from non-beneficiaries, with complete information were analysed for this study. Data on rice farmers' socioeconomic/demographic characteristics, social networks variables, farm specific variables and rice production activities (inputs and total output and their respective prices) elucidated from the farmers.

Analytical Tools and Methods

The analytical tools employed in the study were descriptive statistics (Using IBM SPSS version 21 statistical software program), budgeting analysis, and multiple regression model (using STATA 14).

Descriptive statistics: Descriptive statistics include mean, median, percentages and standard deviation which was employed to profile the socio-economic characteristics of the respondent rice farmers in the study area.

Budgeting analysis: Budgeting analysis: this was used to estimate the cost and return of rice production by Anchor borrower participants and non-participants to evaluate profitability of rice production in the study area.

Following Balogun *et al.* (2016), the gross margin is mathematically expressed as:

GM=GR-TVC----------(1)

Where:

GM= Gross Margin (Naira/ha), TR= Total Revenue and TVC= Total Variable Cost (cost incurred in the use of variable inputs)

Mathematically, GM= TR-TVC

$$GM = \sum P_iQ_i - \sum R_iX_j$$

Where:

GM = Gross Margin,

TR = Total Revenue and

TVC = Total Variable Cost (cost incurred in the use of variable inputs)

Where GM = Gross margin of the farmers (Naira)

P_i= Price of i^{th} crop in Naira

Q_i= Total sales of ith crop in Naira.

Binary Logistic Regression: The model was applied to determine which factors have a probability of influencing rice farmers' participation in Anchor Borrowers' Programme in the study area.

Because of the dichotomous response (dependent variable) of the model, the binary logistic model) was used to examine the determinants of rice farmers' participation in ABP.

$$Y = In\{\frac{(p(Y=\frac{1}{X})}{1-p(Y=\frac{1}{X}))} = \beta_0 + \beta_1 X_1 + ... + \beta_n X_n ..... \quad -(2)$$

Where:

the dependent variable Y is an odds ratio of probability Y(p) of change to the probability (1−p) of no change;

β_0 is the intercept; and β_1, β_2, β_3, ... , β_n are the coefficients of the independent variables of X_1, X_2, X_3, ... , and X_n, respectively

p= the predicted probability of farmers' participating in Anchor Borrowers'' Programme;

1-p = the predicted probability of farmers' not participating in Anchor Borrowers'' Programme;

β_0= the constant of the equation;

β_i= the coefficient of predictor variables;

Xi= the predictor variables.

1-Pi= Probability of not participating in Anchor Borrowers'' Programme

X_1= Age of the farmer (Years)

X_2= Household size

X_3 = Education level (Dummy: 1= Literate, 0= Otherwise.)

X_4= Marital status

X_5= Years of rice farming (years)

X_6 = Extension visit (Dummy: 1= yes, 0= No)

X_7= Cooperative membership (Dummy: 1=yes; 0= No)

X_8= Gender (Dummy: 0 = male, 1 = female)

X_9 = Farm size (hectare)

b_0= Constant or intercept term

b_1 – b_{10}= production coefficient of the respective input variable to be estimated

u_i=Error term

RESULTS AND DISCUSSION

Table 1 presents the socio-demographic characteristics of respondents in the study area. The results indicate that male farmers dominated 65% of all the rice farmers in the study area. This may not mean that men in the study area are better rice farmers than women, rather the patrilineal nature of African societies has made possible for men to have more access to more productive resources than their female counterparts. As such women lack control and ownership of productive resources, which are required as collaterals by financial institutions. However more of the male respondents, 59.6%, are beneficiaries of the ABP showing a lacuna in

the distribution of agricultural grants and incentives in the country between sex, which is skewed towards the male. This marginalization of female in ABP is not farfetched, Badejo and Adekeye (2018) attributes it to some of the criteria for participation under the programme which may have likely exclude the core poor and vulnerable groups including the women and youth, given their inability to meet up with the farm holding requirement of between 1 and 5 hectares, as a result of their being disadvantaged in asset ownerships. This low access of the female gender to land acquisition and holdings compared to their male counterpart has also been reported by several institutions and researchers (Croppenstedt et al 2013; African Development Bank (AFDB) 2014; Coker et al. 2016)

The age of the beneficiary rice farmers shows that majority of the respondents (67.3%) fell into age range of 41-50 years. The mean age of the rice farmers was 47.2 years. This result shows that most rice farmers were in their economically active age and their productivity capability can be at the best. This is similar to the findings of Nwoke (2016) and Ayinde et al. (2018) that average age of farmers in Nigeria exceed 46 years.

The marital status of the household farmer has implication on the household size and subsequently on the availability of family labour to assist on the farm (Aladejebi et al., 2018). Table 1 confirms that majority (73.0%) of the farmers were married while others are either widowed, divorced or single parent. Comparatively the percentage of married ABP beneficiaries supersedes that of non-beneficiary farmers by 16.2%, supporting Ajah et al (2017) assertion that not being married reduces the probability of having access to credit. One can also infer that this finding supports the African cultural, sociology and value system that sees married people as responsible and less likely to leave their family behind and abscond with loan facility. Majority of the farmers (84.0%) have household size of 5-10 members. The average household size in the study area was about 7.2±2.6 persons per household. Irohibe and Agwu (2014) confirms the potentials of this large household size as a buffer against shortfalls in the supply of labour in the farm.

Educational level of the respondents indicates that majority (94%) of the farmers from both strata attained some level of formal education. As such illiteracy cannot be traced as a constraint for non-participation in the programme. Also, the educational level of the farmers makes it easier for capacity building through mandatory training which is one on the tripods of the ABP. The result is at variance with many researchers like Ajah et al, (2017) that the number of years of formal education influences the behavior, values, exposure and increase the participation level of farmer's social networks and ultimately increases their probability to access credit facilities.

The result also reveals that 48.0% of the rice farmers had about 6-10 years' experience in rice farming while only few had less than five years' experience. However, non-beneficiaries had more experience in rice farming than the beneficiaries. The average farming experience of all the rice farmers in the study area was 5.1 ± 3.2.

The Table 1 also show that more of the ABP beneficiaries had more regular extension contact (55.8%) than the non-beneficiaries (29.0%). However, it is noteworthy that a

large percentage of the beneficiaries had little contact with extension services, bearing in mind that a major guideline for ensuring effective capacity programme is the provision of extension services, by the Anchor/State Governments to complement the training, ensure adherence to good agricultural practices and mitigate side selling the programme (CBN, 2016).

The average farm size in the study area was 1.99±1.44 ha. Result also suggests that non-beneficiaries had larger farm size compared to the beneficiaries of ABP. The reason is that the programme is primarily designed for smallholder rice farmers with between 1-5 hectares of land.

Table 1: Socio-demographic characteristics of rice farmers in the study area

	ABP beneficiaries (52)		ABP non-beneficiaries (48)		All farmers (100)	
	Frequency	Percentage (%)	Frequency	Percentage (%)	Frequency	Percentage (%)
Gender						
Male	31	59.6	34	70.8	65	65.0
Female	21	40.4	14	29.2	35	35.0
Total	52	100	48	100	100	100.0
Age						
< 30	1	1.9	-	-	1	1.9
31-40	5	9.6	7	14.6	12	12.0
41-50	35	67.3	29	60.5	64	64.0
51-60	10	19.3	9	18.9	19	19.0
>61	1	1.9	3	6.3	4	4.0
Total	52	100	48	100	100	100.0
Mean	46.9231		47.4375		47.1700	
SD	6.01256		6.39783		6.17433	
Marital status						
Single	-	-	8	16.7	8	8.0
Married	42	80.8	31	64.6	73	73.0
Widowed	7	13.5	6	12.5	13	13.0
Divorced	3	5.8	3	6.3	6	6.0
Total	52	100	48	100	100	100.0
Household size						
<5	3	7.7	6	12.5	9.0	9.0
5-10	48	90.5	36	75	84	84.0
Greater than 10	1	1.9	6	12.6	7	7.0
Total	52	100	48	100	100	100.0
Mean	6.7885		7.7292		7.2400	
SD	1.80779		3.25994		2.63665	
Educational level						
No formal education	2	3.8	4	8.3	6	6.0
Primary education	8	15.4	7	14.6	15	15.0
Secondary education	25	48.1	24	50.0	49	49.0
Tertiary education	17	32.6	13	27.1	23	23.0
Total	52	100	48	100	100	100.0
Years in rice farming (year)						
<5	4	7.7	4	8.3	8	8.0
6-10	25	48.1	23	47.9	48	48.0
11-15	18	34.5	1	2.1	19	19.0
16-20	2	3.8	8	16.7	10	10.0
20>	3	5.7	12	25.2	15	15.0
Total	52	100	48	100	100	100.0
Mean	4.2692		6.0833		5.1400	
SD	1.693		4.05197		3.17827	

Extension visits						
Never	-	-	34	70.8	34	34.0
Rarely	11	21.2	9	18.8	20	20.0
Once in a while	12	23.1	5	10.4	17	17.0
Regularly	29	55.8	-	-	29	29.0
Total	52	100	48	100	100	100.0
Farm size (Ha)						
<1 ha	-	-	1	2.1	1	1.0
1-2ha	40	77	36	75	76	76.0
3-4ha	10	19.2	8	16.7	18	18.0
5-6ha	2	3.8	3	6.3	5	5.0
Total	52	100	48	100	100	100.0
Mean =	1.9423		2.0417		1.9900	
SD =	1.14470		1.15239		1.14367	

Source: Field Survey, 2020

Table 2 depicts the major constraints faced by rice farmers in participation in Anchor Borrowers' programme**.** The result indicates that 97.9% of the farmers in the study area admitted that their not membership in a recognized association was their major constraint while 92.4 and 80.3% of the rice farmers said that lack of what the programme stands for and general lack of trust in government programme/project were challenges to their profitability. However, other limitations were inability to meet the requirements of the programme and belief that the outcome of the programme not be good (inability to bear risk).

Table 2: Major constraints hindering rice farmers' participation in Anchor Borrowers' programme

Constraints	Percentage (%)
I don't know about it	92.4
Lack of trust in government project	90.3
I am not member of cooperative society	97.9
Inability to meet the requirements	46.2
Others (Skeptics and inability to bear risks)	75.6

Source: Field Survey, 2020

Table 3 reveals the various benefits received by rice farmers in the study area from the Anchor Borrowers' Programme. The result also shows that 94.2% of the participants benefitted from input supply by the input suppliers which was orchestrated by the programme while 84.6% of the farmers were provided with adequate training by the Project Management Team of ABP. This is a remarkable improvement on the complaints of the National Treasurer of the Rice Farmers Association of Nigeria (RIFAN), that many farmers complained of not being able to access loan while others were not given the right amount proposed under the programme (Badejo & Adekeye, 2018). This is because one of the responsibilities of the Anchor/state/federal government is to provide logistics support for the success of the programme (CBN, 2016).

Table 3: Benefits Received by rice farmers in the study area from the Programme

Benefits (n=100)	Percentage (%)
Training	84.6
Advisory services	28.8
Input supply	94.2
Farming equipment	51.9
Others (Irrigation)	51.9

Source: Field Survey, 2020

Table 4 present the average cost and returns of ABP beneficiary and non-beneficiary rice farmers in Naira per hectare. The result reveals that an average of 64.23kg paddy rice seed representing about ₦8670.32 were planted per hectare by ABP beneficiary rice farmers while non-ABP beneficiary farmers planted 75.21kg of paddy rice. The result indicates ABP beneficiary rice farmers were efficient in the use of resource than the non-beneficiary probably because of training and advisory services that were packaged with the programme. However, ABP beneficiaries used average of 105 man-day of labour in their rice farms while non-ABP beneficiaries utilized more man-day of labour. The reason might be due to a government subsidized labour-saving farming equipment services that are available and affordable in the state. The average volume of pesticide (3.33 litre/ha) (₦3996.0) used by ABP beneficiaries in their rice farm was lower compared to the ABP non-beneficiaries (4.33 litre/ha) (₦5197.44). In the case of usage of herbicide in litre/ha, ABP beneficiary rice farmers spent less compared to non-ABP beneficiaries. An average of ₦13, 110.51 was expended on this input by ABP beneficiary's rice farmers which was lower than the amount spent (₦28, 794.57) by non-ABP - beneficiaries. Organic fertilizer usage was higher for ABP beneficiary's rice farmers than the non-beneficiary's counterparts, due to preference for organically produced food because of its health benefit. The average bag/ha inorganic fertilizer for the ABP beneficiaries was ₦34, 277.65, which was lower compared to ABP non beneficiaries (₦59, 192.61). The lump-sum cost of tools purchased (cutlass, hoes) for the ABP beneficiaries was lower compared to ABP non-beneficiaries. About ₦288, 952.01 was reported by ABP rice beneficiary farmers as expenditure which was relatively lesser than ₦319, 572.80 expended by ABP non-beneficiary rice farmers. The total revenue for the ABP beneficiaries is ₦920, 130.00 was higher than the total revenue for the ABP beneficiaries which is ₦766, 665.00. The profit for the ABP beneficiaries ₦631, 177.99 was higher than ₦448, 052.20 for the non-beneficiaries. This result clearly shows that the rice farmers of ABP beneficiaries had a higher profit than the ABP non-beneficiaries. The result indicated that the apparent difference-in-means between the two estimates (Gross margin) which is a proxy for profitability was not only positive but also statistically significant and those that participated and coined to be beneficiaries have higher profitability.

Table 4: Average Cost and Returns of ABP Beneficiaries and Non-Beneficiaries rice farmers Naira per Hectare

Variable Input	Unit	**ABP Beneficiaries**			**ABP Non-beneficiaries**				
		Average Quantity	Price/Unit (₦)	Amount (₦)	Average Quantity	Price/Unit (₦)	Amount (₦)	Difference	Difference Test
Farm size	hectare	1.550ha	4000	4000	0.760ha	4000	3040	960.0	2.11**
Quantity of rice seeds planted	kg/ha	64.2246	135.00	8670.32	75.2125	135.00	10153.68	-1481.36	-1.83*
Amount of labour used	Man-day	103	1500.00	154500.00	117	1500.00	175500.00	-21000.0	-1.95*
Volume of Herbicide used	Litre/ ha	6.2431	2100.00	13110.51	13.7117	2100.00	28794.57	-15684.06	-1.12
Volume of Pesticide	Litre/ ha	3.3300	1200.00	3996.00	4.3312	1200.00	5197.44	1201.44	-1.62
Quantity of organic fertilizer used	Bag/ha	54.4523	1100.00	59897.53	26.2345	1000.00	26234.50	33663.03	2.14**
Quantity of Inorganic fertilizer used	Bag/ha	6.2323	5500.00	34277.65	9.8245	6025.00	59192.61	-24914.96	-2.06**
Cost of tools Purchased (Cutlass, hoes)			10500.00	10500.00		10500.00	10500.00	0	NA
Total Cost (TC)				₦288,952.01			₦318,612.80	-26660.79	-3.12***
Average rice output tons/ha		6.1342	150000.00	920130.00	5.1111	150000.00	766665.00	153465.0	
Total Revenue (TR)				₦920,130.00			₦766,665.00	153465.0	2.11**
Gross margin (TR-TC)				₦631,177.99			₦448,052.20	587125.79	2.09**

Source: Field Survey, 2020.

***P<0.01, **P<0.05, *P<0.Test-test was employed to test the difference in cost and returns. NA= Not available due to inadequate variability within the data.

Factors influencing farmers participation in Anchor Borrowers' programme is presented in Table 5. The result of the factors influencing rice farmer's participation in Anchor Borrowers' programme is presented in Table 5. The result of probit regression model shows that the Pseudo R^2 was 0.1158 meaning that 11.58% of the variation in the dependent variable were explained by the independent or explanatory variables included in the model. Out of the nine explanatory variables included in the model to explain rice farmers' decision to participate in the ABP only four were statistically significant at various levels. These are: extension visit, cooperative membership, gender and farm size. This suggests that there was a significant cause-effect relationship between rice farmers' participation in Anchor Borrower Programme and the selected explanatory variables. In addition, the estimated coefficients of the regression which provide insight into the direction of the explanatory variables in explaining the extent of farmers' participation in the programme and the marginal effect of the estimates were equally presented. The coefficient of extension visit has a positive and statistically significant at a 5% level of significance with participation in the ABP, meaning that extension visit increases the likelihood of participation in the ABP. With marginal effect of 0.086042, the variable increases the likelihood of participation in the ABP by 8.6%. The implication is that farmers who had contact with extension workers would be more exposed to information that could beneficial to them like ABP funds and better method of production than their counterparts. However, cooperative membership of rice farmer has a positive sign and significant with participation in the ABP. With the marginal effect of 0.2692027, membership of cooperatives of rice farming increases the likelihood of participation in the ABP by 26.9%. The implication is that rice farmer that is a member of association stands a better chance to be more informed about important programmes and also more likely to be favoured or positioned for any benefit that comes with it. The result agrees with Olarewaju et al., (2020) that membership of a cooperative society influences an individual farmer's decision to adopt farm technologies. Farm size has a negative effect on participation and it is statistically significant at 5%. Also, with marginal effect of -0.154663, farm size increases the likelihood of participation in the ABP by 15.5%. Also, gender of rice farmer has a positive and statistically significant relationship at a 1% level of significance with participation in the ABP, implying that being a male rice farmer increases the likelihood of participation in the ABP. With marginal effect estimates of 0.1013822, the variable increases the likelihood ABP participation by 10.1%. This further implied that rice farmers who are male are more likely to participate in the ABP than the female counterparts.

Table 5: Factors Influencing Farmers Participation in Anchor Borrowers' Programme.

Independent Variable(s)	Coefficient	Standard Error	T-statistic	Marginal Effect (dy/dx)	Standard Error	T-statistic
Age	.0481953	.0534941	0.90	.012042	.01336	0.90
Household size (number)	-.1538789	.1378849	-1.12	-.038447	.03445	-1.12
Educational level (years)	-.0327325	.0764449	-0.43	-.008178	.0191	-0.43
Marital status	.2700473	.5894688	0.46	.067405	.14661	0.46
Years of experience in rice farming (years)	-.0073813	.0912376	-0.08	-.001844	.0228	-0.08
Extension visit	.3443673**	.193441	2.18	.086042	.04832	2.18
Cooperative membership	.2692027***	.08683	3.10	.2692027	.08683	3.10
Gender	.4081927**	.145264	2.81	.1013822	.03582	2.82
Farm size	-.6190068**	.245054	-2.53	-.154663	.06132	-2.52
Constant	-.3815185	2.70177	-0.14			
Log likelihood = -60.634916,						
Number of obs = 99						
chi2(9) = 15.88						
Prob > chi^2 = 0.0494						
Pseudo R^2 = 0.1158						

Source: Field Survey, 2020

*Significant at 10% level, **significant at 5% level, ***significant at 1% level

CONCLUSION AND RECOMMENDATION

This study focused on Anchor Borrowers' Programme and profitability of rice farmers in Badagry Local Government Area. Results showed male domination of rice farming in the study area both ABP and non-beneficiaries. Most of the rice farmers were still young and within their active age for tedious work required in rice farming. Results also revealed that the ABP beneficiaries enjoyed extension visits more than the non-beneficiary counterparts. The result showed some levels of profit in both groups (ABP beneficiaries and Non-ABP beneficiaries) with ABP beneficiaries making more profit than the non- ABP beneficiaries suggesting that ABP is an intervention that should be extended to reach all categories of farmers in Nigeria in order to boost profit and income. The results of probit regression model to determine the factors influencing rice farmer's participation in anchor Borrowers' Programme, indicates that extension visit, cooperative membership, gender and farm size significantly determined rice farmers participation in Anchor Borrowers' programme. The finding from the study indicate that land size essentially affects participation in the ABP

amongst the rice farmers. The study therefore recommends that all stringent conditions attached to access to land for agricultural investment should be removed. Also, farmers should be encouraged to join association to enable them benefit from programmes channels through groups.

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