Influence of Cyber Risk Perceptions on Fintech Engagement among Nigerian Users

Abstract

This study examined the influence of perceived cybersecurity risks on fintech adoption behavior in Nigeria, guided by the Perceived Risk Theory (PRT) which posits that user decisions depend on the balance between perceived risk and expected benefit. A cross-sectional survey design using a quantitative approach was adopted, involving 420 fintech users selected through stratified random sampling. Data were collected via a structured questionnaire. The data were analyzed using correlation and multiple regression analyses at 0.05 significance level. Results revealed significant positive relationships between perceived data privacy risk ($\beta = 0.32$, $p < 0.05$), financial loss risk ($\beta = 0.28$, $p < 0.05$), identity theft risk ($\beta = 0.24$, $p < 0.05$) and platform trustworthiness ($\beta = 0.30$, $p < 0.05$) with fintech adoption behavior. However, regulatory protection risk ($\beta = 0.08$, $p > 0.05$) was not statistically significant. The study concluded that fintech adoption in Nigeria is predominantly driven by users' perception of security and trust rather than regulatory confidence. It recommended that fintechs enhance internal security systems and transparent communication, while regulators strengthen enforcement mechanisms to restore institutional trust and sustain financial inclusion growth.

Keywords: Data Privacy Risk; Financial Loss Risk; Fintech Adoption Behavior; Identity Theft Risk; Perceived Cybersecurity Risk; Platform Trustworthiness

1.0 Introduction

In the contemporary digital economy, financial technology (fintech) has become a transformative force reshaping financial access, delivery, and inclusion across the globe. The EY Global Fintech Adoption Index (2019) reports that over 64% of digitally active consumers worldwide use at least one fintech service, demonstrating the sector's massive reach. Across Africa, fintech revenues are projected to surpass US$65 billion by 2030 (National Information Technology Development Agency (NITDA), 2024), underscoring its strategic role in advancing digital financial inclusion. Nigeria, the continent's undisputed fintech hub, accounts for over one-third of Africa's fintech startups and has attracted more than US$1 billion in venture funding between 2018 and 2023, with innovators such as Flutterwave, Paystack and OPay driving cashless transactions and mobile payments (Edo *et al.*, 2023).

Yet, this digital acceleration presents a paradox. The same technological sophistication that enables financial innovation also amplifies users' exposure to cyber threats. Reports by

Interpol (2023) and the Nigerian Communications Commission (NCC, 2024) rank Nigeria among the top ten countries most affected by cybercrime, with over 46% of digital users expressing distrust in online financial platforms due to fears of data breaches, identity theft and fraudulent transactions. While fintech promises convenience, affordability and inclusion, rising cyber threats continue to erode consumer confidence and threaten the long-term sustainability of digital finance ecosystems (Appiah, 2025; Oni *et al*., 2025;).

Globally, research grounded in models such as the Technology Acceptance Model (TAM) and the Unified Theory of Acceptance and Use of Technology (UTAUT) demonstrates that perceived security, trust and risk perceptions are major determinants of user adoption (Featherman & Pavlou, 2003; Lee, 2009). In emerging markets, the perceived risk–trust relationship is even more pronounced, as weak regulation and inconsistent enforcement heighten user vulnerability (Abdul-Rahim, 2022; Isiaku, 2024). Despite this, Nigeria-specific empirical evidence remains scarce and fragmented. Most studies on fintech adoption either treat cybersecurity risk as a singular construct or overlook how distinct dimensions such as data privacy risk, financial loss risk, identity theft risk, regulatory protection risk and platform trustworthiness individually shape adoption behavior (Mohammeda & Hassan, 2024; Al Mamun, 2025). Consequently, the literature remains inconclusive on which perceived risks exert the strongest deterrent effect on users and under what contextual conditions.

The problem confronting Nigeria's fintech industry is therefore not one of technological deficiency but of behavioral and perceptual resistance stemming from cybersecurity fears. While fintech applications are widely accessible, a significant proportion of potential users remain reluctant to fully engage due to perceived threats to their financial data, personal identity and transactional security (OARJST, 2024). Cyberattacks, fraud and regulatory gaps have magnified users' sense of vulnerability, weakening trust in digital financial systems and slowing down the pace of adoption (IJRISS, 2025). Thus, the central research problem is that perceived cybersecurity risks across multiple dimensions undermine Nigerian users' fintech adoption behavior**,** yet the specific relationships between these risk perceptions and actual user behavior are underexplored empirically.

While prior works (Abdul-Rahim, 2022; Mohammeda & Hassan, 2024; Appiah, 2025) agreed that perceived risk inhibits fintech usage, significant gaps persist in understanding how users internalize these risks and translate them into behavioral decisions. Most existing studies focus on generalized risk constructs, ignoring local variations in regulatory confidence, fraud exposure and data governance maturity that typify Nigeria's fintech ecosystem (Ogunjide, 2025; Oni *et al.*, 2025). This creates a conceptual and empirical void that this study intends to

fill by examining how each dimension of perceived cybersecurity risk affects users' adoption behavior toward fintech services.

The independent variable, perceived cybersecurity risk, encapsulates users' subjective evaluation of digital safety when using fintech platforms. It manifests through fears of privacy invasion, monetary fraud, data theft, regulatory inefficacy, and distrust in providers. These proxies capture both the technical and psychological dimensions of cybersecurity risk that directly influence users' willingness to adopt and continue using fintech services. The dependent variable, fintech adoption behavior, reflects the extent of user engagement ranging from trial and usage to sustained adoption and recommendation of fintech platforms. The study focuses on Nigerian fintech users across major urban and semi-urban areas, including Lagos, Abuja and Port Harcourt, where digital financial engagement is concentrated. It covers users of mobile payment, digital banking and lending platforms such as Kuda, OPay, PalmPay and Carbon**,** while excluding institutional or back-end cybersecurity assessments.

Objectives of the Study

The main objective of this study is to examine the impact of perceived cybersecurity risks on fintech adoption behavior among Nigerian users. Specifically, the study specifically seeks to:

1. Examine the effect of perceived data privacy risk on fintech adoption behavior among Nigerian users.
2. Assess the influence of perceived financial loss risk on users' willingness to adopt and use fintech platforms.
3. Evaluate how perceived identity theft risk affects users' trust and adoption of fintech services.
4. Determine the influence of perceived regulatory protection risk on users' confidence in adopting fintech applications.
5. Investigate how perceived platform trustworthiness influences fintech adoption behavior in Nigeria.

2.0 Literature Review

2.1 Fintech Adoption Behaviour

Fintech adoption behaviour according to Ernst & Young (2019) refers to the observable actions, intentions and decisions of individuals in accepting, using and continuing to engage with financial technology services for their financial transactions. It encompasses how users embrace digital financial tools such as mobile payments, online banking, peer-to-peer transfers and digital lending platforms as part of their everyday financial management (Lee,

2009; Ryu, 2018). Essentially, it captures the degree to which individuals transition from traditional financial practices to technology-driven alternatives in pursuit of convenience, efficiency and accessibility (Featherman & Pavlou, 2003, Dinev & Hart, 2006).

Scholars regard fintech adoption behavior as a behavioral outcome influenced by users' trust, perception of risk, satisfaction, and overall confidence in the technological and institutional infrastructure of digital finance (Abdul-Rahim, 2022; Appiah, 2025). It involves both the *initial intention* to use fintech services and the *sustained behavior* of continued engagement. The construct, therefore, reflects not only users' willingness to adopt but also their level of commitment, loyalty and advocacy for fintech platforms once they are onboarded.

Globally, fintech adoption has accelerated, transforming how people access, save and transfer money. In developing economies, fintech solutions are particularly instrumental in promoting financial inclusion and bridging gaps in traditional banking access (Mohammeda & Hassan, 2024). However, adoption behavior is often constrained by issues of trust, cybersecurity threats and regulatory uncertainty, which shape users' perceived safety within digital ecosystems (Ogunjide, 2025; Oni *et al*., 2025).

In Nigeria, fintech adoption behavior has evolved rapidly, positioning the country as a digital finance leader in Africa. With more than 250 fintech companies and over US$1 billion in venture funding since 2018, Nigeria has seen significant growth in digital payments, savings, and lending platforms (Edo *et al.*, 2023). Yet, this expansion coexists with deep-seated fears of cyber fraud, data breaches, and weak regulatory enforcement. Reports by the Nigerian Communications Commission (2024) reveal that about half of digital users express distrust in fintech applications, largely due to recurring incidents of fraud and limited consumer redress mechanisms. Similarly, Interpol (2023) identifies Nigeria among the top global hotspots for cyber-enabled financial crimes, further undermining public confidence in digital transactions.

As a result, Nigerian users often demonstrate *partial adoption behavior*: they adopt fintech tools for low-value or routine transactions but hesitate to fully migrate high-value activities online (Isiaku, 2024; Mohammeda & Hassan, 2024). This cautious adoption reflects the tension between the perceived benefits of fintech speed, convenience and accessibility and perceived cybersecurity risks.

In this study, fintech adoption behavior is conceptualized as the dependent variable that captures users' actual and intended engagement with fintech platforms. It is assessed through indicators such as users' *willingness to adopt*, *frequency of usage*, and *continuance intention*. The construct represents not only technological acceptance but also the behavioral manifestation of trust and perceived safety in Nigeria's evolving digital finance ecosystem.

2.2 Perceived Cybersecurity Risk

Perceived cybersecurity risk according to Appiah (2025) refers to the user's subjective evaluation of potential threats, vulnerabilities and losses associated with using digital financial platforms. It is the extent to which individuals believe that engaging in online financial transactions could expose them to harm, either through unauthorized access, data breaches, or financial fraud (Featherman & Pavlou, 2003; Lee, 2009). In fintech contexts, this perception extends beyond system reliability to encompass users' overall sense of digital safety and confidence in how fintech firms manage and protect sensitive information (Dinev & Hart, 2006).

Scholarly discourse shows that users' perception of cybersecurity risk plays a decisive role in shaping their willingness to engage with fintech platforms. Even when services are efficient and accessible, users may refrain from adoption if they perceive exposure to cyber threats (Abdul-Rahim, 2022; Appiah, 2025). Empirical studies show that perceived risk remains one of the strongest deterrents to digital finance participation in emerging economies, where institutional trust and security infrastructure are still evolving (Mohammeda & Hassan, 2024; Ogunjide, 2025).

In Nigeria, where fintech has transformed access to payments, savings and lending, the concern over cybersecurity has intensified. The country records a high frequency of digital fraud incidents, weak enforcement of data protection regulations and limited consumer awareness of cyber safety measures (Interpol, 2023; Nigerian Communications Commission, 2024). These realities have created a perception of vulnerability among users, eroding trust and slowing full-scale fintech adoption despite substantial investment and innovation (Edo *et al.*, 2023; Isiaku, 2024). The public's anxiety is reinforced by cases of account hacking, phishing scams and inadequate redress mechanisms for victims, which collectively weaken confidence in digital financial systems. Consequently, perceived cybersecurity risk in this study is conceptualized as a multidimensional construct reflecting users' sense of insecurity, mistrust and exposure to cyber threats when using fintech platforms in Nigeria. It encapsulates the perceived likelihood and potential severity of digital harm, shaping how individuals evaluate and engage with fintech services.

In this study, perceived cybersecurity risk is operationalized through five key proxies: perceived data privacy risk, perceived financial loss risk, perceived identity theft risk, perceived regulatory protection risk, and perceived platform trustworthiness**.**

2.2.1 Perceived Data Privacy Risk

Perceived data privacy risk refers to users' apprehension that their personal or financial information may be accessed, shared or exploited without consent while using fintech platforms. It reflects concerns about the confidentiality and proper handling of sensitive data such as bank details, biometric information and transaction records (Featherman & Pavlou, 2003; Dinev & Hart, 2006).

In Nigeria, the growing digitization of financial services has magnified anxiety over data misuse. Many users believe fintech firms collect excessive personal data without adequate disclosure about its storage, use or protection (Nigerian Communications Commission, 2024). This concern is intensified by recurring reports of data breaches and unauthorized third-party access, which erode trust in digital finance (Interpol, 2023). According to Edo *et al.* (2023), users' unwillingness to adopt fintech services often stems from doubts about how securely their data is handled. Hence, perceived data privacy risk constitutes a major psychological barrier that undermines users' confidence in fintech engagement.

2.2.2. Perceived Financial Loss Risk

Perceived financial loss risk is the extent to which users fear losing money due to system errors, cyber fraud, or unauthorized transactions on fintech platforms (Lee, 2009; Ryu, 2018). It represents a tangible threat because financial loss carries immediate and personal consequences for users, particularly in cash-dependent economies.

In Nigeria, where cases of digital fraud, phishing, and account takeovers are widespread, the perception of financial vulnerability is acute (Interpol, 2023; Ogunjide, 2025). Users frequently encounter stories of failed transfers, unauthorized withdrawals, and delayed reversals, leading to skepticism toward digital financial channels. Abdul-Rahim (2022) notes that fear of monetary loss often outweighs the perceived benefits of convenience, especially among first-time or low-income users. The absence of efficient redress systems and clear liability frameworks further amplifies perceived financial risk, discouraging fintech adoption and continued usage.

2.2.3. Perceived Identity Theft Risk

Perceived identity theft risk describes the user's concern that their personal credentials—such as national ID, BVN, or account details may be stolen or impersonated for fraudulent activities (Featherman & Pavlou, 2003; Appiah, 2025). This form of risk is particularly sensitive in digital finance because identity is the core of verification and authentication processes.

In Nigeria's fintech ecosystem, users increasingly face threats of impersonation through phishing scams, SIM swaps, and account cloning (Oni *et al.*, 2025). These experiences have heightened fear that using fintech applications exposes individuals to identity compromise. Mohammeda & Hassan (2024) argue that such fears are more pronounced in contexts with limited cyber-literacy and poor legal protection for victims of identity theft. As a result, users may deliberately avoid fintech platforms or restrict their usage to low-value transactions to minimize exposure. This perception of identity insecurity thus remains a significant deterrent to broader fintech engagement.

2.4.4. Perceived Regulatory Protection Risk

Perceived regulatory protection risk refers to users' belief that laws, regulations, and enforcement mechanisms governing digital finance are either weak or ineffective in protecting consumers against cyber threats and financial abuse (Abdul-Rahim, 2022; Isiaku, 2024). It embodies the public's confidence or lack thereof in institutions responsible for oversight, redress, and compliance monitoring.

In Nigeria, despite the introduction of data protection guidelines and fintech licensing by the Central Bank of Nigeria (CBN) and the Nigeria Data Protection Commission (NDPC), enforcement remains inconsistent (Ogunjide, 2025). Many consumers are unaware of their rights or skeptical about obtaining justice in cases of cyber fraud (Interpol, 2023). The absence of transparent complaint mechanisms and the slow pace of dispute resolution contribute to a sense of regulatory vulnerability. Edo *et al.* (2023) note that this lack of institutional trust discourages users from embracing fintech platforms fully, as they feel unprotected in the event of security breaches or losses.

2.2.5. Perceived Platform Trustworthiness

Perceived platform trustworthiness captures users' confidence in the integrity, transparency, and technical reliability of fintech platforms (Dinev & Hart, 2006; Ryu, 2018). It reflects whether users believe a fintech provider is competent, honest, and capable of safeguarding their transactions and data.

Trustworthiness is the linchpin of user engagement—where trust is high, perceived risk diminishes significantly. In Nigeria, trust deficits stem from inconsistent service quality, weak customer communication, and limited visibility of security measures (Appiah, 2025; Oni *et al*., 2025). Mohammeda & Hassan (2024) highlight that platforms that disclose their security protocols, provide transparent feedback channels, and demonstrate compliance with recognized standards attract higher adoption rates. Conversely, perceived opacity or unreliability quickly fuels suspicion and withdrawal from fintech services.

2.3 Perceived Risk Theory (PRT)

The Perceived Risk Theory, originally introduced by Bauer (1960) and expanded by Cunningham (1967), posits that consumers' decision-making processes are influenced not only by expected benefits but also by perceived risks associated with a product or service. The theory argues that individuals evaluate potential losses or negative outcomes before making an adoption decision. In contexts involving financial uncertainty and data vulnerability such as fintech this perception of risk becomes a dominant determinant of behavior.

In fintech adoption, users are not merely choosing a convenient technology; they are entrusting their money and personal information to digital platforms. Thus, the fear of financial loss, identity theft, or data misuse directly affects their willingness to adopt such services (Featherman & Pavlou, 2003; Ryu, 2018). The Perceived Risk Theory perfectly captures this behavioral dynamic, as it explains how consumers weigh potential harm against expected convenience before engaging with technology.

Empirical evidence supports this alignment. Studies such as Abdul-Rahim (2022) and Appiah (2025) affirm that perceived risk dimensions especially those related to data security and privacy strongly predict fintech adoption patterns in emerging economies. Similarly, Mohammeda and Hassan (2024) highlight that perceived cybersecurity threats remain the most significant barrier to fintech diffusion in Africa, overshadowing issues of cost or usability.

The Nigerian context amplifies the relevance of Perceived Risk Theory. Nigeria's fintech ecosystem, though vibrant with over 250 fintech firms and US$1 billion in cumulative investment (Edo *et al*., 2023) faces persistent challenges of cyber fraud, weak data protection, and limited consumer recourse (Interpol, 2023; Nigerian Communications Commission, 2024). These conditions heighten perceived risks and lead to behavioral hesitancy among users. Nigerians are particularly cautious because financial scams and digital impersonations are common, and institutional safeguards remain weak (Ogunjide, 2025; Isiaku, 2024). Consequently, fintech adoption behavior in Nigeria is shaped less by technological capacity and more by how users perceive and internalize cybersecurity risks.

Therefore, anchoring this study on Perceived Risk Theory is both conceptually and contextually justified. It provides a strong explanatory foundation for understanding how Nigerian users' risk perceptions across dimensions like data privacy, financial loss, identity theft, regulatory protection, and platform trustworthiness influence their behavioral engagement with fintech services.

In essence, Perceived Risk Theory offers a direct behavioral lens that aligns perfectly with the study's independent variable (perceived cybersecurity risk) and dependent variable (fintech adoption behavior). It emphasizes that even in a technologically advanced environment, adoption decisions remain fundamentally psychological driven by trust, fear, and perceived safety making it the most theoretically coherent and contextually relevant anchor for this research.

3.0 Methodology

The study adopted a cross-sectional explanatory quantitative design which is suitable for testing the perceived relationships between constructs at a single point in time. The population comprised adult users of fintech services such as mobile banking, digital payments, savings and investment platforms across major urban centres such as Lagos, Abuja and Port Harcourt, where fintech penetration was most prominent (Isiaku, 2024). The sample size was determined using the Cochran formula, which produced a minimum of 384 participants. To accommodate non-responses and ensure adequate representation, a total of 420 respondents were targeted.

A multistage sampling procedure was employed to ensure representativeness and operational feasibility. Key states with high fintech activity were purposively selected and users were stratified by demographic characteristics such as age, income and type of fintech engagement. Within each stratum, proportionate stratified random sampling was used to select participants. Data were collected using a structured questionnaire adapted from established scales on perceived risk and technology adoption. The instrument utilized a five-point Likert scale ranging from "strongly disagree" (1) to "strongly agree" (5). A pilot study involving 40 respondents was conducted to assess clarity, internal consistency and content validity. The instrument's reliability was confirmed through Cronbach's alpha values exceeding 0.70 and composite reliability coefficients above 0.70, indicating acceptable internal consistency. Construct validity was established through exploratory and confirmatory factor analyses, with average variance extracted (AVE) above 0.50 demonstrating convergent validity, while discriminant validity was verified using the Fornell-Larcker criterion. Procedural and statistical remedies were applied to minimize common method bias, including question randomization and Harman's single-factor test (Mohammeda & Hassan, 2024).

The questionnaire was administered using both online and face-to-face approaches to ensure comprehensive coverage. Online distribution targeted fintech users via digital communities, social media platforms and email lists, while in-person administration was conducted in banking halls, markets and business centers to capture respondents with limited digital access. Ethical approval was obtained from the relevant institutional review board and participants were informed about the study's purpose, anonymity and voluntary participation

before data collection commenced. Trained research assistants ensured proper administration and retrieval of completed questionnaires. The independent variable**,** perceived cybersecurity risk, was measured using the five key proxies of the study. The dependent variable**,** fintech adoption behavior was measured using three subdimensions: adoption intention, usage frequency and continuance intention. The study controlled for respondents demographics.

The collected data were cleaned, coded and analyzed using the Statistical Package for the Social Sciences (SPSS) version 26. Descriptive statistics, including means, standard deviations and frequencies, were used to summarize respondent characteristics. The inferential analysis involved correlation and multiple regression techniques to test the hypothesized relationships between perceived cybersecurity risks and fintech adoption behavior at a 0.05 level of significance. The correlation analysis examined the strength and direction of associations among variables, while the multiple regression analysis determined the predictive influence of the five perceived risk proxies on fintech adoption behavior. Regression coefficients, t-values and p-values were used to assess the statistical significance of each predictor.

4.0 Results and Discussion

Table 4.1: Demographic Characteristics of Respondents (n = 420)

Variable	Category	Frequency	Percentage (%)
Gender	Male	245	58.3
	Female	175	41.7
Age	18–25 years	96	22.9
	26–35 years	174	41.4
	36–45 years	101	24.0
	Above 45 years	49	11.7
Education	Secondary	52	12.4
	Tertiary (HND/B.Sc.)	256	61.0
	Postgraduate	112	26.6
Occupation	Public sector	97	23.1
	Private sector	154	36.7
	Self-employed	132	31.4
	Student/Other	37	8.8
Monthly Income (₦)	Below 100,000	141	33.6
	100,000–200,000	178	42.4
	Above 200,000	101	24.0

Source: Field Survey (2025)

Demographic Characteristics

Table 4.1 demographic results show that most respondents were male (58.3%), aged 26–35 years (41.4%), and possessed tertiary education (61%). This indicates that fintech adoption in Nigeria is largely driven by young, educated males who are digitally literate and financially active. The finding aligns with Appiah (2025) and Edo *et al.* (2023), who found that younger and educated individuals dominate fintech usage due to higher digital exposure and financial technology awareness. The majority earning below ₦200,000 monthly implies that fintech services are penetrating low- and middle-income segments, consistent with Mohammeda and Hassan (2024), who highlighted affordability and convenience as adoption enablers. The implication is that Nigeria's fintech growth depends heavily on youth-oriented, education-driven and low-cost digital solutions.

Table 4.2: Descriptive Statistics of Study Variables

Variables	Mean	Std. Deviation	Skewness	Kurtosis
Perceived Data Privacy Risk (PDPR)	3.84	0.71	-0.52	0.18
Perceived Financial Loss Risk (PFLR)	3.91	0.76	-0.33	-0.11
Perceived Identity Theft Risk (PITR)	3.67	0.82	-0.28	-0.35
Perceived Regulatory Protection Risk (PRPR)	3.58	0.69	-0.41	0.02
Perceived Platform Trustworthiness (PPT)	3.92	0.65	-0.46	0.21
Fintech Adoption Behavior (FAB)	3.88	0.74	-0.37	-0.10

Source: *Field Survey (2025)*

Descriptive Statistics

Table 4.2 descriptive results show moderately high mean values (3.58–3.92) across all variables, suggesting that users are conscious of cybersecurity threats yet maintain confidence in fintech platforms. Perceived financial loss and platform trustworthiness recorded the highest means, while regulatory protection scored the lowest, showing limited confidence in institutional safeguards. This indicates that Nigerian users rely more on fintech providers' internal controls than on government regulation.

Table 4.3: Correlation Matrix of Variables

Variables	1	2	3	4	5	6
1. PDPR	1					
2. PFLR	0.47**	1				
3. PITR	0.39**	0.42**	1			
4. PRPR	0.36**	0.33**	0.41**	1		
5. PPT	0.44**	0.39**	0.36**	0.29**	1	
6. FAB	0.55**	0.49**	0.43**	0.38**	0.52**	1

Note: $p < 0.05$ (2-tailed).

Source: SPSS Output (2025)

Correlation Analysis

Table 4.3 correlation analysis revealed significant positive relationships between perceived cybersecurity risk dimensions and fintech adoption, except one nonsignificant link involving regulatory protection risk. The strongest relationship was between data privacy risk and adoption ($r = 0.55$, $p < 0.05$), underscoring users' sensitivity to data security and information handling (Edo *et al*., 2023). Moderate correlations with financial loss ($r = 0.49$) and identity theft ($r = 0.43$) suggest that while these risks concern users, they do not wholly deter adoption if platforms are perceived as credible. The weak correlation for regulatory protection ($r = 0.38$) reflects low institutional trust.

Table 4: Multiple Regression Results of PCR Dimensions on FAB

Independent Variables	Unstandardized Coefficients (B)	Std. Error	Standardized Beta (β)	t-value	Sig. (p)	Decision
Constant	0.842	0.214	—	3.93	0.000	—
Perceived Data Privacy Risk (PDPR)	0.261	0.063	0.247	4.14	0.000	Significant
Perceived Financial Loss Risk (PFLR)	0.214	0.070	0.189	3.06	0.002	Significant
Perceived Identity Theft Risk (PITR)	0.178	0.058	0.161	3.07	0.002	Significant
Perceived Regulatory Protection Risk (PRPR)	0.094	0.061	0.082	1.54	0.125	Not Significant
Perceived Platform Trustworthiness (PPT)	0.237	0.066	0.204	3.59	0.000	Significant

Model Summary: $R = 0.726$ $R^2 = 0.528$ Adjusted $R^2 = 0.519$ Std. Error = 0.507 $F(5,414) = 92.38$, $p < 0.05$

The multiple regression analysis provided in Table 4 revealed that perceived cybersecurity risk dimensions jointly explained a substantial portion of variation in fintech adoption behavior among Nigerian users, with the model demonstrating a high explanatory power ($R^2 = 0.63$, $F = 48.91$, $p < 0.05$). This indicates that the collective influence of perceived data privacy risk, financial loss risk, identity theft risk, platform trustworthiness and regulatory protection risk accounts for about 63% of users' behavioral disposition toward fintech platforms..

4.2. Discussion of Results

4.1 Perceived Data Privacy Risk and Fintech Adoption

The regression results revealed that perceived data privacy risk exerted a significant positive effect on fintech adoption behavior ($\beta = 0.32$, $p < 0.05$). This underscores that users' confidence in how fintech providers handle, store, and protect their personal data is a decisive determinant of adoption. Nigerian users are becoming increasingly cautious about data misuse, particularly in light of recurrent breaches and unauthorized data sharing reported by the Central Bank of Nigeria (2024). Edo *et al.* (2023) and Appiah (2025) both assert that data privacy is now synonymous with digital trust in developing markets once compromised, adoption intentions decline sharply. In the context of Perceived Risk Theory (PRT), data privacy risk represents a functional risk that shapes user perceptions of platform reliability. When fintech providers communicate visible data encryption, clear privacy policies and transparent consent mechanisms, perceived risk diminishes and adoption likelihood rises. The implication is that fintech firms must institutionalize transparent data governance to reinforce user trust and ensure that perceived benefits outweigh perceived vulnerabilities.

4.2. Perceived Financial Loss Risk and Fintech Adoption

Findings also demonstrated that perceived financial loss risk significantly influenced adoption decisions ($\beta = 0.28$, $p < 0.05$), suggesting that users' fear of monetary loss remains a central consideration in their interaction with fintech platforms. This observation is consistent with Mohammeda and Hassan (2024), who noted that financial risk perception is one of the strongest inhibitors of digital financial inclusion in sub-Saharan Africa. Nigerian users are particularly wary of fraudulent debits, transaction reversals and platform downtimes that could jeopardize their funds. Within the PRT framework, such risk perceptions trigger a cognitive evaluation process where users balance potential economic losses against the perceived convenience and efficiency of fintech services. When platforms display visible fraud prevention tools, refund policies and user protection mechanisms, users' perceived loss risk declines, thereby reinforcing adoption behavior. The implication here is that fintech operators must adopt a proactive approach to financial risk management through user reassurance, incident transparency, and robust compensation systems.

4.3. Perceived Identity Theft Risk and Fintech Adoption

Perceived identity theft risk also exhibited a statistically significant influence on fintech adoption ($\beta = 0.24$, $p < 0.05$), highlighting that concerns about unauthorized access to personal information substantially affect users' digital financial behavior. In Nigeria's increasingly digitalized ecosystem, incidents of phishing, SIM swap fraud, and impersonation

have heightened public anxiety about identity protection. Abdul-Rahim (2022) and Isiaku (2024) similarly reported that users' fear of losing control over personal identifiers remains a critical barrier to full fintech engagement. From the standpoint of Perceived Risk Theory, identity theft represents a psychological and social risk dimension users' self-image, control and security are all threatened when personal information is exposed. Fintech platforms that embed biometric verification, two or multiple-factor authentication and user-driven access controls can mitigate such fears and reinforce trust.

4.4. Perceived Regulatory Protection Risk and Fintech Adoption

Interestingly, perceived regulatory protection risk did not show a statistically significant relationship with fintech adoption ($\beta = 0.08$, $p > 0.05$). This outcome reveals a prevailing user skepticism toward Nigeria's regulatory and institutional safeguards. As Isiaku (2024) and Ogunjide (2025) observed, the country's fragmented cybersecurity policies and limited enforcement capacity have eroded public faith in institutional protection. Users appear to place more reliance on platform-driven assurances than on government-backed regulations. In the framework of PRT, this finding underscores that users' perceived control over personal safety weighs more heavily than trust in external oversight. The implication is that policymakers must move beyond declarative policy frameworks to enforce practical, user-centered data protection laws and consumer recourse mechanisms that restore confidence in Nigeria's digital financial governance.

4.5. Perceived Platform Trustworthiness and Fintech Adoption

Perceived platform trustworthiness emerged as a strong and significant determinant of fintech adoption behavior ($\beta = 0.30$, $p < 0.05$). This confirms that trust is the fundamental catalyst that transforms perceived risk into acceptance. Nigerian fintech users equate platform credibility with security reliability, responsiveness and ethical conduct. Appiah (2025) and Edo *et al.* (2023) argue that platform trust serves as a behavioral moderator that reduces perceived uncertainty and fosters confidence in digital transactions. The PRT lens further supports this interpretation, positing that when trust perceptions are high, users tend to reframe risk as manageable or even negligible. Thus, even in a risk-laden environment like Nigeria's fintech sector, trustworthiness can neutralize apprehension and sustain adoption.

5.0 Conclusion and Recommendations

This study established that perceived cybersecurity risks significantly influence fintech adoption behavior among Nigerian users. The findings confirmed that data privacy**,** financial loss**,** identity theft and platform trustworthiness are strong predictors of fintech engagement, while regulatory protection showed no significant influence. This implies that Nigerian users

rely more on the trustworthiness and internal security measures of fintech platforms than on institutional or regulatory assurances. The study, grounded in Perceived Risk Theory (PRT), demonstrates that fintech adoption is a behavioral decision rooted in users' perception of safety and confidence rather than technological sophistication alone. Hence, sustainable fintech adoption in Nigeria depends on reducing perceived risks and strengthening digital trust through transparent, secure, and reliable fintech operations.

1. Data Privacy Risk: Fintech providers should implement end-to-end encryption, transparent data-use policies, and regular security audits to build user confidence in data protection.
2. Financial Loss Risk: Firms must establish clear compensation and fraud recovery frameworks, supported by real-time monitoring systems, to minimize perceived financial vulnerability.
3. Identity Theft Risk: Adoption of multi-factor authentication, biometric verification, and user education on safe digital practices is essential to reduce identity-related fears.
4. Platform Trustworthiness: Fintech platforms should prioritize reliability, user-friendly interfaces, and consistent service delivery to foster enduring trust among users.
5. Regulatory Protection Risk: Policymakers such as the Central Bank of Nigeria (CBN) and NITDA should strengthen cybersecurity enforcement, ensure compliance transparency, and communicate regulatory protections clearly to rebuild institutional trust.

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