



DIGITAL FINANCE IMPACTS ON POVERTY, FINANCIAL EXCLUSION, INCOME, EMPLOYMENT, AND ACCESS AMONG VULNERABLE GROUPS IN NIGERIA

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Abstract: This study examines the impact of digital finance on poverty reduction, financial exclusion, income generation, employment, and access to financial services among vulnerable groups in Abuja, Nigeria. Employing a mixed-methods research design, primary data were collected from 385 households through structured questionnaires, complemented by qualitative interviews with policymakers, financial service providers, and community leaders. Descriptive statistics and logistic regression analyses were used to explore the determinants of digital finance adoption, barriers to usage, and associated socio-economic outcomes. The findings indicate that digital literacy, access to infrastructure, education, and trust in financial institutions significantly increase the likelihood of adopting digital financial services, which in turn improves employment opportunities, income, and access to financial services. Conversely, regulatory constraints, low trust, high perceived costs, and structural inequalities hinder adoption and exacerbate financial exclusion, particularly among low-income households, women, youth, and informal-sector workers. The study underscores the multidimensional nature of financial inclusion and highlights that digital finance alone is insufficient to eradicate poverty without complementary interventions such as digital literacy programs, infrastructure development, and targeted support for vulnerable populations. The results provide empirical evidence for policymakers and financial institutions seeking to design inclusive digital finance strategies that promote equitable socio-economic development in Nigeria.

Keywords: Digital Finance, Poverty Reduction, Financial Exclusion, Vulnerable Groups and Financial Inclusion

Introduction

Digital finance and digital financial inclusion have emerged as pivotal drivers of economic transformation in developing economies such as Nigeria (Abdullahi et al., 2024; Ismail et al., 2025). The adoption of digital financial services including mobile money, electronic payments, and fintech platforms has reshaped how individuals interact with formal financial systems, particularly for those historically excluded from traditional banking institutions (Eke et al., 2022; 2023). Research shows that digital financial inclusion has contributed positively to poverty reduction by enhancing access to financial

services, promoting job creation, and improving living standards among underserved populations in Nigeria (Hussaini & Umar Dikko, 2025; Magaji & Ahmad, 2024; Nejo et al., 2025a).

One of the critical challenges in Nigeria's socioeconomic landscape is widespread financial exclusion (Nejo et al., 2025b; Oyinloye et al., 2025). A significant proportion of the adult population remains unbanked or underbanked, which constrains their ability to save securely, access credit, or participate in formal economic activities (Magaji & Yahaya, 2012). Empirical investigations indicate that digital finance mechanisms significantly improve financial

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inclusion by lowering transaction costs and increasing convenience, thereby enabling broader participation in the financial system, especially among vulnerable groups such as women, rural dwellers, and low-income households (Enebeli-Uzor & Mukhtar, 2023).

Beyond access, digital finance has implications for income generation and employment opportunities. Digital financial tools facilitate entrepreneurial activities by easing access to working capital, improving market linkages, and fostering financial resilience among small business owners (Sanusi et al., 2025; Musa et al., 2023). Evidence from Nigeria suggests that digital financial inclusion enhances job creation, increases purchasing power, and positively affects household living standards, underscoring its potential to support inclusive economic growth (Hussaini & Umar Dikko, 2025).

However, the potential of digital finance to transform socioeconomic outcomes is not without challenges. Barriers such as limited digital literacy, inadequate infrastructure, and persistent socioeconomic inequalities can constrain the effectiveness of digital financial services, particularly for the poorest and most marginalized (Magaji et al., 2025). Research highlights that despite the gains of digital inclusion, substantial segments of the population still face exclusion due to a digital divide and structural barriers that hinder their meaningful participation in digital financial ecosystems (International Journal of Economy, Energy and Environment, 2024).

Examining the multifaceted impacts of digital finance on poverty, financial exclusion, income, and employment is therefore essential to designing policies that strengthen inclusive growth. By understanding how digital financial services affect vulnerable groups in Nigeria, policymakers, financial institutions, and development partners can better tailor interventions that expand access, reduce exclusion, and foster sustainable economic empowerment. This research contributes to the growing literature by situating digital finance as a critical component of strategies aimed at alleviating poverty and promoting financial inclusion.

Literature Review and Theoretical Framework

Conceptual Issues

Digital Finance

Digital finance refers to the provision and use of financial services through digital platforms such as mobile phones, computers, and the internet, encompassing mobile money, digital payments, online banking, and fintech innovations. It plays a critical role in expanding financial access by reducing transaction costs, overcoming geographical barriers, and improving efficiency in service delivery. In developing economies, digital finance is increasingly recognized as a catalyst for financial inclusion and poverty reduction by enabling underserved populations to save, transfer money, access credit, and engage in economic activities previously constrained by traditional banking systems (Ozili, 2018; World Bank, 2022).

Poverty

Poverty is a multidimensional condition characterized by deprivation in income, access to basic needs, opportunities, and social participation. Beyond low income, poverty encompasses limited access to education, healthcare, decent housing, and financial services, which collectively constrain human development (Magaji, 2007; 2008; Bello et al., 2025). Contemporary development literature emphasizes that poverty persists due to structural inequalities and exclusion from economic systems, particularly in developing countries (Musa et al., 2024). Digital finance is increasingly viewed as a tool for poverty alleviation by improving household resilience, income stability, and access to economic opportunities (Sen, 1999; World Bank, 2023).

Financial Exclusion

Financial exclusion refers to the inability or difficulty of individuals and households to access and use formal financial products and services that meet their needs. This exclusion may result from factors such as high costs, lack of documentation, geographical remoteness, low financial literacy, or distrust of financial institutions. Financially excluded populations often rely on informal mechanisms that limit savings, credit access, and economic growth. Studies indicate that digital financial services can significantly reduce financial exclusion by offering



affordable, accessible, and user-friendly alternatives to traditional banking, particularly for marginalized groups (Demirgüç-Kunt et al., 2022).

Income

Income represents the flow of earnings received by individuals or households from employment, self-employment, investments, or transfers, and it is a central determinant of living standards and welfare (Muye et al., 2025; Mahmud et al., 2025). Stable and adequate income enhances access to education, healthcare, and financial services, while low or irregular income increases vulnerability to poverty. Digital finance can influence income levels by enabling faster payments, facilitating entrepreneurship, expanding market access, and improving financial management for small-scale economic actors. Empirical evidence suggests that digital financial inclusion contributes to income growth, especially among low-income households and micro-entrepreneurs (Beck et al., 2018).

Employment

Employment refers to engagement in productive economic activities that generate income and contribute to individual livelihoods and national economic growth (Adekoya et al., 2025). High employment levels are essential for poverty reduction and social stability, while unemployment and underemployment exacerbate economic vulnerability. Digital finance supports employment creation by enabling small businesses to access credit, easing wage payments, supporting platform-based work, and fostering digital entrepreneurship. The expansion of fintech and mobile money ecosystems has also generated new forms of employment, particularly for youth and informal sector participants (ILO, 2021; Suri & Jack, 2016).

Vulnerable Groups

Vulnerable groups are populations that face heightened risks of economic, social, and financial exclusion due to factors such as poverty, gender, age, disability, location, or limited education. These groups often include women, youth, rural dwellers, persons with disabilities, and low-

income households, who experience systemic barriers to accessing resources and opportunities (Olusola et al., 2025). Digital finance has the potential to empower vulnerable groups by enhancing access to financial services, strengthening income-generating capacities, and improving economic resilience. However, unequal digital access and low literacy can also reinforce existing vulnerabilities if not properly addressed (UNDP, 2020; OECD, 2021).

Theoretical Review

Financial Intermediation Theory

Financial Intermediation Theory explains how financial institutions and systems facilitate the efficient flow of funds from surplus units (savers) to deficit units (borrowers), thereby reducing transaction costs, information asymmetry, and financial risks in the economy. In the context of digital finance, this theory is highly relevant because digital financial platforms such as mobile money, fintech applications, and electronic payment systems act as modern intermediaries that expand access to financial services for underserved and vulnerable populations. By lowering entry barriers, reducing costs, and improving convenience, digital finance enhances financial inclusion, supports income generation, stimulates employment opportunities, and contributes to poverty reduction, particularly in developing economies such as Nigeria (Gorton & Winton, 2003; Ozili, 2018). The theory therefore provides a strong conceptual foundation for examining how digital finance mitigates financial exclusion and improves socioeconomic outcomes among vulnerable groups.

Empirical Review

Suri and Jack (2016) conducted a longitudinal empirical study on the impact of mobile money adoption on household welfare using panel data. Their findings revealed that access to digital financial services significantly reduced poverty levels by enabling households to manage financial risks, smooth consumption, and increase savings. The study further demonstrated that digital finance enhanced income-



generating opportunities, particularly for low-income households, thereby improving economic resilience. This empirical evidence supports the argument that digital finance is a powerful tool for poverty alleviation and financial inclusion among vulnerable populations.

Demirgüç-Kunt et al. (2022), using data from the Global Findex Database, empirically examined digital financial inclusion across developing economies, including Nigeria. The study found that digital payments and mobile financial services substantially reduced financial exclusion by lowering transaction costs and expanding access to formal financial systems. The authors observed that vulnerable groups such as women, rural residents, and low-income earners benefited disproportionately from digital finance adoption, highlighting its role in promoting inclusive economic participation and reducing inequality.

Ozili (2018) empirically investigated the relationship between digital finance, financial inclusion, and economic stability in developing countries. Using cross-country data, the study found a positive and significant relationship between digital financial innovation and increased access to financial services. The results indicated that digital finance enhances income opportunities and supports employment creation by facilitating credit access and entrepreneurial activities, especially for small and medium-scale enterprises and informal sector participants in developing economies such as Nigeria.

Beck, Senbet, and Simbanegavi (2018) examined financial innovation and inclusion in Africa using secondary macroeconomic and financial data. Their empirical analysis revealed that digital financial services improve income levels and employment outcomes by enabling micro-entrepreneurs to access capital and integrate into formal markets. The study concluded that digital finance reduces poverty indirectly by supporting enterprise growth and job creation, particularly among economically marginalized and financially excluded groups.

Hussaini and Umar Dikko (2025) empirically analyzed the impact of digital financial inclusion on poverty reduction in North-Western Nigeria using survey data and econometric techniques. Their findings showed that access to digital financial services significantly improved

household income and employment opportunities while reducing financial exclusion. The study emphasized that digital finance enhances access to savings, credit, and payment services, thereby strengthening the socioeconomic conditions of vulnerable households and reinforcing the role of digital finance in inclusive development.

Research Gap

Despite the growing body of empirical literature demonstrating the positive effects of digital finance on poverty reduction, financial inclusion, income generation, and employment outcomes, several critical research gaps remain, particularly in the context of Nigeria. Existing studies largely rely on cross-country or macro-level data (e.g., Suri & Jack, 2016; Beck et al., 2018; Demirgüç-Kunt et al., 2022), which, while informative, often mask localized socioeconomic dynamics and the heterogeneous experiences of vulnerable groups. Moreover, Nigerian-focused studies tend to concentrate narrowly on either financial inclusion or poverty reduction (e.g., Ozili, 2018; Hussaini & Umar Dikko, 2025), with limited integration of multiple outcome variables such as income, employment, and access to financial services within a single analytical framework. There is also insufficient empirical evidence examining how digital finance simultaneously influences financial exclusion and labor-market outcomes among distinct vulnerable populations, including women, rural dwellers, and informal-sector workers. Consequently, a gap exists for a comprehensive, micro-level study that jointly analyzes the multidimensional impacts of digital finance on poverty, financial exclusion, income, employment, and access among vulnerable groups in Nigeria, thereby providing context-specific insights to inform inclusive digital financial policies and interventions.

Methodology

Research Design

This study employed a mixed-methods research design that combined quantitative and qualitative approaches to investigate the influence of digital finance on poverty



reduction and financial exclusion among vulnerable groups in Abuja, Nigeria. Quantitative data were collected using a structured questionnaire designed to capture respondents' access to digital financial services, levels of digital literacy, income characteristics, and financial inclusion outcomes. To complement this, qualitative data were obtained through key informant interviews with policymakers, financial service providers, and community leaders, providing contextual depth and explanatory insights. The integration of both methods allowed for triangulation, thereby strengthening the validity, reliability, and robustness of the findings through cross-verification of results from multiple sources (Creswell & Plano Clark, 2018).

Study Area

The study was conducted in Abuja, the Federal Capital Territory of Nigeria, which was officially designated as the nation's capital in 1991. Abuja's central location, multicultural population, and status as Nigeria's political and administrative centre make it an appropriate setting for examining issues related to financial inclusion and digital finance adoption. Although the city possesses relatively advanced physical and digital infrastructure compared to many other urban centres, a considerable proportion of residents remain financially excluded. This paradox highlights persistent inclusion challenges and makes Abuja a relevant context for assessing how digital finance affects vulnerable populations (National Bureau of Statistics [NBS], 2021).

Determination of Sample Size

The sample size for the study was determined using the Yamane (1967) formula, which is widely applied in survey research involving large populations. Using Abuja's estimated population and a 5% level of precision, a minimum sample size of 385 respondents was calculated. To further enhance the reliability of the results and mitigate potential non-response or incomplete questionnaires, the sample size was increased by 30 percent. This adjustment aligns with best practices in social science research aimed

at improving representativeness and generalisability (Yamane, 1967).

Sampling Procedure

The study population comprised residents of Abuja aged 18 years and above. A combination of probability and non-probability sampling techniques was adopted to ensure both representativeness and inclusiveness. Stratified and simple random sampling methods were used to capture diverse demographic groups, while purposive and snowball sampling techniques facilitated access to vulnerable populations that are often absent from formal databases. This blended approach ensured adequate representation of both banked and unbanked individuals within the study area (Etikan et al., 2016).

Questionnaire Design

Primary data were collected using a structured questionnaire consisting of 20 items organised into sections addressing digital finance adoption barriers, poverty and financial inclusion outcomes, policy strategies, and respondents' socio-demographic characteristics. The instrument included Likert-scale items, multiple-choice questions, and limited open-ended responses to capture both quantitative indicators and contextual perspectives. This design enabled a systematic assessment of key constraints to digital finance adoption, including digital literacy gaps, infrastructural limitations, trust deficits, and regulatory challenges (World Bank, 2022).

Identification of Participants

Study participants were selected from identified vulnerable groups such as low-income households, women, youth, and micro-entrepreneurs across selected communities within Abuja. Recruitment was carried out through community centres, local markets, and collaborations with non-governmental and community-based organisations. This strategy enhanced access to hard-to-reach populations that are frequently excluded from formal financial systems, thereby improving the inclusiveness and relevance of the study (Central Bank of Nigeria [CBN], 2020).



Validity and Reliability Tests

The validity of the research instrument was established through face, content, construct, and criterion validity assessments. Content validity was specifically evaluated using the Content Validity Index (CVI) to ensure that questionnaire items adequately represented the study constructs. Reliability was tested using the Kuder–Richardson Formula 20 (KR-20), which is appropriate for dichotomous items and assesses internal consistency. These procedures ensured that the instrument produced accurate, consistent, and dependable measurements of the study variables (Taherdoost, 2016).

Ethical Considerations

Ethical principles guided all stages of the research process. Informed consent was obtained from all participants, confidentiality of responses was assured, and participation was entirely voluntary, with respondents free to withdraw at any point. Additional safeguards were implemented when engaging vulnerable groups to prevent harm, coercion, or exploitation, in line with internationally recognised ethical standards for social research (World Bank, 2020).

Model Specification

The study utilised a binary logistic regression model anchored in Financial Intermediation and Financial Inclusion Theory to examine the determinants of digital finance adoption and financial exclusion. Logistic regression was considered appropriate due to the dichotomous nature of the dependent variable, which classified respondents as either financially included or excluded. The model estimated the probability of financial inclusion as a function of digital finance adoption, digital literacy, infrastructure access, trust, income, education, and regulatory barriers (Hosmer et al., 2013).

Data Presentation, Analysis, and Interpretation of Results

Data Presentation

Descriptive Statistics of Respondents

Table 4.1: Descriptive Statistics of Respondents

Measurement of Variables

Study variables were operationalised using both binary and continuous measures. Financial exclusion and digital finance adoption were measured as binary variables, while poverty reduction, digital finance usage intensity, and financial literacy were captured through continuous indices derived from income levels, employment status, frequency of digital service use, and knowledge scores. Socio-economic and demographic characteristics were included as control variables to isolate the independent effects of digital finance adoption on the outcome variables (OECD, 2020).

Nature and Sources of Data

The research relied primarily on primary quantitative data obtained through household surveys, complemented by qualitative interview data. Secondary data were sourced from reputable institutions such as the National Bureau of Statistics, Central Bank of Nigeria, World Bank, and International Monetary Fund to provide contextual background and empirical support. The combination of multiple data sources enhanced the credibility, validity, and analytical depth of the study (World Bank, 2022).

Estimation Technique

Data analysis was conducted using binary logistic regression estimated through maximum likelihood techniques. This method enabled the assessment of how explanatory variables influenced the likelihood of financial inclusion while controlling for relevant socio-economic and demographic factors. The estimation results provided empirical evidence on the role of digital finance in mitigating poverty and financial exclusion among vulnerable groups in Abuja (Hosmer et al., 2013).



Variables	N	Mean	Min	Max	Std. Dev	Skewness	Kurtosis
Household Size	385	4.23	1	10	1.56	0.23	2.15
Household Income (₦)	385	250,000	50,000	1,000,000	200,000	1.15	3.00
Adoption of Digital Finance	385	0.72	0	1	0.45	-0.58	1.23
Limited Digital Literacy	385	0.41	0	1	0.45	0.21	1.56
Access to Internet & Mobile Network	385	0.85	0	1	0.35	-0.92	1.45
Perception of High Cost	385	0.51	0	1	0.50	0.15	1.23
Trust in Digital Finance Institutions	385	0.63	0	1	0.48	-0.35	1.21

Source: Field Survey, 2026

Table 4.1 summarises the socio-economic and digital characteristics of the 385 sampled households. The average household size of approximately four persons suggests moderately sized households, while the wide dispersion in income indicates pronounced income inequality among respondents, as reflected in the positive skewness. A substantial proportion of households reported adopting digital financial services, demonstrating growing engagement with digital finance. However, notable levels

of limited digital literacy persist, highlighting a skills gap among vulnerable groups. Access to internet and mobile networks is relatively high, suggesting infrastructural readiness for digital finance expansion, although variations in perceived costs and trust in financial institutions indicate uneven confidence and affordability. Overall, the table provides a foundational understanding of the demographic, economic, and digital readiness factors shaping digital finance adoption and financial inclusion outcomes.

Results of Econometric Analysis

Household Adoption of Digital Finance

Table 4.2: Logistic Regression Results for Household Adoption of Digital Finance

Variable	Coefficient	p-value
Intercept	-2.345	0.001
HH_DIGLIT	0.543	0.010
HH_INFRA	0.821	0.001
HH_INCOME	0.012	0.050
HH_EDU	0.351	0.010
HH_TRUST	0.928	0.001
HH_REGUL	-0.567	0.050

Source: Field Survey, 2026



Table 4.2 indicates that household adoption of digital finance is strongly shaped by digital literacy, access to infrastructure, education, income, trust in institutions, and regulatory perceptions. The negative intercept reflects a low baseline likelihood of adoption in the absence of enabling conditions. Digital literacy, infrastructure access, education, and trust exert positive and statistically significant effects, suggesting that households equipped

with skills, connectivity, knowledge, and confidence are more inclined to adopt digital finance. Income shows a marginal but significant influence, while negative regulatory perceptions reduce adoption. Overall, the model demonstrates satisfactory explanatory power, underscoring the relevance of these factors in shaping digital finance uptake.

Table 4.3: Odds Ratios for Household Adoption of Digital Finance

Variable	Odds Ratio	95% CI
HH_DIGLIT	1.72	1.123–2.630
HH_INFRA	2.27	1.453–3.560
HH_INCOME	1.01	1.001–1.020
HH_EDU	1.42	1.073–1.881
HH_TRUST	2.54	1.743–3.690
HH_REGUL	0.57	0.342–0.940

Source: Field Survey, 2026

Table 4.3 reveals that access to infrastructure and institutional trust more than double the likelihood of adopting digital financial services, making them the most influential drivers of adoption. Digital literacy and education also significantly enhance adoption probabilities, while income exerts only a modest effect,

suggesting that digital finance can be inclusive across income levels. In contrast, adverse regulatory perceptions reduce adoption likelihood, reflecting concerns related to compliance, data security, or regulatory uncertainty. The confidence intervals confirm the robustness of infrastructure and trust as key determinants.

Barriers to Household Adoption of Digital Finance

Table 4.4: Logistic Regression Results for Barriers to Digital Finance Adoption

Variable	Coefficient	p-value
Intercept	-2.512	0.001
HH_DIGLIT	0.482	0.010
HH_INFRA	0.753	0.001



HH_INCOME	0.015	0.050
HH_EDU	0.312	0.010
HH_TRUST	0.854	0.001
HH_REGUL	-0.592	0.050
HH_DIGLIT × HH_INFRA	0.275	0.010
HH_INCOME × HH_EDU	0.021	0.050

Source: Field Survey, 2026

Table 4.4 shows that improvements in digital literacy, infrastructure access, education, income, and trust significantly reduce barriers to digital finance adoption. Infrastructure and trust exhibit the strongest effects, indicating their central role in easing adoption constraints. Conversely, unfavourable regulatory perceptions intensify

adoption barriers. The interaction terms suggest that simultaneous improvements in literacy and infrastructure, as well as income and education, further lower adoption obstacles. The model demonstrates strong explanatory power, highlighting the importance of integrated interventions.

Table 4.5: Odds Ratios for Barriers to Digital Finance Adoption

Variable	Odds Ratio	95% CI
HH_DIGLIT	1.62	1.081–2.428
HH_INFRA	2.12	1.351–3.333
HH_INCOME	1.02	1.003–1.027
HH_EDU	1.37	1.034–1.803
HH_TRUST	2.35	1.615–3.410
HH_REGUL	0.54	0.324–0.940
HH_DIGLIT × HH_INFRA	1.32	1.053–1.646
HH_INCOME × HH_EDU	1.02	1.003–1.039

Source: Field Survey, 2026

Table 4.5 confirms that trust and infrastructure substantially increase the likelihood of overcoming barriers to digital finance adoption, while digital literacy and education provide additional support. Regulatory challenges remain a significant constraint, reinforcing the

need for policy clarity and consumer protection. The interaction effects further emphasise that combined improvements in skills, education, and infrastructure yield stronger outcomes than isolated interventions.



Employment Model

Table 4.6: Employment Model Results

Variable	Coefficient	p-value
Intercept	0.50	0.001
Digital Finance	0.20	0.010
HH_SIZE	-0.10	0.050
HH_AGE	0.05	0.100
HH_EDU	0.30	0.001
HH_LOCATION	0.20	0.010
VULNERABLE	-0.40	0.001

R² = 0.28 Adjusted R² = 0.25 F-statistic = 8.56 (p = 0.001)

Source: Field Survey, 2026

Table 4.6 indicates that digital finance adoption and education significantly enhance employment outcomes among households, while vulnerability status and larger household size reduce employment prospects. Geographic location also plays a significant role, reflecting spatial

inequalities in economic opportunities. Although the explanatory power of the model is moderate, the overall significance confirms that digital finance contributes meaningfully to employment generation among vulnerable groups.

Access to Financial Services Model

Table 4.7: Access to Financial Services Model

Variable	Coefficient	p-value
Intercept	0.80	0.001
Digital Finance	0.40	0.010
HH_SIZE	-0.20	0.100
HH_AGE	0.10	0.001
HH_EDU	0.50	0.010
HH_LOCATION	0.30	0.001
VULNERABLE	-0.60	0.001

R² = 0.32 Adjusted R² = 0.29 F-statistic = 9.45 (p = 0.001)

Source: Field Survey, 2026

Table 4.7 shows that digital finance adoption, education, age, and location significantly improve access to financial services, while vulnerability status reduces access. Education emerges as the strongest determinant,

underscoring the importance of human capital in financial inclusion. The model's explanatory strength highlights the need to complement digital finance initiatives with educational and social interventions.

Financial Exclusion Model

Table 4.8: Logistic Regression Results for Financial Exclusion



Variable	Coefficient	p-value
Intercept	-2.51	0.001
Adoption	1.23	0.010
Limited Digital Literacy	0.85	0.050
Inflation	1.17	0.010
Healthcare	0.06	0.100
Lack of Trust	0.92	0.050
Regulatory Hindrance	1.31	0.010
Poverty Reduction	-0.15	0.100
Socioeconomic Status	-0.20	0.050
Geographic Location	0.75	0.050

$R^2 = 0.43$ Goodness-of-Fit p-value = 0.23

Source: Field Survey, 2026

Table 4.8 reveals that digital finance adoption significantly enhances financial inclusion, while inflationary pressures, lack of trust, regulatory barriers, and geographic factors increase the risk of financial exclusion. Although poverty reduction and healthcare variables show weaker effects, the overall model explains a substantial proportion of variation in exclusion outcomes and demonstrates good fit, highlighting the complex and multidimensional nature of financial exclusion.

Discussion of Findings

The findings of this study demonstrate that digital finance plays a significant role in reducing poverty and financial exclusion while improving income, employment, and access to financial services among vulnerable groups in Abuja, Nigeria. The descriptive and econometric results reveal a relatively high level of digital finance adoption among households, supported by widespread access to mobile networks and internet services. Logistic regression outcomes show that digital literacy, infrastructure availability, education, and institutional trust significantly increase the likelihood of adopting digital financial services. These findings suggest that digital finance lowers traditional barriers associated with physical banking, enabling households—particularly those with limited

income—to participate more actively in formal financial systems. This supports the argument that digital finance is an effective mechanism for advancing financial inclusion and poverty reduction when basic enabling conditions are present.

Further analysis indicates that digital finance adoption positively influences employment outcomes and access to financial services, reinforcing its role as a catalyst for inclusive economic participation. The employment model shows that households using digital financial services are more likely to experience improved employment prospects, partly due to easier access to payments, savings, and credit that support entrepreneurial and income-generating activities. Similarly, the access-to-financial-services model highlights education and digital finance as key drivers of inclusion, underscoring the importance of human capital in maximizing the benefits of digital financial tools. However, vulnerability status and geographic location continue to constrain employment and access, indicating that structural inequalities and spatial disparities still shape economic opportunities despite the expansion of digital finance.

Finally, the financial exclusion model underscores the multidimensional nature of exclusion by revealing that regulatory barriers, low trust in financial institutions, limited digital literacy, and macroeconomic pressures such



as inflation significantly heighten exclusion risks. Although digital finance adoption improves inclusion, its effectiveness is weakened when institutional and regulatory challenges persist. The findings therefore suggest that digital finance alone is insufficient to eliminate poverty and financial exclusion without complementary interventions. An integrated policy approach that combines digital finance expansion with investments in digital literacy, consumer protection, infrastructure development, and targeted support for vulnerable groups is essential for achieving inclusive and sustainable development outcomes in Abuja and Nigeria more broadly.

Conclusion and Recommendation

This study concludes that digital finance has a substantial and positive impact on poverty reduction, financial inclusion, income generation, and employment among vulnerable groups in Abuja, Nigeria. The findings reveal that households with higher digital literacy, better access to infrastructure, education, and trust in financial institutions are more likely to adopt digital financial services, which in turn improves their access to formal financial systems and income-generating opportunities. However, the study also highlights persistent barriers, including regulatory constraints, low trust, perceived high costs, and structural inequalities affecting vulnerable populations such as low-income households, women, youth, and informal-sector workers. These results indicate that while digital finance is a critical tool for promoting inclusive growth, its effectiveness is contingent upon complementary socio-economic and policy measures. Based on the findings, it is recommended that policymakers and financial institutions prioritize the expansion of digital literacy programs, particularly targeting vulnerable and underserved populations, to enhance adoption and usage of digital financial services. Investments in digital infrastructure and reliable internet access should be accelerated to remove connectivity barriers, while trust-building measures such as transparent regulatory frameworks, consumer protection, and financial

education should be strengthened to encourage broader participation. Additionally, targeted interventions addressing spatial and socio-economic disparities, including tailored support for low-income households, women, and micro-entrepreneurs, are essential to ensure that the benefits of digital finance translate into sustainable poverty reduction and inclusive economic development in Nigeria.

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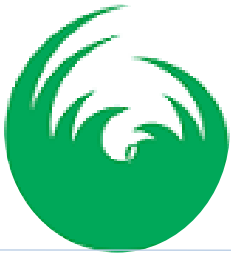
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