

# What Factors Influence Financial Inclusion among Entrepreneurs in Nigeria?

Fasakin I. J<sup>1</sup>, Salawu M B<sup>2</sup>, Adejoorin M. V<sup>3</sup>, and Esezobor O. S<sup>4</sup>.

<sup>1,3</sup>Department of Agricultural Economics, University of Ibadan, Nigeria

\*\*Department of Agribusiness Management, Federal College of Animal Health and Production Technology, Ibadan, Nigeria

<sup>1</sup>Corresponding Author's

**Abstract:-** Financial inclusion is a veritable tool of economic development, as it brings a sense of inclusiveness to individuals in the country. Despite this importance, Nigeria is home to a large unbanked population in sub-Saharan Africa, where half or more adults are unbanked. Using the fourth wave of the General Household Survey Data, this study examined the factors that explained financial inclusion among entrepreneurs in rural Nigeria. Descriptive statistics and probit regression analysis were used to analyze the data of 3,349 entrepreneurs. Findings from the study show that most respondents were male (82.36%), with an average age and household size of 47.71 years and five people, respectively. About 56.17% of the entrepreneurs own only agriculture enterprises, 10.96% own non-agriculture enterprises, and 32.88% own both agricultural and non-agricultural enterprises. The probit regression result shows that financial inclusion is driven by sex, age, marital status, household size, education level, asset value, access to the internet, banking distance to the residence, enterprise type, and geographical zones of the entrepreneurs. The study recommends that financial institutions consider the availability and increase the number of their branches in rural communities to reduce the distance spent assessing financial services. Government and financial institutions should also focus more on educating rural entrepreneurs on the benefits of being financially included. The training should be cut across various age groups, sexes, and the six geopolitical zones in the country.

**Keywords:-** Entrepreneurship, Financial Inclusion, Rural Nigeria, Probit Regression.

## I. INTRODUCTION

The high unemployment rate globally has necessitated an upsurge in human creativity and the development of individual skills, thus making skill development a way of empowerment. This creative development of ideas and skills is called entrepreneurship. However, in Nigeria today, entrepreneurs are not performing exceptionally well due to various challenges such as lack of knowledge of technology, unfair competition, multiple taxes, unfavourable monetary policies, inadequate market research, hostile fiscal policies, poor policy

implementation, and uneasy access to funding (Arasti, 2011; Agri *et al.*, 2018; Akinyemi & Adejumo, 2018; Aribaba *et al.*, 2019). Entrepreneurship, defined as the totality of those attributes that enable a person to identify hidden business opportunities along with the capacity to organize needed resources to profitably take advantage of such opportunities in the face of calculated risk and uncertainty, has gained prominence worldwide. The creation, enhancement, realization, and renewal of value for the enterprise's owners, all participants, and stakeholders have been identified as a fundamentally important part of modern economic and social life. This is crucial in ensuring businesses can thrive and contribute positively to society (Taiwo *et al.*, 2016). Though entrepreneurship is more than the mere creation of businesses, it is undoubtedly essential to business creation and empowerment. One of the critical ingredients needed for business formation and growth is finance. The high concentration of job creation in micro/informal firms with low productivity in Sub-Saharan Africa has been attributed to several factors, including a lack of comprehensive entrepreneurial training and small market size (Dugassa, 2012), obstructing laws and regulations, and poor infrastructure, and a lack of finance (Legas, 2015; Olawale & Garwa, 2010).

Financial inclusion is widely considered a right of all citizens to social inclusion, a better quality of life, and a tool for strengthening the economic capacity and capabilities of people with low incomes in a nation (Banco Central do Brazil, 2010). As a result of the global success and benefits of financial inclusion, the Nigerian government has introduced some policies such as electronic banking, promoting bank–customer relationships, educating the public about financial services, and introducing credit enhancement schemes as part of its financial inclusion strategies (CBN, 2013). Despite this considerable effort, many individuals and low-income earners are still excluded. This has affected them regarding limited economic participation, entrepreneurship skills, and total economic development. Access to financial credit, bank accounts, and additional financial services has been identified as an effective way to open up economic opportunities (World Bank, 2013), especially in developing economies like Nigeria. It plays a crucial role in an economy, providing funds for economic activities and development. Despite its significant

role in economic development, many individuals are excluded in Nigeria for one reason or another, thereby slowing down the country's overall economic development (CBN, 2013). Nigeria is home to millions of unbanked people in sub-Saharan Africa, where half or more of adults, including women, are unbanked. Mobile money accounts have risen in other parts of West Africa (Demirguc-Kunt *et al.*, 2018). Even with her large population in Sub-Saharan Africa, Nigeria is nowhere to be found in the economies with this substantial rise. This rise in mobile money accounts has helped those economies boost financial inclusion, enhance entrepreneurship skills, and lift their people from poverty by facilitating investment in their health, education, and businesses (Beck *et al.*, 2008). The increasing importance of financial inclusion as a catalyst for economic growth and development has been well documented in the literature. Lakuma *et al.* (2019) used firm-level data from the 2013 World Bank Enterprise Survey to assess the impact of finance on the growth of firms of different sizes. The study concluded that micro, small, and medium enterprises (MSMEs) benefit more from financial access than large firms. According to the World Bank (2013), women face more significant challenges than men when accessing financial services. In addition, mainstream credit policies of money deposit banks have not been favourable to women-owned enterprises in developing countries due to a lack of collateral securities to secure loans (Kabukuru & Afande, 2016). This has been attributed to lower levels of overall capitalization and ratios of debt finance, lower patterns of remuneration, and more significant limitations in accessing personal savings, given more interrupted and punctuated work histories among women entrepreneurs (Bruin *et al.*, 2007; Jamali, 2009). In Nigeria, women participate actively in entrepreneurial activities (Ayogu & Agu, 2015). However, formal funding for entrepreneurship has not been favourable for women-owned enterprises, as women entrepreneurs are primarily characterized by smaller start-up capitals, less access to technology, and lower sales performance than their male counterparts (Brixiova & Kangoye, 2016). The bias in financial inclusion has not been based on gender alone. Other authors have attributed the increase in biases to weak enforcement and institutions (Galindo & Micco, 2007), market and institutional failures, as well as the non-formality of Small and medium-scale enterprises (Kasekende & Opondo, 2003), and business environment failure (Aterido *et al.*, 2009). Evidence has also shown that reduced informality and infrastructure (Turyahikayo, 2015), age (Cabral & Mata, 2003), location, and choice of sector (Lakuma & Kuteesa, 2016) reduce financial inclusion biases. Despite the importance of financial inclusion in business growth and the effect of the choice of the business sector on financial inclusion bias reduction, previous literature has failed to explore how financial inclusion can influence the choice of business enterprise or sector among entrepreneurs using the agricultural and non-agricultural sector lenses. Also, much emphasis has been put on business activities in urban areas relative to rural communities where agricultural activities occur. From the above, this present study assess how financial

inclusion influences the choice of enterprises in rural Nigeria by examine the influence of financial inclusion on the choice of enterprises and identifying other factors influencing the choice of enterprises

## II. THEORETICAL AND LITERATURE REVIEW

### A. Theories on Financial Inclusion

Theories are underlying principles and prepositions that can explain the observed variation in a particular concept. Ozili (2020) opined that theories of financial inclusion are needed to achieve a high level of synthesis between financial inclusion objectives and outcomes. Four theories of financial inclusion were identified in the literature. These include the public good theory, dissatisfaction theory, vulnerable group theory, and the system theory of financial inclusion. Among these theories, this study is anchored on the public good theory of financial inclusion. The theory argues that financial inclusion should be regarded as a public good accessible to all population members with unrestricted access to finance. The theory opined that all individuals should enjoy formal bank services without paying for them. Moreover, all members of the population are beneficiaries of financial inclusion, and they should have access to free debit cards and use Automated Teller Machines (ATM) without being charged transaction fees; therefore, the cost of financing a financial institution lies on the financial institution itself. Government can, however, subsidise these costs of operation to reduce the burden on the financial institutions. The government can also provide lump sums in bank accounts and make opening accounts in formal financial institutions a significant criterion for individual citizens to access such funds. The theory makes everyone eligible for financial inclusion, irrespective of social or economic differences; it also emphasises the role of government in promoting financial inclusion and relegates private sector roles in fostering financial inclusion. Despite the advantages of treating financial inclusion as a public good, there are numerous disadvantages, which include the inability to address the natural causes of financial exclusion, the failure to sustain the level of financial inclusion in the long term, the diversion of public funds from other more crucial public projects, and the non-relevance of the theory to developing and emerging economies.

### B. Empirical Review

Several authors have conducted studies on determinants of financial inclusion using individual (micro) and country/institutional-based (macro) variables. Oshora *et al.* (2021) analysed the determinants of financial inclusion in Small and Medium Enterprises in Ethiopia. The study analysed primary and secondary data using an explanatory research design, a mixed research approach, and a multiple linear regression model. Findings from the study showed that supply-side factors, market opportunity, demand-side factors, and collateral requirements positively affect a firm's access to finance. In contrast, the cost of borrowing and institutional framework factors negatively influences a firm's access to

finance. Eze and Mark Jackson (2020) examined the determinants of financial inclusion in Nigeria using data from the World Development Indicators and the Central Bank of Nigeria database. The study identified influencing factors on both the demand and supply sides using Ordinary Least squares (OLS) regression and the error correction model (ECM). Financial inclusion was captured using the number of depositors with commercial banks per 1,000 adults. Findings from the study revealed that domestic credit to the private sector, the ratio of rural deposits to loans, and lending interest rates positively and significantly impact financial inclusion. Gebregziabher and Makina (2019) examined the macroeconomic determinants of financial inclusion across 27 African Countries using the Generalized Method of Moment dynamic panel data analysis. The lagged value of financial inclusion, GDP per capita, and mobile infrastructure was significant and positively related to financial inclusion. At the same time, a negative relationship was observed between financial inclusion and government borrowing. Wokabi and Fatoki (2019) evaluated the determinants of financial inclusion in East Africa using secondary data sourced from the World Development Indicators database of the World Bank from 2000–2016 for five East African countries, namely Kenya, Uganda, Tanzania, Rwanda, and Burundi. Financial inclusion was measured using domestic credit given to the private sector by banks. The fixed effect model analysis revealed that rural population and income were the significant determinants of financial inclusion in East Africa. Abel *et al.* (2018) reviewed the determinants of financial inclusion in Zimbabwe using the Fin Scope Consumer Survey of 2014. Financial inclusion was captured by the probability of an individual adult or household head seeking formal financial services. Data analysis using logistic regression showed that age, education, financial literacy, and internet connectivity are positively related to financial inclusion, while documentation to open a bank account and distance to the nearest access point are negatively associated with financial inclusion. Akileng *et al.* (2018) evaluated the determinants of financial inclusion in Uganda using data from adult populations in rural and urban settings. The data were analysed using correlation and regression analysis. Financial literacy and innovations were the study's significant factors influencing financial inclusion. Ajide (2017) examined whether institutional infrastructure determines financial inclusion in Sub-Saharan African countries. Panel data from 18 Sub-Saharan African countries was analysed using the Generalised Method of Moment. Financial inclusion was measured using bank branches per 100,000 adults, ATMs per 100,000 adults, and ATMs per 1000km. The findings from the study showed that the composite governance index reduces the amount of financial inclusion per region for bank branches per 100,000 adults and ATMs per 100,000 adults. At the same time, a contrary result was obtained for ATMs per 1000km. Also, governance indicators, namely regulatory quality, the rule of law, and the control of corruption were positive and significant in promoting financial inclusion for the region. Allen *et al.* (2016) analysed determinants of financial inclusion using data

from the World Bank Global Finindex database. The study revealed that being rich, more educated, older, living in urban areas, married, or separated would enhance the probability of owning an account in a formal financial institution. These factors also influenced the likelihood of traditional savings and borrowings. Zins and Weill (2016) analysed the determinants of financial inclusion in Africa. Data from 37 African Countries in the World Bank's Global Finindex database were analysed using probit estimations. Financial inclusion variables used in the study were formal accounts, formal savings, and formal credit. The result of the study showed that being a man, more successful, educated, and affluent favours financial inclusion, with a higher influence on education and income. These variables also influence the use of mobile banking in African countries. Fungacova and Weill (2015) also found that more affluent, educated, older men are more likely to be financially included in China. Significant factors influencing financial inclusion were cost and trust in the banking system, lack of documentation, lack of money, distance, and religious reasons. Bayero (2015) examined the effects of the cashless economy policy on financial inclusion in Nigeria. Awareness, consumer/user value proposition, and infrastructure are the strong, significant links with financial inclusion. In contrast, the business model of financial service providers did not show any significant relationship with financial inclusion. The review of empirical studies showed that financial inclusion was influenced by individual characteristics, household characteristics, bank-related/institutional variables, and other macroeconomic variables.

### III. MATERIAL AND METHODS

#### A. Scope of the Study

The scope of the study covers rural Nigeria. The country has a rural population of about 95,604,260, of which about 90% is employed in agriculture. The country can be split into six geopolitical zones: North West, North Central, North West, South-South, South West and South Eastern zones, and occupied by numerous ethnic groups. Secondary data from the Nigeria General Household Survey (GHS) Panel Datasets of 2018/2019 wave four was used for this study. The data set had a household response status of 99.72% (4987 out of 5000 respondents interviewed) (NBS, 2016). The GHS panel survey used a two-stage probability sampling. The primary sampling Unit (PSU) was enumeration Areas (EA). They were selected based on probability proportional to the size (Pps) of the total EAs in each state and FCT and the total households listed in those EAs, with a total of 500EAs selected using this method. Households were randomly selected using the systematic selection of ten (10) households per EA. In all, 500 clusters/EAs and 5000 households were interviewed. These samples were proportionally selected in all the states such that different states had different sample sizes. However, the selection covers all the Local Government Areas and all the states in Nigeria. The urban and rural areas were also included in the sample. The data have sex, age, marital status,

household size, education level, assets value, safety net, internet access, remittance, banking distance, income, land area and enterprise types. In this study, relevant data were cleaned and sorted for entrepreneurs who reside in the country's rural areas. A sample of 3,349 entrepreneurs that live in rural Nigeria was used for this study.

*B. Method of Data Analysis*

**Probit Regression Model:** This was used to examine Nigeria's financial inclusion determinants. The probit model is a choice model, and in this study, two probit models were estimated. The first model, determinants of financial inclusion, uses "having a bank account "as the dependent variable, while the second model isolates the determinants of financial inclusion regarding credit access.

The models are specified as follows:

Having a Bank account Model

$$Probit B_i = \beta_0 + X_i\beta_i + \epsilon_i \tag{1}$$

B= having bank account (Y=1 if entrepreneur has bank account, 0 otherwise)

Access to Credit Model

$$Probit C_i = \beta_0 + X_i\beta_i + \epsilon_i \tag{2}$$

C= Credit Access (C=1 if entrepreneur has access to credit, 0 otherwise)

The explanatory variables for the two models are;

- X<sub>1</sub>=Sex of the entrepreneur (1=Male, 0 otherwise);
- X<sub>2</sub>=Age of the entrepreneur (Years);
- X<sub>3</sub> = Household size of the entrepreneur;
- X<sub>4</sub>= Education level; X<sub>5</sub>= Marital Status;
- X<sub>6</sub>= Received Safety net (1=Yes, 0=Otherwise);
- X<sub>7</sub>= Access to Internet (1=Yes, 0=Otherwise);
- X<sub>8</sub>= Received Remittances (1=Yes, 0=Otherwise);
- X<sub>9</sub>= Income (Naira);
- X<sub>10</sub> = Bank distance to residence (M);
- X<sub>11</sub>=Land area owned (hectares);
- X<sub>12</sub> =Enterprise type (1=engaged in agricultural enterprise; 0= non-Agric enterprise);
- X<sub>13</sub>=Asset Values (Naira);
- X<sub>14</sub>= North-Central;
- X<sub>15</sub>=North-East;
- X<sub>16</sub> =North-West;
- X<sub>17</sub> =South-East;
- X<sub>18</sub> =South-South;
- X<sub>19</sub> =South-West;
- ε<sub>i</sub> = Error term

**IV. RESULTS AND DISCUSSION**

Table 1 shows the table of descriptive statistics. The table indicated that the mean age of the farmers is 47.78, suggesting that they are of age and can access financial services. Most of the farmers are male, 82.36%, with 71.69% married. The mean household size was 5, indicating that a large percentage of household income might be spent on consumption and an indication of poverty. The table also shows that 56.17% of the respondents engaged in agriculture expenditure, 10.96% of non-agriculture spending, and 32.88% engaged in trading and business enterprise. The mean bank distance to the residence was 5.8, while only 23.7% of the respondents had access to an internet facility.

**Table 1: Descriptive Statistics and Expected Signs of Selected Variables**

Variable	Description of variables	Expected Sign	Mean/percentage	Std. Dev.
Sex	The sex of the entrepreneur (% male)	+/-	82.38	
Age	The age of the entrepreneur in year	+/-	47.706	11.413
Marital status	Marital Status of the entrepreneur (% Married)	+/-	71.69	
Household size	Number of individuals in a household	+/-	5	3
Education level	Education level of the entrepreneur (with at least secondary education)	+/-	83.73	
Assets value	Value of assets owned by the entrepreneur (N)	+/-	71794.924	64996.939
Safety net	Received safety net by the entrepreneur (% yes)	+/-	3.17	
Internet access	Access to internet usage (% yes)	+/-	23.98	
Credit Access	Access to credit (% yes)		24.48	
Own a bank account	An entrepreneur owns a bank account (% yes)		13.94	

Banking distance	The distance to the nearest bank or ATM	+/-	5.802	3.446
Income	The income of the entrepreneur	+/-	31320.15	42224.144
Land area	Area of land owned by the entrepreneur		5.304	2.795
Type of Enterprise	Agricultural Enterprise Non-Agricultural Enterprise Agric and Non-agric Enterprises	+/-	56.17 10.96 32.88	
Zone	North Central North East North West South East South-South South West.	+/-	17.86 21.02 19.89 18.09 16.30 06.84	1.534

Source: Data Analysis from GHS 2018/2019

Table 2 shows the result of the probit regression analysis. The result of the probit regression using having a bank account as the dependent variables indicated the sex, age, household size, education level, assets value, access to the internet, banking distance to the residence and zones (Northwest, Northcentral and south-east) is the variable influence financial inclusion. Age, household size, education level, asset value and internet access positively correlate with financial inclusion. In contrast, sex and banking distance to the residence zone (Northwest, Northcentral and South-east) show a negative relationship with financial inclusion. The positive coefficient of the education level indicates that education is a significant factor in explaining financial inclusion in Nigeria. Educated people can understand the various financial services on the market and make informed decisions, improving their access. This result is supported by the studies of Cole *et al.*, 2019 Abel *et al.*, 2018 and Peña *et al.*, 2014 argue that education measures knowledge, skills and capacity to make decisions in formal financial markets. Regarding household size, the positive relationship indicates that household size is related to the consumption power of the household. A household with prominent members might be unable to access financial services because of higher consumption power and other household welfare. The study also indicated that the sex of the respondents had a negative relationship with financial inclusion; this suggests that the sex of the household head has influenced access to financial inclusion, where being a woman is significantly associated with a high likelihood of exclusion from financial services and thus not able to use financial services for investment. More men than women are more likely to use formal and informal financial services. Previous studies have indicated that women are more likely to use semi-formal financial services. Women have been found to lag significantly behind men on the rate of saving and borrowing from formal institutions, even after accounting for personal characteristics such as education, age, income, and residence, i.e., urban or rural (World Bank, 2014; Ellis *et al.*, 2012). Asset values indicate a positive relationship with financial inclusion; this implies that household heads with physical assets can be motivated to access financial services, unlike

those without physical assets. The assets can be collateral when borrowing from banks and other financial institutions. Respondents with large household sizes might not be willing to save or access financial services because a more significant percentage of households spend much of their income on consumption and household welfare. Zhang and Mallick (2019) have previously found that financial inclusion significantly increased overall consumption.

The positive coefficients of the age of the respondents indicate that as they get older, they get more access to financial services, i.e., financial inclusion increases with age. The result is corroborated by several studies, such as (Abel *et al.*, 2018 Peña *et al.*, 2014 and Hoyos *et al.*, 2013), who found similar results in their studies. As people age, they become knowledgeable about the various financial products and can choose which one to use and benefit them better. Internet access positive coefficient indicates that internet usage/access positively influences financial inclusion in Nigeria. Access to Internet facilities has been found to contribute significantly to using financial services because most financial institutions operate on the Internet. Internet banking reduces the length of distance travel to access banking services. This is supported by Abel *et al.* (2018) and Duncombe and Boateng (2009), where internet access positively influences financial inclusion, as technological innovations such as internet services improve access to financial services. There has been an increase in number of people using Internet banking in Nigeria recently, as online banking has received significant attention. The determinants of financial inclusion concerning the zones are indicated with the marginal probabilities. It shows that financial inclusion reduces in the zones with negative coefficients, i.e., North East, North West and South East. At the same time, it increases in South-South due to its positive coefficient. This implies that the probability of financial inclusion decreases by 10.62%, 12.17%, 11.28% and 1.37%, respectively.

The second model using access to credit as a dependent variable shows that age, marital status, education level, asset values, internet access, banking distance to the residence, enterprise choice and zone (Northcentral, South-South and South East) are the variables that influence financial inclusion in Nigeria. Age, marital status and education level were significant with negative coefficients. At the same time, asset value, internet access, banking distance to the residence and enterprise choice all have a positive relationship in determining financial inclusion. This means financial inclusion decreases with age; as the household head ages, his ability or passion to access financial services decreases. This is in contrast to findings from (Peña *et al.*, 2014; Hoyos *et al.*, 2013), who found that as people age, they become knowledgeable about various financial services, but there is a decline in interest and usage. The negative coefficient of education indicates that educated people can understand the various financial services on the market and make informed decisions, but the usage declines. This is in variance with Cole *et al.* (2019) arguing that education measures knowledge, skills and capacity to make decisions in formal financial markets. The negative relationship between the marital status of the household head and financial inclusion indicated that married household heads are not likely to be financially included, i.e. having and using financial services, unlike their non-married respondents. This might be due to financial commitment to family issues and impede their propensity to save for future purposes. The study results also show that distance has a positive significant impact on financial inclusion. The result means that the farther away/distance away a financial institution is in residence, the likelihood a user will be discouraged from assessing it. This implies that access to financial services is a function of the distance between the service provider and the consumer of the financial product. This aligns with Abel *et al.* (2018), where they found a positive relationship between banking distance to the residence and financial inclusion. Asset values indicate a

positive relationship with financial inclusion; an implication is that household heads with physical assets can be motivated to access financial services, unlike those without physical assets. The assets can be collateral when borrowing from banks and other financial institutions. In contrast, internet access indicates a negative relationship with access to credit as the dependent variable. This finding might be because most respondents have access to credit directly through microfinance institutions. Hence, they might not embrace internet usage compared to when having a bank account is considered. Enterprise choice had a positive relationship with financial inclusion and access to credit. This indicates that entrepreneurs engaged in agriculture are more likely to access credit than their counterparts engaged in non-agricultural enterprises. Government effort towards revamping the agricultural sector has constantly been enhanced through providing credit facilities to farmers; however, most entrepreneurs in the agricultural sectors need to be made aware of the modalities to access government financial support for their enterprise. The performance of agriculture and its ability to enhance food security and reduce unemployment has made the government prioritize and give necessary financial support to those engaged in the enterprise. Otiato (2016) supports this finding, reporting a direct relationship between Small and Medium Enterprises (SMEs) performance levels and financial inclusion. The determinants of financial inclusion concerning the zones show that financial inclusion reduces in the zones with negative coefficients (North East, North West, South East and South-South), indicative of lack of access to credit by entrepreneurs in the regions. This implies that the marginal probabilities of financial inclusion decrease by 26.13%, 16.47%, 23.16% and 21.38 %, respectively. Financial inclusion in some regions in Nigeria has been very poor due to recent incessant armed robbers, which have led to the closing of some commercial bank branches, especially in rural areas.

**Table 2: Probit Regression Estimates of Determinants of Financial Inclusion in Nigeria**

Variable	Access to Bank Account		Access to Credit	
	Coef/Std. Err	dy/dx	Coef/Std. Err	dy/dx
Sex	-1.336*** (0.172)	-0.120	-0.030 (0.176)	-0.005
Age	0.01* (0.005)	0.001	-0.016*** (0.004)	-0.003
Marital status	0.31*** (0.027)	0.028	-0.052* (0.03 <sup>^</sup> )	-0.009
Household size	0.041** (0.019)	0.004	0.000 (0.014)	-0.000
Education status	0.086*** (0.012)	0.008	-0.243*** (0.021)	-0.040
Assets value	0.000*** (0.000)	-0.000	0.000*** (0.000)	0.000
Safety net	-0.139 (0.203)	-0.012	-0.052 (0.159)	-0.009
Internet access	1.049***	0.094	-0.282**	-0.047

	(0.14)		(0.141)	
Remittance	-0.494 (0.352)	-0.044	0.11 (0.256)	0.018
Banking distance	-0.022* (0.013)	-0.002	0.024*** (0.008)	0.004
Income	0.000 (0.000)	-0.000	0.000*** (0.000)	0.000
Land area	-0.029 (0.510)	-0.003	0.015 (0.12)	0.002
Enterprise type	0.029 (0.210)	0.003	0.168*** (0.43)	0.028
North central	--	--	--	--
North East	-1.062*** (0.179)	-0.153	-2.613*** (0.130)	-0.698
North West	-1.217*** (0.176)	-0.167	-1.647*** (0.118)	-0.518
South East	-1.128*** (0.208)	-0.159	-2.316*** (0.161)	-0.660
South-South	-.137 (0.202)	-0.028	-2.138*** (0.15)	-0.630
South West	--	---	--	---
Constant	0.736 (0.973)		1.637 (0.656)	
Pseudo r-squared	0.593		0.489	
Chi-square	1562.95		1759.59	
Prob> chi2	0.000		0.000	
No of Obs.	3349			

Source: Data Analysis from GHS 2018/2019 Standard errors in parentheses \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$

## V. CONCLUSION AND RECOMMENDATIONS

Financial inclusion is a veritable tool of economic development, as it brings a sense of inclusiveness to individuals in the country. This study examined the determinants of financial inclusion among entrepreneurs in Nigeria. Financial inclusion variables were captured using access to bank accounts and access to credit. Data of 3,349 entrepreneurs that reside in rural Nigeria from the GHS 2018/2019 data were analysed using descriptive statistics and a probit regression model. The findings from the study established that several factors drive financial inclusion among entrepreneurs in rural Nigeria. Marital status, education status, household size, asset value and internet access positively influenced entrepreneurs' access to bank accounts, while sex, banking distance and being in the north-east, north-west and south-east negatively affected access to bank accounts and access to credit factors, namely asset value, banking distance, and income of the entrepreneur, positively influenced the financial inclusion indicator. Also, the age of the entrepreneur, marital status, education status, internet access, choice of enterprise and being in the north-east, north-west, south-east and south-west negatively influenced the financial inclusion indicator. The government should focus more on citizens' education and human capital development across the six

geopolitical zones. Considerable effort should be made on training across age groups, gender and region of residence.

## REFERENCES

- [1]. Abel, S., Mutandwa, L. & Roux, P. Le. (2018). A Review of Determinants of Financial Inclusion, *International Journal of Economics and Financial Issues* 8(3), 1–8.
- [2]. Adewale, A.A., Pramanik, A.H. & Meera, M.A.K, (2012). A Measurement Model of the Determinants of Financial Exclusion among Muslim Micro-entrepreneurs in Ilorin, Nigeria. *Journal of Islamic Finance* 1(1): 30 – 43.
- [3]. Akileng, G., Lawino, G. M. & Nzibonera, E. (2018). Evaluation of Determinants of Financial Inclusion in Nigeria. *Journal of Applied Finance and Banking* 8(4): 1-4
- [4]. Akudugu, M.A. (2013). The Determinants of Financial Inclusion in Western Africa: Insights from Ghana, *Research Journal of Finance and Accounting*, 4(8), <https://www.researchgate.net/publication/254258038>
- [5]. Ajide, K.B., (2017). Determinants of Financial Inclusion in Sub-Saharan Africa Countries: Does Institutional Infrastructure Matter? *CBN Journal of Applied Statistics*, 8(2), 69-89.

- [6]. Allen, F., Demircug-Kunt, A., Klapper, L. & Peria, M. S. M. (2016). The foundations of Financial Inclusion: Understanding Ownership and Use of Formal Account. *Journal of Financial Intermediation* 27: 1-30
- [7]. Babajide, A.A., Adegboye, F.B. & Omankhanlen, A.E. (2015). Financial Inclusion and Economic Growth in Nigeria. *International Journal of Economics and Financial Issues*, 2015, 5(3), 629-637
- [8]. Banco Central Do Brasil (2010). "Report on Financial Inclusion" a report of the financial inclusion project in Brazil.
- [9]. Bayero M. A (2015). Exploring the Link between Women Entrepreneurship and Financial Inclusion in Nigeria, *Lapai Journal of Management Sciences* 3(6), 247-259.
- [10]. Beck, Thorsten, AsliDemircug-Kunt, & Maria Soledad Martinez Peria.(2008). "Banking Services for Everyone?Barriers to Bank Access and Use around the World." World Bank, mimeo
- [11]. Beck, T. & de la Torre, A. (2006).The basic analytics of access to financial services.Vol. 4026.World Bank. Available from: <http://www.documents.worldbank.org/curated/en/586361468166156750/The-basic-analytics-of-access-to-financial-services>
- [12]. Central Bank of Nigeria (2013).National Financial Inclusion Strategy" Summary Report.
- [13]. Central Bank of Nigeria (2012).National Financial Inclusion Strategy" Summary Report.
- [14]. Cole, S., Sampson & T., Zia, B. (2009).Prices or Knowledge? What Drives Demand for Financial Services in Emerging Markets? Working Paper 09-071.Harvard Business School. Available from: <http://www.hbs.edu/faculty/Publication%20Files/09-117.pdf>.
- [15]. De Koker, Louis & Jentzsch, Nicola, (2013).Financial Inclusion and Financial Integrity: Aligned Incentives? World Development, Elsevier, 44(C) 267-280.
- [16]. Demircug-Kunt, A., Klapper, L., Singer, D., Ansar, S. & Hess, J., (2018).*The Global Findex Database 2017: Measuring Financial Inclusion andthe Fintech Revolution*. Washington, DC: World Bank.
- [17]. Demircug-Kunt, A. & Klapper, L. (2012). Financial inclusion in Africa: An Overview. *World Bank Policy Research Working Paper, WPS No. 6088*.
- [18]. Demircug-Kunt, A. & L. Klapper. (2012). "Measuring Financial Inclusion: The Global Findex Database." Policy Research Working Paper 6025, World Bank, Washington, DC.
- [19]. Dittus, P., & Klein, M. (2011).On harnessing the potential of financial inclusion. BIS Monetary and Economic Department Working Paper No. 347. Basel: BIS
- [20]. Efobi, U., Beecroft I. & Osabuohien. E (2014).Access to and use of bank services in Nigeria: Micro-econometric evidence. *Rev. Dev. Finance* (2014), <http://dx.doi.org/10.1016/j.rdf.2014.05.002>
- [21]. Eze, G. P & D. Markjackson (2020). Determinants of Financial Inclusion in Nigeria. *IOSR Journal of Economics and Finance* 11(1): 14-22.
- [22]. Ellis, K., Lemma, A. & Rud, J. (2010).Investigating the impact of access to financial services on household investment.Overseas Investment Institute. Available from: <https://www.odi.org/resources/docs/6099>.
- [23]. Fungacova, Z. & Weill, L. (2015). Understanding Financial Inclusion in China. *China Economic Review* 34: 196-206.
- [24]. FinScope (2004). South Africa 2004: Survey highlights. Midrand: FinScope
- [25]. Gebregziabher, K. & D. Makina (2019). Macroeconomics Determinants of Financial Inclusion: Evidence using Dynamic Panel Data Analysis In book: Extending Financial Inclusion in Africa 167-191. Publisher: Elsevier.
- [26]. Hoyos, C., Peña, X. & Tuesta, D. (2014). Determinantes de la inclusiónfinanciera en México a partir de la ENIF 2012.Documento de Trabajo, N° 14/14 BBVA Research. Available from: [https://www.bbvaesearch.com/wp-content/.../2014/06/WP\\_1414](https://www.bbvaesearch.com/wp-content/.../2014/06/WP_1414).
- [27]. Love, Inessa & Martinez Peria, M. S. (2013). How Bank Competition Affects Firms' Access to Finance (September 11, 2012).Midwest Finance Association 2013 Annual Meeting Paper. Available at SSRN: <http://dx.doi.org/10.2139/ssrn.2144888>
- [28]. Lusardi, A. & Mitchell, O.S. (2007). Baby boomer retirement security: The roles of planning, financial literacy, and housing wealth. *Journal of Monetary Economics*, 5(4), 205-224.
- [29]. Mitchell, T. (2003).The role of microfinance in economic development.Student Econ. Rev. 17, 3, Available at [www.tcd.ie/Economics/SER/sql/download.php?key=65](http://www.tcd.ie/Economics/SER/sql/download.php?key=65)
- [30]. Okoroafor, A. & Awe, (2018). Perceived Relation of Human Capital Development and Poverty Alleviation in Nigeria (1970-2016): A linear probability model approach. *International Journal of Development Research*
- [31]. Oshora, B., Desalegn, G., Gorgenyi-Hegyess, E., Fekete-Farkas, M & Zeman, Z. (2021). Determinants of Financial Inclusion in Small and Medium Enterprises: Evidence from Ethiopia. *Journal of Risk and Financial Management* 14:286
- [32]. Ozili, P. K (2020). Theories of Financial Inclusion In book: Ozen, E. and Grima, S. (Ed.) Uncertainty and Challenges in Contemporary Economic Behaviour. Emerald Studies in Finance, Insurance and Risk Management. Emerald Publishing Limited, Bingley 89-115.
- [33]. Peña, P., Hoyo, C. & Tuesta, D. (2014). Determinants of Financial Inclusion in Mexico based on the 2012 National Financial Inclusion Survey (ENIF). Working Paper N° 14/15 BBVA Research. Available from: [http://www.scirp.org/\(czech2tfqyw2orz553k1w0r45\)/reference/ReferencesPapers.aspx](http://www.scirp.org/(czech2tfqyw2orz553k1w0r45)/reference/ReferencesPapers.aspx)



- [34]. Platt, A-B., Singh, A., Bansal, S., Giri, A. & Tiwari, A. J. (2011). No Thrills – Dormancy in NFA Accounts. Microsave India, Lucknow
- [35]. Soumaré, I., Tchana, F.T. & Kengne, T.M. (2016). *Analysis of the Determinants of Financial Inclusion in Central and West Africa*, Transnational Corporations Review, 8(4)-12-08.<http://dx.doi.org/10.1080/19186444.2016.1265763>
- [36]. Wokabi, V. M. & Fatoki, O. I (2019). Determinants of Financial Inclusion in East Africa. *International Journal of Business and Management* VII (1): 125-143
- [37]. World Bank (2013). Expanding women's access to financial services. Retrieved from <http://www.worldbank.org/results/2013/04/01/banking-on-women-extending-womens-access-to-financial-servicesn>
- [38]. World Bank (2014). *Global Financial Development Report 2014*
- [39]. Zhang, Q. & Mallick, D. (2019). The Effect of Financial Inclusion on Household Welfare in China MunichPersonalRePEc Archive
- [40]. Zins, A & Weill, L. (2016). The Determinants of Financial Inclusion in Africa. *Review of Development Finance* 6(1): 46-57.
- [41].