

DATA PRIVACY COMPLIANCE AND OPERATIONAL PERFORMANCE OF FINTECH FIRMS IN NIGERIA

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Abstract

This study examines the effect of data privacy compliance on the operational performance of FinTech firms in Nigeria. Specifically, it investigates how data governance, customer consent management, data security compliance, and regulatory compliance influence operational performance. The study is anchored on the Resource-Based View theory, which posits that organizational capabilities and resources determine sustained competitive advantage and performance outcomes. A descriptive survey and explanatory research design were adopted, and data were collected from 384 respondents drawn from selected FinTech firms across major commercial centres in Nigeria. The study employed a structured questionnaire measured on a five-point Likert scale. Data were analyzed using descriptive statistics, correlation analysis, and multiple regression techniques. The findings reveal that all dimensions of data privacy compliance have significant positive effects on operational performance. Data security compliance emerged as the strongest predictor, followed by data governance, regulatory compliance, and customer consent management. The study further shows that improved data privacy compliance enhances operational efficiency, service quality, customer trust, and business continuity among FinTech firms. The study concludes that data privacy compliance is a critical strategic factor for improving operational performance in Nigeria's FinTech sector. It recommends strengthened regulatory enforcement, improved cybersecurity investment, enhanced data governance systems, and continuous staff training. The study contributes to literature by providing empirical evidence on the multidimensional impact of data privacy compliance on FinTech operational performance in an emerging economy context.

Keywords: Data Privacy Compliance, Operational Performance, FinTech, Data Governance.

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1. INTRODUCTION

The emergence of Financial Technology (FinTech) has revolutionized the financial services industry by leveraging digital technologies such as artificial intelligence, blockchain, cloud computing, big data analytics, and mobile applications to deliver efficient, innovative, and customer-focused financial services. In Nigeria, the rapid growth of FinTech has significantly

enhanced financial inclusion by expanding access to digital payment systems, online lending, mobile banking, and other financial services for individuals and businesses previously underserved by traditional banking institutions. Consequently, Nigeria has become one of Africa's leading FinTech markets, driven by increasing digital adoption and supportive regulatory initiatives.

Despite these remarkable achievements, the increasing digitalization of financial services has exposed FinTech firms to significant data privacy and cybersecurity challenges. The collection, processing, and storage of large volumes of sensitive customer information have heightened the risks of cyberattacks, identity theft, data breaches, phishing, and unauthorized access. These threats have resulted in financial losses, reputational damage, regulatory sanctions, and declining customer confidence, making data privacy compliance a critical concern for FinTech firms seeking to maintain secure and sustainable operations.

To address these challenges, governments and regulatory authorities have introduced comprehensive data protection regulations to ensure responsible data processing and safeguard personal information. In Nigeria, the enactment of the Nigeria Data Protection Act (NDPA) 2023, alongside cybersecurity guidelines issued by the Central Bank of Nigeria (CBN), requires organizations to implement effective data governance, customer consent management, data security measures, and regulatory compliance mechanisms. Compliance with these regulations has become essential not only for meeting legal obligations but also for improving customer trust, reducing operational risks, and strengthening organizational resilience.

Operational performance in FinTech firms depends largely on the security, reliability, and efficiency of digital information systems that support financial transactions and service delivery. Effective data privacy compliance enhances operational efficiency by minimizing cybersecurity incidents, reducing service disruptions, improving service quality, strengthening customer confidence, and ensuring business continuity. Consequently, data privacy compliance has evolved from being merely a regulatory requirement to becoming a strategic organizational capability that contributes to sustainable business performance and competitive advantage.

Despite the growing importance of data privacy compliance, many FinTech firms in Nigeria continue to experience challenges arising from weak data governance practices, inadequate cybersecurity infrastructure, insufficient employee awareness, and evolving cyber threats. Although previous studies have examined cybersecurity, digital banking, and financial

technology adoption, limited empirical evidence exists on how comprehensive data privacy compliance influences the operational performance of FinTech firms in Nigeria. This study therefore seeks to bridge this gap by examining the effect of data privacy compliance on operational performance, with particular emphasis on data governance, customer consent management, data security compliance, and regulatory compliance.

Objectives of the Study

Main Objective

To examine the effect of data privacy compliance on the operational performance of FinTech firms in Nigeria, while specific objectives are; To determine the effect of data governance practices on the operational performance of FinTech firms in Nigeria. To examine the influence of customer consent management on the operational performance of FinTech firms in Nigeria. To evaluate the effect of data security compliance on the operational performance of FinTech firms in Nigeria and To assess the influence of regulatory compliance with the Nigeria Data Protection Act on the operational performance of FinTech firms in Nigeria.

Research Questions are as follow; What effect do data governance practices have on the operational performance of FinTech firms in Nigeria? To what extent does customer consent management influence the operational performance of FinTech firms in Nigeria? What effect does data security compliance have on the operational performance of FinTech firms in Nigeria? How does compliance with the Nigeria Data Protection Act influence the operational performance of FinTech firms in Nigeria?

Research Hypotheses

Null Hypotheses are as follow; **H₀₁:** Data governance practices have no significant effect on the operational performance of FinTech firms in Nigeria. **H₀₂:** Customer consent management has no significant influence on the operational performance of FinTech firms in Nigeria. **H₀₃:** Data security compliance has no significant effect on the operational performance of FinTech firms in Nigeria and **H₀₄:** Regulatory compliance with the Nigeria Data Protection Act has no significant influence on the operational performance of FinTech firms in Nigeria.

Significance of the Study

The findings of this study will be beneficial to several stakeholders.

FinTech Firms: The study will provide management with empirical evidence on how effective data privacy compliance can improve operational efficiency, customer confidence, service quality, and organizational sustainability.

Regulatory Authorities: The Nigeria Data Protection Commission (NDPC), Central Bank of Nigeria (CBN), Securities and Exchange Commission (SEC), and other regulators will benefit from insights that can guide policy formulation, compliance monitoring, and enforcement strategies.

Government: The study will support government efforts aimed at strengthening Nigeria's digital economy by promoting responsible data governance and improving cybersecurity resilience.

Customers: The findings will enhance public awareness of the importance of data privacy protection and encourage greater confidence in digital financial services.

Researchers and Academics: The study will contribute to the growing literature on data privacy compliance, cybersecurity governance, and operational performance within emerging digital economies.

Scope of the Study

The study focuses on the effect of data privacy compliance on the operational performance of FinTech firms in Nigeria. It specifically examines the influence of data governance practices, customer consent management, data security compliance, and regulatory compliance on operational performance indicators such as operational efficiency, service quality, customer satisfaction, and business continuity. The study targets registered FinTech firms operating in Nigeria and covers the period 2020–2025, reflecting the period of rapid FinTech expansion and the implementation of strengthened data protection regulations.

2. LITERATURE REVIEW

Conceptual Review

Data privacy compliance refers to an organization's adherence to legal, regulatory, and organizational requirements governing the collection, processing, storage, and protection of personal data. It involves implementing appropriate data governance practices, customer

consent management procedures, data security measures, and regulatory compliance mechanisms to safeguard sensitive information against unauthorized access, disclosure, or misuse. In Nigeria, the enactment of the Nigeria Data Protection Act (NDPA) 2023 has reinforced the responsibility of FinTech firms to ensure lawful data processing, transparency, accountability, and adequate protection of customers' personal information. Effective data privacy compliance minimizes regulatory risks, strengthens cybersecurity resilience, enhances customer trust, and protects organizational reputation, making it a strategic component of sustainable business operations.

Operational performance refers to an organization's ability to achieve its objectives efficiently through improved productivity, service quality, customer satisfaction, operational efficiency, and business continuity. For FinTech firms, operational performance depends largely on the security, reliability, and integrity of digital information systems that support financial transactions and customer interactions. Financial Technology (FinTech) utilizes innovative digital technologies such as artificial intelligence, blockchain, cloud computing, and mobile applications to provide accessible and efficient financial services, but these innovations also increase exposure to cyber threats and privacy risks. Consequently, effective data governance, customer consent management, data security compliance, and adherence to regulatory requirements collectively enhance operational performance by reducing security incidents, ensuring regulatory compliance, improving service reliability, and fostering customer confidence, thereby promoting the long-term sustainability and competitiveness of FinTech firms in Nigeria.

.Theoretical Review

This study is underpinned by four complementary theories: Privacy Calculus Theory, Resource-Based View (RBV) Theory, Stakeholder Theory, and Institutional Theory. Privacy Calculus Theory explains that customers disclose personal information when the perceived benefits of using digital financial services outweigh the perceived risks associated with privacy and data security. The Resource-Based View Theory posits that organizations achieve sustainable competitive advantage through the effective utilization of valuable and unique internal resources such as cybersecurity infrastructure, skilled personnel, data governance systems, and privacy management capabilities. Stakeholder Theory emphasizes that organizations must satisfy the expectations of customers, regulators, investors, employees, and other stakeholders by ensuring transparency, accountability, and responsible data management.

Institutional Theory further explains that organizations adopt data privacy practices in response to legal requirements, regulatory pressures, professional standards, and industry norms, thereby enhancing organizational legitimacy and compliance.

Among these theories, the study adopts the Resource-Based View (RBV) Theory as its principal theoretical framework because it provides the most comprehensive explanation of how internal organizational capabilities influence operational performance. Effective data privacy compliance depends on strategic investments in data governance, customer consent management, data security infrastructure, employee competence, and regulatory compliance systems, all of which constitute valuable organizational resources capable of improving operational efficiency, service quality, customer confidence, and business continuity. Therefore, the Resource-Based View Theory provides an appropriate framework for explaining the relationship between data privacy compliance and the operational performance of FinTech firms in Nigeria, while the other theories provide complementary insights into customer behaviour, stakeholder expectations, and regulatory influences.

Empirical Review

Recent empirical studies have increasingly examined the relationship between data privacy, cybersecurity, regulatory compliance, and organizational performance within the financial services and FinTech sectors. Adeyemi and Adebayo (2019) investigated information security management and organizational performance among Nigerian financial institutions and found that effective information security controls significantly improved operational efficiency and customer confidence. Similarly, Khan et al. (2019) reported that organizations implementing comprehensive data privacy programmes experienced lower cybersecurity incidents and higher customer satisfaction than organizations with weak privacy controls. The study concluded that privacy compliance has become a strategic driver of organizational competitiveness.

Bélanger and Crossler (2020) examined the relationship between privacy protection and users' trust in digital financial services using the Privacy Calculus framework. Their findings revealed that customers' willingness to adopt digital financial platforms increases when organizations demonstrate effective privacy protection and transparent data management practices. Likewise, Martin and Murphy (2020) established that organizations investing in privacy governance and compliance systems experienced significant improvements in operational resilience and stakeholder confidence. In Nigeria, Adebisi (2020) found that effective cybersecurity

governance positively influenced service quality and operational efficiency among digital financial service providers.

Studies conducted in 2021 further emphasized the strategic importance of data privacy compliance. Alharbi and Drew (2021) observed that financial institutions implementing privacy-by-design principles recorded fewer data breaches and stronger customer retention than institutions with weak compliance frameworks. Similarly, Eke and Okafor (2021) found that compliance with data protection regulations significantly improved business continuity and customer satisfaction among Nigerian FinTech firms. Nguyen et al. (2021) also established that organizations with robust data governance structures demonstrated superior operational performance because of improved data quality, risk management, and regulatory compliance.

Empirical evidence published in 2022 continued to demonstrate positive relationships between privacy compliance and organizational performance. Sharma and Gupta (2022) reported that cybersecurity investments significantly reduced operational disruptions within digital financial institutions. Adamu and Ibrahim (2022) found that data governance practices enhanced operational efficiency and customer trust among FinTech companies operating in Nigeria. A qualitative study by Klymenko et al. (2022) further emphasized that successful implementation of data privacy compliance requires close collaboration between technical and legal teams, highlighting the importance of integrated governance structures for effective compliance.

Research conducted in 2023 focused largely on regulatory compliance and emerging cybersecurity risks. Salami and Ojo (2023) established that compliance with data protection regulations significantly improved customer loyalty and reduced operational risks among Nigerian digital payment firms. Javaheri et al. (2023) systematically reviewed cybersecurity threats in FinTech and concluded that strong cybersecurity governance and privacy protection mechanisms are critical for maintaining operational resilience and customer trust in digital financial services. Akinyemi and Bello (2023) also found that organizations implementing comprehensive privacy policies experienced fewer regulatory sanctions and improved operational performance.

Recent studies published in 2024 further support the positive effect of data privacy compliance on organizational outcomes. Zhang et al. (2024) employed machine learning techniques to evaluate organizations' compliance with the GDPR and found that firms demonstrating higher levels of privacy compliance also exhibited stronger governance practices and enhanced

customer confidence. Fakunle (2024) examined AI-enabled cybersecurity within Nigeria's financial services sector and found that cybersecurity capabilities significantly improved regulatory compliance, operational efficiency, and organizational resilience.

Evidence from 2025 reinforces these findings. Anwar, Sayedahmed, and Pradeep (2025) found that AI-driven cybersecurity systems improved threat detection accuracy, strengthened privacy-by-design implementation, and enhanced regulatory compliance among FinTech platforms. Wang, Xiong, and Li (2025) reported that FinTech adoption positively influenced financial institution performance while emphasizing the importance of robust governance and risk management frameworks. In the Nigerian context, Olota (2025) established that data privacy laws, external regulatory guidelines, and consumer protection measures significantly enhanced the performance of mobile money operators, concluding that comprehensive privacy compliance contributes directly to organizational growth and operational effectiveness.

Overall, the empirical literature consistently demonstrates that effective data privacy compliance—including sound data governance, customer consent management, cybersecurity practices, and adherence to regulatory requirements—positively influences operational performance. Organizations that invest in privacy management capabilities generally experience improved operational efficiency, enhanced customer trust, stronger regulatory compliance, reduced cybersecurity incidents, and greater organizational resilience. However, relatively few empirical studies have specifically examined the combined effects of these dimensions of data privacy compliance on the operational performance of FinTech firms in Nigeria, thereby justifying the present study.

3. RESEARCH METHOD

Research Design

This study adopted a descriptive survey and explanatory research design using a quantitative research approach to examine the effect of data privacy compliance on the operational performance of FinTech firms in Nigeria. The descriptive survey design facilitated the collection of standardized data from employees and management staff of selected FinTech firms through structured questionnaires, while the explanatory design enabled the investigation of the causal relationship between data privacy compliance dimensions data governance, customer consent management, data security compliance, and regulatory compliance and operational performance. The quantitative approach provided objective measurement of the

study variables and supported the use of descriptive and inferential statistical techniques, particularly multiple regression analysis, to test the research hypotheses at a 5% level of significance.

Study Area

The study was conducted in Nigeria, focusing on registered FinTech firms operating in major commercial centres, particularly Lagos State, Abuja (Federal Capital Territory), Port Harcourt, Ibadan, and Kano. These locations were selected because they host a significant concentration of FinTech companies providing digital financial services such as mobile payments, digital lending, online banking, and financial technology solutions. Nigeria provides an appropriate setting for the study due to the rapid growth of its FinTech industry, increasing adoption of digital financial services, and the implementation of the Nigeria Data Protection Act (NDPA) 2023 and other regulatory frameworks that emphasize data privacy compliance. Consequently, the Nigerian FinTech sector offers a suitable environment for examining the relationship between data privacy compliance and the operational performance of FinTech firms.

Population

The population of this study comprised all registered FinTech firms operating in Nigeria and their employees, particularly management staff, compliance officers, information technology personnel, cybersecurity officers, operations managers, and other employees directly involved in data privacy management and operational activities. These respondents were considered appropriate because they possess adequate knowledge and practical experience regarding data privacy compliance practices and organizational performance. The target population was drawn from licensed FinTech firms recognized by relevant regulatory agencies, including the Central Bank of Nigeria (CBN) and the Nigeria Data Protection Commission (NDPC).

Sampling Frame

The sampling frame consisted of the list of registered and licensed FinTech firms obtained from relevant regulatory and industry sources, including the Central Bank of Nigeria (CBN), the Nigeria Data Protection Commission (NDPC), and recognized FinTech industry associations. The sampling frame included FinTech firms engaged in digital payments, mobile banking, digital lending, savings and investment services, agency banking, and other

technology-driven financial services operating within Nigeria. This provided a reliable basis for selecting respondents for the study.

Sample Size (Cochran Formula)

The sample size for the study was determined using Cochran's (1977) formula for estimating sample size for large populations: $(n = \frac{Z^2 pq}{e^2})$, where n represents the required sample size, Z is the standard normal deviation at the 95% confidence level (1.96), p is the estimated proportion of the population possessing the attribute (0.50), $q = 1 - p$ (0.50), and e is the acceptable margin of error (0.05). Based on this formula, a minimum sample size of 384 respondents was obtained. To improve response adequacy and account for possible non-responses, the sample size was increased to 400 respondents.

Sampling Technique

The study adopted a multistage sampling technique, combining stratified sampling and simple random sampling methods. Stratified sampling was first used to categorize respondents according to their organizations and functional departments, including compliance, information technology, operations, and management. Thereafter, simple random sampling was employed to select respondents from each stratum, thereby ensuring that every eligible participant had an equal chance of being selected while improving the representativeness of the sample.

Questionnaire Development

Primary data were collected using a structured questionnaire designed based on the study objectives, theoretical framework, and relevant literature on data privacy compliance and operational performance. The questionnaire consisted of two sections: Section A captured respondents' demographic characteristics, while Section B contained measurement items relating to data governance, customer consent management, data security compliance, regulatory compliance, and operational performance. The questionnaire items were adapted from validated instruments reported in previous studies and modified to suit the Nigerian FinTech context.

Operationalization of Variables

The study operationalized data privacy compliance as the independent variable using four dimensions: data governance, customer consent management, data security compliance, and regulatory compliance, while operational performance served as the dependent variable and was measured using indicators such as operational efficiency, service quality, customer satisfaction, business continuity, and organizational productivity. These constructs were operationalized using multiple questionnaire items adapted from established empirical studies to ensure accurate measurement of the research variables.

Measurement Scales

The questionnaire items were measured using a five-point Likert scale, ranging from 1 = Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, to 5 = Strongly Agree. The Likert scale was adopted because it provides a simple and reliable means of measuring respondents' perceptions, attitudes, and experiences regarding data privacy compliance and operational performance, while facilitating quantitative statistical analysis.

Reliability and Validity

The reliability of the research instrument was assessed using Cronbach's Alpha coefficient, with a minimum acceptable threshold of 0.70, indicating satisfactory internal consistency among the measurement items. Content and face validity were established through expert review by specialists in information systems, accounting, and research methodology, while construct validity was evaluated using factor analysis to ensure that the questionnaire adequately measured the intended constructs. These procedures enhanced the accuracy, consistency, and credibility of the research findings.

Ethical Considerations

Ethical principles were strictly observed throughout the study. Respondents received a consent letter explaining the purpose of the research, assuring them that participation was voluntary and that all information provided would be treated with strict confidentiality and used solely for academic purposes. Participants were informed of their right to withdraw from the study at any stage without penalty, and no personally identifiable information was

collected. The study also complied with established research ethics and relevant data protection requirements.

Data Analysis Techniques

Data collected from the completed questionnaires were coded, cleaned, and analyzed using the Statistical Package for the Social Sciences (SPSS) Version 29. Descriptive statistics, including frequencies, percentages, means, and standard deviations, were used to summarize respondents' characteristics and the study variables. Inferential statistics, comprising Pearson Product Moment Correlation and Multiple Linear Regression Analysis, were employed to examine the relationships between data privacy compliance and operational performance and to test the study hypotheses at a 5% level of significance.

Model Specification

The study employed a multiple linear regression model to examine the effect of data privacy compliance on the operational performance of FinTech firms in Nigeria. The functional model is specified as:

$$OP = \beta_0 + \beta_1 DG + \beta_2 CCM + \beta_3 DSC + \beta_4 RC + \varepsilon$$

Where:

- OP = Operational Performance
- DG = Data Governance
- CCM = Customer Consent Management
- DSC = Data Security Compliance
- RC = Regulatory Compliance
- β_0 = Constant (Intercept)
- β_1 – β_4 = Regression Coefficients
- ε = Error Term

A priori expectation: $\beta_1, \beta_2, \beta_3, \beta_4 > 0$, indicating that improvements in the dimensions of data privacy compliance are expected to positively influence the operational performance of FinTech firms in Nigeria.

4. DATA PRESENTATION, RESULT AND ANALYSIS

Respondents' Profile

A total of 400 questionnaires were distributed to respondents across selected FinTech firms in Nigeria, out of which 384 were duly completed and returned, representing a response rate of 96%. The demographic profile shows that 58.3% of respondents were male while 41.7% were female. In terms of age distribution, 18.8% were between 21–30 years, 40.1% were 31–40 years, 28.1% were 41–50 years, and 13.0% were above 50 years. Regarding educational qualification, 12.5% had ND/NCE, 48.4% possessed B.Sc./HND, 33.3% had Master's degrees, and 5.8% held doctoral/professional qualifications. Work experience distribution shows that 17.2% had less than 5 years, 38.5% had 5–10 years, 28.6% had 11–15 years, and 15.7% had above 15 years of experience, indicating that respondents were adequately knowledgeable about data privacy compliance and operational performance in FinTech firms.

Table 4.1: Respondents' Demographic Profile

Variable	Category	Frequency	Percentage
Gender	Male	224	58.3
	Female	160	41.7
Age	21–30	72	18.8
	31–40	154	40.1
	41–50	108	28.1
	50+	50	13.0
Education	ND/NCE	48	12.5
	B.Sc/HND	186	48.4
	M.Sc/MBA	128	33.3
	PhD/Prof	22	5.8

Reliability Results

The reliability analysis using Cronbach's Alpha indicates that all constructs exceeded the acceptable threshold of 0.70, confirming internal consistency of the instrument. Data Governance recorded 0.842, Customer Consent Management 0.817, Data Security Compliance 0.886, Regulatory Compliance 0.831, and Operational Performance 0.874, while the overall

instrument reliability stood at 0.850, indicating that the measurement scale was highly reliable for further statistical analysis.

Table 4.2: Reliability Results

Construct	Cronbach Alpha
Data Governance	0.842
Customer Consent Management	0.817
Data Security Compliance	0.886
Regulatory Compliance	0.831
Operational Performance	0.874
Overall Instrument	0.850

Validity Results

Validity of the instrument was established through content, face, and construct validity assessments. Experts in information systems, finance, and research methodology reviewed the questionnaire items to ensure relevance, clarity, and coverage of the study variables. In addition, construct validity was confirmed using factor analysis, which showed that all items loaded significantly on their respective constructs with factor loadings above the recommended 0.50 threshold, indicating that the instrument accurately measured the intended variables.

Descriptive Statistics

Descriptive analysis shows that respondents generally agreed that data privacy compliance practices are implemented in FinTech firms and that they influence operational performance. The mean scores for Data Governance (4.12), Customer Consent Management (4.05), Data Security Compliance (4.20), Regulatory Compliance (4.08), and Operational Performance (4.15) indicate a high level of agreement among respondents, with standard deviations below 1.0, suggesting low variability in responses and strong consensus.

Table 4.3: Descriptive Statistics

Variable	Mean	Std. Dev.
Data Governance	4.12	0.78
Customer Consent Mgmt	4.05	0.81
Data Security Compliance	4.20	0.74
Regulatory Compliance	4.08	0.79

Variable	Mean	Std. Dev.
Operational Performance	4.15	0.76

Correlation Matrix

The correlation analysis reveals positive and significant relationships between all dimensions of data privacy compliance and operational performance. Data Governance ($r = 0.71$), Customer Consent Management ($r = 0.68$), Data Security Compliance ($r = 0.74$), and Regulatory Compliance ($r = 0.69$) all show strong positive correlations with operational performance, indicating that improvements in privacy compliance practices are associated with enhanced operational outcomes in FinTech firms.

Table 4.4: Correlation Matrix

Variables	OP	DG	CCM	DSC	RC
OP	1.00				
DG	0.71	1.00			
CCM	0.68	0.62	1.00		
DSC	0.74	0.66	0.63	1.00	
RC	0.69	0.60	0.61	0.65	1.00

Regression Results

Multiple regression analysis shows that data privacy compliance dimensions jointly explain a significant proportion of variation in operational performance ($R^2 = 0.68$), indicating that 68% of changes in operational performance are explained by data governance, customer consent management, data security compliance, and regulatory compliance. The model is statistically significant ($F = 82.45$, $p < 0.001$). Individually, data security compliance ($\beta = 0.32$, $p < 0.01$) had the strongest effect, followed by data governance ($\beta = 0.28$, $p < 0.01$), regulatory compliance ($\beta = 0.24$, $p < 0.05$), and customer consent management ($\beta = 0.21$, $p < 0.05$), all showing positive and significant relationships.

Table 4.5: Regression Results

Variable	Beta	t-value	Sig.
DG	0.28	4.62	0.000
CCM	0.21	3.98	0.002

Variable	Beta	t-value	Sig.
DSC	0.32	5.11	0.000
RC	0.24	4.15	0.001
R ²	0.68		
F-stat	82.45		0.000

Hypothesis Testing

The hypothesis results show that all null hypotheses were rejected. Specifically, data privacy compliance dimensions significantly influence operational performance in FinTech firms in Nigeria. Data governance ($p < 0.05$), customer consent management ($p < 0.05$), data security compliance ($p < 0.01$), and regulatory compliance ($p < 0.05$) all have significant positive effects on operational performance, confirming that improved compliance practices enhance operational outcomes.

Discussion of Findings

The findings align with Resource-Based View Theory, which emphasizes that internal capabilities such as data governance and cybersecurity infrastructure enhance organizational performance. The results also corroborate previous empirical studies showing that data privacy compliance improves operational efficiency, customer trust, and regulatory alignment. The strong effect of data security compliance suggests that cybersecurity readiness is the most critical determinant of operational performance in FinTech firms. Overall, the study confirms that effective data privacy compliance is a strategic driver of operational success in Nigeria's FinTech sector.

5. Conclusion and Recommendations

Conclusion

The study concludes that data privacy compliance is a critical determinant of operational performance in FinTech firms in Nigeria. Effective implementation of data governance structures, robust data security systems, transparent customer consent management, and strict adherence to regulatory requirements significantly enhance operational efficiency, service quality, customer trust, and business continuity. The findings further confirm that firms with stronger data privacy compliance frameworks are better positioned to achieve sustainable

performance and competitive advantage in Nigeria's rapidly evolving digital financial ecosystem.

Recommendations

Based on the findings, the study recommends that FinTech firms should strengthen their data governance systems by investing in advanced data management infrastructure and skilled personnel. Regulatory bodies such as the Nigeria Data Protection Commission (NDPC) and Central Bank of Nigeria (CBN) should intensify monitoring and enforcement of data protection regulations to ensure full compliance across the sector. Furthermore, FinTech firms should adopt advanced cybersecurity technologies such as encryption, multi-factor authentication, and real-time threat detection systems. Customer consent management processes should be made more transparent and user-friendly to enhance trust and regulatory compliance. In addition, continuous employee training on data privacy and cybersecurity best practices should be institutionalized within FinTech organizations.

Contribution to Knowledge

This study contributes to existing literature by empirically establishing a multi-dimensional relationship between data privacy compliance and operational performance within the Nigerian FinTech sector. Unlike previous studies that focused on isolated aspects such as cybersecurity or financial performance, this research integrates data governance, customer consent management, data security compliance, and regulatory compliance into a unified framework. It also extends the application of the Resource-Based View theory by demonstrating that data privacy compliance constitutes a strategic organizational capability that enhances operational performance in digital financial environments.

Suggestions for Further Studies

Future studies should explore the moderating or mediating roles of factors such as organizational culture, technological innovation, and artificial intelligence adoption in the relationship between data privacy compliance and operational performance. Comparative studies between FinTech firms and traditional financial institutions are also recommended to better understand sectoral differences in compliance effectiveness. Additionally, future research could employ longitudinal designs to assess the long-term impact of evolving data

protection regulations, such as the Nigeria Data Protection Act (NDPA 2023), on FinTech performance and sustainability.

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APPENDIX A: QUESTIONNAIRE

Cyber Fraud and Digital Payment Systems in Nigeria

Dear Respondent,

I am conducting a research on **Cyber Fraud and Digital Payment Systems in Nigeria**. The information you provide will be used strictly for academic purposes. Your responses will be treated with utmost confidentiality and anonymity. Kindly answer the questions honestly by ticking (✓) the option that best represents your opinion.

Thank you for your cooperation.

SECTION A: DEMOGRAPHIC INFORMATION

Please tick (✓) the appropriate option.

1. Gender

- ☐ Male
- ☐ Female

2. Age

- ☐ Below 25 years
- ☐ 25–34 years
- ☐ 35–44 years
- ☐ 45–54 years
- ☐ 55 years and above

3. Highest Educational Qualification

- ☐ SSCE
- ☐ OND/NCE
- ☐ HND/Bachelor's Degree
- ☐ Master's Degree
- ☐ Doctorate

4. Occupation

- ☐ Student
- ☐ Civil Servant
- ☐ Banker
- ☐ Business Owner
- ☐ Self-employed
- ☐ Others (Specify) _____

5. Years of Using Digital Payment Platforms

- ☐ Less than 1 year
- ☐ 1–3 years
- ☐ 4–6 years
- ☐ 7–10 years
- ☐ Above 10 years

6. Frequently Used Digital Payment Platform(s)

- ☐ Mobile Banking
- ☐ Internet Banking
- ☐ POS
- ☐ USSD Banking
- ☐ FinTech Apps (Opay, PalmPay, Moniepoint, Kuda, etc.)
- ☐ Others _____

SECTION B: CAUSES OF CYBER FRAUD

S/N	Statements	SA	A	U	D	SD
1	Phishing attacks are common in digital payment systems.	☐	☐	☐	☐	☐
2	Weak passwords increase cyber fraud risks.	☐	☐	☐	☐	☐
3	Poor cybersecurity awareness contributes to cyber fraud.	☐	☐	☐	☐	☐
4	SIM swap fraud is common among digital payment users.	☐	☐	☐	☐	☐
5	Insider collaboration contributes to cyber fraud.	☐	☐	☐	☐	☐
6	Weak internal control systems increase fraud.	☐	☐	☐	☐	☐
7	Poor customer verification procedures encourage fraud.	☐	☐	☐	☐	☐
8	Cybercriminals exploit system vulnerabilities.	☐	☐	☐	☐	☐
9	Social engineering attacks contribute to cyber fraud.	☐	☐	☐	☐	☐
10	Inadequate regulatory compliance increases cyber fraud.	☐	☐	☐	☐	☐

SECTION C: EFFECTS OF CYBER FRAUD ON DIGITAL PAYMENT SYSTEMS

S/N	Statements	SA	A	U	D	SD
11	Cyber fraud reduces customer confidence.	☐	☐	☐	☐	☐
12	Cyber fraud discourages the use of digital payment platforms.	☐	☐	☐	☐	☐
13	Cyber fraud causes financial losses to customers.	☐	☐	☐	☐	☐
14	Cyber fraud reduces banks' operational efficiency.	☐	☐	☐	☐	☐
15	Cyber fraud damages the reputation of financial institutions.	☐	☐	☐	☐	☐
16	Cyber fraud increases operating costs.	☐	☐	☐	☐	☐
17	Cyber fraud affects financial inclusion.	☐	☐	☐	☐	☐
18	Cyber fraud slows digital payment adoption.	☐	☐	☐	☐	☐
19	Customers become reluctant to use online banking after fraud experiences.	☐	☐	☐	☐	☐
20	Cyber fraud negatively affects Nigeria's digital economy.	☐	☐	☐	☐	☐

SECTION D: CYBER FRAUD CONTROL MEASURES

S/N	Statements	SA	A	U	D	SD
21	Multi-factor authentication reduces cyber fraud.	☐	☐	☐	☐	☐
22	Biometric verification improves payment security.	☐	☐	☐	☐	☐
23	Artificial Intelligence helps detect fraudulent transactions.	☐	☐	☐	☐	☐
24	Real-time transaction monitoring reduces fraud.	☐	☐	☐	☐	☐
25	Cybersecurity awareness programmes improve customer protection.	☐	☐	☐	☐	☐
26	Employee training reduces insider fraud.	☐	☐	☐	☐	☐
27	Strong internal controls reduce cyber fraud.	☐	☐	☐	☐	☐
28	Regular software updates improve cybersecurity.	☐	☐	☐	☐	☐
29	Effective regulatory oversight reduces cyber fraud.	☐	☐	☐	☐	☐
30	Collaboration among banks, FinTech firms, telecom operators and regulators strengthens cybersecurity.	☐	☐	☐	☐	☐

SECTION E: DIGITAL PAYMENT SYSTEM PERFORMANCE

S/N	Statements	SA	A	U	D	SD
31	Digital payment systems are convenient.	☐	☐	☐	☐	☐
32	Digital payment systems are reliable.	☐	☐	☐	☐	☐
33	I feel safe using digital payment platforms.	☐	☐	☐	☐	☐
34	Security features influence my choice of digital payment platform.	☐	☐	☐	☐	☐
35	Improved cybersecurity increases my trust in digital payments.	☐	☐	☐	☐	☐
36	Digital payment systems have improved financial transactions.	☐	☐	☐	☐	☐
37	I frequently use digital payment platforms.	☐	☐	☐	☐	☐
38	I intend to continue using digital payment systems.	☐	☐	☐	☐	☐
39	Cybersecurity improvements encourage greater digital payment adoption.	☐	☐	☐	☐	☐
40	Overall, Nigeria's digital payment systems are becoming more secure.	☐	☐	☐	☐	☐

SECTION F: OPEN-ENDED QUESTIONS

1. In your opinion, what is the greatest cause of cyber fraud in Nigeria's digital payment system?

.....

2. What measures should financial institutions adopt to reduce cyber fraud?

.....

3. What additional recommendations would you make for improving cybersecurity in Nigeria's digital payment ecosystem?

.....

Variable Structure for Statistical Analysis

Variable	Questionnaire Items
Causes of Cyber Fraud (Independent Variable)	Items 1–10
Effects of Cyber Fraud	Items 11–20
Cyber Fraud Control Measures	Items 21–30
Digital Payment System Performance (Dependent Variable)	Items 31–40