

Effect of Fintech Adoption on Customer Retention in Deposit Money Banks in Wukari Metropolis

Obabuike Ikeni Nkpurukwe, Ph.D.*; Ayodele Tunde Lawrence;
Anthonia Aliugo; Sadiq Isa

Department of Business Administration, Faculty of Management Sciences, Federal University Wukari, Taraba State, Nigeria.

*Corresponding Author's Email: obason@ymail.com; obabuikei@fuwukari.edu.ng

Abstract

This study examined the effect of Fintech Adoption on Customer Retention in selected Deposit Money Banks (DMBs) in Wukari Metropolis, Taraba State. The research was necessitated by the increasing "churn rate" of traditional bank customers toward aggressive Fintech rivals (Neo-banks) despite heavy investments in digital infrastructure by DMBs. The study adopted a descriptive survey research design. The population comprised active digital banking customers of three selected active DMBs in Wukari, including, UBA, Zenith Bank, and Unity Bank. A sample size of 300 respondents was determined using convenience sampling. Data were collected using a structured 4-point Likert scale questionnaire, validated by experts, and tested for reliability using Cronbach's Alpha, which yielded a coefficient of 0.84. Data analysis was performed using descriptive statistics and Multiple Regression Analysis via SPSS Version 27. Findings revealed that while Payment Channels (USSD and Mobile Apps) significantly drive usage frequency, Settlement Infrastructure (ATM and POS uptime) emerged as the most critical factor influencing long-term loyalty and advocacy in the Wukari Metropolis ($\beta = 0.412$, $p < 0.05$). Furthermore, Security Architecture was found to be the primary driver of switching resistance among the community. The study concluded that Fintech adoption is a significant predictor of customer retention.

Keywords: Fintech Adoption; Customer Retention; Deposit Money Banks; Wukari Metropolis; Digital Trust; Settlement Infrastructure.

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INTRODUCTION

The global banking industry is currently undergoing a radical transformation driven by the rapid evolution of financial technology (Fintech). In the modern digital economy, the survival of Deposit Money Banks (DMBs) is no longer tied solely to physical branch networks but to their ability to provide seamless, secure, and instantaneous digital services. Globally, Fintech tools ranging from sophisticated mobile applications to blockchain-enabled security are redefining banking by lowering transaction costs, enhancing accessibility, and fostering deeper financial inclusion (McKinsey, 2025). In Nigeria, the banking sector has transitioned into a "digital-first" era, where traditional banks must compete with aggressive Fintech startups to retain a customer base that is increasingly tech-savvy and mobile-dependent (Central Bank of Nigeria [CBN], 2026).

Fintech adoption refers to the integration of digital software, web-based platforms, and telecommunication infrastructure to deliver financial services without the necessity of physical bank visits (Akande, 2025). This involves the use of diverse Payment and Transfer Channels such as USSD and Mobile Apps, the deployment of Settlement Infrastructure like Point of Sale (POS) terminals and Automated Teller Machines (ATMs) and the implementation of a robust Security Architecture to safeguard user data.

Fintech has the potential to revolutionize the Nigerian banking landscape by bridging the gap between urban hubs and semi-urban centers. For instance, Payment and Transfer Channels allow for 24/7 transaction capabilities, eliminating the geographical barriers to banking (Agboola & Ehizuelen, 2024). Furthermore, advanced Security Architecture, including biometric authentication and two-factor authentication (2FA), serves to build digital trust, which is the cornerstone of long-term customer relationships (Lexis, 2024; Seyum, 2025).

The context of Wukari Metropolis is particularly significant. As an academic and commercial hub hosting the Federal University Wukari, Kwararafa University, and a thriving merchant community, the metropolis demands high-velocity banking. Unlike major cities with redundant infrastructure, Wukari's banking customers primarily students and local traders face unique pressures regarding network uptime and service reliability. While DMBs in Wukari have introduced various digital platforms, the extent to which these tools translate into Customer Retention remains a critical debate. Existing reforms have focused on general financial inclusion, but the specific impact of Fintech dimensions on the psychological loyalty and "continuance intention" of Wukari residents has received scant empirical attention (Nanda, 2025).

Consequently, examining the role of payment channels, settlement infrastructure, and security architecture in enhancing customer loyalty and reducing churn is vital. This research intends to fill the gap by examining the effect of Fintech adoption on the composite customer retention of selected DMBs in Wukari Metropolis, thus adding empirical depth to the discourse on digital banking in Northern Nigeria.

Statement of the Problem

The adoption of Fintech by Deposit Money Banks (DMBs) is expected to result in enhanced convenience, reduced transaction failure, and heightened customer loyalty. In a bustling academic and trade center like Wukari Metropolis, banks are expected to leverage digital tools to meet the high-frequency demands of students and merchants.

Many customers in Wukari continue to experience frequent transaction failures, particularly with USSD and mobile app transfers during peak periods, leading to a loss of confidence in the bank's Payment and Transfer Channels (Bankuoru et al., 2025). Even when transactions are initiated, the unreliability of Settlement Infrastructure, such as "Out of Service" ATMs and failed POS settlements at local markets, forces many users to revert to cash-heavy habits or switch to more agile Fintech competitors like OPay and Moniepoint (Ndaman & Mohammed, 2025).

Moreover, the fear of electronic fraud remains a significant barrier. While banks promote digital banking, many users in Wukari perceive the Security Architecture as inadequate, especially when faced with news of unauthorized withdrawals or slow dispute resolution for failed transactions (Oladimeji & Adebayo, 2025). This leads to "transactional usage" where customers use the bank only for withdrawals but move their actual savings and daily activity to competitors, representing a failure in true customer retention.

Most literature on Fintech in Nigeria has focused on adoption barriers or the performance of banks in major commercial centers like Lagos and Abuja (KPMG, 2025; Yusuf & Nzei, 2023). This study aims to fill these gaps by analyzing the effect of Fintech adoption dimensions on the retention of bank customers in Wukari Metropolis, providing actionable data for bank managers and financial regulators.

Objectives of the Study

The broad objective of this study is to examine the effect of Fintech Adoption on Customer Retention of selected Deposit Money Banks (DMBs) in Wukari Metropolis. Specifically, the study intends to:

- i. examine the effect of Payment and Transfer Channels on Customer Retention of selected Deposit Money Banks (DMBs) in Wukari Metropolis.
- ii. analyze the effect of Settlement Infrastructure on Customer Retention of selected Deposit Money Banks (DMBs) in Wukari Metropolis.
- iii. determine the effect of Security Architecture on Customer Retention of selected Deposit Money Banks (DMBs) in Wukari Metropolis.

Research Questions

Based on the specific objectives, the study seeks to answer the following questions:

- i. What is the effect of Payment and Transfer Channels on Customer Retention of selected Deposit Money Banks (DMBs) in Wukari Metropolis?
- ii. What is the effect of Settlement Infrastructure on Customer Retention of selected Deposit Money Banks (DMBs) in Wukari Metropolis?
- iii. To what extent does Security Architecture affect Customer Retention of selected Deposit Money Banks (DMBs) in Wukari Metropolis?

Research Hypotheses

The hypotheses are formulated in the null (H₀) form for statistical testing. Each hypothesis corresponds to an objective and research question:

Hypothesis One (H01)

There is no significant positive effect of Payment and Transfer Channels on Customer Retention of selected Deposit Money Banks (DMBs) in Wukari Metropolis.

Hypothesis Two (H02)

Settlement Infrastructure does not have a significantly positive influence on Customer Retention of selected Deposit Money Banks (DMBs) in Wukari Metropolis.

Hypothesis Three (H03)

Security Architecture has no significant positive effect on Customer Retention of selected Deposit Money Banks (DMBs) in Wukari Metropolis.

Significance of the Study

A variety of interest groups are impacted by this study, including bank executives, financial regulators, the academic community, and the diverse customer base within Wukari Metropolis.

To the Researcher: This study will help the researcher appreciate the real-world impacts of Fintech components specifically payment channels, settlement infrastructure, and security architecture on customer loyalty. In addition, it will aid in the researcher's academic progress and act as a springboard for future studies on digital financial inclusion within Taraba State.

To Bank Management and Staff: For the managers of Deposit Money Banks (DMBs) in Wukari, the study equips them with knowledge on how specific digital tools can reduce customer churn, minimize transaction failures, and build digital trust. The results will guide strategic investment decisions, encouraging a shift from basic service provision to a focus on "Continuance Intention" for better market share.

To the Government and Regulators: This study provides relevant information to public policy makers (such as the Central Bank of Nigeria) by illustrating the role that digital reliability plays in the stability of the sub-national banking sector. Such insights will assist in the formation of policies aimed at improving telecommunications infrastructure in semi-urban centers like Wukari to support the "Cashless Policy."

To Future Researchers: This work adds to the expanding body of literature regarding technology adoption in the Nigerian banking industry. It gives empirical evidence toward further scholarly study of consumer behavior and financial resilience within the context of university towns, distinguishing their unique needs from major commercial hubs like Lagos or Abuja.

Scope of the Study

This research is aimed at analyzing the effect of Fintech Adoption on the Customer Retention of selected Deposit Money Banks (DMBs) in Wukari Metropolis. It examines in detail three components of Fintech as independent variables: Payment and Transfer Channels; Settlement Infrastructure; and Security Architecture. Customer Retention in this case is a composite dependent variable, measured by Continuance Intention, Customer Advocacy, and Switching Resistance.

The study is geographically limited to the operations of DMBs and their customers within Wukari Metropolis (covering key areas such as the Federal University Wukari vicinity, the New Market area, and the Town Center) because of the high concentration of digital banking users. The research was designed and conducted from a quantitative perspective and incorporated a structured questionnaire to collect information from bank customers across various demographic segments, including students, civil servants, and merchants.

Limitations of the Study

Similar to all empirical research studies, this study has some limitations. First, the geographic scope of Wukari Metropolis constrains the generalization of findings to large-scale commercial centers like Lagos, which operate with 5G connectivity and different infrastructural realities.

Furthermore, this research relies on self-reported data from bank customers regarding their loyalty and usage habits. Self-reporting can introduce response bias, where respondents might underreport their usage of "informal" Fintech apps (like OPay or PalmPay) or exaggerate their loyalty to traditional banks to project a certain financial status.

Third, this study uses a quantitative research method, which may not capture the deep, qualitative nuances of "digital anxiety" or the specific cultural factors that influence trust in electronic banking. Regardless of these constraints, robust statistical techniques were employed to ensure the validity and reliability of the findings, providing a strong empirical basis for the conclusions drawn.

CONCEPTUAL REVIEW

Fintech Adoption

Fintech Adoption refers to the degree to which a customer integrates digital financial technologies ranging from mobile interfaces to automated settlement hardware into their regular banking behavior. Akande (2025) defines it as the transition from traditional, human-intermediated banking to a self-service digital ecosystem. In Wukari Metropolis, adoption is not a binary "yes/no" status but a spectrum influenced by the availability of infrastructure and the user's digital literacy (Nanda, 2025).

According to Seyum (2025), Fintech adoption is characterized by three core pillars: Accessibility, Functionality, and Security. For a student or a trader, "Adoption" means moving away from the physical banking hall and relying on USSD codes, Mobile Apps, and POS terminals for 90% of their financial needs.

Payment and Transfer Channels

Payment and transfer channels refer to the digital interfaces and telecommunication protocols, such as Mobile Banking Applications, Unstructured Supplementary Service Data (USSD), and Internet Banking, used by customers to initiate financial transactions. In the context of Deposit Money Banks (DMBs), this represents the shift from "in-branch" banking to "anywhere-anytime" banking. Akande (2025) posits that these channels are the primary touchpoints through which customers interact with modern banks, acting as a gateway to financial inclusion.

Oladeji and Ogunleye (2023) argue that for Nigerian banking customers, the primary value of these channels lies in "temporal convenience," noting that the ability to perform transfers via USSD especially in areas with inconsistent data connectivity is critical for service continuity. Agboola and Ehizuelen (2024) support this, emphasizing that mobile apps minimize the human fault associated with physical teller transactions, ensuring higher accuracy in fund transfers. Mordi et al. (2024) observe that while network latency remains a challenge in semi-urban areas like Wukari, the 24/7 availability of these channels is a strategic requirement for maintaining a competitive edge. These findings indicate that payment channels are no longer just "add-ons" but are the core infrastructure of the modern banking relationship.

Settlement Infrastructure

Settlement infrastructure involves the physical and digital hardware used to finalize transactions and provide cash liquidity, primarily through Point of Sale (POS) terminals and Automated Teller Machines (ATMs). Ndaman and Mohammed (2025) define this as the "last mile" of digital banking, where electronic value is converted into goods or cash. In Wukari, where a large merchant population exists, the reliability of POS settlement is essential for the survival of the local "New Market" and "Old Market" economies.

Nwosu et al. (2024) argue that the value of settlement infrastructure lies in its "system uptime," noting that frequent ATM "dispense errors" or POS network failures lead to immediate customer dissatisfaction. Hidayat et al. (2024) found that bank customers who perceive their bank's POS terminals as reliable are significantly less likely to switch to competitors, as the infrastructure provides a sense of transactional certainty. Nanda (2025) observes that in university towns like Wukari, the density of functional ATMs directly influences the bank's visibility and perceived reliability. Thus, settlement infrastructure serves as the "physical anchor" of Fintech adoption, ensuring that digital promises are fulfilled at the point of trade.

Security Architecture

Security architecture refers to the multi-layered digital defenses, including Biometric Authentication (Face ID, Fingerprint), Two-Factor Authentication (2FA), and encryption protocols, designed to protect customer funds and data. Oladimeji and Adebayo (2025) note that in the 2026 Nigerian banking climate, security is the primary driver of "Digital Trust."

Innovate Finance (2025) argues that advanced security features enhance the customer experience by reducing "transactional anxiety," allowing users to perform high-value transfers with confidence. LexisNexis Risk Solutions (2024) highlights that DMBs utilizing shared fraud intelligence and biometric locks reported lower churn rates because customers feel their assets are safer than with less-regulated Fintech startups.

Customer Retention

Customer retention is a composite behavioral metric that measures the success of a bank in maintaining its client base; essentially, it is the ability of the DMB to ensure customers do not migrate to competitors. Seyum (2025) suggests that in the era of "Neo-banks" like OPay and Moniepoint, retention is best proxied by "Continuance Intention." For this study, Customer Retention is operationalized into three key dimensions:

i. Continuance Intention and Usage Frequency: Continuance Intention and Usage Frequency refer to a customer's psychological commitment to keep using a bank's digital tools as their primary interface. Alfikri et al. (2025) suggest that retention is high when a user

integrates the bank's app into their daily spending habits. In Wukari, where students frequently receive allowances, high performance is achieved when the student chooses to keep funds in the DMB app rather than transferring them out immediately (Seyum, 2025).

ii. Customer Advocacy (Word-of-Mouth): Customer Advocacy (Word-of-Mouth) Advocacy refers to the willingness of a customer to recommend the bank's Fintech services to peers. Ndaman and Mohammed (2025) highlight that in close-knit communities like Wukari, organic referrals are more powerful than traditional advertising. High-performing banks leverage their Settlement Infrastructure to turn merchants into advocates who encourage their customers to use specific POS channels or apps.

iii. Switching Resistance: The third dimension focuses on the "barriers to exit." Ideally, a retained customer ignores lower fees from competitors because they value the existing bank's Security Architecture and reliability. Oladimeji and Adebayo (2025) note that when a bank provides a high level of digital trust, customers develop a resistance to switching, even when aggressive Fintech rivals offer "zero-fee" incentives.

Theoretical Framework: The Unified Theory of Acceptance and Use of Technology (UTAUT2)

This research is anchored on the Unified Theory of Acceptance and Use of Technology (UTAUT2), popularized by Venkatesh, Thong, and Xu (2012). The theory posits that the adoption of technology is driven by seven constructs: performance expectancy, effort expectancy, social influence, facilitating conditions, hedonic motivation, price value, and habit. For this study, the framework is adapted to focus on how Facilitating Conditions (Wukari's infrastructure) and Performance Expectancy (the utility of Fintech) drive the transition from mere adoption to Customer Retention.

The UTAUT2 framework is highly relevant to the context of Deposit Money Banks (DMBs) in Wukari Metropolis. It allows the researcher to analyze how technological factors such as the ease of using a Mobile App (Effort Expectancy) and the availability of ATMs/POS terminals (Facilitating Conditions) interact with the user's psychological commitment to stay with a bank. While critics suggest the model is complex, it provides a superior lens for banking research compared to the original TAM, as it accounts for the "Price Value" (transaction fees) and "Habit" which are critical for retention in the Nigerian banking sector (Seyum, 2025).

Empirical Review

Akande (2025) explored the relationship between Fintech adoption and the growth of SMEs in Northern Nigeria. The research adopted a survey design, utilizing questionnaires administered to small business owners. Data analysis was performed utilizing regression techniques. The study found that while network instability remains a barrier, businesses that integrated Payment and Transfer Channels reported a significant increase in transaction frequency and customer trust. This research supports the first objective regarding payment channels, demonstrating that digital tools directly correlate with the "Continuance Intention" of users.

Ndaman and Mohammed (2025) examined the impact of digital financial innovation on customer loyalty in Nigerian Deposit Money Banks. This study employed a quantitative design with a sample of bank customers in urban and semi-urban areas. Data was analyzed using correlation analysis. The findings revealed that banks with highly reliable Settlement Infrastructure (ATMs and POS) had significantly higher Customer Advocacy scores than those

with frequent downtimes. This supports the second objective regarding the link between physical Fintech touchpoints and composite retention.

Oladimeji and Adebayo (2025) investigated the impact of cybersecurity architecture on consumer risk perception in the Nigerian Fintech ecosystem. A descriptive survey method was adopted with the use of structured questionnaires. To ascertain the relationship between biometric security and user loyalty, statistical tools were applied. The research determined that banks utilizing advanced Security Architecture (2FA and Biometrics) experienced significantly higher Switching Resistance among their users. This fulfills the third goal of the study to underscore how security architecture drives digital trust.

Seyum (2025) examined the challenges of digital banking continuance in emerging markets. This study was conducted using a descriptive survey design, and findings were subjected to descriptive statistical calculations. According to the researcher, retention in the modern banking environment is significantly conditioned by the "Experience Quality" of the Fintech tools. The study noted that users were more likely to remain with a bank if the digital interface felt "human-centric" and secure. This helps answer the overarching inquiry by demonstrating that Fintech is the primary driver of modern bank-customer relationships.

Gap in Literature

Previously, the research on Fintech and financial inclusion has been conducted focusing on the impact of Fintech on the financial inclusion and bank performance respectively, but there is little attention given on how the payment channels, settlement infrastructure and security architecture jointly influences customer retention. Besides, there is limited empirical data from Wukari metropolis since majority of studies have been carried out in Lagos and Abuja. To fill these conceptual and geographical gaps, this study investigates the relationship between these specific dimensions of Fintech, and the level of customer retention of Deposit Money Banks in Wukari Metropolis.

RESEARCH DESIGN

This study employed a descriptive survey design. This approach was deemed appropriate as it allows for the assessment of the existing conditions without manipulating variables. It facilitates the quantitative analysis of the current relationship between Fintech adoption dimensions (Payment Channels, Settlement Infrastructure, and Security) and customer retention outcomes.

Population and Sampling

The target population comprised active digital banking customers of the five (3) major Deposit Money Banks (DMBs) in Wukari Metropolis. A total sample of 300 respondents was drawn from the selected banks using a convenience sampling technique. Data were collected at bank branches, ATM points, and major merchant locations (e.g., New Market, FUW Gate) to ensure engagement with active Fintech users. The sample distribution is presented below:

Table 1: Sample Distribution by Bank

S/N	Bank Name	Sample Size
1.	United Bank for Africa (UBA)	130
2.	Zenith Bank PLC	120

3	Unity Bank	50
	Total	300

Source: Field survey, 2026

The total sample of 300 questionnaires was distributed between the three functional Deposit Money Banks (DMBs) in Wukari Metropolis, with a larger allocation to United Bank for Africa (UBA) to reflect its comparatively higher customer traffic and operational presence in the area at the time of the study.

Instrumentation and Data Collection

Primary data was collected using a structured questionnaire divided into two sections: Section A: Captured demographic information (age, occupation, primary bank, digital service usage frequency). Section B: Measured the study's core constructs using a five-point Likert scale (1=Strongly Disagree to 5=Strongly Agree).

Validity and Reliability

Validity: Content validity was established through review by experts. A pilot study involving 30 bank customers in Jalingo ensured clarity and relevance.

Reliability: Internal consistency was assessed using Cronbach's Alpha. All constructs exceeded the 0.70 benchmark, confirming the instrument's reliability.

Table 2: Reliability Test Results

Variable	No. of Items	Cronbach's Alpha	Interpretation
Payment & Transfer Channels (PTC)	5	0.83	Reliable
Settlement Infrastructure (SI)	5	0.78	Reliable
Security Architecture (SA)	5	0.86	Highly Reliable
Customer Retention (CR)	6	0.88	Highly Reliable
Overall Instrument	21	0.84	Highly Reliable

Data Analysis

Data were analysed using Statistical Package for Social Sciences (SPSS) Version 27. Descriptive statistics (frequencies, means, standard deviations) were used to summarize demographic data and study variables. Multiple Regression Analysis was employed to test the study's hypotheses and determine the effect of the independent variables (Fintech dimensions) on the dependent variable (Customer Retention).

Model Specification

The multiple regression model for the study is specified as:

$$CR = \beta_0 + \beta_1 PTC + \beta_2 SI + \beta_3 SA + e$$

Where:

CR = Customer Retention (Composite measure)

PTC = Payment and Transfer Channels

SI = Settlement Infrastructure

SA = Security Architecture

β_0 = Constant (Intercept)

$\beta_1, \beta_2, \beta_3$ = Regression Coefficients

e = Error term

RESULTS

Data Presentation

The data for this study was obtained from the administration of structured questionnaires to the digital banking customers of selected Deposit Money Banks (DMBs) in Wukari Metropolis. A total of three hundred (300) questionnaires were distributed.

Table 3: Rate of Return of Questionnaires

Questionnaire	Frequency	Percentage (%)
Returned and Valid	264	88.0%
Not Returned / Invalid	36	12.0%
Total Distributed	300	100.0%

Source: Field Survey, 2026

Test of Hypotheses

Multiple Regression Analysis was used to test the effect of the independent variables (Payment Channels, Settlement Infrastructure, and Security Architecture) on the dependent variable (Customer Retention).

Table 4: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.845 ^a	.714	.703	.28410

a. Predictors: (Constant),
Security, Infrastructure,
Channels

The Model Summary table shows an R value of 0.845, indicating a very strong positive relationship between the variables. The R Square value of 0.714 implies that 71.4% of the variation in Customer Retention in Wukari DMBs can be explained by the adoption of Fintech

dimensions. The remaining 28.6% is explained by other factors (e.g., interest rates, staff relationship management).

Table 5: Analysis of Variance (ANOVA)

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	52.874	3	17.625	218.45	.000 ^b
Residual	21.170	260	0.081		
Total	74.044	263			

a. Dependent Variable: Customer Retention

b. Predictors: (Constant), Payment Channels (PTC), Settlement Infrastructure (SI), Security Architecture (SA)

The ANOVA results indicate that the regression model is statistically significant. The F-statistic value of 218.45 with a corresponding p-value of 0.000 ($p < 0.05$) demonstrates that the independent variables (Payment Channels, Settlement Infrastructure, and Security Architecture) jointly have a significant effect on Customer Retention. This implies that the model provides a good fit for the data and that fintech adoption dimensions significantly explain variations in customer retention among Deposit Money Banks in Wukari Metropolis.

Table 6: Coefficients^a

Model	B	Std. Error	Beta	t	Sig.
(Constant)	0.412	0.095		4.336	.000
Payment Channels (PTC)	0.215	0.048	0.254	4.479	.000
Settlement Infra (SI)	0.388	0.052	0.412	7.461	.000
Security Architecture (SA)	0.284	0.055	0.315	5.163	.000

a. Dependent Variable: Customer Retention (Composite)

Hypothesis Testing

H01 (Payment Channels): The p-value (Sig) is 0.000 (< 0.05). We reject the null hypothesis. This implies that efficient USSD and Mobile App channels significantly drive the frequency of use and continuance intention.

H02 (Settlement Infrastructure): The p-value is 0.000 (< 0.05). We reject the null hypothesis. The high Beta value (0.412) indicates that Settlement Infrastructure (ATM/POS uptime) has the strongest effect on retention in Wukari.

H03 (Security Architecture): The p-value is 0.000 (< 0.05). We reject the null hypothesis. This confirms that biometric and 2FA features are critical for building digital trust and switching resistance.

DISCUSSION OF FINDINGS

The results demonstrate that Fintech adoption is a critical determinant of customer loyalty for DMBs in Wukari Metropolis.

First, Payment and Transfer Channels were significant predictors of retention. This suggests that the speed and accessibility of USSD/Apps reduce "transactional friction," especially for

the student population at Federal University Wukari. This supports Seyum (2025), who noted that ease of use is a baseline for digital continuance.

Second, Settlement Infrastructure showed the strongest positive relationship with retention. In Wukari's merchant-heavy economy, the reliability of POS terminals and ATMs is the "trust anchor." This corroborates Ndaman and Mohammed (2025), who observed that infrastructure uptime is the primary driver of advocacy in semi-urban Nigerian markets.

Third, Security Architecture was found to be significant, acting as a "switching barrier." This aligns with Oladimeji and Adebayo (2025), who found that customers stay with traditional banks primarily because they perceive their security protocols as superior to those of unregulated Fintech rivals.

These findings support the UTAUT2 (Venkatesh et al., 2012), which posits that technology adoption and continued use depend on perceived usefulness and facilitating conditions. The significant effects of payment channels, settlement infrastructure, and security architecture confirm that reliable and useful Fintech services enhance customer retention among DMB customers in Wukari Metropolis.

Recommendations

- i. Prioritize "Uptime" for Settlement Hardware: Since Settlement Infrastructure had the strongest impact, DMBs in Wukari must ensure 24/7 ATM liquidity and POS network redundancy, particularly during market days and university registration periods.
- ii. Enhance Digital Service Recovery (DSR): Banks should automate the refund process for failed transfers. Reducing the "resolution time" for a failed USSD transaction from days to minutes will directly increase customer advocacy and trust.
- iii. Localize Security Education: Banks should leverage the academic community in Wukari to launch "Cyber-Safety" workshops, highlighting their superior Security Architecture (Biometrics/2FA) to discourage customers from migrating to less-secure platforms.

Contribution to Knowledge

Contextual Contribution: This study provides rare empirical data on the Wukari Metropolis, a university town. It highlights that in semi-urban settings, physical infrastructure (ATMs/POS) is actually more important for retention than the "flashiness" of a mobile app.

Methodological Contribution: By treating Customer Retention as a composite variable (Continuance Intention, Advocacy, and Switching Resistance), this study offers a more holistic metric for loyalty than studies that only look at "account activity."

Theoretical Validation: By applying the UTAUT2 Framework, the study validates that "Facilitating Conditions" (network and infrastructure) are the most significant drivers of technology use in Northern Nigeria, extending the theory's relevance to semi-urban banking.

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