Evaluation of, Awareness and Accessibility of Anchor Borrowers' Programme to Smallholder Rice Farmers in Jigawa State

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Abstract: **Nigeria is the largest rice producing country in West Africa, but also the second largest importer of rice in the world. The current government policy initiatives aim at prioritizing the rice sector and decreasing dependence on import thereby fostering production and supplying agricultural inputs. Nigeria is faced with mounting food import bills for the staple crop that has been consuming huge chunks of foreign exchange, particularly in times of low crude oil revenues, the government, in 2015, created the Anchor Borrowers Programme (ABP), a micro-credit scheme for farmers of identified crops, including rice. Jigawa State is mainly an agrarian area, and is one of the major rice producing zones in the country. Three specific objectives guided the study. One null hypothesis was formulated and tested as 0.05 level of significance. Data for the study was collected through a researcher designed questionnaire. Result was analyzed using descriptive statistics of frequency, percentage, mean and standard deviation. Inferential statistic of binary logic regression was used to test the null hypothesis formulated. Result of the findings shows that there is high level of ABP awareness among smallholder rice farmers in the study area as well as high accessibility of farmers to the facilities provided. Government should give larger financial support to the programme and should be made available in all rice growing states of the federation was among recommendations made.**

***Keywords*: Anchor Borrowers Programme, Smallholder farmers, accessibility**

I. INTRODUCTION

Agricultural development is an integral part of national development. It is that aspect of development that is related to agrarian reforms. Considering the contribution of agriculture to the socio-economic development of many countries, several scholars have postulated theories linking agriculture with national development. Within the context of development paradigms postulated in the field of agriculture, communication, sociology and economics there are evidences to show that changes are taking place in the agricultural sector across the globe. Therefore, such changes can be viewed from contributions of agriculture to the nation through policies, projects and programmes.

Agricultural policies and programmes in Nigeria have under gone changes especially in the postcolonial era. These changes have been a mere reflection of changes in government or administration. This is because these policies and programmes vary only in nomenclature and organizational network. They emphasize almost same objectives like: to provide food for the inhabitants of the nation (food security and sufficiency) and export excess to other countries and to provide rural dwellers and farmers with extension services, agricultural support and rural development services. Notwithstanding all the policies and laudable programmes with challenging themes, Nigeria is yet to achieve food security.

Some policies and programmes were positively impactful while some made no difference. All the same, the plethora of agricultural policies continues to suffer from inertia associated with these policies and programme reformation that pervade Nigeria. The persisted failures of most agricultural programmes in Nigeria have revealed the basic weakness of agricultural policies in the country and the inability of the several administrations to solve the basic and fundamental problems of agricultural development. Agricultural development may be achieved through the adoption of new farm input, technological know-how, access to soft loan and rural roads facilities.

Food shortages in Nigeria are often blamed on ineffective agricultural research, lack of continuity in agricultural policies and programmes, the poor implementation by administrators, low quality of extension and weak linkage system between research, extension and farmers (Harrison & Oguntunde, (2021). According to Kassem, (2014) the criticism on government programmes is due to the top-down approach, which has been supply-driven, weak, catering only for large farmers and providing insufficient coverage of the smallholder farmers, who are the producers of the bulk of food crops in Nigeria. It implied that proven agricultural technologies which are needed to ensure higher productivity and food security, do not reach millions of smallholder farmers scattered in the rural areas. Agriculture remains a key economic activity in Nigeria employing about 75% of the population, only approximately 1% of bank lending goes to the agricultural sector. Most of Nigeria's poor depend largely on agriculture for their livelihoods, improving the productivity, profitability, and sustainability of the agricultural sector is argued to be the main pathway out of poverty in the country (Ahmed & Mesfin, 2017). In spite of

this fact, agricultural sector growth in Nigeria remains stagnant.

Access to financial services is critical to provide funds for farm investments in productivity, improve post-harvest practices, smooth household cash flow, enable better access to market and promote better management of risks. Access to finance can also play an important role in climate adaptation and increase the resilience of agriculture to climate change, thus contributing to longer term food security. Access to a comprehensive range of financial services is a significant challenge for smallholders, who constitute the vast majority of farmers in Nigeria. These smallholders play a key role in increasing food supplies. Despite their socioeconomic importance, smallholders tend to have little or no access to formal credit, which limits their capacity to invest in the technologies and inputs needed to increase their yield and incomes and reduce hunger and poverty, both their own and that of others (IFC 2014).

In an attempt to address the challenges and re-awaken the agricultural sector, the Federal government in 2015 launched the Anchor Borrowers' Programme (ABP). Anchor Borrowers' Programme (ABP) was part of Federal Government's efforts to ensure food security, job creation, and diversification of economy. The programme was launched on November 17, 2015 in collaboration with Central Bank of Nigeria (CBN, 2016). The programme became effective in the last quarter of 2016 to provide funding to the country's smallholder farmers. The programme provides farm inputs in kind and cash to increase the production of key agricultural commodities (including rice), stabilize the supply of inputs to agro processors, and address the country's negative balance-of payments on food. At harvest time, farmers exchange with the agro-processor (i.e., the Anchor) their production for a cash equivalent (ARCN, 2018).

Twenty-nine states (29) were involved in Anchor Borrowers' Programme including Kebbi, Ebonyi, Anambra, Cross Rivers, Kano, Kaduna, Ogun,and Ekiti States to mention just a few. The targeted commodities of the programmers include cereals such as Roots and Tubers, Maize, and wheat, Cotton and Rice. Successive Nigerian governments have been making tremendous efforts to curtail the high dependency on rice (*Oriza sativa*) importation by putting embargo on it, at the same time creating an enabling environment that will stimulate the production of home-grown rice (Oba, Abdullahi, Lateef, Fatai, Muhammed & Mahmud, 2021). The democratically elected government in 2015 came up with a strong policy that totally bans the importation of foreign rice into the country and creating an enabling environment to stimulate local rice production through the provision of subsidized farm input such as fertilizer, herbicides, pesticides and improved varieties of rice seeds to farmers through cooperative groups nationwide (Oba *et al.*, 2021).

The purpose of the Anchor Borrowers' Programme (ABP) is to create economic linkage between smallholder farmers and reputable large-scale processors with a view to increasing agricultural output and significantly improving capacity utilization of processors (Olusola, Akintunde, Balogun, Jimoh & Apata, 2021). It also intended to, among other things, increase banks' financing to the agricultural sector, reduce agricultural commodity importation and conserve foreign external reserves, increase capacity utilization of agricultural firms, create new generation of farmers/entrepreneurs and employment, assist rural smallholder farmers to grow from subsistence to commercial production levels, deepen the cashless policy and financial inclusion and reduce the level of poverty among smallholder farmers. To what extent has the Anchor Borrowers Programme (ABP) contributed to the realization of the policy objectives, particularly in Jigawa State?

Objectives of the Study

Specifically, the study intends to:

i. describe the socio-economic characteristics of ABP smallholder rice farmers in Jigawa State;
ii. determine the level of awareness of the ABP among smallholder rice farmers in the area under study;
iii. determine the level of accessibility of smallholder rice farmers to ABP in the study area.

Hypothesis

A null hypothesis was formulated and test at 5% level of significance.

$H_{1:}$ Anchore Borrower programme has no significant effect on smallholder rice farmers' yield in Jigawa State.

II. LITERATURE REVIEW

Rice Production in Nigeria

Rice is the most valuable cereal crop in the world, feeding more than half of the world's population (Ajibola & Onwu, 2017). The global production of milled rice is estimated to be about 480 million metric tons per year. China and India alone produce and eat half of the world's rice (Edu & Ogba, 2019). Rice is a major staple crop in Nigeria, and it is grown and consumed throughout the country (Ajala & Gana, 2016). Nigeria had the lowest per capita annual rice intake in the sub-region in the 1960s, with an annual average of 3kg. Nigerian per capita intake has increased at a rate of 7.3 percent per year since then. As a result, per capita intake in the 1980s averaged 18 kilograms, increasing to 22 kilograms in 1995-2000 (Mustapha, Yusuf & Ibrahim, 2018). Rice is grown in nearly all of Nigeria's agro-ecological zones, from the mangrove and swampy ecologies of the River Niger delta in the coastal areas to the dry zones of the Sahel in the north, and has assumed a strategic role in the food basket of rural and urban households (Oyinbo, Damisa & Rekwot, 2012).

Rice consumption per capita in Nigeria is 32 kilograms, reflecting a 4.7 percent rise over the last decade, bringing total consumption to 6.4 million tonnes in 2017, compared to 3.7 million tonnes produced annually (United States Department of Agriculture, 2019). Rice is very significant in Nigeria because of the many different ways it can be used. The ability to grow more rice has helped in the growth of many communities, while its failure has resulted in the spread of hunger, death, and political instability in many countries, including Nigeria (Ojo & Adebayo, 2012). Rice production has not kept up with demand, rising from less than 1 million tonnes in the 1970s to 4.2 million tonnes in 2010 (Oladimeji, 2017). The five rice-growing ecosystems found in Nigeria (plateau, rained plains, irrigated plains, lowlands, and mangrove) have significant potential for expanding and intensifying rice production. According to Oyinbo, Damisa, and Rekwot, (2012) approximately 79 million hectares of land could be cultivated. Irrigation is actually used on less than 10% of the 3.4 million hectares that could be irrigated. Self-sufficiency in rice production has eluded Nigeria for a long time, despite the government's efforts of over 36 years to achieve it.

Several policies were implemented by successive Nigerian governments in an effort to render the country rice self-sufficient. The establishment of various programmes and institutes aimed at stimulating interest in local rice production is one of these steps. The Federal Rice Research Station (FRRS) was established in 1970, the National Cereal Research Institute (NCRI) was established in 1974, the National Seed Service (NSS) was established in 1975, Operation Feed the Nation (OFN) was established in 1976, the Basin Development Authority (RDBA), Agricultural Development Projects (ADP) was established in 1975, and the National Grain Production Programmes were established in 1976. (NGPP), to name a few, the Presidential Initiative on Increased Rice Production, Processing, and Export (2003) and the Special Rice Programme, all these programmes failed to achieve the purpose for which they were designed.

The Anchor Borrower Programme

The Central Bank of Nigeria (CBN), in line with its developmental functions as enshrined in Section 31 of the CBN Act 2007, established the Anchor Borrowers' Programme (ABP) to create economic linkages between smallholder farmers (SHFs) and reputable companies (anchors) involved in the production and processing of key agricultural commodities (Anchor Borrowers' Programme Guidelines, 2021). The core of the Programme is to provide loans (in kind and cash) to smallholder farmers to boost agricultural production, create jobs, reduce food import bill towards conservation of foreign reserve. The Programme evolved from consultations with stakeholders comprising Federal Ministry of Agriculture and Rural Development, state governments, agro-processors, commodity associations, financial institutions and smallholder farmers to ramp up agricultural production, boost non-oil exports and diversify the revenue base of Nigeria (Anchor Borrowers' Programme Guidelines, 2021).

In 2017, CBN expanded the Anchor Borrowers' Programme (ABP) to include Agricultural Commodity Associations of the targeted produce in an effort to expand the implementation of the ABP. This decision was taken to further ramp up domestic production of identified commodities by leveraging the existing organized structures of the agricultural associations nationwide, thereby providing huge economics of scale in the implementation of APB (Farmrades, 2022). According to Central Bank of Nigeria (2016), the broad objective of the Anchor Borrowers' Programme is to create economic linkage between smallholder farmers and reputable large-scale agro-processors with a view to increasing agricultural output and significantly improving capacity utilization of processors.

Specifically, other objectives include:

i. Increase banks' financing to the agricultural sector;
ii. Reduce agricultural commodity importation and conserve external reserves;
iii. Increase capacity utilization of agricultural firms;
iv. Create new generation of farmers/entrepreneurs and employment;
v. Deepen the cashless policy and financial inclusion;
vi. Reduce the level of poverty among smallholder farmers; and
vii. Assist rural smallholder farmers to grow from subsistence to commercial production levels.

Twenty-nine states (29) were involved in Anchor Borrowers' Programme including Kano, Ekiti, Kaduna, Ogun,and Jigawa States to mention just a few. The targeted commodities of the programmers include cereals such as Rice, Maize, and wheat, Cotton, Roots and Tubers (Olusola *et al.*, 2021). By the second quarter of 2021, the Governor of the CBN, Godwin Emefiele, disclosed that 3,107,890 farmers had been empowered under the scheme to cultivate 3,801,397 hectares of land and produce 21 commodities, leveraging the services of 23 financial institutions acting as direct links to farmers **(**Murtala, 2021**).** Data corroborates Mr Buhari's claims. Between 1999 and 2015, yearly milled rice production in Nigeria averaged 2.4 million metric tonnes. But following the introduction of the ABP initiative, production rose from 3.9 mmt in 2015 to 4.5 mmt (15 per cent increase) in 2016, (United States Department of Agriculture (USDA) 2016).

Rice Production in Nigeria

In 2017 and 2018, Nigeria's milled rice production averaged 4.5 mmt, and rose to 5.0 mmt(11 per cent increase) in 2019. In 2020, amidst the upsurge of the coronavirus pandemic and the devastating impacts of climate change and insecurity, production decreased to 4.8 mm but later rose to 5.0 mmt in 2021. With this, Nigeria is currently ranked 14th highest rice producer in the global pecking order and the highest producer of the commodity in Africa.

III. METHODOLOGY

Jigawa State is one of the seven states in the Northwest geo-political zone of Nigeria. It lies between latitudes 11.00°N to 13.00°N and longitudes 8.00°E to 10. 15°E.With 27 Local Government Areas, the state has a total land area of approximately 22,410 square kilometers and 5.828 million people, according to the 2016 National Bureau of Statistics population estimates (http://www.nigerianstat.gov.ng/). Annual population growth rate is 3.5%, while 80% of the population reside in rural areas. Its topography is characterized by undulating land, with sand dunes of various sizes spanning several kilometers in parts of the State. The southern part of the state comprises the Basement Complex while the northeast is made up of sedimentary rocks of the Chad Formation. The main rivers are Hadejia, Kafin Hausa and Iggi with a number of tributaries feeding extensive marshlands in north-eastern part of the State. Hadejia-Kafin Hausa River traverses the State from west to east through the Hadejia-Nguru wetlands and empties into the Lake Chad Basin.

Jigawa State is largely characterized by informal sector activities with agriculture as the major economic activity. Over eighty percent (80%) of the people from this State engage in subsistence farming and animal husbandry. Food crops produced in the State include maize, millet, rice, wheat, guinea corn, onions, pepper and a number of vegetables. While cash crops like cotton, sugar cane and groundnut are also produced. The waters of Hadejia, Kafin Hausa and Iggi Rivers, together with their tributaries, provide for agricultural activities, including irrigation (http://www.nigeria.gov.ng/index.php/2016-04-06-08-39-54/north-west/jigawa-state). The UNDP Poverty Index, covering 2004 to 2015, lists Jigawa State as the third poorest state in Nigeria with poverty level at 88.4%, almost double the national average of 46%. Agriculture is therefore an important activity that could drastically reduce poverty in the state.

The Federal Government of Nigeria identifies seven (7) major rice producing zones in the state. These zones are Dutse, Jahun, Ringim, Hadejia, Gwaram, Kafin-Hausa and Kaugama. Three of these areas (Hadejia, Kafin-Hausa and Kaugama) are in Jigawa Northeast. Another three (Dutse, Jahun and Gwaram) are in Jigawa Central; while Jigawa West has one major rice producing zone – Ringim (http://www.nigeria.gov.ng/index.php/2016-04-06-08-39-54/north-west/jigawa-state). This study used a cross-sectional survey research approach, multi-stage random sampling procedure was used to select 125 participants. The first stage entails a random selection of five producing zones (LGAs), that is, two each from Jigawa Northeast and Jigawa Central districts, and the only LGA in Jigawa West district. The second stage involved random selection of one community each from the five selected LGAs, while the last stage entails random selection of twenty-five (25) rice farmers from the selected communities which then amounted to 125 farmers as sample size. A researcher designed questionnaire was used as instrument for data collection. The instrument was validated by two research experts to ensure face and content validity. The instrument after validation was subjected to pilot testing, the data collected from the pilot study yielded a Guttman split half coefficient 0.73 which was deemed reliable. Data collected were analyzed using descriptive statistics of mean and standard deviation. Hypothesis was tested using binary regression. Binary Logistic Regression is useful in the analysis of multiple factors influencing a negative/positive outcome, or any other classification where there are only two possible outcomes (Patel, 2021).

Binary Logistic Regression

A binary regression estimates a relationship between one or more explanatory variables and a single output binary variable. Generally the probability of the two alternatives is modeled, instead of simply outputting a single value, as in linear regression. Binary regression is usually analyzed as a special case of binomial regression, with a single outcome (yield), and one of the two alternatives considered as "success" and coded as 1: the value is the count of successes in 1 trial, either 0 or 1.

$Z = \log [P/1-P] = \log Y = \alpha + \beta 1X1 + \beta 2X2 + \mu$ Where Z = yield: Increase yield = 1; No increase in yield= 0 β = regression coefficient explaining changes caused in Z by changes in the independent variables. X1 = Level of awareness of ABP; X2 = level of accessibility to ABP; μ = Error term

IV. RESULT AND DISCUSSION

Table 1: Socio-Economic Characteristics of Respondents

Variable	Frequency	Percentage (%)	Mean
Age			
Less than 20years	19	15.2	34.5
21-30years	34	27.2	
31-40years	21	16.8	
41-50years	33	26.4	
>50	18	14.4	
Sex			
Male	94	75.2	
Female	29	23.2	
Marital status			
Single	37	29.6	
Married	61	48.8	
Divorced	15	12.0	
Widowed	7	5.6	
Separated	5	4.0	
Traditional	12	9.6	
Educational Qualification			

No Formal education	23	18.4	
Primary education	36	28.8	
Secondary education	39	31.2	
Tertiary education	27	21.6	
Others	.0	.0	
Family size			
1-2	36	28.8	5.0
3-4	21	16.8	
5-6	48	38.4	
7-8	9	7.2	
9-10	11	8.8	
Primary occupation			
Farming	125	100	
Secondary occupation			
Teaching	9	7.2	
Painting	19	15.2	
Carpentry	15	12.0	
Tailoring	9	7.2	
Trading	45	36.0	
Marketing	21	16.8	
Plumbing	7	5.6	

Source: Field survey, (2021)

Personal characteristics of respondents

The selected socio-economic characteristics of the respondents include age, sex, marital status, religion, educational qualification, family size, primary occupation, secondary occupation, monthly income, farm size, and means of farmland acquisition and years of farming experience. Table 1 shows that 26.4% of the respondents were between 41 and 50 years and 14.4% were above 50 years. It further shows that the mean age of the respondents was 34.5 years which implies that the majority of the respondents are in their active years. This corroborates the findings of Bello-Kano (2018) who reported that native rice farmers in Ogun state are in their active years. Result shows that the male constitutes 75.2% while the female constitutes 23.2%. The dominance of the male among the native rice farmers shows that rice production is a male dominant occupation in Jigawa state. However, it has been observed that more females will probably engage in farming, especially rice production with encouragement and incentives (Bakare, 2019). The finding is also in line with that of Ayinde, Fatigun, Ogunbiyi, Ayinde and Ambali, (2018) who reported that female involvement in rice farming is low compared to their male counterparts with male having 73.1% in Kwara State. This is also similar to FAO, (2012) assertion that women make up on average 43% of farmers in developing countries ranging from 20 % to almost 50%.

Result shows that 48.8% of the respondents were married while 29.6% were single and 12% were divorced. The dominance of the married ones among the respondents is likely as a result of the need to meet family food need and income, this may be as a result of the need to use family labour to complement the efforts of the farmers. This further corroborates with the findings of Bakare (2004) who reported that farmers are married to enhance their labour strength through family labour. This is also in line with the finding of Ayinde, *et al.* (2018) who reported that majority (78.4%) of the respondents were married in Kwara State. Results show that 31.2% had formal education while 18.4% of the respondents had no formal education. Literate population is easy targets for extension information dissemination. So, since more of the respondents have at least primary education, it was easy for them to participate in ABP. This finding is in line with Ayinde, *et al.* (2018) who reported that about 56% of the ABP rice farmers have tertiary education in Kwara State. Results indicate that 38.4% had family size of 5-6 children, 28.8% had between 1-2 children while 16.4% of the respondents had between 3 and 4 children. The finding negates that of Ayinde, *et al.* (2018) who concluded that 34.3% of the respondents have a household size of about 10 people and above. However, the mean family size is 4 which imply that most of the respondents have a small family size. Result shows that all the respondents take rice production as their primary occupation. This is probably as a result of the lucrativeness of the venture and recent policy initiatives that focus on rice production. Result shows that 36.0 of the respondents are traders, 16.8% are marketers while 15.2% engaged in painting and 12.0% are carpenters distinctively. The need for engaging in these secondary occupations may be as a result of the need to augment income from rice farming which is in tandem with the findings of Ajala (2015) who alluded to the fact that farmers engage in numerous income generating activities.

Table 2: Distribution of respondents by level of awareness of the ABP in the area under study

ABP Awareness	VL (%)	LW (%)	MO (%)	HG (%)	VH (%)	Mean (±SD)	Remark
Are you aware that ABP can make soft loan accessible by you?	0	5.7	15.3	26.4	52.6	4.26±0.92	High
Are you aware that ABP can help export your farm produce?	0	0	9.4	36.3	54.2	4.45±0.66	High
Are you aware that ABP helps to train and retrain rice farmers?	0	0	18.9	35.8	45.3	4.26±0.76	High

Are you aware that ABP is to transform you to a commercial farmer?	0	0	12	29.5	58.5	4.46±0.70	High
Are you aware that ABP is meant to create employment?	0	5.7	9.2	28.1	57.1	4.42±0.74	High

Source: Field Survey, (2021)

Note: any mean score of 3.0 and above will be regarded as high awareness, while mean value below 3.0 would be considered as low awareness.

VL= very low; LW= Low; MO= Moderate; HG= High; VH= Very High

Result presented in Table 2 shows that a high level of awareness of ABP among smallholder rice farmers. The findings show that farmers are aware that they can access loan through ABP with a mean of score of 4.26 and standard deviation of 0.92. The farmers are also aware that ABP can help them export their produce with a mean score of 4.45 and a standard deviation of 0.66, the respondents in the study area are aware that ABP train and retrain farmers with a mean score of 4.26 and a standard deviation of 0.76. Respondents being aware of ABP is unconnected with the fact radio is owned and use by each household to source information. This finding negates that of Olarenwaju, (2019) who conducted a research on assessment of awareness and determinants of anchor borrowers programme adoption among rice farmers in Kaduna State, Nigeria, the finding shows that only about 40% of the smallholder rice farmers were aware of the programme in the study area. The findings also negate that of Olusola, Akintunde, Balogun, Jimoh and Apata (2021) who asserted that farmers awareness of ABP loan in Ekiti State was below average.

Table 3: Distribution of respondents by level of accessibility to ABP in the area under study

ABP Accessibility	VL (%)	LW (%)	MO (%)	HG (%)	VH (%)	Mean (±SD)	Remark
How accessible is the loan made available by ABP?	1.2	4.5	11.3	28.1	55	4.38±0.76	High
How accessible is the export service provided by ABP?	0	0	11.1	29.7	59.2	4.48±0.69	High
How far ABP being able to create job?	0	0	0.7	20.5	78.8	4.78±0.43	High
How effective is the transformation agenda?	0.9	0.9	15.8	27.1	55.2	4.35±0.85	High
How effective is the training provided by ABP?	0	1.4	18.4	26.4	53.8	4.33±0.82	High

Source: Field Survey, (2021)

Note: any mean score of 3.0 and above will be regarded as high accessibility, while mean value below 3.0 would be considered as low accessibility.

VL= very low; LW= Low; MO= Moderate; HG= High; VH= Very High

Result in Table 3 shows that ABP loan accessibility is high with a mean score of 4.38 and a standard deviation of 0.76. The result shows that respondents have high accessibility to the export service provided by the ABP with a mean score of 4.48 and a standard deviation of 0.69. The result shows that the job creation agenda of the ABP is high in the study area with a mean score of 4.78 and a standard deviation of o.43. This finding is in line with that of Mansur (2019) and Janta and Shitta (2020) who agreed that level of farmers' access to all facilities provided to farmers in Kano and Kaduna States were high.

Table 4: Results of binary regression estimates showing the relationship between ABP and farmers' rice yield

Variables	β	S.E.	Wald statistics	Sig.	Exp(B)
Rice yield (kg)	1.56E-06***	5.26E-07	8.766	0.003	1.000
Constant	0.419	0.143	8.642	0.003	1.521

2 Log likelihood = 516.726; Cox & Snell R square = 0.023; Nagelkerke R square = 0.033

***Significant at 1%.

Source: Field survey (2021)

Result from Table 4 shows that ABP significantly have effect on the yield of smallholder rice farmers in Jigawa state, rice yield is significant when p value is 0.003 with a β coefficient of 1.56E-06 at 1% level of significance. There was a significant change in 2 log-likelihood. Therefore, the null hypothesis which states that ABP has no significant effect on smallholder rice farmers' yield in Jigawa State is hereby rejected. This implies that ABP has 1% significant to rice production in Jigawa State. This finding is in line with the findings of Olanrewaju, Osabohien, and Fasakin, (2020) who stated that ABP participation increases farmers' rice yield by 18.11% in northern Nigeria. This finding is similar with that of Ayinde, *et al.* (2018) who stated that access to ABP significantly affect rice yield.

V. CONCLUSION

Based on the study findings of this research, it is concluded that ABP has high level of awareness among smallholder rice farmers and that respondents have high access to all ABP activities in the study area. Majority of Anchor Borrower Programme beneficiaries in Jigawa State is are male and it is unconnected with the general belief that agriculture is for the male forks. It can also be concluded that ABP participation significantly increase yield of smallholder rice farmers in the study area.

VI. RECOMMENDATIONS

The study recommended that:

1. Anchor borrowers programme coordinators should increase outreach to larger number of smallholder rice farmers so as to achieve its objective of assisting rural farmers to grow from subsistence to commercial production levels.
2. The template of ABP should be adopted by future programme planners since it has proven to be effective.
3. Government should give larger financial support to the programme and it should be made available in all rice growing states of the federation.
4. More females should be encouraged to participate in the programme through extension service delivery.

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