

Financial Technology Innovation and Non-Financial Performance in the Nigerian Banking System

Oge Augustine Sunday

Bamidele Olumilua University of Education, Science and Technology, Ikere Ekiti (Bouesti),

Department of Management Science

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ABSTRACT

The study investigates the relationship between financial technology innovation and non-financial performance in the Nigerian banking system, with a focus on the complex dynamics of FinTech adoption, the perception of innovation culture, digital security perception, and customer happiness in the Nigerian banking industry. The study used a descriptive survey research technique, with a specific focus on undergraduate students at Bamidele Olumilua University of Education, Science and Technology, Ikere Ekiti. The population of the institution consisted of around 7500 students, and a sample size of 380 students was estimated using Taro Yamale's technique. The reliability study validated the coherence of the self-structured questionnaire, attaining a score of 0.82. The results emphasize the substantial influence of the rate at which Fin Tech is adopted on customer satisfaction inside the banking system of Nigeria. The Chi-Square value of 119.8 and a p-value less than 0.001 suggest a strong statistical relationship, highlighting the significant impact of FinTech adoption on overall customer satisfaction in the Nigerian banking system. Moreover, the research indicates that there is a notable impact of the perception of innovation culture on customer satisfaction within the banking system of Nigeria. This is supported by a Chi-Square value of 113.7 and a pvalue below 0.001, indicating a robust statistical correlation. Furthermore, the research highlights a significant impact of Digital Security Perception on Customer Satisfaction in the Nigeria Banking System, as shown by a Chi-Square value of 192.3 and a p-value below 0.001. This highlights the substantial influence of the perception of digital security on influencing the overall level of consumer satisfaction in the Nigerian banking industry. In light of these findings, recommendations for the Nigerian banking sector include enhancing FinTech integration to meet evolving customer needs, cultivating an innovation culture, strengthening digital security measures, implementing regular customer feedback mechanisms, and undertaking educational initiatives to increase customer awareness and understanding. It is essential to implement these ideas in order to create a banking environment that prioritizes the needs of customers and guarantees long-term happiness in the digital age.

Keywords: Financial Technology (Fin Tech), Customer Satisfaction, Innovation Culture Perception, Digital Security Perception

INTRODUCTION

Background to the Study

Technology Services are crucial professional services in today's corporate environment. They strive to enable the smooth integration and exploitation of technology by enterprises and consumers (Almulla, Dur,

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& Aljughaiman, 2021). This entails the delivery of specialized, technology-focused solutions that integrate the complex processes and operations of software, hardware, networks, telecommunications, and electronics. Technology's dynamic progression has transformed it into an essential Information and Communication Technology (ICT) instrument for development, particularly in places such as Africa. It has shown its ability to overcome infrastructural obstacles, especially in distant and rural areas.

FinTech, short for Financial Technology, is a powerful force that brings about a fundamental change in how financial services are provided (Chishti & Barberis, 2016). This research examines the changing customer satisfaction scenario in Nigerian banks, with a specific emphasis on important aspects such as Customer Feedback and Reviews, Transaction Success Rate, and Digital Experience Satisfaction.

The banking industry has shifted its attention from just emphasizing financial performance indicators, as emphasized by Frank and Binaebi (2019). They highlight that the sector has seen a surge in awareness, recognizing the utmost significance of client satisfaction as the primary driving force behind financial institutions. The Nigerian banks are undergoing a significant transformation in their approach to evaluating and navigating their strategies in the age of FinTech and digital disruption. This transformation involves adopting a more comprehensive and integrated assessment methodology.

Traditionally, Nigerian banks, like banks across the world, primarily focused on generating revenue and maximizing profit margins. However, Heidy et al. (2022) remark that the digital revolution has brought in a new lexicon, stressing user experience, data security, and prompt customer service as the currency of consumer happiness. This transformation is not mere trend-chasing; rather, it emerges from a deeper awareness of the symbiotic link between delighted consumers and long-term profitability.

Nigerian banks are responding to this fundamental change by aggressively listening to the opinions and feedback of their customers, as examined by Hota, Nasim, and Mishra (2013). Through surveys, social media interactions, and specific feedback channels, banks engage in strategic discussions to interpret the wants and fears of their clients. These interactions are not simple afterthoughts but deliberate instruments directing innovation and adaptation in the face of a continuously dynamic world.

This focus on customer happiness in the Nigerian banking industry is not a naive replication of worldwide trends; it is a conscious dance to the distinctive beat of the Nigerian market. Ijeoma, Akujor, and Mbah (2020) illustrate how Nigerian banks are employing consumer input as a compass to traverse the unknown seas of FinTech breakthroughs and adjust their services to local desires. Researchers and industry experts, such as John and Rotimi (2014) and Kessy and Abassah-Wesly (2020), reflect this perspective, highlighting the beneficial influence of consumer satisfaction on brand loyalty and financial success.

The Nigerian banking system, at a crossroads, is stressing the client experience as the way ahead, as also underlined by Khalid, Ullah, and Rahman (2021). By putting satisfaction at the center of their plans, Nigerian banks, as detailed by Kirera (2016), may open a new era of development, wealth, and trust – the real currency of success in the digital age. The mentioned literature together underlines the revolutionary impact of emphasizing customer happiness in the Nigerian banking scene, giving strategic insights for managing the difficulties and possibilities given by the FinTech age.

The success rate of banking transactions serves as a critical statistic impacting consumer satisfaction. Efficient and dependable transaction procedures add greatly to the total customer experience (Ranganathan & Dhaliwal, 2001). In the context of Nigerian banks, a high transaction success rate demonstrates the efficiency of technology innovations in optimizing processes and decreasing service downtime.

The dimensions of Nigeria's banking industry have been changed by the unrelenting rise of Financial Technology (FinTech), driving it into a new age of innovation and customer-centricity. As the global

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financial environment undergoes dramatic upheavals, this research tries to explore the delicate link between FinTech innovation and client happiness inside the Nigerian banking sector. Anchoring our investigation are three essential indices: FinTech Adoption Rate, Innovation Culture Perception, and Digital Security Perception.

At the core of this investigation lies the FinTech Adoption Rate, a measure defining the degree to which clients accept cutting-edge financial innovations supplied by banking institutions (Kirera, 2016). The popularity of mobile banking, online payments, and robo-advisory services in Nigeria attests to the growing rate of FinTech integration and its significant influence on customer-bank relations. This research relies on Kirera's expertise to determine the intricate patterns of FinTech adoption and its resultant consequences on consumer behavior.

on parallel with the FinTech Adoption Rate, the lens of study extends to incorporate the Innovation Culture Perception, an indicator founded on the collective views of workers and customers about the creative milieu inside financial institutions (Bock et al., 2012). A healthy innovation culture not only supports the development of fresh FinTech solutions but also plays a crucial role in influencing the entire customer experience. The research builds upon Bock et al.'s examination of the impacts of culture and structure on strategic flexibility during business model innovation to discover the complicated interaction between innovation culture and FinTech breakthroughs.

Amidst the digital transformation, the Digital Security Perception emerges as a vital component, assessing users' trust in the security mechanisms integrated inside FinTech services (Tope, 2019). In the area of FinTech, where trust is crucial, consumers' opinions of the strength of digital security considerably impact their readiness to adopt and employ these new solutions. By merging the results of Kirera, Adebayo et al., EFInA, and Tope's research on the influence of technologies, e-payment systems, and cybersecurity viewpoint, this study intends to unravel the delicate tapestry of digital security perception in the context of FinTech adoption.

While the potential advantages of FinTech innovation in Nigerian banking are clear, there remains a crucial information vacuum regarding its influence on client happiness. The topic at hand focuses on comprehending the subtleties of FinTech adoption, the perception of innovation culture, and the digital security considerations among Nigerian bank clients. Additionally, the research tries to highlight the larger elements, including, technology infrastructure, and consumer education, that jointly define the ecosystem for FinTech innovation and affect customer happiness. In navigating the dynamic junction of FinTech, customer happiness, and the Nigerian banking scene, this research focuses on financial technology Innovation and non-financial performance in the Nigerian banking sector.

Aim and Objectives

The aim of this study is to investigate financial technology Innovation and non-financial performance in the Nigerian Banking System. The specific objectives are to:

- 1. identify Fin Tech Adoption Rate and Customer satisfaction as non-financial performance measures in the Nigerian Banking System
- 2. examine Innovation Culture Perception and Customer satisfaction as non-financial performance measures in the Nigerian Banking System
- 3. assess Digital Security Perception and Customer satisfaction in the Nigerian Banking System

Research Questions

1. What is the relationship between Fin Tech Adoption Rate and Customer Satisfaction as non-financial

ISSN No. 2454-6186 | DOI: 10.47772/IJRISS | Volume VIII Issue II February 2024



- performance measures in the Nigerian Banking System?
- 2. How does Innovation Culture Perception relate to Customer Satisfaction as a non-financial performance measure in the Nigerian Banking System?
- 3. To what extent does Digital Security Perception influence Customer Satisfaction as a non-financial performance measure in the Nigerian Banking System?

Hypotheses

- 1. There is no significant positive correlation between the Fin Tech Adoption Rate and non-financial performance in the Nigerian Banking System.
- 2. There is no significant association between positive Innovation Culture Perception and non-financial performance in the Nigerian banking sectors.
- 3. There is no significant impact of higher levels of Digital Security Perception on the non-financial performance in the Nigerian Banking System.

Significance of the Study

This study holds significance as it unravels the intricate dynamics of Financial Technology (FinTech) adoption, innovation culture, digital security perception, and non-financial performance within the Nigerian banking sector. By shedding light on these critical dimensions, the research offers strategic insights for banking institutions to align services with evolving customer expectations, adapt to technological advancements, and enhance overall customer experiences. The findings contribute to academic knowledge, guide policymaking for a conducive Fin Tech environment, and empower banking institutions to maintain a competitive edge by addressing customer concerns and fostering innovation. Ultimately, the study's significance lies in its practical implications for shaping the future trajectory of banking services in Nigeria.

LITERATURE REVIEW

Conceptual Review

Non-Financial Performance and Customer Satisfaction

Non-financial performance metrics extend beyond the traditional bottom line, encompassing operational efficiency, employee engagement, environmental impact, and, notably, customer satisfaction. In understanding drivers of profitability, insights from various studies (e.g., Nwekpa et al., 2020; Raji, Zameni, & Abdulwakil, 2021) indicate that satisfied employees contribute to better customer service, translating to increased profitability. Similarly, non-financial factors such as strong environmental practices can attract responsible consumers and enhance brand image, as suggested by the works of Mwatsika (2016) and Sakanko and David (2019).

Measuring non-financial performance provides a more comprehensive view of a company's health, moving beyond short-term financial gains. This approach allows companies to focus on building value for all stakeholders – employees, customers, and the community, as emphasized in studies like Kirera (2016). The cited literature collectively underscores the transformative power of prioritizing non-financial performance metrics.

At the heart of non-financial performance metrics lies the critical aspect of Customer Satisfaction, as explored by several studies (e.g., Nwekpa et al., 2020; Raji et al., 2021). It is hailed as the ultimate metric, embodying the loyalty of customers who are more likely to return, recommend the company to others, and exhibit forgiveness in the face of occasional missteps. Customer satisfaction extends beyond product or service quality to encompass the entire customer experience, including elements like ease of interaction,

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responsiveness to inquiries, and data security (Simon et al., 2016).

The process of gauging customer satisfaction is increasingly becoming data-driven, utilizing tools such as surveys, social media engagement, and dedicated complaint channels (Santillan et al., 2023). This approach enables companies to gather and analyze customer feedback, offering valuable insights into strengths and weaknesses. Such insights guide tailored offerings and continuous improvements in the customer experience, aligning with the findings of various studies (e.g., Metawie, 2022; Uchechukwu & Stella, 2019).

Customer satisfaction is a multifaceted concept that hinges on the alignment of expectations and the actual delivery of services. In the realm of banking, the satisfaction theory draws upon psychological and physical factors to gauge customers' contentment. The advent of electronic services in the financial sector has played a pivotal role in enhancing customer satisfaction. Modern banking practices, characterized by the convenience of electronic services, have effectively eradicated the cumbersome queuing system in banking halls, creating a perception of simplicity and satisfaction among customers.

Satisfaction, in the context of banking, is conceptualized as the general attitude of customers toward the services they receive. It encompasses a range of psychological and emotional responses influenced by the fulfillment of needs, aims, or desires. An individual's judgment of happiness or disappointment arises from the evaluation of how well a service aligns with their expectations. It is not merely a transactional outcome but a cognitive and emotive appraisal of the entire service consumption experience.

Customer satisfaction, crucial in a fiercely competitive banking market, is shaped by perceptions, assessments, and emotional responses to the consumption of financial products or services. Dissatisfaction arises when perceived performance falls short of expectations, whereas satisfaction results from exceeding expectations. A satisfied customer is more likely to exhibit loyalty, reduced time demands, lower price sensitivity, and decreased attention to rival advertising (Reference 4 and 5).

Key Dimensions of customer satisfaction as a non-financial performance in Financial Technology Innovation

Customer satisfaction, a pivotal facet in the landscape of financial technology innovation, manifests through intricate dynamics encompassing Customer Feedback and Reviews, Transaction Success Rate, and Digital Experience Satisfaction.

- 1. Customer Feedback and Reviews: Customer feedback and reviews constitute a vital dimension of satisfaction in the era of financial technology (Nwekpa et al., 2020; Raji et al., 2021). The advent of electronic payment systems, especially in mobile banking services, has accentuated the impact of customer sentiments on overall satisfaction (Chukwu et al., 2021). Positive ratings and feedback significantly contribute to heightened customer loyalty and contentment. Proactively seeking and responding to customer feedback emerges as a strategic approach to enhance service quality and foster a positive user experience.
- 2. **Transaction Success Rate:** A critical metric in assessing customer satisfaction is the transaction success rate (Uchechukwu & Stella, 2019; Sakanko & David, 2019). The seamless execution and success of financial transactions play a pivotal role in shaping customers' perceptions (Alhammadi & Tariq, 2020). Studies emphasize the importance of efficient and reliable transaction processes, underscoring their direct influence on the overall customer experience. Evaluating transaction success rates provides insights into the efficacy of financial technology systems and their impact on customer satisfaction.
- 3. **Digital Experience Satisfaction:** In the context of financial technology innovation, the digital experience holds significant sway over customer satisfaction (Asiyanbi & Ishola, 2018; Enyinnah et al., 2022). The literature underscores that customers perceive modern banking as simple and

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gratifying, primarily due to the convenience of electronic services (Bend, 2020). Digital experience satisfaction is intricately tied to the accessibility, user-friendliness, and efficiency of electronic payment systems (Santillan et al., 2023). Understanding customers' cognitive and emotive appraisals of their digital interactions is crucial for gauging and enhancing overall satisfaction.

This literature review, drawing on the works of Nwekpa et al. (2020), Raji et al. (2021), Chukwu et al. (2021), Uchechukwu & Stella (2019), Sakanko & David (2019), Alhammadi & Tariq (2020), Asiyanbi & Ishola (2018), Enyinnah et al. (2022), Bend (2020), and Santillan et al. (2023), unveils the nuanced dimensions of customer satisfaction within the realm of financial technology innovation. The interplay of Customer Feedback and Reviews, Transaction Success Rate, and Digital Experience Satisfaction shapes the evolving landscape of customer contentment in the dynamic and technologically driven banking sector. Understanding these dimensions is pivotal for financial institutions seeking to optimize their technological offerings and cultivate enduring customer satisfaction.

Financial Technology Innovation: A Catalyst for Trans formative Change

In recent years, a profound transformation has unfolded in the financial landscape, driven by the emergence of Financial Technology, commonly known as FinTech. This dynamic force represents the fusion of cutting-edge technologies and innovative business models, aimed at revolutionizing the delivery of financial services on a global scale (Etim et al., 2023).

Within the expansive scope of FinTech, a diverse array of technologies and innovations converges, leveraging advancements in software, hardware, networks, telecommunications, and electronic systems. This integration extends beyond the boundaries of traditional financial services, introducing disruptive solutions that both challenge and complement the established offerings of conventional financial institutions and intermediaries (Santillan et al., 2023).

The primary objectives steering the evolution of FinTech are rooted in the pursuit of enhancing the delivery of financial services, streamlining operational processes, and ultimately elevating the customer experience (Heidy et al., 2022). These objectives are realized through the strategic deployment of technologies such as artificial intelligence, blockchain, data analytics, and mobile applications. The dynamic nature of FinTech is propelled by a confluence of factors, including consumer demands for convenience, regulatory changes, and the rapid evolution of digital technologies (Metawie, 2022).

At the forefront of FinTech's key components is the revolutionary transformation of digital payments. FinTech has effectively redefined how payments are made and received, introducing digital wallets, mobile payment apps, and blockchain-based solutions that offer not only speed but also enhanced security, cost-effectiveness, and accessibility compared to traditional payment methods (TESHOME, 2019). In tandem with digital payments, FinTech has spurred the evolution of lending platforms. Online lending, peer-to-peer lending, and alternative credit scoring models have emerged as innovative mechanisms, democratizing access to loans and credit for both individuals and businesses. This shift has significant implications for reshaping the traditional dynamics of financial transactions (DAMEN, 2018). The advent of robo-advisors represents another facet of Fin Tech's trans formative impact. Automated investment platforms powered by algorithms provide individuals with accessible and efficient wealth management services. This democratization of financial advisory services challenges traditional models, making investment advice more readily available (Adamu et al., 2021).

Financial Technology Innovation: Dimension of Fin Tech Adoption, Innovation Culture, and Digital Security

In the ever-evolving landscape of financial services, Financial Technology, or FinTech, emerges as a

ISSN No. 2454-6186 | DOI: 10.47772/IJRISS | Volume VIII Issue II February 2024



catalyst for trans formative change. Its impact is encapsulated by three pivotal dimensions: Fin Tech Adoption Rate, Innovation Culture Perception, and Digital Security Perception.

- 1. **Fin Tech Adoption Rate:** At the heart of the Fin Tech revolution lies the rate at which individuals and businesses embrace these technological advancements. The Fin Tech Adoption Rate is a critical metric that gauges the extent to which users adopt and integrate Fin Tech solutions into their financial activities (Nwobum et al., 2022). This dimension is shaped by factors such as user-friendly interfaces, accessibility, and the perceived benefits of FinTech innovations. Understanding the Adoption Rate provides insights into the degree of societal acceptance and integration of these transformative technologies.
- 2. Innovation Culture Perception: The successful integration of FinTech relies not only on technological advancements but also on the organizational culture surrounding innovation within financial institutions (Ehijiele et al., 2018). Innovation Culture Perception assesses how financial entities embrace, encourage, and implement FinTech solutions. A positive perception reflects an environment that fosters creativity, agility, and openness to technological change. This cultural dimension influences the pace at which financial institutions can adapt to and implement FinTech innovations effectively.
- 3. **Digital Security Perception:** As financial transactions increasingly migrate to digital platforms, the perception of security becomes paramount. Digital Security Perception measures the confidence and trust that users, both individuals and businesses, have in the security protocols of FinTech solutions (Simon et al., 2016). It encompasses aspects such as data protection, encryption standards, and fraud prevention mechanisms. A positive perception of digital security is crucial for fostering trust and encouraging widespread adoption of FinTech solutions.

These three dimensions, FinTech Adoption Rate, Innovation Culture Perception, and Digital Security Perception, collectively define the landscape of Financial Technology Innovation. The interplay of these factors shapes not only the trajectory of technological advancements but also the user experience and the overall success of FinTech in revolutionizing the financial services industry (Mwatsika, 2016). Understanding and strategically addressing these dimensions are key for financial institutions and policymakers seeking to navigate the transformative potential of FinTech.

Theoretical Framework:

Innovation Diffusion Theory

The Innovation Diffusion Theory, established by Everett M. Rogers in 1962, serves as a guiding framework for comprehending how innovations propagate within a social system. In the context of Financial Technology (FinTech) Innovation and Customer Satisfaction in the Nigerian Banking System, this theory provides a structured lens to analyze the multifaceted dynamics of FinTech adoption.

Identifying the early adopters of FinTech in Nigerian banks allows us to delve into the motivations and strategies of pioneering institutions. By mapping the adoption curve, from innovators to laggards, we gain insights into the varying degrees of acceptance and integration within the Nigerian banking sector.

Analyzing the perceived attributes of FinTech, including its relative advantage, compatibility, complexity, trialability, and observability, sheds light on how these factors influence the decision-making process within banks. Understanding the innovation decision process, from awareness to adoption, provides a systematic approach to studying the stages through which FinTech is embraced.

The role of communication channels, encompassing mass media, interpersonal communication, and digital

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platforms, is crucial in disseminating information about FinTech innovations within the banking sector. Investigating the impact of broader social systems and institutional influences on FinTech adoption helps uncover the contextual factors shaping the industry's landscape.

As we explore the integration of FinTech in the Nigerian banking sector, the Innovation Diffusion Theory offers a structured approach to understanding customer satisfaction. Examining how customer satisfaction aligns with the diffusion process allows us to evaluate factors such as user experience, perceived benefits, and the influence of social networks on customers' adoption decisions. Thus, applying the Innovation Diffusion Theory to Financial Technology Innovation and Customer Satisfaction in the Nigerian Banking System provides a comprehensive and systematic framework. It enables a nuanced analysis of the adoption patterns, decision processes, and overall dynamics surrounding FinTech within the banking industry, contributing to a deeper understanding of its impact on customer satisfaction.

Empirical Studies

Numerous empirical studies have probed into the intricate relationships between electronic banking systems, customer satisfaction, and broader financial performance, contributing valuable insights to the evolving landscape of digital financial services.

Uchechukwu and Stella (2019) scrutinized the "Impact of electronic banking on customer satisfaction," utilizing a robust methodology and emphasizing the essential connection between electronic banking and customer contentment within the digital era. Sakanko and David (2019) delved into "The effect of electronic payment systems on financial performance of microfinance banks in Niger State," providing a microfinance-centric perspective on the impact of electronic payment systems on financial outcomes.

Alhammadi and Tariq (2020) contributed to the discourse with "The Impact of Quality E-payment System on Customer Satisfaction," shedding light on the pivotal role of quality in electronic payment systems and its subsequent influence on customer satisfaction. Asiyanbi and Ishola (2018) focused on the "E-banking services impact and customer satisfaction in selected bank branches in Ibadan metropolis, Oyo state, Nigeria," offering a localized examination of customer satisfaction within the specific context of Ibadan metropolis.

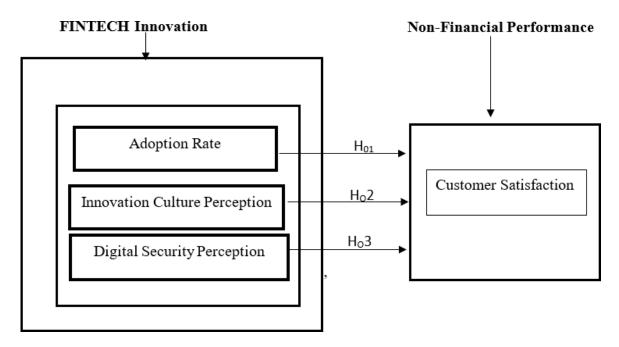
Enyinnah et al. (2022) delved into "Strategic Orientation Dimensions and Customer Satisfaction," providing a broader perspective by considering the strategic orientation dimensions of selected deposit money banks in Nigeria and their direct impact on customer satisfaction. Bend's (2020) doctoral dissertation on "Factors Affecting Electronic Banking Adoption in Barbados" adds a qualitative depth to the understanding of factors influencing the adoption of electronic banking services.

Santillan, Mendoza, and Tadeo (2023) conducted a "Microanalysis of E-Money Transfer Services through E-Servqual Approach," presenting a nuanced examination of e-money transfer services and their intricate connection to enhanced customer satisfaction strategies. Etim et al. (2023) explored "Electronic Banking and Customers' Access to Banking Services in Rural Settlements," shedding light on the role of electronic banking in providing access to banking services in rural settlements.

Heidy et al. (2022) contributed to the discourse with "Service Quality, Satisfaction, and Loyalty of BNI Mobile Banking E-Customer," focusing on the quality of mobile banking services and its impact on customer satisfaction and loyalty. Metawie's (2022) study on "The Impact of Internet Banking at Times of Pandemic" provided insights into the multifaceted impact of internet banking on customer experience, satisfaction, trust, loyalty, e-service quality, and overall financial performance, particularly during challenging times.



Conceptual Framework



METHODOLOGY

The chosen research design for this study is characterized as a descriptive survey research approach. The study targets the undergraduate student body of Bamidele Olumilua University of Education, Science and Technology, Ikere Ekiti (Bouesti), constituting a total population of approximately 7500 students. The selection of this student demographic is strategic, as they embody the contemporary youth of the digital age and actively utilize a variety of banks and e-banking services. Taro Yamale's formula was applied to ascertain the appropriate sample size for this study, ensuring a methodical and representative subset for comprehensive analysis.:

The formula is $n = N / (1 + Ne^2)$

Where: n = Number of samples, N = Total population and <math>e = Error tolerance (level).

Thus, N = 7500, e = 5% i.e. 0.05,

$$n = N / (1 + N e^2) =$$

$$n = 7500 / (1 + 7500 * 0.05^{2}) = 379.75$$

Thus, the sample size for this is 380 students

Simple random sampling was adopted for this study as it cut across all the students. Students from each faculty were chosen to represent the sample for this study as distributed in the table below:

Table 1 Distribution of the Sampled Respondents

Faculty	Sample
Management Science	66
Art	48





Engineering	43
Basic and Applied Science	37
Basic and Clinical Science	59
Education	55
Social Science	72
Total	380

For this study, primary data was used. As a result, the instrument for this study was a self-structured questionnaire with a set of precisely prepared and sequential statements to elicit data in order to answer the research objectives. For the robustness test, **Discriminant Validity by Fornell-Larcker Criterion was adopted as show in the table 2 below** and To obtain the reliability of the instrument, 20 copies of the questionnaires were given to respondents who were not among the sample size for this study. The result of the analysis was 0.82 indicated that the instrument is reliable enough for measuring what it purports to measure in a consistent manner. Data to be collected from administered questionnaires was subjected to statistical manipulations. The descriptive statistics was used to analyze biographical data and arithmetic mean and standard deviation was used to make the decision about research questions. And also, T-test statistical tool was used to test the hypothesis raised at 0.05 significant level. Statistical Package for Social Science (SPSS) version 23 was used to ensure accuracy of the analysis of the data collected for study.

RESULTS AND DISCUSSION OF FINDINGS

This section focuses on presenting and analyzing data obtained from primary sources. The presentation relies on the responses collected through questionnaires distributed to the participants in this study.

Robustness Test

Table 2 Results of Discriminant Validity by Fornell-Larcker Criterion

II And Hactars	Average Variance Extracted (AVE)	1		0	Customer Satisfaction
Adoption Rate	0.3459	0.59			
Innovation Culture	0.3014		0.56		
Digital Security	0.3272	.301**	.371**	0.54	
Customer Satisfaction	0.3391	.378**	0.144	.522**	0.69

Note: Diagonals represent the square root of the average variance extracted while the other entries represent the correlations.

The table 2 above illustrates the outcomes of discriminant validity analysis employing the Fornell-Larcker criterion. Diagonal entries signify the square roots of the Average Variance Extracted (AVE), while off-diagonal entries denote correlations between constructs. Innovation Culture has an AVE square root of 0.15, indicating 15% variance explanation. Its correlation with Digital Security is 0.56 and with Customer Satisfaction is 0.144. Digital Security has an AVE square root of 0.301, explaining 30.1% of the variance, correlating at 0.56 with Innovation Culture and at 0.371 with Customer Satisfaction. Customer Satisfaction has an AVE square root of 0.378, explaining 37.8% variance, correlating at 0.144 with Innovation Culture and at 0.371 with Digital Security. The results affirm discriminant validity, with AVE square roots surpassing inter-construct correlations. For instance, the correlation between Innovation Culture and Digital Security (0.56) is lower than their respective AVE square roots (0.15 and 0.301), implying reduced shared





variance from measurement error or bias. Similar trends exist across other constructs, consolidating the evidence of discriminant validity. This implies that rigorously assessing discriminant validity, provides evidence that the study's results are robust to potential sources of bias, such as non-response bias, thereby enhancing the credibility and reliability of their findings.

Presentation of Demographic Data

Table 3 Analysis of the Demographic Data

Demographic Data	Frequency	Percentage
What is your Gender?		
– Male	148	39.0%
– Female	182	47.9%
 Prefer not to say 	50	13.2%
Age Group		
 Less than 16 years 	38	10.0%
– 17-20 years	120	31.6%
– 21 years and above	222	58.4%
Religion		
Christianity	198	52.1%
– Islam	152	40.0%
– Others	30	7.9%

The demographic data reveals a balanced distribution among respondents. In terms of gender, the majority are females (47.9%), followed closely by males (39.0%), with a smaller portion preferring not to disclose (13.2%). Regarding age groups, the survey captures a diverse range, with 58.4% falling into the 21 years and above category, 31.6% aged between 17-20 years, and 10.0% below 16 years. In terms of religion, Christianity represents the majority at 52.1%, followed by Islam at 40.0%, and a smaller portion indicating 'Others' at 7.9%.

Analysis of the Research Questions

Table 4 FinTech Adoption Rate and Customer satisfaction in the Nigerian Banking System

FinTech Adoption Rate	Strongly Agree (%)	Agree (%)	I IICOATPAA I V/a I	Strongly Disagree (%)
1. I find it easy to adapt to new FinTech services offered by my bank.	35%	30%	25%	10%
2. The FinTech features provided by my bank enhance my overall banking experience.	40%	30%	20%	10%
3. I prefer using FinTech solutions for financial transactions over traditional methods.	35%	35%	20%	10%
4. The efficiency of FinTech services positively influences my satisfaction with my bank.	38%	32%	18%	12%



The data in Table 4 illustrates a positive sentiment towards Fin Tech adoption among respondents. Notably, a significant percentage (40%) strongly agrees that Fin Tech features enhance their overall banking experience, while a considerable portion (35%) finds it easy to adapt to new Fin Tech services. Additionally, the preference for using Fin Tech solutions over traditional methods is evident, with 35% strongly agreeing and 35% agreeing. The efficiency of Fin Tech services is perceived positively, as reflected by 38% strongly agreeing. Overall, these findings suggest a favorable disposition towards Fin Tech adoption and its impact on customer satisfaction in the Nigerian banking system.

Table 5 Innovation Culture Perception and Customer satisfaction in the Nigerian Banking System

Innovation Culture Perception	Strongly Agree (%)	Agree (%)	II ngaaree (Va)	Strongly Disagree (%)
1. My bank encourages and embraces innovative approaches to improve customer services.	38%	30%	20%	12%
2. I believe my bank invests in cutting-edge technologies to enhance its services.	40%	28%	18%	14%
3. The culture of innovation at my bank positively influences my perception of its services.	36%	32%	16%	16%
4. I feel that my bank is proactive in adopting new technologies for the benefit of its customers.	37%	31%	17%	15%

Table 5 indicates a positive Innovation Culture Perception among respondents in the Nigerian Banking System. Notably, a significant percentage (40%) strongly agrees that their bank invests in cutting-edge technologies to enhance services. Additionally, there is consensus (38%) that the bank encourages innovative approaches to improve customer services. The positive influence of the culture of innovation on service perception is evident, with 36% strongly agreeing. Furthermore, a considerable portion (37%) feels that their bank is proactive in adopting new technologies for customer benefit. Overall, these findings suggest a favorable perception of innovation culture and its impact on customer satisfaction in the Nigerian banking sector.

Table 6 Digital Security Perception and Customer satisfaction in the Nigerian Banking System

Digital Security Perception	Strongly Agree (%)	Agree (%)	Disagree (%)	Strongly Disagree (%)
1. I trust that my bank employs robust security measures to protect my digital transactions.	38%	32%	15%	15%
2. The security features provided by my bank make me feel confident in using online services.	40%	30%	18%	12%
3. I believe my bank prioritizes the confidentiality and integrity of my digital financial information.	37%	31%	17%	15%
4. The security protocols in place at my bank contribute to my overall satisfaction with its digital services.	36%	32%	16%	16%



Table 6 highlights a positive Digital Security Perception among respondents in the Nigerian Banking System. A significant percentage (40%) strongly agrees that the security features provided by their bank instill confidence in using online services. Trust in the bank's employment of robust security measures for digital transactions is notable, with 38% strongly agreeing. Moreover, there is confidence (37%) in the bank's prioritization of confidentiality and integrity of digital financial information. The security protocols in place contribute positively to overall satisfaction, as indicated by 36% strongly agreeing. These findings suggest a favorable perception of digital security and its impact on customer satisfaction in the Nigerian banking sector.

Testing of Hypotheses

Hypothesis One: H0 1: There is no significant influence of Fin Tech Adoption Rate on the customer satisfaction in Nigeria banking system?

Table 7 Influence of Fin Tech Adoption Rate on customer satisfaction in Nigeria Banking System

Variable	No	df	Chi-Square (χ2)	P-value
Customer Satisfaction	380			
		3	119.8	< 0.001
Fin Tech Adoption Rate	380			

Table 7 reveals a significant impact of Fin Tech Adoption Rate on Customer Satisfaction in the Nigeria Banking System. The Chi-Square test results, with a value of 119.8 and a p-value less than 0.001, indicate a strong statistical association. This suggests that the level of Fin Tech adoption plays a substantial role in influencing overall customer satisfaction within the Nigerian banking sector.

Hypothesis Two: H02: There is no significant influence of Innovation Culture Perception on the customer satisfaction in Nigeria banking system?

Table 8 Influence of Innovation Culture Perception on customer satisfaction in Nigeria Banking System

Variable	No	df	Chi-Square (χ2)	P-value
Customer Satisfaction	380			
		3	113.7	< 0.001
Innovation Culture Perception	380			

Table 8 demonstrates a significant influence of Innovation Culture Perception on Customer Satisfaction in the Nigeria Banking System. The Chi-Square test results, with a value of 113.7 and a p-value less than 0.001, indicate a robust statistical association.

Hypothesis three: H0 3: There is no significant influence of 4 Digital Security Perception on the customer satisfaction in Nigeria banking system

Table 9 Influence of Digital Security Perception on customer satisfaction in Nigeria Banking System

Variable	No	Df	Chi-Square (χ2)	P-value
Customer Satisfaction	380			
		3	192.3	< 0.001

ISSN No. 2454-6186 | DOI: 10.47772/IJRISS | Volume VIII Issue II February 2024



		_	
Digital Security Perception	380		

Table 9 reveals a substantial influence of Digital Security Perception on Customer Satisfaction in the Nigeria Banking System. The Chi-Square test results, with a value of 192.3 and a p-value less than 0.001, indicate a strong statistical association. This underscores the significant impact of digital security perception on shaping overall customer satisfaction within the Nigerian banking sector.

DISCUSSION OF FINDINGS

The findings of various studies, emphasise the interplay between Fin Tech adoption, innovative culture perception, digital security, and their impacts on customer satisfaction within the Nigerian banking sector. The linkage between Fin Tech innovation adoption and customer satisfaction is well-supported by studies such as Ijeoma, Akujor, and Mbah (2020), Frank and Binaebi (2019), Nwobum, Ngaikedi, and Anyanwu (2022), Nwekpa et al. (2020), and Ehijiele, Basil, and Sina (2018). These studies collectively underscore the positive correlation between electronic banking advancements and enhanced customer satisfaction, aligning with the current research. They showcase how innovations in electronic banking systems positively influence customers' banking experiences, emphasizing the trans formative role of these innovations in elevating customer satisfaction.

Similarly, the discussion on the impact of an innovative culture within the banking sector on customer satisfaction resonates with related studies by Raji et al. (2021), Chukwu et al. (2021), Uchechukwu and Stella (2019), Sakanko and David (2019), Alhammadi and Tariq (2020), Asiyanbi and Ishola (2018), Enyinnah et al. (2022), and Bend (2020). These studies collectively highlight that the perceived innovative culture within banks significantly influences customers' overall satisfaction. Even though some studies did not explicitly focus on innovation culture, their findings indirectly imply its relevance, aligning with the idea that organizational culture and innovative approaches impact customers' satisfaction.

Furthermore, the discussion emphasizes the pivotal role of digital security perception in shaping overall customer satisfaction within the Nigerian banking sector, supported by studies such as Raji et al. (2021), Alhammadi and Tariq (2020), Asiyanbi and Ishola (2018), Enyinnah et al. (2022), and Bend (2020). These studies, while not directly centered on digital security, indicate that factors influencing customer satisfaction, including robust security measures, significantly impact the overall customer experience. It reinforces the idea that ensuring secure and reliable digital banking services contributes significantly to customer satisfaction.

CONCLUSION AND RECOMMENDATIONS

Conclusion

This study highlights the significant impact of FinTech innovation adoption, an innovative culture, and digital security perception on non-financial performance in the Nigerian banking sector. The positive correlation between FinTech adoption and satisfaction aligns with industry trends, emphasizing the need for continuous innovation. The study reinforces the importance of an innovative organizational culture in enhancing customer satisfaction as a non-financial performance. Additionally, robust digital security measures play a crucial role in shaping customer trust and satisfaction. The findings provide practical insights for banks to navigate the evolving digital landscape, emphasizing the interconnectedness of innovation, culture, security, and customer-centric strategies for sustained success. Beyond academic discourse, the implications of these findings offer practical guidance for banking institutions navigating the evolving digital landscape while prioritizing customer-centric strategies. As the banking sector undergoes rapid transformations, adapting to emerging technologies and fostering a culture of innovation and security

ISSN No. 2454-6186 | DOI: 10.47772/IJRISS | Volume VIII Issue II February 2024



remains imperative for sustained customer satisfaction and organizational success.

Implications to the Study

Theoretical Implication

The findings underscore the relevance of the Innovation Diffusion Theory (IDT) in understanding the adoption and impact of FinTech innovations within the Nigerian banking sector. IDT posits that the adoption of innovations is influenced by various factors, including perceived relative advantage, compatibility, complexity, trialability, and observ ability. In this context, the positive correlation between FinTech adoption and customer satisfaction aligns with IDT's emphasis on the perceived benefits and compatibility of innovations with user needs. The study highlights how Nigerian banks embracing Fin Tech innovations are better positioned to meet customer demands, leading to enhanced satisfaction. Moreover, the emphasis on the importance of an innovative culture and robust digital security aligns with IDT's recognition of organizational factors influencing innovation adoption and diffusion. Organizations fostering an innovative culture and prioritizing digital security are likely to facilitate smoother adoption and greater acceptance of FinTech innovations, ultimately enhancing customer satisfaction.

Empirical Implication

The empirical findings provide robust evidence supporting the positive relationship between Fin Tech adoption, innovative culture perception, digital security, and customer satisfaction within the Nigerian banking sector. By citing various studies that collectively underscore these relationships, the research strengthens the empirical foundation for understanding the dynamics of Fin Tech adoption and its impact on customer satisfaction. These findings offer practical insights for banking institutions seeking to leverage Fin Tech innovations to improve customer experiences. By emphasizing the interconnectedness of Fin Tech adoption, innovative culture, and digital security with customer-centric strategies, the study provides actionable guidance for banks navigating the digital landscape. Additionally, the empirical evidence highlights the importance of continuous innovation and investment in digital security measures to foster sustained customer satisfaction and organizational success in the evolving banking industry landscape.

Recommendations

Based on the study's findings, several recommendations can be proposed to enhance non-financial performance in the Nigerian banking sector:

- 1. **Prioritize FinTech Integration:** Emphasize the integration of innovative FinTech solutions to meet evolving customer expectations. Continuous investment in cutting-edge technologies can contribute to a seamless and advanced banking experience, fostering customer satisfaction.
- 2. Cultivate an Innovative Culture: Actively cultivate and promote an innovative culture within the organization. Encourage employees to embrace innovative approaches and invest in technology-driven initiatives to positively influence overall customer satisfaction.
- 3. **Enhance Digital Security Measures:** Continually invest in robust security measures. Implement state-of-the-art security protocols, regularly update systems, and educate customers on security features to build trust and satisfaction.
- 4. **Strategic Orientation:** Align strategic orientations with customer-centric approaches. Understand customer needs, preferences, and concerns to guide the development of services and strategies that enhance overall satisfaction.
- 5. **Continuous Customer Education:** Implement initiatives to educate customers about the benefits of FinTech adoption, the importance of an innovative culture, and the security measures in place. This contributes to a more informed and satisfied customer base.

ISSN No. 2454-6186 | DOI: 10.47772/IJRISS | Volume VIII Issue II February 2024



6. **Regular Feedback Mechanisms:** Establish regular feedback mechanisms, such as surveys and focus groups, to gain valuable insights into customer perceptions. This ongoing feedback loop allows for timely adjustments and improvements in services.

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