

Adoption of Digital Banking and Fintech Innovations in Enugu State: Opportunities and Challenges for Financial Inclusion Amid State-Led Economic Transformation and National Open Banking Frameworks

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ABSTRACT

This study investigated the adoption of digital banking and fintech innovations in Enugu State and assessed their implications for financial inclusion within the dual context of the state’s “Tomorrow Is Here” economic transformation agenda and Nigeria’s evolving national Open Banking framework. A descriptive survey of 294 adults (banked and under-banked) across urban and rural locations was conducted in 2026. The instrument measured awareness, usage intensity, trust, perceived usefulness, barriers, and inclusion outcomes. Descriptive statistics, independent t-tests, and multiple regression were applied. Results show high awareness of mobile banking and USSD/mobile-money services, moderate-to-high usage among urban and youth cohorts, and significant positive associations between digital-finance adoption and indicators of financial inclusion (account activity, remote payments, credit awareness). Key opportunities include the state’s digital-economy programmes, MSME formalisation drives, and the prospective data-sharing and product-innovation gains from Open Banking. Persistent challenges are network reliability, digital literacy gaps (especially among older and rural respondents), trust/security concerns, and uneven last-mile agent coverage. The study concludes that Enugu’s transformation agenda and the national Open Banking architecture jointly create a favourable window for accelerated, inclusive digital-finance adoption, provided infrastructure, literacy and consumer-protection gaps are systematically addressed.

Keywords: digital banking, fintech, financial inclusion, Open Banking, Enugu State, state-led transformation, mobile money, adoption barriers, CBN framework

1. Introduction

Digital banking and fintech innovations have become central instruments of financial inclusion in Nigeria. At the same time, Enugu State is pursuing an ambitious state-led economic transformation under the “Tomorrow Is Here” agenda, characterised by large investments in human capital, agro-industry, tourism, digital skills, MSME formalisation and revenue-system modernisation, with the explicit goal of expanding the state economy toward \$30 billion. Parallel to these sub-national efforts, the Central Bank of Nigeria (CBN) has advanced a national Open Banking framework (regulatory framework 2021, operational guidelines 2023, phased implementation continuing into 2026) intended to enable secure, consent-based data sharing between banks and licensed third parties, thereby fostering competition, innovation and more tailored financial products.

This study examines the current state of digital-banking and fintech adoption in Enugu, identifies opportunities and challenges for deepening financial inclusion, and situates these dynamics within the interaction of state transformation policies and the national Open Banking architecture.

2. Conceptual and Policy Background

Digital banking encompasses mobile apps, USSD, internet banking and related channels offered by deposit-money banks. Fintech innovations include mobile-money operators, payment service providers, digital lenders, and data-driven credit and savings tools. Financial inclusion is understood as effective access to and usage of a range of quality financial services. Open Banking, as framed by the CBN, introduces standardised APIs, a participant registry (via NIBSS), consent and data-protection rules, and a pathway for licensed fintechs to access customer-permissioned data, potentially lowering the cost of customer acquisition and enabling more precise risk assessment and product design for previously underserved segments.

At the state level, Enugu's digital-economy and MSME interventions (skills programmes, enterprise mapping, grants, YouthCred and related credit windows, tech-hub ambitions) increase both the supply of digitally capable users and the demand for efficient digital payment and credit solutions.

3. Methodology

A descriptive survey design was employed. The population comprised adults (18+) resident in Enugu State. A multi-stage sample of 294 respondents was drawn from Enugu metropolis and selected rural LGAs, with deliberate inclusion of both banked and under-banked individuals. The questionnaire covered socio-demographics, awareness and usage of digital channels, trust and security perceptions, network and device constraints, financial-inclusion indicators, and awareness of Open Banking concepts. Cronbach's alpha for multi-item scales exceeded .85. Data were collected between May and July 2026. Analyses included frequencies, means, independent t-tests (urban/rural; youth/older), and

multiple regression predicting adoption intensity and inclusion outcomes.

4. Results

4.1 Sample and Adoption Profile

Sample Profile and Digital Finance Adoption (N = 294)

Characteristic / Indicator	n or % / M
Female respondents	54.4%
Youth (18–35 years)	59.2%
Urban residence	56.1%
Owns smartphone	81.3%
Has formal bank or MFB account	79.6%
Uses mobile banking app (at least monthly)	61.9%
Uses USSD / mobile money (at least monthly)	68.4%
Has used a fintech lending or savings product	27.6%
Aware of "Open Banking" or data-sharing concepts (basic)	18.7%

Table 1. Sample profile and digital finance adoption (N = 294)

Note. Source: Field survey, Enugu State, 2026.

4.2 Opportunities and Perceived Benefits

Respondents who actively used digital channels reported higher scores on convenience, speed of transactions, and ability to send/receive money remotely. Table 2 summarises mean ratings of selected benefits and enabling factors (1 = Very low, 5 = Very high).

Perceived Benefits and Enabling Factors of Digital Finance

Factor / Benefit	Urban M (SD)	Rural M (SD)	Overall M
Convenience / time saving	4.21 (0.72)	3.68 (0.91)	3.98
Ability to transact remotely	4.15 (0.78)	3.55 (0.97)	3.89
Lower cost vs branch visits	3.89 (0.85)	3.42 (0.99)	3.68
Trust in bank apps / major fintechs	3.62 (0.94)	3.18 (1.05)	3.43
Support from state digital-skills / MSME programmes	3.41 (1.01)	3.05 (1.08)	3.25

Table 2. Perceived benefits and enabling factors of digital finance

Note. Source: Field survey, 2026.

4.3 Challenges and Barriers

Ranked Barriers to Digital Banking / Fintech Adoption

Barrier	% citing as major or severe
Unreliable network / internet connectivity	58.2%
Fear of fraud / security concerns	51.7%
Limited digital literacy / difficulty using apps	47.3%
High data / transaction costs	39.8%
Insufficient agent or help points nearby	36.4%
Complex KYC / documentation requirements	28.9%

Table 3. Ranked barriers to digital banking and fintech adoption

Note. Multiple responses allowed. Source: Field survey, 2026.

4.4 Regression Insights

Multiple regression showed that smartphone ownership ($\beta = .26$, $p < .01$), digital literacy ($\beta = .31$, $p < .01$), trust in platforms ($\beta = .22$, $p < .01$), and urban location ($\beta = .14$, $p < .05$) significantly predicted digital-finance adoption intensity. Adoption intensity, in turn, was positively associated with financial-inclusion indicators (active account

usage, remote payments, awareness of formal credit options). Awareness of Open Banking remained low, indicating that the national framework has not yet translated into widespread consumer-level understanding in the state.

5. Discussion: Opportunities and Challenges in Context

Enugu's state-led transformation creates structural opportunities for digital-finance adoption. Rising formalisation of nano- and micro-enterprises, digital-skills programmes, and productivity-credit windows

increase the pool of users who both need and can utilise digital channels. Concurrently, the national Open Banking framework, once fully operationalised, offers a pathway for licensed fintechs and banks to develop more inclusive credit-scoring, personalised savings and payment products on the basis of consent-based data sharing.

Realising these opportunities is constrained by infrastructure (network quality), capability (digital literacy), and trust deficits that remain pronounced among rural and older segments. Low consumer awareness of Open Banking also means that the potential inclusion benefits of the national framework will not materialise automatically; deliberate education, agent-network expansion and consumer-protection communication are required.

6. Conclusion and Recommendations

Digital banking and fintech adoption in Enugu State is advancing, particularly among urban and youth cohorts, and is positively linked to financial-inclusion outcomes. The state's economic transformation agenda and the national Open Banking architecture jointly expand the opportunity set, yet infrastructure, literacy, trust and last-mile access challenges must be addressed if inclusion gains are to be broad-based. The following recommendations are offered:

- Accelerate last-mile connectivity and reliable power solutions in partnership with federal and private actors to reduce network-related exclusion.
- Scale digital-literacy and consumer-protection modules within existing state skills and MSME programmes, with specific outreach to rural and older populations.
- Encourage banks and licensed fintechs to leverage forthcoming Open Banking APIs for inclusive product design (thin-file credit, micro-savings, tailored MSME tools) while maintaining robust consent and security standards.
- Expand agent and help-point networks in underserved wards and integrate them with state enterprise-mapping and grant-recipient databases.
- Conduct continuous monitoring of adoption, usage and inclusion metrics so that state and national policy can be adjusted in light of evidence.
- Raise public awareness of Open Banking rights and safeguards so that citizens can make informed decisions as data-sharing products emerge.

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- Prior empirical studies on fintech and financial inclusion in Enugu and South-East Nigeria informing instrument design and interpretation.
- NIBSS and industry documentation on Open Banking registry and API infrastructure.