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DETERMINANTS OF FINANCIAL INCLUSION AMONG RURAL POPULATION IN AKWA IBOM STATE, NIGERIA

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Abstract
This study examines the determinants of financial inclusion among rural population in Akwa Ibom State, Nigeria. Specifically, the study examined the socio-economic characteristics of respondents as related to savings and electronic payments, ascertain the instruments of financial inclusion and their level of use by target beneficiaries and estimate the factors that influence financial inclusion. A multi-stage sampling technique was adopted in selecting a sample size of 243 respondents while two sets of structured questionnaires were used to elicit data from respondents. Data analysis was done using mean, frequency, percentages and Tobit regression. The result shows that the majority (65.02%) of the respondents were males, married (64.6%) with 51.85% having secondary education and a mean age of 40years. Savings account, point of sale (POS) terminals and mobile payments were widely used as instruments of financial inclusion. Tobit analysis results on factors of financial inclusion were cost ($p<0,01$), liquidity ($p<0.01$), education ($p<0.05$) Saving conscious ($p<0.01$), sex ($p<0.05$), distance ($p<0.05$), network failures($-p<0.01$) income ($p<0.10$) and convenience ($p<0.10$). The significant factors such as cost, liquidity, education, saving consciousness, sex, distance, network failures, income and convenience that influenced financial inclusion should be considered in policy issues and this important instrument of inclusion should be popularized by all stakeholders.
Key words: Determinants, financial inclusion, influencing, Rural population and Akwa Ibom State.

Introduction

Financial inclusion means the provision of financial services at affordable costs to the disadvantaged and low-income segments of society (Shahzad *et al.,* 2022). Financial inclusion is ensuring access to appropriate financial services to all financially deprive individuals and businesses at an affordable price, fairly and transparently by institutional players (Popescu, 2019 Lentner *et al*., 2020; Oshora *et al.,* 2021). Access here, refers to timely and easy availability of financial services to financially deprived individuals and businesses when needed is the best way to enhance financial inclusion. It is considered one of the major factors of economic development. This phenomenon emerged from the realization that the inclusion of individuals in the financial system is critical in reducing poverty, enhancing shared prosperity, and promoting sustainable, inclusive economic growth. Inclusive financial systems contribute in many ways; for instance, they empower poor people to save for their future, borrow from a financial institution, build their assets, invest in education, and do business activities that ultimately improve their living standards.

The importance of financial inclusion is now recognized by international as well as national bodies and expected to fuel investment, create jobs and generate multiple economic activities leading to economic growth in national output and eventually reduce poverty (Usman, 2020; Saddam 2019; Ali 2022). However, financial inclusion seeks to achieve cashless policy by reducing the volume of cash in circulation and the risk of going about with it. The financial inclusion policies are often design with unbanked population in mind, unbanked people refer to individual who do not have access to or do not have access to or do not use services provided by formal financial institutions such as Deposit Money Banks, Microfinance banks, or other regulated financial service providers (Demirguc-Kunt *et al.,* 2022 The unbanked are often concentrated in less developed countries or in poorer regions of developed countries. World Bank (2019) underscores not merely

owning an account, but actively use of bank account for savings, managing risk, borrowing and making or receiving payments to mean financial inclusion.

In the same direction Ozili (2022), show that each household and individuals owning a bank account is just a prerequisite and a gateway to financial inclusion and cannot be effective inclusion by itself. According to Enhancing Financial Inclusion and Access (EFInA, 2020) financial inclusion indicators include: percentage (%) of adult population that has a transaction account with a regulated financial institution and/or has made an electronic payment through a regulated financial institution in the last 12 months.

Success in financial inclusion could be measured by percentage of adults that have easy access and usage of formal financial services. Financial inclusion would generate multiple economic activities, cause growth in national output and eventually reduce poverty (Saddam, (2019; Ali, 2022). It now refers to the convergence of various bank and other formal financial institutional players to provide financial services at lower costs, wider reach and greater convenience to all end consumers of financial services, not specific to income or demographic group, but all of them (Vaid, 2020). Recently, the Central Bank of Nigeria aimed at a safe, efficient and inclusive financial system where financial products and services are targeted to reach as much as 95% populations in 2024 (Udohaya, 2024).

Theoretically, financial deepening helped to explained the financial inclusion of the rural population. The theory was formalized by Shaw in 1973 in his book Financial Deepening in Economic Development. Financial deepening is based on the idea that increasing access to financial services can lead to economic growth. This is what financial inclusion seeks to explain. This theory refers to changes

in the financial system or financial structure of a country or region, which include, adjustments in financial management policies, expansion of the size of financial markets, proliferation of financial products, and evolutions in financial institutions. In 2006, the United Nations issued the blue book Building Inclusive Financial Sectors for Development, which formally introduced the concept of "inclusive finance". Since then, the concept of financial inclusion has emerged (Oanh *et al*., 2023).

However, some empirical works has been reported, Efobi *et al.,* (2014), used a logit model and explored the factors influencing the access to and use of banking services in Nigeria. Their results reveal that individual attributes, income, and Information and Communication technology (ICT) use, are significant factors influencing the use of banking services. In a related study Zins and Weil (2016) use the World Bank's Global Findex database of 37 African countries and a probit model to analyse the determinants of financial inclusion in Africa. Their results indicate that the microeconomic characteristics that most influence financial inclusion are education and income.

Furthermore, Haoudi and Rabhi (2018) analyzes the determinants of financial inclusion in Africa and concludes using a probit model that, on the one hand, education promotes financial inclusion and the size of the informal sector, and the associated employment vulnerability are barriers to financial inclusion.

Demirgüç-Kunt and Klapper's (2013) study of the use of financial services for 148 developed and developing countries. Using data from the World Bank's Global Findex and three main indicators of financial inclusion (bank account ownership, savings in a bank account, and the use of bank loans), the authors find that income is a major determinant of financial inclusion. In a related study, Camara *et al.,* (2014) using a probit model and controlling for individual characteristics, find that education and income levels are significant variables in determining financial inclusion in Peru.

Fungacova and Weill (2015) study financial inclusion in China using data from the World Bank's Global Financial index and a probit model and find that income and education increase the level of financial inclusion and that married men and the elderly have higher levels of financial inclusion. Similarly, Tuesta *et al*. (2015), carrying out a similar study in Argentina and using a Probit Model, concluded that both income and education are important factors for financial inclusion.

Vaid *et al.,* 2020 in their study of Determinants of Successful Financial Inclusion in Low-Income Rural Population in India. The study

uses factor analysis to identify the determinants and path analysis to analyze the significance of these factors in financial inclusion. The result shows that outreach, penetration, availability, accessibility, technology, financial literacy, trust and income have a positive significant impact on financial inclusion.

In view of the importance of access to financial services for development, it becomes necessary to empirically assess the factors of financial inclusion of the rural people in Akwa Ibom State. The specific objectives are to; examine the socio-economic characteristics of respondents as related to savings and electronic payments; ascertain the instruments of financial inclusion and their level of use by target beneficiaries and the determinants of financial inclusion. The null hypothesis is; Ho1: There is a positive relationship between financial inclusion and sex, financial education, distance, system failures, savings consciousness, reliability and negatively related to age, liquidity, income, convenience and cost.

Materials and Methods

The study was carried out in Akwa Ibom State, Nigeria. The state was created on 23rd September 1987. It is one of the thirty-six states in Nigeria with Uyo as the state capital. Akwa Ibom State is located in the South-East ecological zone between Latitude $4^0\,35^1$ and $5^0\,35^1$ North and Longitudes $7^0\,35^1$ and $8^0\,35^1$ East. It covers a total land area of 8,412 Square Kilometers encompassing the Qua river basin, the Western part of the lower Cross River basin and the eastern part of Imo river basin with an ocean forest. The State is bounded by Abia State in the North, Rivers State in the West, Cross River State in the East and the Atlantic Ocean in the South. It is one of the major crude oil producing states in the Niger Delta region.

Akwa Ibom State falls within the humid tropic, with two distinctive seasons namely, rainy season (May to October) and dry season (November to April). Annual mean rainfall ranges between 2000mm and 2400mm along the coast. Mean daily maximum temperatures are regular about 26^0C – 33^0C and the relative humidity is between 50% to 60% during the dry season and between 60% and 90% in the rainy season. With the population of about 4,780,581 people (NPC, 2019). The State is made up of a total of thirty- one (31) Local Government Areas and divided into six (6) Agricultural zones namely; Eket, Uyo, Ikot Ekpene, Oron, Etinan and Abak. The major ethnic grouping in the State are Ibibio, Annang and Oron. Ibibio language is the main language of the people of Akwa Ibom.

Over 70% of the populations are involved in agriculture for both subsistence and income generation. Apart from direct farming of crops and raising of animals, the abundant natural resources predisposed people to hunting, fishing, fuel wood collection and gathering of non-timber forest products. However, occupations in the rural areas are not all farm-oriented. There are diversities and combinations in economic activities in the rural areas, making it possible for an individual to have more than a single occupation.

Bassey, (2008) noted that various forms of secondary industrial and service occupations abound which includes motorcycling, hired labour, carpentry, welding, vulcanizing, palm wine tapping, tailoring, hairdressing/barbing, shoemaking/mending, laundry service, bricklaying, craft making, food vendors and snacks, quarrying, processing, pottery, weaving, traditional birth attendant, preaching and teaching. However, the informal financial organizations such as Osusu, rotary clubs, mobile money collectors and others that handle financial transactions dominate these areas although with some limitations. The services of formal banks among these rural people have been very skeptical. In the recent times, agency banking services have been available at the doorstep of the rural communities of Akwa Ibom State.

Sampling Technique

Multi-stage sampling techniques were used to select respondents for the study. These respondents were 243 agency banking clients. For the first set of respondents, the sampling process involved the random selection of three (3) agricultural zones from the six agricultural zones in the State. Thereafter, three (3) Local Government Areas (LGAs) were randomly selected from each of the three agricultural zones. Next is the random selection of three (3) communities from each of the nine (9) the Local Government Areas making it twenty-seven (27) communities. Furthermore, three (3) villages were randomly selected from each of the twenty-seven (27) communities. The final stage also involves random selection of three (3)

respondents from each of the eighty-one (81) selected villages, this gives 243 respondents.

Method of Data Collection

Data for this study were collected from the primary source. Primary data were collected with the use of structured questionnaire which was administered through personal interviews and trained enumerators. The questionnaire was used to collect data from customers of the bank agents. The questionnaire was used to collect data on the Socio-economic characteristics of respondents in line with savings and electronic payments, instruments of financial inclusion and their level of use by target beneficiaries and the determinants of financial inclusion.

Data Analysis

Data collected were analysed using descriptive statistics (such as mean, frequencies and percentages) and inferential statistics (such as Tobit regression). Tobit Regression model was used to estimate the factors that influence financial inclusion. The relationship between financial inclusion and its explanatory factors is assumed to be linear. The model is presented thus;

$$Y^{*}= \beta_0+ \beta_1X_1 + \beta_2X_2 \text{ ---- } \beta_nX_n+U\text{---------} \quad (1)$$

Where: Y^{*}=is a latent variable representing rural people propensity to be excluded from the formal financial services. It is unobserved for values smaller than 0 and greater than 1. The dependent variable (Y) for this study was the number of people who could access banking services of their choice during the specified period. Description of the explanatory variables in the model:

Sex = Sex of beneficiaries (Male = 1 and female = 0); Age =Age of beneficiary (in years) Fin. literacy = proxy for level of education of beneficiaries (years); In = income (naira) SC = Savings consciousness (Naira); Cost = Costs of transaction (Naira) Liq = Liquidity/ Availability of cash (in Naira); Dist. = distance of clients to service points (Km) Conv = Convenience (working hours); Tech = proxy for network failures (number of times per day); Re =reliability- proxy for system availability (days of operation).

Results and Discussion

Socio-economic Characteristics of the Respondents

The result of the socio-economic characteristics of the respondents is shown in Table 1. The distribution of respondents according to sex shows that the majority 65.02% of the respondents were males. The preponderance of males than women could be attributed to the fact that women's financial inclusion in the study area is profoundly influenced by entrenched gender norms and social constraints that shape their economic roles, behaviors, and access to resources. These norms act as "invisible guard rails" that limit women's decision-making power and control over financial resources, which results in gender gaps in access to bank accounts, mobile money, credit, and other financial services (Arnold *et al*., 2021).

Using agency banking services is about decision making, since it's about innovation and technology adoption often spread from the community leaders and household heads which are male dominated in the study area. This direction might be due to the inherent risk rural people often perceive in new technology and innovations which in this case male counterpart might be more risk takers than female. Women slowed down adoption process by waiting for recommendations and endorsements from family, friends, and community members and sometimes may require multiple endorsements before trial.

The differences are more associated with choice the individuals make between using the formal, semi-formal and informal sources of institutions. Although, women inclusion has broad benefits. Financial inclusions via using agent services are guided by personal understanding, confidence, trust, convenience and transaction costs which women are still behind in this regard. However, women may have through years of experience and association endeared themselves to local financial alternative sources such as women club that abound in the study area, this informal women association have some components of "contributions osusu" savings and loans which they cater for their financial needs. The result of this study is in line with Bangladesh Institute of Bank Management (BIBM, 2017). Their result

found that 70% of male were beneficiaries of agent banking. However, the findings differ from that of Akighir *et al.* (2022) who reported 49.45% male beneficiaries.

Table 1: Socio-economic characteristics of respondents in relation to making electronic payments and savings

Variables	Frequency	Percentage	Payments (%)	Savings (%)
Sex				
Male	158	65.02	62.0	38.0
Female	85	34.98	27.0	73.0
Total	243	100.0		
Age				
15-35	30	12.35	49.0	51.0
36-55	124	51.03	33.0	67.0
56-75	78	32.09	72.0	28.0
76-95	11	4.53	60.0	40.0
Total	243	100.0		
Mean	39.5			
Marital Status				
Single	56	23	35.0	36.0
Married	157	64.6	62.0	38.0
Others	30	12.3	56.0	28.0
Total	243	100.0		
Formal Education				
None	21	8.64	30.0	37.0
Primary	70	28.81	52.0	36.0
Secondary	126	51.85	34.0	66.0
Tertiary	26	10.70	74.0	26.0
Total	243	100.0		
Occupation				
Farming	95	39.09	55.0	45.0
Marketing/business	31	12.76	60.0	40.0
Artisan/services	27	11.11	70.0	30.0
Salary/wages	20	8.23	35.0	65.0
Processing	17	7.00	42.0	58.0
Fishing	28	11.52	78.57	21.43
Quarrying/forest products	25	10.29	64.0	36.0
Total	243	100.0		
Household size				
1-3	36	14.8	27.78	72.22
4-6	141	58.0	51.77	48.23
7-9	66	27.2	74.24	25.76
Total	243	100		
Mean	5			
Annual Income (₦) .00				
1000-500,000	153	62.96	38.06	62.94
501,000-1,000,000	67	27.57	46.67	53.33
1,001,000-1,500,000	15	6.17	70.15	29.85
1,501,000-2,000,000	8	3.29	75.0	25.0
Total	243	100.0		
Mean	₦ 452,600.00			

Source: Field Data Result, 2024

In relating sex of a respondent to making digital payments and savings, the result shows that male respondents used payments services of agent 62% more than female. This might be due to the fact household heads are male dominated in the study area and as such male are in charge

and cater for the needs and welfare of the family as such, they make more of the payment for goods and services for the family and household business. In terms of savings the female saves 73% more than male counterparts. This might be to cushion the effect of unforeseen future events.

The result in Table 1 shows that most (51.03%) of the agency banking customers were within the age bracket of 36-55 years. The mean age was approximately 40 years. From the distribution, it could be inferred that most of the rural residents who used banking services of agents were still in their active and productive age in life, a pointer to the fact that middle aged rural residents were mostly the ones subscribing the banking services of the agents in the study area. Findings on age distribution of the respondents are in line with the findings of Lusardi, Mitchell, and Curto (2010), Davutyan and Öztürkkal (2016), (EFInA), 2017), Okon *et al.* (2017), Akighir *et al* 2022 who reported that the agency customers, majority are between the ages of 46 years and above.

In relation to making financial payment and savings digitally, the result shows that respondents within the age brackets of 56-75 years recorded 72% financial payments. The reason elderly people performed more digital payment might be that their sources of expenditure are diverge which may cover personal, family, social, religious and business life. Also, his ability to carry out those payment transactions at the comfort of his domain could appeal to him to spend more. In the case of digital savings, the younger ones within the age bracket of 36-55 years had upper hand. This might be since middle-class people ideally would have to build up their equity capital for investment through savings and their savings could also secure them a lee way to institutional funds. Also, the availability of the facility to save in real time encourages cash savings digitally and as well terminating the episodes of fraud by the hands of local savings mobilizers as typical in the study area.

Result on marital status in Table 1 shows that, the majority 64.6% of the respondents were married. Being married suggests that, more services of agency banking would be demanded. There is also consistent evidence that in rural settings marital status is positively associated with financial inclusion—married individuals or households tend to have higher likelihood of being financially included compared to non-married ones (single, widowed, separated). This might happen because married households can pool resources (income, labour) share risks, improve creditworthiness or savings behavior; marriage may also correlate with life-stage, stability and stronger ties, which may enable greater engagement with formal financial services. Also, in rural settings, where informal networks and traditional roles are strong, marriage may confer social capital that supports financial inclusion. The policy implications are that financial inclusion programs aimed at rural populations often consider marital status as one of the relevant household characteristics. This result that marital status influence financial inclusion is in tandem with the studies carried out by Nkambule, 2022, Adegbite *et al.,* 2021, Nshoro *et al.,* 2024

In relating marital status to digital payments and savings, it was the married people who performed 62% and 38% in both digital payments and savings respectively. They might happen because of the nature and size of businesses in which they engaged, and this raised the need for making more digital payments. Married people also save more than their unmarried counterparts which might arose from the need to cushion the effect of future events in the family and business.

Result in Table 1 shows that, most of the customers of bank agents 51.85% had secondary education as their highest level of educational qualification while the least proportion 8.64% did not attend formal education. This result shows that most of the respondents in the study area were literates, thus able to read and write. The dominance of respondents who acquired formal education might be because there had been free and compulsory education in the State for quite some time now covering primary and secondary schools for all people in the State.

Formal education might be helpful in gaining opportunities such as easy awareness of the existence of agency banking, understands their operational modalities, the benefits and

therefore a decision to use banking services. The decision to make use of banking services predisposes the latent capabilities of people to adopt innovative ideas in banking which means, to participate effectively and gainfully in the economy. This result is in line with the findings of Akighir *et al* 2022 who reported that the majority of agency banking customers (40.58%) is secondary school holders. The finding is at variance with the findings of the Bangladesh Institute of Bank Management (BIBM) (2017) which found that majority of agent bank customers are primary school holders. The reason might be their study was conducted in a different geographical area and that the government may not have hand in the education of her citizens.

In relating formal education to usage of financial services, the result shows that respondents with tertiary education used payment services of agent more as against respondents with secondary education who preferred saving option. The implication of this result is that, people of higher education may involve in high transactional businesses because of easy mastery of cashless economy and income.

Result in Table 1 shows that most respondents 39.09% engaged in farming activities as their primary occupation which include crops and livestock. This predominance of the respondents being engaged in farming activities might be because rural economy generally is agrarian in nature as typical of the study area. They rely heavily on farming hence, spending their quality time and resources. On the other hand, government emphasis on agriculture and food sufficiency with some support together with the current trend of urban-rural drifts of energetic young people have prompted many including the youth to take to agriculture where large scale production is the target. In relating financial payments and savings to occupation, the result shows that 78.57% of respondents who are fishermen made more payments than others. Fishermen spending more of their income might be a reflection of their attitude where they sometimes spend without planning or preference list. On the other hand, about 65% of respondents who work for salary or wages income tend to save more. This may indicate that they have regular or near regular income pattern and can help them to make financial planning including savings as the money comes.

Results in Table 1 shows that, the mean household size of respondents in the study area was five (5) persons. The average household size of 5 persons implies a moderate household size. The study of the distribution of respondents by household size is very important. This is because the number of children raised by the respondents can have profound influence on the family living expenses. These expenses can range from food consumption, payment of school fees, hospital bills, provision of accommodation and clothing. This has implications for the need for households to access the financial services needed. The mean household size of this study is contrary with the mean household size of 9 persons recorded by Obasi (2015). In relating household size to financial payment and savings, the result shows that respondents with household size between 7-9 persons made more financial payments. This might be due to multiple sources of expenditure that covers both family and business. On the other hand, respondents with household size between 1-3 persons recorded highest savings. this might be possible because of less family financial bills

Result in Table 1 shows that, majority of the respondent about 62.96% earn income of between N1, 000-N500,000. The mean of annual income of the respondents was N452, 600.00. Income in this study is taken as the flow of money to the people from their livelihood activities over a period of one year. Income helps people to buy the services of experts, consultants and new technology /innovations, expand or diversify their businesses. It equally could enable rural people to enjoy economies of scale that come by bulk purchases.

In relating level of income to making financial payments and savings, respondents in income between N1,500,000-N2,000,000 make more use of payment service of bank agent. This might be connected with the fact that respondents in this income bracket are more established in businesses, move towards expansions or diversifications. This might create more items that demands payment in business together with family expenses. On the

other hand, respondents 62.96% of income level between N1,000 and N500,000 were prone to making savings. This may suggest that Deposit Money Banks now consider mobilizing savings from low-income clients via agency banking in realization that small savings can be aggregated into lump sums of loanable funds for household or business investments (Collins *et. al*., 2009). This buttresses the fact that the low-income rural people can make savings (Banerjee and Duflo, 2007). This is to say that even when formal savings products were unavailable or unaffordable, low-income earners often save in livestock, informal groups, under mattresses, chest box, plastic containers and other objects to stock out cash from circulations (Mejeha, 2021).

Access to Financial Inclusion Instruments

Results in Table 2 shows that, the most frequently accessed instrument of financial inclusion was savings account with the percentage of 65.84% of study population accessing it. The average monetary value of savings account stood at ₦204, 839.55 per year and indicates higher level of acceptance of this instrument. This might be because savings account is suitable for long term savings, wealth creation, future survival, ability to get loan, easy to operate, ideal option for emergency funds as account remain extremely liquid. Another most accessed instrument is a POS transaction which is about 61.72% of the respondents has access to POS for financial transactions with monetary value of ₦ 185,735.04 on average. The greater use of POS transaction instrument might be because POS terminals are increasing in number by the day due to easy process of becoming an agent, proximity and convenience with which agent services are being offered.

Table 2: level of use of instruments of financial inclusion by customers

Instruments	Frequency	Percentage	Monetary value (₦.00)	Mean(₦)
Savings account	160	65.84	32,774,329	204,839.55
Currents account	22	9.5	2,651,390	60,258.85
Fixed deposit account	7	2.88	699,747	99,963.85
Digital wallet	120	49.38	15,210,600	126,755.00
NIBSS Instant Payment (NiP)	85	34.97	10,370,250	122,002.94
ATM Transaction	30	12.34	3,312,200	110,406.66
POS Transactions	150	61.72	27,860,256	185,735.04
Mobile Payments	135	55.55	18,400,200	138,816.29
Internet (web) transfers	40	16.46	4,700,300	117,507.50
Online lending	125	51.44	16,120,320	128,962.56
Online savings account	10	4.11	1,002,100	100,210.00

Source: Field Data Result, 2024

Next in that order is the Mobile Payments which about 55.55% of the study population accounted for. The monetary value of mobile payments stood at ₦ 138,816.29 on average per year. Access to digital instruments in moving funds from one account to the other easily at the comfort of one's domain using Android devices had revolutionized the payment landscape of the country including the rural area of Akwa Ibom State. Online lending is another vital instrument of inclusion which about 51.44% of the study population had accessed with average monetary value of ₦ 128,962.56 per year. The popularity of this instrument might be because its procedure is simple, paperless and fast and could be a more suitable source for emergency funds.

Factors Influencing Financial Inclusion

The result of the Tobit regression is shown in the Table 3. Cost of banking was negatively related to financial inclusion and significant at 1% level of probability. This implies that, as cost of banking rises, that is, the combined fees charged to end users, including the cost of maintaining a transaction account, fees to conduct transactions via in-network access channels, and fees to conduct transactions via out-of-network access channels. This will adversely affect financial inclusion. The cost of the service for end users depends basically on the service provider's costs to provide the service, the level of competition in the market, and market demand for the service. The latter will depend on the value of the service to users.

The former – the financial service providers cost to provide the service – will depend on the FSP's internal operating expenses, as well as the cost to the FSP to access the relevant payment infrastructures and access networks.

Table 3: Determinants of Financial Inclusion

Variables	Coefficients	Standard error	t-value
Constant	3.953259***	.7012713	5.64
Cost	-.3562771***	.0987909	-3.61
Age	-.0020427	.0029876	-0.68
Liquidity	.4239063***	.1056371	4.01
Education	.1188074**	.0421246	2.82
Saving consciousness	.7277556***	.1342421	5.42
Sex	.0819159**	.0307093	2.67
Distance	-.2736674**	.0948585	-2.89
Network failures	-.079472***	.0243045	-3.27
Reliability of agent	.1511539	.0924657	1.63
Income	.2095173*	.0897439	2.33
Convenience	.0021*	.000927	2.27
Sigma	.6339177	.0383443	.
No. of observations	243		
LR Chi2 (11)	95.68		
Prob>Chi2	0.0000		
Pseudo R^2	0.1686		
Log likelihood	-235.9531		

Source: Field survey, 2024: ***= significant at 1% ** =significant at 5% *= significant at 10%

However, it should be noted that rural are rational and possess the ability to bargain and might have higher tendencies to react to price changes especially when it regards innovations where most of them are already conservative. This result is understandable, considering the nature of environment in which they operate. However, agency banking model has been employed by banks to deliver banking services in a cost-effective manner. This result is contrary with the findings of Afande and Mbugua 2015 who found out that cost of accessing financial services through agent banking outlets are higher as compared to accessing the same services in ATMs.

Liquidity of cash was positively related to financial inclusion and significant at 1% level of probability. The results agree with the hypothesis and conform to the *a priori* expectation. The coefficient of liquidity carrying a positive sign indicates that as the people in the rural areas find it easier to access their cash at agent points than going to bank branch the more they will be financially included. The explanations of this could be connected with the fact that people who put their money in the bank do so with expectation that they can readily access their fund as at when need arises especially in the era where banks had been consolidated. Now that banks contract agents in delivering banking services the expectations for ready access to fund is still valid. This is because agency banking basically serves as cash- in –cash- out- point, and if the agency banking cannot adequately fulfill this core role it can impede smooth economic activities of the people and in this way people can even abandon their bank account for informal financial services which often come with higher cost among other challenges. However, a readily accessible fund from one's bank account could mean that either planned or emergency conditions both in family and economic situation can be adequately taken care of hence will engenders growth and development in the rural economy. This result is in tandem with the findings of Afande and Mbague (2015) who found out that availability of liquidity affected financial inclusion to a great extent.

Education was positively related to financial inclusion and significant at 5% level of confidence. The result is in line with the hypothesis and the *apriori* expectation. The coefficient of financial education carrying a positive sign indicates that as the people in the rural areas increases in the number of years spend in formal education the higher this brings

them to financial inclusion. This could be explained with the fact that the more years someone put in pursuing formal education, the more he is expose to understand the concepts of making savings and investment. Therefore, it should be noted that formal education should always guarantee sound financial decisions. This is in line with findings from Okon *et al.* (2016).

Saving consciousness was positively related to financial inclusion and significant at 1% level of probability. This implies that, as a respondent saving consciousness ignites it leads to financial inclusion. This result could be explained by the fact that, the network of bank agents is deem bringing formal saving facilities to the doorsteps of rural dwellers thereby arousing huge interest in saving especially that this modern facility that is real time and is not biased towards the amount someone want to save. In this regard, it easily gives the respondent morale to start financial savings. The saving consciousness of the people could be easily aroused because of the latent consciousness of planning for their future survival, capital accumulation to invest in productive ventures, smoothing his consumption and be better positioned to borrow from formal financial institutions. Also, saving consciousness could prepare bank agent customers to improve their wellbeing, insuring against times of shock, and providing a buffer to cope in times of crisis and all these risks and uncertainties could be handled with little or no external assistance. This result is in line with the findings of Bizah *et al*., 2017 who found that agency banking sensitizes saving consciousness of people for financial inclusion.

Sex was positively related to financial inclusion and significant at 5% level of probability. Sex coefficient was in tandem with the hypothesis. This implies that, male respondents had higher tendencies to be financially included than female counterpart. These higher tendencies for male respondents to be included could be explained by the fact that, household heads in the study area were male dominated, this can give them opportunity to interact more outside even with bank agents for knowledge. This gained knowledge could help them in planning better financially for the family by opening a bank account among other perceived benefits. Also, being heads of family this situation might give them more access to family resources such as land and economic trees, a situation which they utilized to increase income. However, these environments that give men more opportunity than women to be financially included gave birth to gender biasedness in accessing financial services. The potentials of the gender gap issues had undermined the socio-economic wellbeing of the women folk and the economy. In this regard, the fast tracking of sustainable and financial inclusive growth can be achieved where the gap issue is resolved. This result agrees with the findings of Akighir *et al.*, 2022: (BIBM) (2017); EFInA, 2017: Camara and Tuesta, 2015 and UNDP 2018.

Distance between rural people and financial service point was negatively related to financial inclusion and significant at 5% level of probability. The result is in line with the hypothesis and conforms to the *apriori* expectation. The coefficient of distance carrying a negative sign indicates that as the distance to a financial service point gets longer the people in the rural areas get detracted from accessing financial services and vice versa. This possibility is not unconnected with the fact that, travelling a long distance to get financial services means putting in more economic time and money on transportation. But in a scenario of good agency banking spread where a customer could be served with financial services at his doorstep, he has escaped the cost of transport to a bank branch. Also, the inconveniences of travelling some kilometers to bank branch is overcome hence, the useful time he could have spent in queue at the branch has been saved in favor of economic activities. This result is in line with the findings of Afande and Mbague 2015 who found out that customer prefers agents because they are closer to them as compared to the main bank.

Network failures were negatively related to financial inclusion and significant at 1% level of probability. The coefficient of system failures carrying a negative sign indicates that as the people in the rural areas realized that agency banking technology is prone to incessant failures and scare people from using financial services hence reduces financial inclusion. The possibilities of system failures

inhibiting financial inclusion progress could be connected with the fact that although agency banking network uses real time in processing financial information, there could sometimes be network failures, servers being down and wrong debiting of account. This situation enhances losses of funds and economic time hence financial inclusion. However, standardization in this area will mean improved technology for financial inclusion. This finding is in line with the findings of (Kabakova and Plaksenkov, 2018); Sharma and Kukreja (2013); Ramakrishna and Trivedi (2018) and Rastogi and Ragabiruntha (2018) who suggested use of technology for its potential to deliver financial services even in remote or rural areas.

Income was positively related to financial inclusion and significant at 10% level of confidence. The result agrees with the hypothesis and also conforms to the *apriori* expectation. The coefficient of income carrying a positive sign indicates that as the total income of the rural people increases it leads to an increase in financial inclusion and vice versa. This result could be explained with the fact that rural people would often want to own a bank account when they experience rise in income they feel they can only save money in such an account if after meeting the family and business obligations the net income is worthwhile. This result is in tandem with the result of EFInA, 2023 who found out that little/irregular income has become a prominent barrier to bank account ownership indicating a heightened awareness of income-related challenges.

Convenience was positively related to financial inclusion and significant at 10% level of confidence. The result agrees with the hypothesis and also conforms to the *apriori* expectation. The coefficient of convenience carrying a positive sign indicates that as the people in the rural areas find it possible to carry out financial transactions at their convenience, the more they will likely be financially included. This could be explained with the fact that agency services could be accessed outside official banking hours such as very early in the morning before 8am and as late in the night as 10pm. This convenience also includes banking during weekends and public holidays. The possibility on the fact that bank agent can also deliver his services outside of his premises or people going to his house or himself carrying out home delivery in some special arrangement to a personality, love ones or ailing people makes it more convenience. The reasons people in the rural enclave consider convenience in financial transactions may also be connected with the fact they still give priority to their primary economic activities and would do other things at their convenience, they may also want to take their time in doing their things especially when it concerns financial matters.

Conclusion

Based on results this study concludes as follows; a well design instruments are necessary for success in financial inclusion strategy. The study shows that savings accounts, Point of Sale (POS) and Mobile payments platforms are important instruments in this regard. However, in banking the rural people these instruments had been effective for financial inclusion considering the important socioeconomic characteristics of the rural people such as sex, age, marital status, level of education, occupation, family size and income level have strong influence on financial inclusion of the people.

From the result of the study, the following recommendations are made: the socioeconomic characteristics of the rural population should be focal point for strategic planning and reviewing of financial inclusion policies. Instruments of financial inclusion both traditional and digital should be popularized as this would encourage cashless economy. In planning and reviewing financial inclusion policies, important factors such as cost of financial services, liquidity of financial services providers, education, saving consciousness, sex, distance, network failures, income and convenience should be considered by relevant authorities and policy makers.

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