

Barriers to Financial Inclusion among Rural Households and in Nigeria: Evidence from Cross River State

Akaninyene Billy Orok¹, Udeme Dunamis Archibong¹, AfomaJesus Marvelous Orok² and
Matthew Ekare Mogbe¹

¹Department of Banking and Finance, University of Calabar, Calabar, Nigeria

²Department of Marketing, University of Calabar, Calabar, Nigeria

Abstract

This study examined barriers to financial inclusion among rural households in Nigeria, drawing on evidence from Cross River State. Despite policy initiatives by government, financial institutions, and regulators to promote inclusive finance, a substantial proportion of rural households remain excluded from formal financial services, including savings accounts, credit facilities, insurance, and digital payment systems. The study specifically investigated the effects of the cost of financial services, trust and security concerns, income level, distance to financial institutions, documentation requirements, financial literacy, and mobile network quality on financial inclusion among rural households. The study adopted a descriptive survey research design. Primary data were collected through a structured questionnaire administered to rural household respondents selected from communities across Cross River State using a multistage sampling technique. The data were analyzed using descriptive statistics and Structural Equation Modelling (SEM) to determine the magnitude and significance of relationships between the identified barriers and financial inclusion. The findings revealed that the cost of financial services has a significant negative effect on financial inclusion, indicating that high transaction charges, loan interest rates, and account maintenance costs discourage participation in formal finance. Income level also exerted a significant negative influence, suggesting that low-income households face affordability constraints. Financial literacy was found to significantly enhance financial inclusion, while mobile network quality emerged as the strongest positive determinant, highlighting the critical role of digital connectivity in expanding access to financial services. Trust and security concerns, however, did not show a statistically significant independent effect. The study concluded that financial inclusion among rural households in Cross River State is shaped largely by economic, infrastructural, institutional, and technological factors. It recommended reducing banking service costs, expanding agent banking and mobile money services, improving rural telecommunications infrastructure, simplifying documentation procedures, and implementing aggressive financial literacy programmes. These measures are necessary for achieving sustainable and inclusive financial development in rural Nigeria.

Keywords: Financial Inclusion, Rural Households, Financial Literacy, Mobile Network Quality, Agent Banking, Financial Access, Digital Financial Services, Nigeria

JEL: G21, G53, O16, O18, O55

1.1 Background of the study

Financial inclusion has become a major policy objective in many developing economies because of its role in promoting economic growth, poverty reduction, and social development.

According to Hasan et al., (2021), financial inclusion refers to the process of ensuring that individuals and businesses have access to useful and affordable financial products and services such as savings accounts, credit, insurance, and payment systems delivered in a responsible and sustainable manner. The concept gained global attention after the work of Muhammad Yunus on microfinance, as it emerged as a major policy objective in many developing economies due to its significant role in promoting economic growth, reducing poverty, and enhancing social development. It refers to the process of ensuring that individuals and businesses have access to useful, affordable, and appropriate financial products and services such as savings, credit, insurance, and payment systems delivered in a responsible and sustainable manner.

Financial inclusion also enhances financial stability and promotes the efficient allocation of resources within an economy and as a result, many countries have implemented policies and technological innovations aimed at expanding financial access to previously underserved populations. In Nigeria, financial inclusion has become a central component of financial sector reforms and national development strategies and the Central Bank of Nigeria launched the National Financial Inclusion Strategy to increase the proportion of Nigerians with access to formal financial services. This initiative aims to reduce the large number of financially excluded adults by promoting digital payments, mobile banking, agency banking, and other innovative financial delivery channels (Tay et al., 2022). Despite these initiatives, a significant portion of the Nigerian population still remains outside the formal financial system, particularly among rural dwellers, low-income earners, and individuals with limited education.

According to Magaji et al.,(2025), several barriers have been identified as major obstacles to financial inclusion in Nigeria, these include low income levels, high cost of banking services, inadequate financial literacy, poor infrastructure, long distances to financial institutions, and limited access to digital technologies. In addition, issues such as lack of trust in financial institutions, insufficient identification documents, and weak financial awareness also contribute to the exclusion of many individuals from the formal financial system. These barriers limit the ability of individuals and small businesses to access credit, save securely, and participate effectively in the formal economy. Also, rapid technological advancement in the financial sector has introduced digital financial services such as mobile banking and electronic payments, which have the potential to improve financial inclusion (Ocharive & Iworiso, 2024). However, digital illiteracy, poor internet connectivity, and inadequate technological infrastructure continue to hinder the widespread adoption of these services in many parts of Nigeria. As a result, the benefits of financial technology innovations have not been fully realized among vulnerable and underserved populations.

Adegbite et al., (2021), said that Rural households in Nigeria represent one of the most financially excluded segments of the population. This exclusion is largely attributed to a combination of structural, economic, technological, and socio-cultural barriers that limit their access to formal financial services as many rural dwellers operate within the informal sector, characterized by irregular income patterns and lack of formal financial records, making it difficult for financial institutions to assess their creditworthiness. In addition, the high cost of financial services, including account maintenance fees and transaction charges, discourages participation in the formal financial system.

Widiastuti, (2025), mention long distances to financial institutions and inadequate banking infrastructure in rural areas as another problem, making access to financial services both costly and inconvenient. He said that financial inclusion for economic empowerment and national development, is essential to identify and understand the barriers that prevent individuals from

accessing financial services, and examining these barriers will provide valuable insights for policymakers, financial institutions, and other stakeholders seeking to design effective strategies that promote inclusive financial systems. Therefore, this study seeks to investigate the barriers to financial inclusion in Nigeria and evaluate how these challenges affect individuals' ability to access and utilize formal financial services.

Beyond the structural and institutional challenges, socio-cultural factors also play an important role in shaping financial inclusion in Nigeria(Shoimah et al., 2025). In many communities, particularly in rural areas, traditional savings methods such as informal thrift systems, rotating savings groups, and cooperative societies are commonly used instead of formal banking services. While these informal arrangements provide some level of financial support within communities, they often lack the security, regulation, and broader financial opportunities that formal financial institutions provide. As a result, individuals who rely solely on informal financial systems may have limited opportunities to access credit, investment services, and financial protection mechanisms such as insurance.

Shoimah et al., (2025), came up and said that the issues affecting financial inclusion in Nigeria is the uneven distribution of financial infrastructure across different regions. Urban centers tend to have a higher concentration of banks, automated teller machines (ATMs), and financial service providers, whereas rural and semi-urban areas often experience limited availability of such facilities. This imbalance creates a geographical gap in financial access, making it difficult for residents of remote communities to conveniently access banking services. Consequently, many individuals in these areas remain excluded from the formal financial system due to the inconvenience and cost associated with traveling long distances to access financial institutions. Regulatory and institutional frameworks also influence the level of financial inclusion in the country.

While regulatory authorities have introduced policies aimed at expanding financial access, certain compliance requirements such as strict documentation and identification procedures may unintentionally exclude individuals who lack formal identification or proof of address. For many low-income earners and rural dwellers, obtaining the required documentation can be challenging, thereby limiting their ability to open and operate accounts with formal financial institutions. Addressing these regulatory constraints while maintaining financial security remains an important aspect of improving financial inclusion

As a matter of fact the role of financial education cannot be overlooked in efforts to expand financial inclusion, because many individuals lack adequate knowledge about financial products, banking procedures, and the benefits associated with formal financial services. This lack of awareness often results in hesitation or reluctance to engage with financial institutions(Shoimah et al., 2025). Strengthening financial literacy programs can help individuals better understand financial management, savings culture, and responsible borrowing, thereby increasing their confidence in using formal financial services. However, the growth of financial technology has introduced new opportunities for expanding financial inclusion by reducing reliance on traditional banking infrastructure (Abdullahi et al., 2025).

Mobile banking platforms, digital payment systems, and agent banking services have the potential to reach underserved populations more efficiently. However, challenges such as cybersecurity concerns, unreliable electricity supply, and limited access to smartphones continue to constrain the full adoption of these technologies among certain segments of the population. Considering these diverse challenges, addressing barriers to financial inclusion requires a comprehensive approach that involves collaboration among government agencies, financial

institutions, technology providers, and development organizations. By identifying the major obstacles limiting financial access and understanding how they affect different segments of the population, appropriate policies and innovative solutions can be developed to promote broader financial participation and sustainable economic development in Nigeria.

Examining the barriers to financial inclusion remains an important area of research for improving the effectiveness of financial systems and ensuring that the benefits of economic growth are accessible to all members of society and in view of these challenges, this study seeks to investigate the major barriers to financial inclusion in Nigeria and analyze how these barriers influence individuals' access to and use of formal financial services. Understanding these constraints will provide useful insights for policymakers, financial institutions, and other stakeholders in designing more effective strategies to promote inclusive financial systems and improve economic participation among the Nigerian population.

1.2 Objective of the study

The main objective of the study is to examine the barriers to financial inclusion among rural households in Nigeria. The specific objectives are to:

1. Examine the effect of cost of financial services on financial inclusion among rural households in Nigeria.
2. Assess the effect of trust/security concerns on financial inclusion among rural households in Nigeria.
3. Determine the effect of income level on financial inclusion among rural households in Nigeria.
4. Evaluate the effect of distance to financial institutions on financial inclusion among rural households in Nigeria.
5. Examine the effect of documentation requirements on financial inclusion among rural households in Nigeria.
6. Investigate the effect of financial literacy on financial inclusion among rural households in Nigeria.
7. Assess the effect of mobile network quality on financial inclusion among rural households in Nigeria.

1.3 Research hypotheses

Below are the hypotheses proposed for the study all stated in null form:

1. Cost of financial services has no significant effect on financial inclusion among rural households in Nigeria.
2. Trust/security concerns have no significant effect on financial inclusion among rural households in Nigeria.
3. Income level has no significant effect on financial inclusion among rural households in Nigeria.
4. Distance to financial institutions has no significant effect on financial inclusion among rural households in Nigeria.
5. Documentation requirements have no significant effect on financial inclusion among rural households in Nigeria.
6. Financial literacy has no significant effect on financial inclusion among rural households in Nigeria.

7. Mobile network quality has no significant effect on financial inclusion among rural households in Nigeria.

2.1 THEORETICAL FRAMEWORK

According to Gurley and Shaw (1960), Financial intermediaries play a vital role in creating a market mechanism for transferring claims on actual resources from savers to more efficient investors. The more flawless the financial market, the closer to the optimal allocation of investment. Financial transactions and financial instruments have two separate sorts of effects on economic behavior, which correspond to flow and stock linkages. The first is the Intermediation Effect, which is caused by features of financial assets that tangible assets do not have. Indirect exchange through the intermediation of financial instruments is technically a more efficient method of wish satisfaction than direct exchange.

Money intermediation, which is usually acknowledged as a mode of payment, allows for the purchase and sale of commodities split into two acts that are special in time. As a result, the use of money reduces the obstacles encountered during transaction in a barter system. In addition to the effects of financial transactions in aiding the expansion and intermediation of the flow of economic exchange, financial instruments play a crucial role in the production, integration, and ownership of wealth, the formation of economic activity. The "Asset Transmutation Effect" refers to the stock implications of financial assets that result from the observation that financial goods have qualities that tangible goods do not, making the indirect ownership of real wealth through the possession of financial assets a technically more effective way to satisfy wants than the direct ownership of tangible assets (Peery, 1960).

Transaction Cost Theory was originally developed by Ronald Coase in 1937 to explain why firms exist and how economic transactions are organized. According to Coase (1937), the central argument of the theory is that engaging in market transactions is not costless; rather, individuals and firms incur various costs when they attempt to exchange goods or services. These costs, known as transaction costs, include the cost of searching for information, negotiating and drafting contracts, monitoring performance, and enforcing agreements. Coase argued that firms emerge as a response to these costs, as organizing transactions within a firm can sometimes be more efficient than relying on the open market.

Oliver Williamson developed the theory into what is now commonly known as Transaction Cost Economics, building on this foundation, he posits that the structure of economic activities and exchanges is determined by the costs associated with conducting transactions. According to the theory, factors such as asset specificity, uncertainty, and transaction frequency influence these costs, while bounded rationality and opportunistic behavior necessitate the use of contracts, regulations, and institutional frameworks to reduce risks and ensure efficient exchanges.

However, the establishment and enforcement of these mechanisms also generate additional costs. In the context of financial services, transaction costs may include bank charges, transportation expenses, time spent accessing services, and the complexity of documentation requirements. Similarly, financial institutions incur costs related to customer verification, monitoring, and loan recovery, particularly in rural and low-income areas with inadequate infrastructure. Consequently, when the costs of accessing or providing financial services exceed the perceived benefits, both customers and service providers may be discouraged from participating, leading to financial exclusion. This theory is relevant to the present study because it explains how barriers such as the cost of financial services, distance to financial institutions,

documentation requirements, and low income levels can increase transaction costs and consequently reduce financial inclusion among rural households in Cross River State, Nigeria.

2.2 EMPIRICAL REVIEW

Empirical studies provide critical evidence on how mobile money and digital financial services influence financial inclusion, especially among rural populations where traditional banking infrastructure is limited. Ojeh et al., (2025), examined the effect of mobile money services on financial inclusion among rural traders in Oyo State, Nigeria. Using primary survey data, the study found that mobile money significantly improved access to financial services by enabling users to conduct transfers, make payments, and store money securely without visiting physical bank branches. However, the authors also identified persistent barriers, including poor network connectivity, irregular electricity supply, and transaction costs, which limited the full realization of mobile money's potential in rural areas. Socio-economic factors such as education and income were also found to influence the level of mobile money adoption, suggesting that enhancing digital and financial literacy could improve utilization rates (Ojeh et al., 2025).

Broadening the scope Grzybowski et al., (2023), conducted a cross-country empirical analysis on mobile money and financial inclusion in Sub-Saharan Africa, including data from Nigeria. Their study revealed that mobile money services significantly increase the likelihood of individuals participating in formal financial systems, particularly in regions with limited or no traditional banking facilities. The findings highlighted that network access and proximity to telecommunications infrastructure were key determinants of mobile money adoption, with younger and relatively higher-income individuals exhibiting higher usage rates. These results underscore the role of infrastructure and demographic characteristics in shaping digital financial behavior in rural contexts (Mbiti & Weil, 2023).

Comparative research conducted by Soetan & Umukoro, (2023), examined the differences in financial inclusion between rural and urban households in Nigeria. Their mixed-methods study demonstrated that rural households were significantly less likely to hold bank accounts or engage with formal financial services than urban residents. The authors suggested that digital financial services, including mobile money and agent banking, could bridge this gap if supported by improvements in infrastructure and financial education. Their analysis reinforces the notion that mobile money is a valuable mechanism for advancing rural inclusion, but its effectiveness depends on a supportive ecosystem (Soetan & Umukoro, 2023).

Studies on digital financial services broadly indicate that fintech innovations including mobile banking and point-of-sale (POS) systems can reduce transaction costs and enhance market access for rural populations. Abdullahi, (2025), found that digital payment platforms contributed to improved financial engagement among rural communities in Northwestern Nigeria. However, issues such as digital literacy deficits and limited trust in financial institutions remained significant barriers to sustained usage.

Regulatory and institutional frameworks also influence rural financial inclusion. Studies by Ogochukwu, (2021), highlight that strict documentation requirements, identification procedures, and compliance policies often exclude individuals who lack formal identity papers or proof of residence. These regulatory barriers disproportionately affect rural populations, especially low-income households, reinforcing structural exclusion despite broader national policies promoting financial inclusion.

Complementing this, Chidimma Maria-Gorretti Umeaduma, (2023), emphasize that policy support for digital financial services, agent banking, and microcredit programs can mitigate these

constraints, making formal financial services more accessible and affordable to rural households. Socio-demographic factors such as age, gender, and household size also determine financial inclusion outcomes. Women in rural communities often face lower participation due to social norms, limited control over household finances, and less access to digital tools (Kaur & Kapuria, 2020). Larger households may face resource constraints that reduce their ability to save or access credit, while younger household members are generally more likely to adopt mobile money and other digital financial services due to greater familiarity with technology.

Conclusively, determinants of financial inclusion in rural Nigeria are multi-dimensional. Socio-economic status, education, income, digital infrastructure, financial literacy, cultural attitudes, regulatory policies, and socio-demographic characteristics collectively shape the ability of rural households to access and use formal financial services. Understanding these determinants is critical for designing targeted interventions that address specific barriers, enhance the adoption of mobile money and digital financial platforms, and ultimately expand financial inclusion across rural Nigeria.

3.1 Research design

The use of survey design is appropriate for this study because the research focuses on identifying the barriers to financial inclusion among rural households in Nigeria. Through the administration of questionnaires, data can be collected on issues such as income level, cost of financial services, distance to financial institutions, financial literacy, trust in financial institutions, and access to digital financial services. These variables are essential in understanding the level of financial inclusion among rural households. The descriptive survey design allows the researcher to gather data from a relatively large number of respondents within a limited period of time and at a lower cost. It also makes it possible to analyze respondents' opinions and behaviors using statistical tools such as percentages, tables, correlation, and regression analysis.

3.2 Model specification

Structural Model Equations

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \mu$$

Where:

β_{ij} : Path coefficient showing the effect of independent variable X_j on dependent variable Y_j

ϵ_1 & ϵ_2 : Error terms

Independent Variables

X_1 = Cost of Financial Services

X_2 = Trust / Security Concerns

X_3 = Income Level

X_5 = Distance to Financial Institutions

X_6 = Financial Literacy

X_7 = Mobile Network Quality

Dependent Variables (Financial inclusion proxies)

Y_1 = Ownership of Bank Account

Y_2 = Access to Credit/Loans

Y_3 = Usage of Financial Services

Y₄ = Access to Mobile/Digital Banking

Table 1: Descriptive statistics for all constructs (N = 400)

Construct	Mean	Std. Dev.	Min	Max
Cost of Financial Services (CFS)	3.520	0.665	2.00	4.40
Trust / Security Concerns (TSC)	2.960	0.593	1.80	3.80
Income Level (IL)	3.320	0.689	2.00	4.20
Distance to Financial Institutions (DFI)	3.140	0.891	1.20	4.20
Documentation Requirements (DR)	2.940	0.711	1.40	4.00
Financial Literacy (FL)	2.880	0.940	1.20	4.40
Mobile Network Quality (MNQ)	3.740	0.900	1.80	4.60
Financial Inclusion — OBA	3.340	0.746	2.00	4.60
Financial Inclusion — ACL	3.340	0.781	2.00	4.20
Financial Inclusion — UFS	2.880	0.756	1.80	4.40
Financial Inclusion — MDB	3.960	0.437	3.40	5.00
Financial Inclusion (Composite)	3.275	0.550	2.55	4.65

Source: Author's Computation Using SPSS Version 27 from Field Survey Data, 2025.

Table 1 presents the descriptive statistics for all study variables based on 400 respondents. The results show that Mobile Network Quality (MNQ) recorded the highest mean score among the independent variables (Mean = 3.740, SD = 0.900), indicating that respondents generally perceived mobile network services as relatively adequate for accessing financial services. This was followed by Cost of Financial Services (CFS) (Mean = 3.520, SD = 0.665) and Income Level (IL) (Mean = 3.320, SD = 0.689). Trust/Security Concerns (TSC), Documentation Requirements (DR), and Financial Literacy (FL) recorded moderate mean values of 2.960, 2.940, and 2.880 respectively, suggesting varying perceptions among respondents regarding these barriers to financial inclusion.

Distance to Financial Institutions (DFI) had a mean score of 3.140 and the highest variability among the barriers (SD = 0.891), indicating differences in respondents' access to financial institutions. Regarding the dependent variables, Mobile/Digital Banking (MDB) recorded the highest mean score (Mean = 3.960, SD = 0.437), suggesting a relatively high level of access to and use of digital financial services among respondents. Ownership of Bank Account (OBA) and Access to Credit/Loans (ACL) both recorded mean values of 3.340, while Usage of

Financial Services (UFS) had a lower mean of 2.880. The composite measure of Financial Inclusion recorded an overall mean of 3.275 with a standard deviation of 0.550, indicating a moderate level of financial inclusion among rural households. Overall, the findings suggest that mobile network quality and digital banking play important roles in enhancing financial inclusion, while barriers such as financial service costs, documentation requirements, and limited financial literacy may still constrain broader participation in the formal financial system.

Table 2: Reliability coefficients for all constructs.

Construct	α Value	No. of Items	Interpretation

Cost of Financial Services (CFS)	0.632	5	Acceptable
Trust / Security Concerns (TSC)	0.465	5	Below threshold
Income Level (IL)	0.779	5	Acceptable
Distance to Financial Institutions (DFI)	0.675	5	Acceptable
Documentation Requirements (DR)	0.640	5	Acceptable
Financial Literacy (FL)	0.825	5	Good
Mobile Network Quality (MNQ)	0.882	5	Good
Bank Account Ownership (OBA)	0.963	5	Excellent
Access to Credit/Loans (ACL)	0.784	5	Acceptable
Usage of Financial Services (UFS)	0.743	5	Acceptable
Mobile/Digital Banking (MDB)	0.614	5	Acceptable

Source: Author's Computation using SPSS Version 27 (2026)

Table 2 presents the reliability coefficients (Cronbach's Alpha) for all constructs used in the study. The results indicate varying levels of internal consistency among the measurement scales. Mobile Network Quality ($\alpha = 0.882$) and Financial Literacy ($\alpha = 0.825$) demonstrated good reliability, while Bank Account Ownership ($\alpha = 0.963$) exhibited excellent reliability, indicating a very high level of consistency among its items. Income Level ($\alpha = 0.779$), Access to Credit/Loans ($\alpha = 0.784$), and Usage of Financial Services ($\alpha = 0.743$) showed acceptable reliability. Cost of Financial Services ($\alpha = 0.632$), Distance to Financial Institutions ($\alpha = 0.675$), Documentation Requirements ($\alpha = 0.640$), and Mobile/Digital Banking ($\alpha = 0.614$) were also considered acceptable, although their values were close to the minimum recommended threshold. However, Trust/Security Concerns recorded a relatively low reliability coefficient ($\alpha = 0.465$), suggesting weak internal consistency and indicating that the results associated with this construct should be interpreted with caution. Overall, the reliability analysis shows that most of the study constructs possess acceptable to excellent reliability, confirming the suitability of the questionnaire items for subsequent statistical analysis.

Table 3 Summary of Hypotheses Testing Results

Hypothesis	Barrier	Direction	p-value	Decision	Significance
H01	Cost of Financial Services	Negative (–)	< 0.001	H ₀ Rejected	***
H02	Trust / Security Concerns	Positive (+)	0.791	H ₀ Not Rejected	n.s.
H03	Income Level	Negative (–)	0.002	H ₀ Rejected	**
H04	Distance to Institutions	Negative (–)	< 0.001	H ₀ Rejected	***
H05	Documentation Requirements	Positive (+)	< 0.001	H ₀ Rejected	***
H06	Financial Literacy	Positive (+)	0.011	H ₀ Rejected	*
H07	Mobile Network Quality	Positive (+)	< 0.001	H ₀ Rejected	***

Source: Researcher's Computation from Structural Equation Modelling (SEM) Results, 2026

Table 3 presents the summary of hypothesis testing results regarding the barriers affecting financial inclusion among rural households. The findings indicate that six out of the seven hypothesized relationships were statistically significant. Cost of Financial Services (H01) exhibited a significant negative effect on financial inclusion ($p < 0.001$), leading to the rejection of the null hypothesis. Similarly, Income Level (H03) and Distance to Financial Institutions (H04)

showed significant negative effects with p-values of 0.002 and less than 0.001 respectively. Documentation Requirements (H05), Financial Literacy (H06), and Mobile Network Quality (H07) demonstrated significant positive effects on financial inclusion, with Mobile Network Quality emerging as one of the strongest determinants. However, Trust/Security Concerns (H02) did not significantly influence financial inclusion ($p = 0.791$), resulting in the acceptance of the null hypothesis. Overall, the results suggest that economic, institutional, educational, and technological factors play significant roles in determining the level of financial inclusion among rural households, while trust and security concerns do not independently exert a significant influence in the study area.

5.1 SUMMARY OF FINDINGS

Finding 1: Cost of Financial Services

- i. The study found that the cost of financial services has a significant negative effect on financial inclusion among rural households. High bank charges, account maintenance fees, loan interest rates, and minimum balance requirements discourage rural households from using formal financial services.
- ii. It was found that trust and security concerns do not have a statistically significant independent effect on financial inclusion. This suggests that although trust matters, other barriers such as cost, distance, and network quality are stronger determinants of exclusion.
- iii. Analysis revealed that income level has a significant negative effect on financial inclusion. Rural households with lower income levels are less likely to access and use financial services due to affordability constraints.
- iv. The study also revealed that distance to financial institutions has a strong significant negative effect on financial inclusion. Long travel distances, poor roads, and absence of bank branches or ATMs reduce rural households' access to financial services.
- v. The study found that documentation requirements have a significant positive relationship with financial inclusion. This implies that respondents who possess valid identification documents and can complete formal procedures are more financially included.
- vi. The study found that financial literacy has a significant positive effect on financial inclusion. Rural households with better understanding of savings, loans, digital banking, and financial products are more likely to participate in the formal financial system.
- vii. Findings showed that mobile network quality has the largest positive effect on financial inclusion. Reliable network connectivity significantly improves access to mobile money, transfers, savings, and digital banking.

5.2 Conclusion

The study concludes that financial inclusion among rural households in Nigeria is significantly influenced by structural, economic, and technological barriers. Specifically, cost of financial services, low income, and long distance to financial institutions reduce inclusion, while documentation readiness, financial literacy, and mobile network quality enhance inclusion. Among all determinants, mobile network quality emerged as the strongest positive driver, while distance to financial institutions was the strongest negative barrier. Therefore, improving digital infrastructure, reducing banking costs, increasing financial literacy, and extending financial access points are essential strategies for deepening rural financial inclusion in Nigeria.

5.3 Recommendation

- i. Financial institutions and regulators should introduce low-cost rural banking products, zero-maintenance accounts, reduced transaction charges, and subsidized microcredit facilities targeted at low-income rural households.
- ii. Banks and fintech firms should still strengthen consumer protection, fraud prevention systems, complaint resolution mechanisms, and public awareness campaigns to sustain confidence in rural financial systems.
- iii. Government and development agencies should promote income-generating programmes, agricultural financing schemes, vocational empowerment, and rural enterprise support to improve household earnings and financial participation.
- iv. Banks should expand agent banking networks, mobile banking centres, POS agents, and digital kiosks in rural communities. Government should also improve rural transport and road infrastructure.
- v. Government should intensify issuance of national identity cards, BVN, NIN, voter cards, and rural identity registration programmes. Banks should simplify Know Your Customer (KYC) processes for low-risk rural customers.
- vi. Stakeholders should implement financial education campaigns, community sensitization programmes, school-based literacy programmes, and local-language training on digital finance and banking services.
- vii. Government and telecom companies should invest in rural broadband expansion, mobile towers, stronger signal coverage, and affordable internet services to support digital financial inclusion.

This study provides robust quantitative evidence that structural, geographic, economic, and informational barriers collectively and significantly impede financial inclusion among rural households in Cross River State, Nigeria.

References

- Abdullahi, Y. Z. (2025). Digital financial services and rural market access in Northwestern Nigeria: Evaluating the economic impacts of fintech inclusion. *Journal of Social Review and Development*, 4(3), 47–53. <https://doi.org/10.64171/JSRD.4.3.47-53>
- Adegbite, O. O., Machethe, C. L., & Anderson, C. L. (2021). Revisiting the measurement of financial inclusion of rural smallholder farmers in Nigeria. *Agricultural Finance Review*, 81(4), 554–567. <https://doi.org/10.1108/AFR-07-2020-0099>
- Umeaduma, Chidimma Maria-Gorretti (2023). Financial inclusion strategies for poverty reduction and economic empowerment in underbanked rural populations globally. *World Journal of Advanced Research and Reviews*, 18(1), 1263–1280. <https://doi.org/10.30574/wjarr.2023.18.1.0709>
- Coase, R. H. (1937). The Nature of the Firm. *Economica*, 4(16), 386–405. <https://doi.org/10.1111/j.1468-0335.1937.tb00002.x>
- Grzybowski, L., Lindlacher, V., & Mothobi, O. (2023). Mobile money and financial inclusion in Sub-Saharan Africa. *Information Economics and Policy*, 65, 101064. <https://doi.org/10.1016/j.infoecopol.2023.101064>

- Hasan, M., Le, T., & Hoque, A. (2021). How does financial literacy impact on inclusive finance? *Financial Innovation*, 7(1), 40. <https://doi.org/10.1186/s40854-021-00259-9>
- Kaur, S., & Kapuria, C. (2020). Determinants of financial inclusion in rural India: Does gender matter? *International Journal of Social Economics*, 47(6), 747–767. <https://doi.org/10.1108/IJSE-07-2019-0439>
- Magaji, S., Ibukuoluwa, N. D., & Musa, I. (2025). Exploring the Financial Inclusion Gap for Humanitarian Aid Recipients in Nigeria. *International Journal of Research and Scientific Innovation*, XII(V), 1572–1583. <https://doi.org/10.51244/IJRSI.2025.120500150>
- Modiba, F. S., Musasa, G., Matindike, S., Kwanhi, T., Damiyano, D., & Mago, S. (2024). Can the digital economy transform financial inclusion in rural communities? A gendered lens. *Journal of Infrastructure Policy and Development*, 8(8), 3756. <https://doi.org/10.24294/jipd.v8i8.3756>
- Ocharive, A., & Iworiso, J. (2024). The Impact of Digital Financial Services on Financial Inclusion: A Panel Data Regression Method. *International Journal of Data Science and Analysis*, 10(2), 20–32. <https://doi.org/10.11648/j.ijdsa.20241002.11>
- Ogochukwu, M. (2021). Identification Management in Nigeria: Innovations for Financial Inclusion. *Indiana International & Comparative Law Review*, 30(1), 33–52. <https://doi.org/10.18060/25063>
- Ojeh, A., Onah, K. A., Okonkwo, B. S., & Nkwo, F. N. (2025). *Effect of Mobile Money Services on Financial Inclusion in Nigeria's Rural Areas*. <https://doi.org/10.5281/ZENODO.17113614>
- Shoimah, S., Babatunde, A. A., Adekunle, A. O., & Akbar, R. N. (2025). Determinants of Financial Inclusion among Nigerian MSMEs: The Roles of Push Factors. *Jurnal Manajemen Dan Kewirausahaan*, 13(1), 16–27. <https://doi.org/10.26905/jmdk.v13i1.15573>
- Soetan, T. O., & Umukoro, O. S. (2023). Financial Inclusion in Rural and Urban Nigeria: A Quantitative and Qualitative Approach. *International Journal of Economics and Finance*, 15(11), 64. <https://doi.org/10.5539/ijef.v15n11p64>
- Tay, L.-Y., Tai, H.-T., & Tan, G.-S. (2022). Digital financial inclusion: A gateway to sustainable development. *Heliyon*, 8(6), e09766. <https://doi.org/10.1016/j.heliyon.2022.e09766>
- Widiastuti, C. T. (2025). Systemic Barriers and Opportunities in Financial Inclusion: Lessons from Developing Regions. *Moneta: Journal of Economics and Finance*, 3(2), 89–102. <https://doi.org/10.61978/moneta.v3i2.917>