ISSN: 2695-2556 (Online)
ISSN: 2651-5679 (Print)

AKSU Journal of Agriculture and Food Sciences 8(3) 9-16, 2024

Assessment of Socio-economic Factors Influencing Financial Inclusion among Small Holder Cassava Farmers in Rivers State, Nigeria

Raphael B. Kpaama[1]* and Dumka N. Benson[2]
[1]Department of Agricultural & Applied Economics, Rivers State University, Nkpolu-Oroworukwo, Port Harcourt, Rivers State, Nigeria
[2]Department of Agricultural Education, Federal College of Education (Technical), Omoku, Rivers State, Nigeria
*Corresponding author's Email: kpamabr@yahoo.com

Abstract

Despite all the efforts made to financially include small holder farmers in Nigeria in order to boost their productivity, financial inclusion among small holder cassava farmers in the study areas still remains poor with low productivity and low income. This was what motivated the conduct of this study to assess the socio-economic factors that influenced financial inclusion among small holder cassava farmers in Rivers State, Nigeria. It was hypothesized in the study that no socio-economic factor has positive significant influence on participation in financial inclusion in the study area. A multi-stage sampling procedure was used to sample 357 respondents; data were collected through well-structured questionnaires and analyzed using both descriptive and logit regression model. The results of the study show that majority of the respondents, (44.3%) fell within the age bracket of 42-62 years, 67.5% of the respondents were male and 32.5% of them were female, and over 82.6% of them were married. Considering educational qualifications, 44% of them had no formal educational qualifications with average monthly income of ₦29,235.29 and family size of 6 members. The results also show that socio-economic factors like experience in cassava cultivation and income level of the farmers positively and significantly influenced participation in financial inclusion at 1% and this finding rejects the null hypothesis. The study concluded that socio-economic factors influenced participation in financial inclusion in the study area with age in farming and income level as the main socio-economic factors influencing its participation. The study therefore recommended that small holder cassava farmers should be supported to acquire experience through sustained cassava cultivation by provision of farming support/incentives from the relevant government agencies/ministries. Also, small holder cassava farmers should adopt methods and practices that will improve their level of income generated from cassava cultivation to enhance their participation in financial inclusion.

Key words: Financial inclusion, Socio-economic factors, Productivity

1.0 Introduction

Cassava (Manihot Esculenta) is a valuable root crop cultivated worldwide for its economic importance. In Nigeria, cassava cultivation plays a vital role in the agricultural sector, contributing immensely to the nation's economy and the livelihood of most households (Food and Agricultural Organization, 2018).

Cassava farming is an important agricultural activity in Rivers State and it holds significant potentials for improving rural livelihoods and contributing to the economy of the state. Small holder farmers are the major producers of cassava in Rivers State and their productivity level is low despite the huge potentials available in the state for improved production of the crop (Antia-Obong *et al*, 2021; Okorie *et al*, 2022).

Financial inclusion has been identified as one way of achieving high productivity that gives rise to economic development of any nation. According to Central Bank of Nigeria CBN (2018) financial inclusion is the processes of making all adults have access to a wide range of formal financial products and services that meet their needs and at less expensive costs. Araba (2020) and Ozili (2018) have posited that financial inclusion has helped small holder farmers to save for the future, access credits and make investment that improve their productivity. It was on the basis of the above contribution of financial inclusion that measures were taken by the government to achieve greater participation in financial inclusion by the greater percentage of the nation's population including small holder cassava farmers (Central Bank of Nigeria Financial Inclusion Newsletter, 2020)

Despite all the efforts already made to financially include the small holder cassava farmers in Rivers State in order to boost their cassava productivity, low participation in financial inclusion is still observed among them and they generally remain poor with low productivity and low income.

Available literature show that some studies have been carried out on participation in financial inclusion (Gbalam *et. al,*. 2020, Mutamuliza *et. al*, 2021, Zulfigar *et. al,* 2016, Mhlanga *et. al* 2022, Dzadza, *et al,* 2021, Ugwuja and Attah, 2020 and Mhlanga *et. al,* 2020). However, none of such studies have been done on socio-economic factors influencing participation among small holder cassava farmers in the study area. The study by Ugwuja and Attah (2020) which is similar considered farmers generally and not small holder cassava farmers in particular. Therefore, this study filled this research gap by providing information on the socio-economic factors influencing participation among small holder cassava farmers in the study area. The specific objectives of the study were to describe the socio-economic characteristics of the small holder cassava farmers and to assess the socio-economic factors influencing their participation in financial inclusion in the study area. This study is therefore justified because relevant stakeholders are informed through its findings of what drive participation in financial inclusion among small holder cassava farmers in the study areas which can inform the policies, efforts and measures to be taken in these areas to achieve greater percentage of financial inclusion.

2.0 Methodology

2.1 The Study Area

This study was conducted in Rivers State. Rivers State is one of the states in the Niger Delta Region of Nigeria. The state has abundant fertile land as well as rivers and these enable the people to make a living from both fishing and farming activities. The major crops cultivated include cassava, yam, plantain, banana, oil palm. Crude oil and natural gas are also the major mineral resources of the state. The state has both upland and riverine local government areas. A total of twenty three (23) local government areas exist in the state. Nine (9) local government areas are riverine, while fourteen (14) are upland. However, the study was conducted in 12 local government areas. These local government areas are upland communities where cassava cultivation is one of the major farming activities and there is predominance of small holder cassava farmers in these areas. The population of the study comprised of all the 5029 small holder cassava farmers registered with the Ministry of Agriculture, Rivers State. The Taro Yamane formula (Yamane, 1967) was used to get a sample size of 357 respondents who were randomly selected using a multi-stage sampling technique.

2.2 Method of Data Collection and Analytical Technique

The data used for this study were collected from primary sources through the use of well structured questionnaires, which were distributed to the respondents in the study area. The data were analyzed using both descriptive and inferential statistics. Descriptive statistics like mean, frequency and percentage were used to describe the socio-economic characteristics of the small holder cassava farmers, while logit regression model was used to analyze the socio-economic factors influencing their participation in financial inclusion in the study area. Logit model is a method used to analyze the relationship between one or two categorical dependent variables and a set of independent variables which may be either continuous or categorical. The logit model was chosen because participation in financial inclusion, the dependent variable is categorical. The logit regression model is expressed explicitly as:

$$PFI = \beta_0 + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \beta_4X_4 + \beta_5X_5 + \beta_6X_6 + u$$

Where:

PFI = Participation in financial inclusion, operationalized as utilization of formal bank services and measured in number using dummy

X_1 = Educational qualifications using dummy

X_2 = Income level measured in naira

X_3 = Gender in number using dummy

X_4 = Family size measured in number

X_5 = Experience in cassava cultivation measured in number

X_6 = Marital status measured using dummy

u = the error term

PFI, β_0, β_1, β_2, β_3, β_4, β_5, β_6= parameters to be estimated

3.0 Results and Discussion

3.1 Socio-Economic Characteristics of the Small Holder Cassava Farmers in the Study Area

Table 3.1 presents the result of the socio-economic characteristics of the respondents.

Table 3.1: Socio-economic characteristics of small holder cassava farmers

Variables	Frequency	Percentage	Mean
Age			57
21-41	54	15.1	
42-62	158	44.3	
63-83	145	40.6	
Sex			
Male	241	67.5	
Female	116	32.5	
Marital status			
Married	295	82.6	
Single	32	9.0	
Widow	30	8.4	
Educational qualifications			
WASC/SSCE	70	19.6	
OND	40	11.2	
HND	28	7.8	
BSc. and above	62	17.4	
No formal Education	157	44	
Monthly income			29,235.29
₦0.00-₦20,000.00	149	41.7	
₦21,000.00-₦41,000.00	119	33.3	
₦42,000.00-₦62,000.00	59	16.5	
₦63,000.00-₦83.000.00	30	8.4	
Family size			6
1-3 persons	70	19.6	
4-6 persons	77	21.6	
7-9 persons	209	58.5	
Above 9 persons	1	3	

Field Survey, 2024

From table 3.1, majority of the respondents, 158 (44.3%) fell between the age bracket of 42-62 years, followed by those who were in the age bracket of 63-83 years with 40.6% and 54 (15.1%) for those in the age brackets of 21-41 years. The mean age was 57 years. The implication of this is that the majority of the respondents were adult and not minors, thus they were capable and eligible to enter into a valid contract that is required for participation in financial inclusion. This finding agrees with the finding of Edriss (2013) who found that the age of the farmers determined the kind of relationship and contract or transactions that the farmers can enter into which is vital for participation in financial inclusion.

The result in table 3.1 showed that 241 (67.5%) of the respondents were male and 116 (32.5%) of the respondents were female. The implication is that majority of the respondents could participate in financial inclusion because males find it quick and easier than females to embrace new innovation. This is because most female are financially excluded for the above reason (CBN, 2020).

The result of marital status of the respondents as indicated in Table 3.1 shows that 82.6% of them were married. Also, 9.0% of them were single and 8.4% of them were widow. This implies that most of the small holder cassava farmers in the study areas were married. The need to provide family labour for the cassava production may have informed this in order to reduce the cost of hired labour. This agrees with the finding of Ugwuja and Attah (2020) who reported that majority of small holder farmers in Ogba Local Government Area of Rivers State were married.

Table 3.1 also shows that 19.6% of the respondents had WASC qualification, 11.2% had OND qualification, 7.8% had HND qualification and 17.4% had BSc. and above qualifications. About 44% of them had no formal educational qualification. This implies that the majority, 56% of the respondents had some basic educational qualifications which indicate that most of the respondents could participate in financial inclusion because of their level of literacy. This agrees with the finding of Seluhinga (2023) that the likelihood of having a formal bank account increased if small holder farmers have higher attainment level in education.

Table 3.1 shows that 41.7% of the respondents had monthly income range of ₦0-₦20,000.00, 33.3% had ₦21,000.00-₦41,000.00, and 16.5% had ₦42,000.00-₦62,000.00 while 8.4% had ₦63,000.00 N83,000.00 with a mean monthly income of ₦29,235.29. This implies that small holder cassava farmers in the study areas were low income earners. This agrees with the findings of Taiy *et al* (2017) that small holder farmers are mostly low income earners.

The result of the family size in Table 3.1 shows that 19.6% of the respondents had family size of 1-3 persons, 21.6% had family size of 4-6 persons, 58.5% had family size of 7-9 persons and only 3% had family size of above 9 persons with a mean family size of 6 persons. The majority (58.5%) of the small holder cassava farmers in the study areas had large family size of 7-9 persons. This is in line with the findings of Dzever *et al* (2023) which states that small holder farmers have large household size which is necessary for labour supply to serve as insurance in the event of shortage of labour.

3.2 Socio-Economic Factors that Determined Participation in Financial Inclusion by Small Holder Cassava Farmers in the Study Areas

Table 3.2 shows Logit Regression results on the socio-economic factors that determined participation in financial inclusion by small holder cassava farmers in the study areas. The result of the logistic regression analysis showed in table 3.2 was used to explain the socio-economic factors that determined participation in financial inclusion in the study areas. Two out of the six explanatory variables were statistically significant. These are age and monthly income.

Experience in cassava cultivation of the small holder cassava farmers had a positive coefficient (2.50700) and was significant at 1% level of probability. The level experience of the farmers in cassava production increased the likelihood of the farmers to participate in financial inclusion. This is because participation in financial inclusion requires some achievements of success and income in cassava production which is made possible by the farmers' level of experience in cassava production. This agrees with the finding of Mhlanga *et al* (2022) that the level of experience of the household heads was a significant factor that enhanced participation in financial inclusion in Zimbabwe.

Monthly income also had a positive coefficient (1.36821) and was also significant at 1% level of probability. This implies that the more income the small holder cassava farmers earned in the study areas, the more likely they will participate in financial inclusion. This is possible because the farmers will have enough income to save some with financial institutions that are the providers of financial inclusion services.

The R-Squared (R^2) value was 0.378704 indicating that the variables tested determined 38% of the participation in financial inclusion by small holder cassava farmers in the study areas. The loglikelihood was -188.00069 which indicated that the model fit to the data. The Chi-Square-X^2 value of the logit regression model was 143.859 and was significant at 1% level of probability. This implies that the socio-economic factors of the small holder cassava farmers significantly influenced their participation in financial inclusion in the study areas. This finding is consistent with the result obtained by Noelea *et.al* (2014) in a study on determinants of participation in financial inclusion in Peru.

Table 3.2: Summary of logit regression analysis on the socio-economic factors that determined participation in financial inclusion by small holder cassava farmers in the study areas

Variables	Coefficients	Standard Error	z-value	p-value
Constant	87.3313	52436.8	0.001666	0.9987
Experience in cassava cultivation	2.50700	0.846715	2.961	0.0031***
Gender	-46.7072	20764.8	-0.002249	0.9982
Marital status	-1.82270	21048.4	-8.660e-005	0.9999
Education level	-23.0345	10382.4	-0.002219	0.9982
Monthly income	1.36821	0.358589	3.816	0.0001***
Family size	21.6662	10382.4	0.002087	0.9983

R-Squared=0.378704, Adjusted R-Squared=0.341849, Loglikelihood=-118.0069, Chi-Square=143.859 (0.0000)

Field Survey, 2024

4.0 Conclusion and Recommendations

The study assessed the socio-economic factors that influenced participation in financial inclusion among small holder cassava farmers in Rivers State. The study concluded that socio-economic factors like experience in cassava cultivation and the income level of the farmers positively and significantly influenced participation of small holder cassava farmers in financial inclusion in the study area. Based on the findings of the study, it is recommended that:

1. Small holder cassava farmers should be trained, encouraged and empowered to adopt production practices that will boost their income level in order to have enough income to participate in financial inclusion.
2. Small holder cassava farmers should be supported to acquire experience through sustained cassava cultivation by provision of farming support/incentives from the relevant government agencies/ministries.

References

Antia-Obong, E.A., Hubbard, C. and Garrod, G. (2021). Influence of transaction costs on smallholder poultry market participation in Nigeria: A mixed methods analysis. *World Food Policy*, 7(2),96-110.

Araba, D. (2020). *Financial Inclusion: Affordability and Financing for Small Holders*. The Guardians Newspaper of November, 2020.

Central Bank of Nigeria (2018). *National Financial Inclusion Strategy (Revised*). Retrieved from https://cbn/gov.ng/out/2019/ccd/national/20financial/20inclusion/20strategy.pdf

Central Bank of Nigeria Financial inclusion Newsletter (2020). *A Quarterly Publication of the Financial Inclusion Secretariat. 4 (2), 145-153.*

Dzadza, P, Aldoo, R & Nurah, G. K. (2021). Factors Determining Acess to Formal Credit in Ghana. A case study of Small holders in the Abura-Asebu Kwamankese District of Central Region of Ghana. *Journal of Development and Agricultural Economics.* 4, 416-423.

Dzever, D. D, Humbe, I. T. & Bogbenda, A,,(2023). Effects of Socio-Economic Factors on Rice Production in Makurdi Local Government Area of Benue State, Nigeria, *FAMAN Journal*, 23 (2), 19-30.

Edriss, A. (2013). *Smart Research Method*. BEECSI Series Publication, International I-Publishers, Malawi.

Food and Agriculture Organization (FAO) (2018). Food Outlook-Biannual Report on Global Food Markets, November, 2018. Rome, P.10 https//www.fao.org/3/ca2320en/CA2320EN.

Gbalam, P. E. & Dumani, M. (2020). Determinants of Financial Inclusion in Nigeria. *IOSR Journal of Economics and Financial (IOR-JEF).* 11 (1) 14-22. www.iosrjournals.org.

Mhlanga, D. & Adewale, H. A. (2022). Financial Participation among Small Holder Farmers in Zimbabwe. What are the driving Factors? *Academic Journal of Interdisciplinary Studies*. 11 (4). 300-310. DOI: https//doi.org/10.36941/ajis.2023-2117

Mhlanga, D. & Dunga, S. H. (2020). Measuring Financial Inclusion and its Determinants among the Small holder Farmers in Zimbabwe. An Empirical Study. *Eurasian Journal of Business and Management*, Eurasian Publications, 8 (3), 266-281

Mutamuliza, E., Vishwanatha, K. & Mbaraka, S. R. (2021). Determinants of Small Holder Farmers' Participation in Microfinance Markets in Huye District, Southern Province, Rwanda. *African Journal of Food, Agriculture, Nutrition and Development*. 21 (7), 18319-18329. https://doi.org/10.8697/ajl and 19443.

Noelea, C., Ximena, P. & Tuesta, D. (2014). *Factors that matter for Financial Inclusion: Evidence from Peru*. BBVA Working Paper No. 14/09. Madrid.

Okorie, N.U., Okoro, G.I., Antia-Obong, E.A (2022) Analysis of Information and Communication Technologies (ICTs) Utilization among poultry farmers in Ikot Ekpene Agricultural Zone, Akwa Ibom State, Nigeria. *Faman Journal*, 22(2), 17-27.

Ozili, P. K. (2018). Impact of Digital Finance on Financial Inclusion and Stability. Borsa *Istanbul Review*. 18 (4), 329-340.

Seluhinga, N. S. (2023).Factors Influencing Smallholder Farmers' Access to Formal Financial Services in Morogoro Region, Tanzania. *Tanzania Journal of Agricultural Science*. 22 (2), 434-443.

Taiy, R. J., Oneyango, C., Nkurunwa, A. & Ngetich, K. (2017). Socio-economic Characteristics of Small Holder Potato Farmers in Mauche Ward of Nakuru County, Kenya, *Universal Journal of Agricultural Research*, 5 (5), 257-266.

Ugwuja, V. C. & Attah, C. (2020).Determinants of Farmers' Financial Inclusion in Ogba Local Government Area of Rivers State, *Nigeria. Nigerian Agricultural Policy Research Journa*l. 8 (1), 48-56.

Yamane, Taro (1967). *Statistics, An Introductory Analysis*, 2nd Ed., New York: Harper and Row

Zulfigar, K., Chaudhary, A. M. & Aslam, A.(2016). Financial Inclusion and its Implication for Inclusive Growth in Pakistan. *Pakistan Economic and Social Review.* 54 (2), 297-325.