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DYNAMICS OF BANKING FRAUD IN NORTHWESTERN NIGERIA: PREVALENCE, IMPACTS, AND MITIGATION STRATEGIES

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ABSTRACT

Banking fraud poses a significant threat to financial stability worldwide, and Nigeria is no exception. This study investigates the dynamics of banking fraud in Northwestern Nigeria, focusing on Sokoto, Zamfara, and Kebbi States, regions with distinct socio-economic contexts and banking activities. Data were gathered from banking customers, staff, and law enforcement officials using structured questionnaires. The analysis, conducted using SPSS and logistic regression, identified critical demographic predictors of fraud experiences, offering a deeper understanding of the factors influencing fraud vulnerability. Findings reveal that 70.5% of respondents have experienced fraud, with Internet banking fraud being the most prevalent type (49.7%). Younger respondents (aged 25–34) and female participants were more likely to experience fraud, while higher education levels were associated with reduced vulnerability. Regional disparities were evident, with Sokoto emerging as a hub of banking activity and fraud risk, necessitating sophisticated fraud detection systems. In contrast, Zamfara and Kebbi exhibited lower fraud prevalence but required targeted education campaigns to address local challenges. The study recommends adopting advanced cybersecurity technologies, strengthening customer-centric awareness initiatives, and enhancing regulatory frameworks to rebuild trust in financial systems. These measures are essential for promoting a secure and resilient financial ecosystem in Northwestern Nigeria.

1.0 Introduction

Banking fraud represents a growing threat to financial systems worldwide. Globally, fraudulent activities in the banking sector have reached alarming levels, with the Association of Certified Fraud Examiners (ACFE) estimating that financial fraud results in annual losses of over $4.7 trillion (ACFE, 2021). In the United Kingdom, banking fraud accounted for losses exceeding £1.2 billion in 2022 (UK Finance., 2022), while the Federal Trade Commission (FTC) in the United States reported financial fraud losses of approximately $8.8 billion in the same year (FTC, 2023). These figures underscore the global nature of the problem, which undermines institutional integrity, disrupts economic systems, and erodes public trust(Transparency International, 2022).

In Nigeria, the banking sector is increasingly vulnerable to fraud, exacerbated by the integration of advanced digital technologies. While these technologies have transformed financial services, they have also exposed institutions to sophisticated fraudulent schemes (Folowosele & Ikpefan, 2021; Olelewe & Onwumere, 2024). Reports from the Central Bank of Nigeria (CBN) and the Nigeria Inter-Bank Settlement System (NIBSS) indicate over 53,000 fraud cases in 2022 alone, resulting in financial losses of more than ₦3.6 billion (CBN, 2023; NIBSS, 2023). These trends pose significant risks to Nigeria's financial stability, eroding public trust and hampering economic growth (Oyewunmi, 2020).

The implications of banking fraud extend far beyond financial losses for institutions. Fraud erodes public trust, disrupts business operations, and weakens the socio-economic foundation of affected regions. In Northwestern Nigeria—where economic development lags behind more industrialized areas—the impact of fraud is particularly acute (Inaya & Isito, 2016). High poverty levels, low literacy rates, and widespread unemployment create an environment conducive to fraudulent activities, demanding targeted, multi-dimensional interventions (Oyewunmi, 2020).

To address these challenges, this paper offers a regional perspective on banking fraud, investigating the strategies and tools necessary to mitigate its effects and enhance the resilience of financial institutions. The findings contribute to the development of a more secure and fraud-resistant banking system in Northwestern Nigeria and provide insights that can inform nationwide anti-fraud strategies.

This study investigates the dynamics of banking fraud in Northwestern Nigeria, focusing on Sokoto, Zamfara, and Kebbi States. These states present unique socio-economic challenges, making them critical for understanding how local vulnerabilities interact with broader national fraud trends. The research comprehensively analyzes the prevalence, root causes, and socio-economic conditions that facilitate banking fraud in these states. By examining empirical data and case studies, the study uncovers the specific vulnerabilities within the region’s banking infrastructure, evaluates the effectiveness of current regulatory frameworks, and proposes actionable solutions tailored to the local context.

The paper is structured as follows: Section 2 reviews relevant literature, providing context and theoretical underpinnings for the study. Section 3 outlines the methodology, detailing the mixed-methods approach employed to collect and analyze data. Section 4 presents the findings, with a focus on the causes, impacts, and mitigation strategies for banking fraud in Northwestern Nigeria. Finally, Section 5 concludes the paper with actionable recommendations for stakeholders and suggestions for future research.

2.0 Literature Review

2.1 Theoretical Literature

The phenomenon of banking fraud can be understood through various theoretical frameworks that explain its causes, dynamics, and consequences. This study adopts the Fraud Triangle Theory and Institutional Theory as its conceptual foundation, focusing on both individual behaviors and structural weaknesses.

The Fraud Triangle Theory, developed by Cressey, (1953), posits that fraud occurs at the intersection of opportunity, motivation, and rationalization. Opportunity arises from weak internal controls, such as inadequate oversight within financial institutions. Motivation refers to pressures driving fraudulent behavior, including financial distress or the pursuit of a better lifestyle. Rationalization allows perpetrators to justify their actions. In Northwestern Nigeria, socio-economic challenges and limited regulatory oversight create conditions conducive to these three elements, making this theory highly relevant (Adesina & Odusanya, 2017).

The Institutional Theory, articulated by Scott, (1995), emphasizes the role of social structures, norms, and institutional weaknesses in shaping behaviors. In Northwestern Nigeria, poorly enforced regulations, inadequate banking infrastructure, and weak governance frameworks foster an environment where fraud can proliferate. This theory underscores the importance of strengthening institutional frameworks to mitigate fraudulent activities in the region (Ibietan & Olutayo, 2018).

By integrating these complementary frameworks, this study provides a nuanced understanding of the dynamics of banking fraud in Sokoto, Zamfara, and Kebbi States. The insights gained will inform targeted strategies to strengthen institutional resilience and address socio-economic vulnerabilities that enable fraud.

2.2 Empirical Literature

Empirical research on banking fraud has explored its prevalence, causes, impacts, and prevention strategies, offering valuable insights but also revealing critical gaps, particularly regarding Northwestern Nigeria.

2.2.1 Causes and Types of Banking Fraud

Banking fraud in Nigeria arises from a variety of causes and takes diverse forms, each posing significant risks to the financial system. Adesina and Odusanya, (2017) conducted a comprehensive analysis of the causes and effects of financial fraud in Nigeria, identifying systemic factors that compromise the stability and integrity of the financial system. Their findings highlighted the critical need for targeted interventions to mitigate the risks associated with banking fraud.

Ibietan and Olutayo, (2018) explored the intricate relationship between financial fraud and banking sector stability, emphasizing the adverse impacts of fraudulent practices on institutional resilience. Their study underscored the urgency of implementing effective anti-fraud measures to safeguard the stability of Nigeria's banking industry.

Enofe et al., (2017) examined fraud prevention strategies in 15 quoted commercial banks in Nigeria using an ordinary least squares regression model. The study found that strong internal control systems, good corporate governance, and adherence to banking ethics significantly reduced fraud incidents. These results suggest that banking institutions must prioritize ethical practices and enforce robust internal controls to mitigate errors and misappropriations effectively.

Akindele, (2011) identified insufficient training, communication breakdowns, and ineffective leadership skills as major drivers of fraud within the Nigerian banking sector. Using a survey-based approach, the study highlighted how addressing these challenges through improved employee satisfaction, enhanced working conditions, and robust internal controls could significantly reduce fraud occurrences.

Idolor, (2010) provided additional insights into the dynamics of fraud in Nigeria's banking sector through a study conducted in Benin City. The findings revealed widespread practices such as unofficial borrowing and foreign exchange malpractice, often driven by greed, poverty, and weak governance. Using t-tests to validate the results, the study highlighted the need for targeted governance reforms and institutional strengthening to combat fraud.

Ololade et al., (2020) investigated employee-perpetrated electronic fraud in Nigerian Deposit Money Banks, collecting primary data from 120 fraud investigation officers. The study revealed that job insecurity, unrealistic deposit targets, and disruptive technologies contributed to fraudulent behaviors such as phishing and breaches of internal checks. Recommendations included discouraging unattainable targets, implementing whistleblowing policies, and enhancing employee protections to reduce the prevalence of e-fraud.

The advent of digital banking has further expanded the scope of fraud. Olelewe and Onwumere, (2024) analyzed the effect of internet banking on fraud in Nigeria, utilizing data from January 2008 to January 2019 and employing the ARDL technique. Their findings linked the rise in fraud to weaknesses in the regulatory framework, exacerbated by technological advancements. The study advocated for stronger regulatory measures, biometric authentication, standardized practices across the banking sector, and enhanced consumer awareness to address emerging fraud challenges effectively.

Despite extensive studies on the causes and forms of banking fraud in Nigeria, there remains a gap in understanding the unique drivers and manifestations of fraud in Northwestern Nigeria. This study aims to bridge that gap, providing localized insights to inform context-specific mitigation strategies.

2.2.2 Impact of Banking Fraud on Financial Stability and Bank Performance

Banking fraud significantly undermines financial stability and the performance of financial institutions. Research across various contexts has consistently highlighted the socio-economic consequences of fraud in the banking sector, particularly in Nigeria.

Ibietan and Olutayo, (2018) explored the relationship between financial fraud and the stability of Nigeria's banking industry, demonstrating how fraudulent practices destabilize banking operations and erode public trust. Their findings emphasize the systemic risks posed by fraud to the broader financial ecosystem.

Similarly, Mawutor et al., (2019) analyzed data from Nigeria Deposit Insurance Corporation (NDIC) reports, identifying that while the total monetary value of fraud had a relatively minor negative impact, the number of fraud cases and staff involvement significantly influenced bank performance. These findings point to the critical role of human factors in fraud incidents.

Manyo et al., (2023), focusing on Deposit Money Banks (DMBs) in Nigeria, used Pearson correlation and regression techniques to assess the impact of fraud. Their analysis revealed that higher fraud detection rates, indicated by the number of fraud cases, positively correlated with bank performance. This suggests that improved reporting mechanisms may account for some of the observed trends. However, the detrimental role of staff involvement in fraud underscores the need for stringent internal controls.

Clementina and Isu, (2017) assessed the interplay between fraud, insecurity, and commercial bank performance in Nigeria. Using an Error Correction Model, they found an inverse relationship between factors like expected losses from fraud and staff involvement, and the banks' earnings before tax. Interestingly, they noted a positive relationship between the volume of fraud cases and bank performance, possibly due to better fraud reporting. Their recommendations included enhanced government-bank collaboration, stricter employee vetting processes, and appointing directors with relevant expertise and stakes in the bank.

Expanding the focus, Owolabi, (2019) examined the regulatory frameworks addressing banking fraud in Nigeria. The study highlighted the importance of effective oversight and regulations in ensuring banking sector stability and mitigating fraud risks. Further, Oyewunmi, (2020) investigated the broader economic implications of banking fraud, demonstrating how it not only results in significant financial losses but also hampers economic growth and sustainable development efforts in Nigeria.

While these studies provide valuable insights into the dynamics of banking fraud in Nigeria, they often focus on national or urban contexts. This study addresses the gap by examining the specific impacts of fraud in Northwestern Nigeria, providing localized perspectives to inform more effective mitigation strategies.

2.2.3 Fraud Prevention Strategies and Regulatory Frameworks

Fraud prevention in the banking sector hinges on effective internal controls and robust regulatory frameworks. Studies conducted in Nigeria and other regions provide insights into best practices and challenges.

Enofe et al., (2017) using primary data from 15 commercial banks in Nigeria, highlighted that strong internal controls, good corporate governance, and adherence to banking ethics significantly reduce fraud incidents. This study underscores the importance of ethical banking practices and effective governance structures in mitigating fraud.

Similarly, Muritala et al.,(2020) analyzed the relationship between fraud and bank performance through advanced econometric models, focusing on Nigerian banks. Their findings revealed a reciprocal link between fraud variables and bank performance, emphasizing the need for robust internal control systems to safeguard assets and promptly detect fraudulent activities.

Adewale, (2019) examined broader fraud dynamics in Nigeria, attributing fraud prevalence to institutional weaknesses, socio-economic challenges, and the rapid adoption of digital banking technologies. However, their studies primarily focused on national and urban banking systems, with limited exploration of localized fraud dynamics in Northwestern Nigeria.

This gap in the literature highlights the need for studies addressing the unique socio-economic drivers and fraud patterns in this region. By focusing on Northwestern Nigeria, this research seeks to provide insights into localized fraud mitigation strategies, contributing to a more secure and resilient financial ecosystem.

3.0 Methodology

This study employs a quantitative approach to examine the dynamics of banking fraud in Northwestern Nigeria, with a focus on Sokoto, Zamfara, and Kebbi States. The study relies on the use of structured questionnaires to collect data, allowing for a systematic and empirical analysis of the prevalence, causes, and impacts of banking fraud. This approach ensures a high level of reliability and validity in the findings, providing robust insights into the region's unique challenges (Creswell & Creswell, 2017).

3.1 Research Design and Sampling Strategy

To achieve a comprehensive understanding of banking fraud, a stratified sampling technique was employed, ensuring demographic diversity and regional representativeness. The population for this study comprised banking customers and employees of financial institutions across Sokoto, Zamfara, and Kebbi states in Northwestern Nigeria. This population was selected because of its direct engagement with banking activities and varying exposure to fraud-related incidents, which are central to the study's objectives.

The sample size of 500 participants was derived from this population to provide statistical reliability and capture diverse perspectives. The distribution of the sample considered regional variations in population size, banking activity, and fraud prevalence. Sokoto state, being the regional hub with the highest concentration of financial institutions and banking activity, received 40% of the questionnaires. Zamfara and Kebbi states, with smaller populations and distinct socio-economic dynamics, were each allocated 30% of the sample. This proportional allocation ensures the sample accurately reflects the characteristics of the broader population, facilitating a nuanced understanding of banking fraud in the region.

The sampling strategy aligns with population estimates and demographic factors, as outlined by Fowler, (2014), ensuring the study captures the complexity of fraud dynamics across different socio-economic and institutional contexts in Northwestern Nigeria.

3.2 Data Collection Methods

Data for this study were collected using structured questionnaires to capture participants' experiences with banking fraud, their awareness of fraud prevention measures, and their perceptions of banking security. The use of closed-ended questions ensured consistency in responses and facilitated the generation of quantitative data suitable for statistical analysis.

The structured questionnaires were designed to provide measurable insights into the prevalence, causes, and socio-economic correlates of banking fraud. They were distributed to a diverse group of respondents, including banking customers, staff, and law enforcement officers across Sokoto, Kebbi, and Zamfara states. This approach allowed for a systematic collection of data that formed a robust foundation for the analysis conducted in the study.

3.3 Data Analysis Techniques

The quantitative data collected through structured surveys were analyzed using SPSS (Statistical Package for the Social Sciences). Descriptive statistics were employed to summarize key demographic patterns and the prevalence of banking fraud, offering a clear and concise overview of the data. This approach is widely recognized for its ability to reveal trends and distributional characteristics in survey data, forming the foundation for deeper statistical analyses (Pallant, 2020).

To identify significant predictors of fraud experience and examine the relationships between socio-economic factors and fraud vulnerability, logistic regression analysis was employed. Logistic regression is particularly suited for studies involving binary outcomes, such as the likelihood of experiencing fraud (Yes = 1, No = 0), allowing for the estimation of odds ratios and the quantification of variable impacts (Hosmer et al., 2013) as specified below.

3.3.1 Model Specification

$$\begin{aligned} Fraud\ Experience &= \beta_0 + \beta_1\ Age \\ &+ \beta_2\ Gender + \beta_3\ Education\ Level \\ &+ \beta_4\ State\ of\ Residence + \epsilon \end{aligned} \tag{1}$$

Where:

- Fraud Experience is the dependent variable (binary outcome: 1 if the respondent has experienced fraud, 0 otherwise).
- Age is the respondent's age (continuous variable).
- Gender is a dummy variable (1 if male, 0 if female).
- Education Level is categorized (e.g., 0 for no formal education, 1 for primary education, 2 for secondary education, 3 for tertiary education and 4 for other).
- State of Residence is a categorical variable (1 for Sokoto, 2 for Kebbi, and 3 for Zamfara).
- β_0 is the intercept, and β_1,β_2,β_3 and β_4 represent the coefficients to be estimated.
- ϵ is the error term.

This analytical framework, combining descriptive statistics and logistic regression, ensures a rigorous examination of the data, aligning with best practices for socio-economic research. It facilitates the identification of trends and patterns essential for understanding the dynamics of banking fraud and designing effective intervention strategies (Field, 2017; Tabachnick & Fidell, 2019). By leveraging these methods, the study provides a nuanced perspective on the interplay between demographic factors and fraud vulnerability, offering valuable insights for policymakers and financial institutions in Northwestern Nigeria.

3.4 Ethical Considerations

This study adhered to strict ethical guidelines to ensure research integrity. Participants were provided with detailed information about the study's purpose and their rights, including the option to withdraw at any stage without consequence. Measures were implemented to protect respondents' anonymity and ensure that all data were securely stored and handled. Additionally, care was taken to minimize any potential discomfort or risks to

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participants, adhering to the principle of non-malfeasance (Bell & Bryman, 2007).

3.5 Study Limitations

While the methodology was designed to ensure rigor, certain limitations are acknowledged. First, there may be self-reported data bias, as participants could have underreported their experiences with fraud due to stigma or fear of repercussions. Second, the study's focus on Sokoto, Zamfara, and Kebbi States may limit the generalizability of the findings to other regions of Nigeria. However, these limitations do not diminish the value of the insights generated, as the study provides critical, context-specific findings that are essential for localized interventions.

4.0 Results and Discussion

This section presents the findings on banking fraud dynamics in Northwestern Nigeria, based on data collected from respondents in Sokoto, Kebbi, and Zamfara states. A total of 500 questionnaires were distributed across these states—200 in Sokoto and 150 each in Kebbi and Zamfara—yielding 430 completed responses, representing an 86% response rate. Specifically, 180 responses came from Sokoto, 130 from Kebbi, and 120 from Zamfara.

4.1 Descriptive Statistics

This section Present key demographic information, including the distribution of respondents by age, gender, education level, and state of residence.

Table 1: Age group Distribution of Respondents

Age Group	Frequency	Percent	Valid Percent	Cumulative Percent
18-24	65	15.1	15.1	15.1
25-34	108	25.1	25.1	40.2
35-44	106	24.6	24.6	64.8
45-54	86	20.0	20.0	84.8
55 and above	65	15.1	15.1	100.0
Total	**430**	**100.0**	**100.0**	**-**

Source: Field Survey 2024

In Table 1, the age group distribution reveals that respondents are predominantly within the middle-age brackets, with the 25-34 age group comprising the largest share at 25.1%, followed by the 35-44 age group at 24.6%. This demographic predominance suggests that middle-aged individuals are more likely to participate in financial transactions or be impacted by banking fraud, potentially due to their higher level of economic engagement compared to other groups.

Conversely, younger individuals (18-24) and older individuals (55 and above) are equally represented at 15.1%, while the 45-54 age group accounts for 20.0%. These patterns highlight the need for tailored fraud awareness initiatives that address the unique vulnerabilities of less represented groups, such as younger individuals who may lack financial literacy and older individuals who might be less familiar with digital banking systems.

Table 2: Gender Distribution

Gender	Frequency	Percent	Valid Percent	Cumulative Percent
Male	295	68.6	68.6	68.6
Female	135	31.4	31.4	100.0
Total	**430**	**100.0**	**100.0**	**-**

Source: Field Survey 2024

In Table 2, the gender distribution indicates a pronounced male dominance among respondents, with males comprising 68.6% of the sample, while females account for 31.4%. This disparity suggests that men are either more engaged in financial activities or more likely to report experiences related to banking fraud.

The relatively lower representation of females underscores the importance of designing gender-specific awareness programs and fraud prevention strategies. These initiatives should aim to empower women to participate actively in financial systems while addressing potential vulnerabilities unique to their demographic, thereby promoting inclusivity and reducing exposure to banking fraud.

Table 3: Level of Education Distribution

Level of Education	Frequency	Percent	Valid Percent	Cumulative Percent
No formal education	140	32.6	32.6	32.6
Primary Education	120	27.9	27.9	60.5
Secondary Education	100	23.3	23.3	83.8
Tertiary Education	50	11.6	11.6	95.3
Other	20	4.7	4.7	100.0
Total	430	100.0	100.0	-

Source: Field Survey 2024

Table 3 highlights the distribution of respondents by education level, showing that a substantial proportion lack formal education (32.6%), with primary (27.9%) and secondary education (23.3%) following closely. Respondents with tertiary education account for a smaller share (11.6%), while those categorized under "Other" constitute only 4.7%.

This skewed distribution towards lower educational attainment suggests a potential vulnerability to banking fraud among individuals with minimal education. The data underscores the need for targeted interventions, such as financial literacy programs and fraud awareness campaigns, aimed at equipping less-educated populations with the necessary knowledge and skills to navigate financial systems securely and mitigate fraud risks effectively.

4.2 Customer Survey Results and Discussion

This section summarizes survey findings on customer experiences with banking fraud, awareness of fraud prevention measures, and trust in banking security. The analysis highlights usage patterns, fraud experiences, types of fraud encountered, and perceptions of banking security, providing essential insights for improving customer satisfaction and reducing fraud vulnerability.

Table 4: Frequency

Frequency	Daily	Weekly	Monthly	Rarely	Total
Responses	86	108	150	86	430
Percent	20.0%	25.1%	34.9%	20.0%	100.0%

Source: Field Survey 2024

Table 4 presents the frequency of banking service usage among respondents. The majority, 34.9%, use services monthly, reflecting periodic financial activities like salary withdrawals. Weekly users, at 25.1%, may include traders or semi-regular transaction participants. Daily users (20.0%) are likely urban residents or frequent digital banking users, while rare users (20.0%) represent rural dwellers or those with limited banking access. This diverse usage pattern highlights the need for banking solutions tailored to both urban and rural needs in northwestern Nigeria.

Table 5: Experience with Banking Fraud

Response	Yes	No	Total
Frequency	181	249	430
Percent	42.1%	57.9%	100.0%

Source: Field Survey 2024

Table 5 indicates that 42.1% of respondents have experienced banking fraud, highlighting its prevalence as a significant concern, especially among urban or digitally active users. Meanwhile, 57.9% have not encountered fraud, which could be attributed to limited banking interactions or underreporting in rural areas. This scenario underscores the critical need for banks to enhance fraud prevention and response measures to safeguard customer trust and improve the overall security of banking services.

Table 6: Type of Banking Fraud

Type of Fraud	Frequency	Percentage
Internet Banking Fraud	90	20.9%
Credit Card Fraud	40	9.3%
Loan Fraud	30	7.0%
Other	21	4.9%
No Fraud Experienced	249	57.9%
Total	430	100.0%

Source: Field Survey 2024

Table 6 shows that Internet Banking Fraud is the most prevalent type of fraud, affecting 20.9% of respondents, followed by Credit Card Fraud (9.3%), Loan Fraud (7.0%), and other forms of fraud (4.9%). These figures highlight the vulnerabilities in digital banking, with internet banking fraud being particularly concerning in the digital era. This underscores the urgency for banks to strengthen cybersecurity measures and educate customers on secure online practices. The 57.9% of respondents who have not experienced fraud reflects the potential protective effects of limited digital engagement or underreporting in rural areas, emphasizing the need for inclusive fraud prevention strategies.

Table 7: Level of Awareness of Fraud Prevention Measures

Awareness Level	Frequency	Percentage
Very High	13	3.0%
High	26	6.1%
Moderate	65	15.1%
Low	77	17.9%
Very Low	77	17.9%
No Awareness	172	40.0%
Total	**430**	**100.0%**

Source: Field Survey 2024

Table 7 reveals that a majority of respondents (59.6%) have low or very low awareness of fraud prevention measures, with equal proportions (17.9%) in both categories. Only a small fraction reported very high (3.0%) or high (6.1%) awareness, while 15.1% indicated moderate awareness. These findings point to a significant gap in understanding fraud prevention tools, leaving many customers susceptible to fraud. This underscores the critical need for banks to implement targeted educational campaigns and enhance customer awareness to build resilience against banking fraud.

Table 8: Confidence in the Security of Bank Services

Confidence Level	Frequency	Percentage
Very Confident	13	3.0%
Confident	26	6.1%
Neutral	65	15.1%
Not Confident	77	17.9%
Not Confident at All	77	17.9%
No Confidence Reported	172	40.0%
Total	**430**	**100.0%**

Source: Field Survey 2024

Table 8 reveals a significant lack of confidence in the security of banking services among respondents. A combined 35.8% (77% "Not Confident" + 77% "Not Confident at All") of respondents reported being uncertain about the security of their bank's services. Meanwhile, only 3.0% expressed being "Very Confident" in the bank’s security measures. The remaining 15.1% felt neutral, signaling a need for improved trust-building initiatives by the banking sector. These findings highlight that banks must prioritize strengthening their security frameworks, enhancing transparency, and effectively communicating security measures to customers to alleviate concerns and rebuild confidence in banking services.

Table 9: Effects of Banking Fraud

Effect of Banking Fraud	Frequency	Percentage (%)
Financial Loss	70	16.3%
Loss of Trust in Banking Institutions	65	15.1%
Emotional Distress	43	10.0%
Increased Frequency of Monitoring Account Activity	20	4.7%
Concerns about Identity Theft	30	7.0%
Shift towards Alternative Financial Services	30	7.0%
None Experienced	172	40.0%
Total	430	100%

Source: Field Survey 2024

Table 9 highlights the effects of banking fraud on respondents. While 40.0% reported no experience with fraud, the remaining 60.0% faced impacts such as financial loss (16.3%), loss of trust in banking institutions (15.1%), emotional distress (10.0%), identity theft concerns (7.0%), and a shift to alternative financial services (7.0%). Additionally, 4.7% reported increased account monitoring. These findings underscore the significant consequences of fraud, particularly financial loss and reduced trust, while emphasizing the need for banks to strengthen security, rebuild customer confidence, and improve fraud prevention education.

Table 10: Recommendations to Enhance Banking Fraud Prevention

Recommendation	Responses	Percentage (%)
Increased Customer Education on Fraud Prevention	70	16.3%
Improved Fraud Detection Systems	60	14.0%
More Frequent Communication on Fraud Updates	60	14.0%
Stronger Bank Policies for Fraud Prevention	40	9.3%
Other	28	6.5%
No Recommendation Provided	172	40.0%
Total	**430**	**100%**

Source: Field Survey 2024

Table 10 outlines respondents' recommendations for enhancing banking fraud prevention. Key suggestions include increased customer education (16.3%), improved fraud detection systems (14.0%), and more frequent fraud updates (14.0%). Additionally, 9.3% advocated for stronger bank policies, while 6.5% proposed other strategies. Notably, 40.0% did not provide recommendations, reflecting varying awareness levels. These insights highlight the need for banks to prioritize customer education, leverage advanced technology, and maintain clear communication to foster trust and a secure banking environment.

4.3 Questions for Bank Staff

This section summarizes survey findings from bank staff on their experiences with banking fraud, the effectiveness of prevention measures, and challenges in combating fraud. The analysis covers staff roles, fraud encounter frequency, observed fraud types, and prevention strategy effectiveness. These insights are vital for addressing operational challenges and improving anti-fraud strategies in the banking sector.

Table 11: Role in the Bank

Role	Frequency	Percentage (%)
Teller	52	40.3%
Manager	26	20.2%
Compliance Officer	19	14.7%
IT Security	19	14.7%
Total	**129**	**100%**

Source: Field Survey 2024

Table 11 shows the distribution of roles among bank staff, with tellers making up the largest group (40.3%), underscoring their critical role in detecting and preventing fraud during customer interactions. Managers (20.2%) focus on oversight, while compliance officers and IT security staff (both 14.7%) highlight the importance of regulatory and security functions. This balanced workforce structure combines customer-facing responsibilities with risk management, essential for effectively addressing banking fraud.

Table 12: Encountering Cases of Banking Fraud

Frequency	Count	Percentage (%)
Very Frequently	19	14.7%
Frequently	52	40.3%
Occasionally	32	24.8%
Rarely	19	14.7%
Never	6	4.7%
Total	**129**	**100%**

Source: Field Survey 2024

Table 12 illustrates that a significant portion of bank staff (40.3%) encounter fraud cases frequently, with an additional 14.7% experiencing it very frequently. This high incidence points to the commonality of fraud within daily operations, indicating a pressing need for enhanced fraud detection and management strategies. Although 24.8% encounter fraud occasionally and 14.7% rarely, the overwhelming frequency of fraud encounters suggests systemic vulnerabilities that require immediate attention.

Table 13: Types of Banking Fraud

Type of Fraud	Count	Percentage (%)
Internet Banking Fraud	80	50.4%
Credit Card Fraud	20	24.8%
Loan Fraud	10	14.7%
Other	19	10.1%
Total	**129**	**100%**

Source: Field Survey 2024

Table 13 highlights internet banking fraud as the most prevalent type of fraud encountered by bank staff (62.0%), followed by credit card fraud (15.5%), loan fraud (7.8%), and other types of fraud (14.7%). The dominance of internet banking fraud underscores the growing vulnerability of digital banking systems and online transactions. Banks should prioritize bolstering security measures in digital banking channels, focusing on internet banking security protocols. Additionally, improving staff training to recognize and prevent these fraud types is essential for enhancing fraud prevention efforts.

Table 14: Effectiveness of Fraud Protection Measures

Effectiveness Level	Count	Percentage (%)
Very Effective	13	10.1%
Effective	18	14.7%
Neutral	26	20.2%
Ineffective	39	30.2%
Very Ineffective	32	24.8%
Total	**129**	**100%**

Source: Field Survey 2024

Table 14 reveals that a significant proportion of bank staff (30.2%) consider fraud protection measures ineffective, while 24.8% rate them as very ineffective. Only 14.7% find them effective, and 10.1% rate them as very effective, suggesting widespread dissatisfaction with current fraud prevention systems. The results point to critical weaknesses in the existing strategies, highlighting the need for the bank to reevaluate and enhance its fraud prevention measures, possibly incorporating advanced technology and improving staff training.

Table 15: Challenges in Addressing Banking Fraud

Challenge	Count	Percentage (%)
Lack of Adequate Technology	32	24.8%
Insufficient Training of Staff	26	20.2%
Poor Customer Awareness	45	34.9%
Weak Internal Controls	19	14.7%
Other	7	5.4%
Total	**129**	**100%**

Source: Field Survey 2024

Table 15 identifies poor customer awareness (34.9%) as the most significant challenge in addressing banking fraud, followed by lack of adequate technology (24.8%) and insufficient staff training (20.2%). The findings suggest that banks should prioritize improving customer education on fraud risks, upgrading their technological infrastructure, and increasing staff training in fraud detection. Addressing these core challenges will enhance the bank's capacity to combat fraud effectively and safeguard customer interests.

Table 16: Effects of Banking Fraud

Effect of Banking Fraud	Frequency	Percentage (%)
Financial Loss	55	42.64%
Decline in Customer Trust and Satisfaction	60	46.51%
Increased Operational Costs Due to Fraud Prevention	50	38.76%
Legal and Regulatory Consequences	40	31.01%
Damage to the Bank's Public Image or Reputation	45	34.88%
Negative Impact on Employee Morale	35	27.13%
All of the Above	3	2.33%
Total	**129**	**100%**

Source: Field Survey 2024

Table 16 highlights the effects of banking fraud as reported by 129 bank staff respondents. A decline in customer trust and satisfaction was the most common effect (46.51%), followed by financial losses (42.64%) and increased operational costs due to fraud prevention measures (38.76%). Damage to the bank's reputation (34.88%) and legal or regulatory consequences (31.01%) were also significant concerns. Additionally, 27.13% reported negative impacts on employee morale, while only 2.33% indicated experiencing all the above effects. These findings emphasize the extensive consequences of banking fraud, underscoring the importance of improved prevention strategies, reputation management, and addressing both external and internal challenges.

Table 17: Recommendations to Improve Fraud Prevention

Recommendation	Responses	Percentage (%)
Enhanced Staff Training on Fraud Detection	29	22.5%
Investment in Advanced Fraud Detection Technology	29	22.5%
Increased Collaboration with Law Enforcement	28	21.7%
Improved Customer Fraud Awareness Programs	30	23.3%
Other	13	10.1%
Total	**129**	**100%**

Source: Field Survey 2024

Table 17 shows that the most common recommendation from bank staff is improved customer fraud awareness programs (23.3%), closely followed by enhanced staff training on fraud detection and investment in advanced fraud detection technology, each at 22.5%. These findings suggest that staff recognize the need for both internal and external efforts to combat fraud, emphasizing the importance of improving customer education, investing in cutting-edge technology, and ensuring that employees are adequately trained to detect and prevent fraud.

4.1.4 Questions for Law Enforcement Officers

This subsection summarizes survey findings from law enforcement officers about their experiences with banking fraud. Key focus areas include the types of fraud frequently encountered, the effectiveness of current prevention measures, and the challenges faced in combating fraud. Their insights are essential for identifying systemic issues and enhancing coordination between financial institutions and regulatory bodies to strengthen fraud prevention efforts.

Table 18: Types of Banking Fraud

Type of Fraud	Frequency	Percentage (%)
Internet Banking Fraud	20	39.53%
Credit Card Banking Fraud	10	30.23%
Loan Fraud	5	20.93%
Other	8	9.30%
Total	**43**	**100%**

Source: Field Survey 2024

Table 18 highlights that internet banking fraud (46.51%) is the most frequently encountered type of fraud by law enforcement officers, followed by credit card banking fraud (23.26%). Loan fraud accounts for 11.63% of cases, while other types of fraud make up 18.60%. The high incidence of internet banking fraud underscores the growing vulnerability of digital banking systems, which require immediate attention to bolster security measures. While credit card fraud also remains prevalent, efforts should be focused on enhancing the security of both digital banking platforms and payment methods. These results suggest a need for stronger fraud detection and prevention mechanisms across these common fraud types to ensure a comprehensive and effective anti-fraud strategy.

Table 19: Collaboration Effectiveness

Collaboration Effectiveness	**Frequency**	**Percentage (%)**
Very Effective	11	25.58%
Effective	13	30.23%
Neutral	9	20.93%
Ineffective	6	13.95%
Very Ineffective	4	9.30%
Total	**43**	**100%**

Source: Field Survey 2024

Table 19 presents law enforcement officers' perceptions of the effectiveness of collaboration between law enforcement and banks. A majority (55.81%) view the collaboration as either very effective (25.58%) or effective (30.23%). However, 24.25% of respondents are neutral or perceive it as ineffective (13.95%) or very ineffective (9.30%). These findings suggest that while the collaboration is generally considered effective, there is still room for improvement. Strengthening cooperation between law enforcement and banks could enhance the success of efforts to combat banking fraud, particularly by addressing the concerns of those who view the collaboration as neutral or ineffective.

Table 20: Challenges to Addressing Banking Fraud

Challenges in Addressing Banking Fraud	**Frequency**	**Percentage (%)**
Lack of Training	10	23.26%
Insufficient Resources	14	32.56%
Poor Collaboration with Banks	8	18.60%
Inadequate Legal Framework	8	18.60%
Other	3	6.98%
Total	43	100%

Source: Field Survey 2024

Table 20 identifies the main challenges law enforcement faces in addressing banking fraud. Insufficient resources (32.56%) and lack of training (23.26%) are the primary barriers. Poor collaboration with banks and an inadequate legal framework each account for 18.60% of responses, highlighting systemic issues that hinder effective fraud prevention. Addressing these challenges, particularly by improving resource allocation and providing targeted training, could significantly enhance law enforcement's capacity to combat banking fraud. Strengthening collaboration with banks and improving the legal framework would further optimize fraud prevention efforts.

Table 21: Recommendations

Recommendations to Enhance Fraud Prevention	Frequency	Percentage (%)
Increased Training for Law Enforcement	12	27.91%
Stronger Regulatory Framework	9	20.93%
Better Collaboration with Financial Institutions	8	18.60%
Enhanced Public Awareness Campaigns	11	25.58%
Other	3	6.98%
Total	43	100%

Source: Field Survey 2024

Table 20 highlights key recommendations from law enforcement officers to improve banking fraud prevention and prosecution. The top suggestions include increased training for law enforcement (27.91%) and enhanced public awareness campaigns (25.58%). Strengthening regulatory frameworks (20.93%) and fostering better collaboration with financial institutions (18.60%) were also emphasized. These findings underline the importance of building law enforcement capacity, educating the public, and reinforcing regulatory measures to create a more secure and fraud-resistant banking environment.

4.2 Logistic Regression Results

Logistic regression analysis was conducted to identify predictors of banking fraud experiences, with key demographic variables as independent factors.

Table 22: Logistic Regression Results

Variable	Coefficient (β)	Standard Error	Odds Ratio	p-value
Intercept	-1.200	0.250	-	0.000
Age	0.020	0.008	1.020	0.015
Gender (Male = 1)	0.600	0.200	1.822	0.003
Education Level				
Primary Education	0.900	0.300	2.460	0.002
Secondary Education	0.600	0.250	1.822	0.020
Tertiary Education	0.200	0.150	1.222	0.180
Other Education	-0.300	0.200	0.741	0.120
State of Residence				
Zamfara	-0.850	0.300	0.427	0.004
Kebbi	-0.560	0.250	0.571	0.015

Note: The regression results are based on logistic regression analysis conducted using SPSS. Data from the survey conducted in 2024 was used for the analysis.

The logistic regression analysis reveals several key predictors of fraud experience. Age shows a positive relationship with fraud likelihood ($\beta = 0.020$, $p = 0.015$), and males are 1.822 times more likely to experience fraud than females ($\beta = 0.600$, $p = 0.003$). Individuals with primary and secondary education are more vulnerable to fraud compared to those without formal education, but this effect weakens for tertiary and other education types. Regional factors also influence fraud risk: residents of Zamfara and Kebbi are less likely to experience fraud compared to those in Sokoto, likely due to the higher population density and greater concentration of banking activities in Sokoto, which may increase exposure to fraudulent schemes. These findings suggest that socio-economic and regional factors, including education and banking activity, significantly affect fraud susceptibility.

5.0 Summary, Conclusion, and Recommendations

This study explored the dynamics of banking fraud in Northwestern Nigeria, focusing on its prevalence, impacts, and strategies for mitigation. Data gathered from respondents in Sokoto, Kebbi, and Zamfara states revealed that 70.5% had experienced fraud, with internet banking fraud being the most common (49.7%). Logistic regression analysis identified several significant predictors of fraud vulnerability, including age, gender, education level, and state of residence. Younger individuals (aged 25–34) and male respondents were found to face higher risks of fraud, while higher education levels were associated with reduced vulnerability. Regional disparities also emerged, with Sokoto having the highest fraud prevalence, likely due to its higher banking activity.

The study revealed severe consequences for both customers and financial institutions. Among customers, 70% reported financial losses, 65% experienced diminished trust in banking institutions, and 43% suffered emotional distress. For banks, the challenges included declining customer satisfaction (75%), increased operational costs for fraud prevention (62.5%), and reputational damage (56.25%). These findings underscore the urgent need for comprehensive strategies to address fraud risks, restore customer trust, and safeguard the integrity of financial institutions.

5.2 Recommendations

1. Enhance Cybersecurity Measures: Implement AI-driven fraud detection systems and biometric verification

technologies to strengthen the security of digital banking.
2. Targeted Awareness Campaigns: Develop region- and demographic-specific programs to educate younger and less-educated customers about fraud risks and preventive measures.
3. Strengthen Regulatory Oversight: Enforce stricter compliance regulations, impose harsher penalties for fraudsters, and promote collaboration between regulators and financial institutions.
4. Localized Strategies: Introduce tailored solutions such as advanced monitoring systems in Sokoto and mobile fraud prevention units in Zamfara to address region-specific risks effectively.
5. Public-Private Partnerships: Collaborate with fintech firms, banks, and community organizations to expand access to secure financial services and promote financial literacy in underserved areas.

By implementing these recommendations, the study offers actionable insights to reduce banking fraud, rebuild public trust, and ensure the long-term stability of the financial system in Northwestern Nigeria.

References

ACFE. (2021). Report to the Nations: 2021 Gl obal Study on Occupational Fraud and Abuse. Association of Certified Fraud Examiners.

Adesina, K., & Odusanya, I. (2017). Financia l Fraud in Nigeria: A Critical Analysis of the Causes and Effects. Internationa l Journal of Accounting and Financial R eporting.

Adewale, A. (2019). Institutional Weaknesse s and Financial Fraud in Nigeria: A Re view of Challenges and Remedies. Jou rnal of Banking and Finance, 15(2), 45-58.

Akindele, R. I. (2011). Fraud as a Negative C atalyst in the Nigerian Banking Indust ry. Journal of Emerging Trends in Econ omics and Management Sciences (JETE MS), 2(5), 357–363.

Bell, E., & Bryman, A. (2007). The Ethics of M anagement Research : An Exploratory Content Analysis. British Journal of M anagement, 18(June), 63–77. https://d oi.org/10.1111/j.1467-8551.2006.00487. x

CBN. (2023). Central Bank of Nigeria: 2022 F inancial Fraud Statistics.

Clementina, K., & Isu, I. G. (2017). Security C hallenge , Bank Fraud and Commercia l Bank Performance in Nigeria : Journa l of Business and Management Securit y Challenge , Bank Fraud and Commer cial Bank Performance in Nigeria : An Evaluation. Journal of Business Manag ement, June 2016. https://doi.org/10.1 2735/jbm.v5n2p01

Cressey, D. R. (1953). Other People's Money: A Study in the Social Psychology of E mbezzlement.

Creswell, J. W., & Creswell, J. D. (2017). Rese arch design: Qualitative, quantitative, a nd mixed methods approaches. Sage p ublications.

Enofe, O. A., Abilogun, T. ., Omoolorun, A. J ., & Elaiho, E. M. (2017). Bank Fraud an d Preventive Measures in Nigeria : An Empirical Review. International Journa l of Academic Research in Business an d Social Sciences, 7(7). https://doi.org /10.6007/IJARBSS/v7-i7/2021

Field, A. (2017). Discovering Statistics Using IBM SPSS Statistics (5th ed.). SAGE Pu blication.

Folowosele, F. A., & Ikpefan, O. A. (2021). El ectronic Fraud : An emerging cause of Bank Failure in nigerian deposit mone y Banks. International Journal of Econo mics and Management Systems, 6, 340 –356.

Fowler, F. J. (2014). Survey Research Methods. Thousand Oaks, CA: SAGE Publications.

FTC. (2023). Consumer Sentinel Network: Data Book 2022. Federal Trade Commission.

Hosmer, J. D. W., Lemeshow, S., & Sturdivant, R. X. (2013). Applied logistic regression. John Wiley & Sons.

Ibietan, J., & Olutayo, O. (2018). (2018). Financial Fraud and Banking Sector Stability in Nigeria. Journal of Accounting, Finance, and Auditing Studies.

Idolor, E. J. (2010). Bank Frauds in Nigeria: Underlying Causes, Effects and Possible Remedies. African Journal of Accounting, Economics, Finance and Banking Research, 6(6), 62–8.

Inaya, L., & Isito, E. O. (2016). An Empirical Analysis of Social Impact of Fraud on the Nigerian Banking Industry. Research Journal of Finance and Accounting, 7(4), 12–17.

Manyo, T. S., Walter, M. H., Bassey, O. E., Wonah, O. G., Bekom, A., Ekpo, N. S., & Chike, E. C. (2023). Effect of Fraud on Commercial Banks ' Performance in Nigeria. ParadigmAcademic Press, 2(2), 69–78. https://doi.org/10.56397/FMS.2023.04.08

Mawutor, J. K. M., Enofe, A., & Embele, K. (2019). Fraud and Performance of Deposit Money Banks. Accounting and Finance Research, 8(2). https://doi.org/10.5430/afr.v8n2p202

Muritala, T., Ijaiya, M., Afolabi, O., & Yinus, A. (2020). Fraud and Bank Performance in Nigeria – Var Granger Causality Analysis. Financial Internet Quarterly, 16(1), 20–26. https://doi.org/10.2478/fiqf-2020-0003

NIBSS. (2023). Nigeria Inter-Bank Settlement System (NIBSS): Fraud Statistics Report for 2022.

Olelewe, C. A., & Onwumere, J. U. (2024). The Impact of Internet Banking on Bank Fraud in Nigeria. Asian Journal of Economics, Business and Accounting, 24(5), 510–524. https://doi.org/10.9734/AJEBA/2024/v24i51326

Ololade, B. M., Salawu, M. K., & Adekanmi, A. D. (2020). E-Fraud in Nigerian Banks : Why and How ? Journal of Financial Risk Management, 9, 211–228. https://doi.org/10.4236/jfrm.2020.93012

Owolabi, S. (2019). Regulatory Framework and Banking Sector Stability in Nigeria. European Journal of Accounting, Auditing and Finance Research.

Oyewunmi, O. A. (2020). The Impact of Financial Fraud on Nigeria's Economic Developmen. African Development Perspectives Yearbook.

Pallant, J. (2020). SPSS survival manual: A step by step guide to data analysis using IBM SPSS. Routledge.

Scott, W. R. (1995). Institutions and organizations. Thousand Oaks, CA: Sage Publications.

Tabachnick, B. G., & Fidell, L. S. (2019). Using Multivariate Statistics (7th ed.). Pearson.

Transparency International. (2022). Corruption Perceptions Index.

UK Finance. (2022). Fraud the Facts 2022.