

# Digital Financial Innovation and Customer Loyalty in Deposit Money Banks: A Study of Zenith Bank

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## Abstract

The implementation of digital financial innovations presents significant challenges for financial institutions, particularly in enhancing customer satisfaction, service quality, and customer retention. This study examines the impact of digital banking revolutions proxied by Mobile financial services, online banking and digital payment systems on these key aspects of customer experience at Zenith Bank in Abuja, Nigeria. Adopting a survey research design, the study focused on a target group of 115 employees and employed a census methodology for comprehensive data collection. Data was gathered through structured questionnaires made up of a 5-point Likert scale and analyzed using regression analysis. The findings revealed that mobile banking significantly improves customer satisfaction, internet banking has a strong positive correlation with service quality, and digital payment systems play a vital role in customer retention. The study concludes that embracing digital innovations is crucial for enhancing customer experiences in the banking industry. Therefore, it is recommended that Zenith Bank should continue investing in technological advancements to optimize mobile banking services, enhance internet banking security, and improve the efficiency of digital payment systems. Zenith Bank should focus on these areas in order to enhance customer experience and loyalty thereby ensuring its competitiveness in the rapidly evolving digital financial landscape.

**Keywords:** Digital Financial Innovations, Customer Satisfaction, Service Quality, Customer Retention, Deposit Money Banks, Zenith Bank.

## Introduction

Modern technological revolution has transformed the financial services industry through complete banking procedure modernization and better user experiences. Digital financial innovation serves as the main factor which gives banking institutions their competitive edge in the global financial market. Financial institutions use mobile banking and internet banking and digital payment systems to boost service efficiency as they deliver services that customers need (Gomber et al., 2018). The digital technology developments offer organizations a recognized set of capabilities to improve their operational effectiveness and decrease their transaction expenses while expanding financial service accessibility in digital marketplaces.

The adoption of digital financial innovations in Africa has accelerated because it offers expanded financial inclusion together with improved accessible banking services (Demirgüç-Kunt et al., 2018). Mobile banking platforms have taken off across Africa

because the region does not have enough physical banking infrastructure. The digital platforms advance user satisfaction and they also deliver enhanced service quality while boosting customer loyalty because they enable transactions outside traditional banking locations (Asongu & Nwachukwu, 2018). These innovations achieve different levels of adoption success throughout African countries based on regulatory guidelines alongside technological capabilities and customer preparedness.

The advancement of digital financial technologies drives substantial change within Nigeria's position as Africa's leading economy through its banking sector. Olorunsegun (2020) demonstrates how the Nigerian Central Bank's Cashless Policy accelerates digital adoption even though it continues to encounter issues identical to those Lawal and Abdullahi (2024) discovered regarding small businesses affected by economic policy shifts including naira redesign. The impact of digital financial technology on customer loyalty has attracted extensive research attention since banks must find ways to merge advanced technology with standard service quality and customer satisfaction levels.

As one of the leading banks in Nigeria, Zenith Bank has actively led banking sector digital transformation initiatives. Senior management at the institution has invested significantly in creating mobile banking and internet banking platforms coupled with digital payment solutions for better customer service. The mobile banking system permits smartphone users to handle banking activities in real-time through mobile transactions and bill payments while managing their accounts. The accessibility of banking services elevates customer satisfaction since it decreases the amount of time needed and work required to complete transactions (Alalwan et al., 2018). Internet banking platforms create an opportunity for customers to execute financial transactions at any time which boosts both service quality and user experience according to Pérez et al. (2020).

Mobile money and electronic fund transfers operated as digital payment systems have become essential tools for building customer retention when banks provide secure and reliable payment methods (Shankar & Jebarajakirthy, 2019). These systems help customers reduce their cash dependency because they solve safety problems and physical limitations that cash methods typically face in conventional banking operations. Banks with digital banking services that provide secure and convenient operations will prevent their customers from exiting thereby producing higher numbers of retention.

The adoption of digital payment systems including mobile money and electronic fund transfers improves customer retention because these systems provide secure payment methods which are efficient and reliable (Shankar & Jebarajakirthy, 2019). Electronic payment systems work to decrease customers' dependency on cash since they solve security and logistical problems that traditional banking operations face. Customer loyalty towards their banks increases because customers view digital banking services as both secure and convenient which fosters retention rates.

Digital financial innovation is transforming the Nigerian banking sector through its restructuring processes. Zenith Bank needs powerful mobile banking technology and digital payment solutions and internet banking features to build better service quality and

customer happiness which leads to improved customer loyalty. The combination of proper digital banking management together with financial technology optimization allows Zenith Bank to improve its market strength and build sustained customer relationships. The research investigates digital financial innovation mechanisms at Zenith Bank which drive customer loyalty within the evolving financial sector.

### **Statement of the Problem**

Digital financial innovation helps modern banking institutions to develop customer loyalty by enhancing satisfaction and increasing service quality and retention enhancement. Through mobile banking as well as internet banking and digital payment systems, banking services have undergone a revolutionary change by offering accessible yet convenient bank service delivery (Alalwan et al., 2018). The scientific advancement has potential of enhancing improved customer satisfaction by addressing customer expectations regarding speed and reliability and security assurance (Shankar & Jebarajakirthy, 2019). Digital transaction processes that link seamlessly between stages will create higher service quality through customer trust builds which results in increased retention (Pérez et al., 2020).

The effect of digital financial innovations on customer loyalty has not received sufficient empirical investigation in Africa and Nigeria in particular. The growing prevalence of mobile banking and internet banking as well as digital payment systems encounters numerous limitations such as unreliable networks, restricted functionality and security threats while transactions might get delayed (Oni & Ayo, 2019; Pérez et al., 2020; Shankar & Jebarajakirthy, 2019). The service quality and customer trust level experience erosion while the retention rates decrease when such challenges occur.

The banking sector in Nigeria depends on customer loyalty and imperative for Zenith Bank to retain its competitive advantage. However, the digital financial innovations implemented by the institution fail to produce a direct correlation between their application and customer loyalty patterns. Asongu and Nwachukwu (2018) demonstrated that digital banking services provide financial inclusion advantages coupled with convenience although they fail to boost customer satisfaction or sustain clients. According to Flavián et al. (2016) the effectiveness of digital banking in enhancing customer loyalty depends on service capability to meet client expectations.

This study attempts to fill the existing research gaps by analyzing mobile banking, internet banking and digital payment systems and their influence on client fulfillment together with service delivery excellence and customer retention at Zenith Bank. The study investigates challenges during digital platform service delivery at Zenith Bank while analysing their effects on customer loyalty and perception (Oni & Ayo, 2019). Accurate insights into these factors enable Zenith Bank to discover techniques for enhancing digital financial innovation deployment which will build enduring customer relationships in their digital banking environment.

### Research Questions

The following are the research questions formulated to guide this study:

- i. How does mobile banking influence customer satisfaction at Zenith Bank?
- ii. What is the effect of internet banking on service quality at Zenith Bank?
- iii. To what extent does digital payment systems affect customer retention at Zenith Bank?

### Research Objectives

The main objective of the study is to investigate the effect of digital financial innovation on customer loyalty in deposit money banks (DMBs). The specific objectives of the study are to:

- i. examine the influence of mobile banking on customer satisfaction at Zenith Bank.
- ii. assess the effect of internet banking on service quality at Zenith Bank, and
- iii. investigate how digital payment systems affect customer retention at Zenith Bank.

### Literature Review

#### Concept of Digital Financial Innovation

Modern financial innovations driven by advanced technology offer three key advantages: enhanced operational efficiency, improved accessibility, and greater service convenience. These innovations, particularly mobile banking, have significantly transformed traditional banking operations (Gomber et al., 2018). In response to evolving market dynamics, financial institutions are compelled to continuously develop new products and services to sustain their competitive edge (Philippon, 2016). Mobile banking expands financial access to underserved remote regions, while internet banking and digital payments allow users to perform secure and immediate transactions (Ozili, 2018; Arner et al., 2020). This study focuses on how the implementation of digital banking solutions by Zenith Bank influences customer retention by examining the roles of customer satisfaction and service quality in fostering loyalty. The research investigates how the bank enhances user experience and sustains service standards through the adoption of digital financial innovations (Oghenerukevwe & Uju, 2020). Additionally, Lee (2024) emphasizes the necessity for evolving regulatory frameworks that strike a balance between fostering innovation and ensuring effective risk management, particularly in light of the dual impact that digital banks and alternative lenders have on financial inclusion and the regulatory challenges posed by their operational models.

#### Mobile Banking

Mobile banking enables customers to conduct financial transactions and access banking services conveniently through their mobile devices, offering flexibility and operational efficiency. This technology allows users to check account balances, transfer funds, and pay bills remotely, eliminating the need to visit physical bank branches (Amin, 2016; Ozili, 2018). The widespread adoption of mobile banking is largely driven by the growing

prevalence of smartphones, coupled with advancements in user-friendly interfaces and enhanced security measures within mobile applications (Shaikh & Karjaluo, 2016). These services promote customer satisfaction and foster loyalty by offering personalized experiences, robust security, and seamless integration with broader digital financial platforms (Lin, 2018). The current research examines how mobile banking influences customer loyalty at Zenith Bank by assessing levels of customer satisfaction, evaluating service quality, and analyzing patterns in customer retention. With mobile technology becoming increasingly widespread in Nigeria, there is a critical need to understand its role in reinforcing customer loyalty through digital financial innovations (Singh & Srivastava, 2020; Oghenerukevwe & Uju, 2020). Moreover, Obeta et al. (2024) highlight the importance of developing comprehensive legal frameworks to address emerging cybersecurity threats in Nigeria's banking sector. Supporting this concern, Diallo et al. (2024) conducted a security assessment of mobile banking applications in the West African Economic and Monetary Union, uncovering vulnerabilities that expose users and financial institutions to heightened risks of cyberattacks and financial losses.

### **Internet Banking**

Internet banking empowers customers to perform various financial transactions such as checking balances, transferring funds, and paying bills through an internet connection, eliminating the need for in-person visits to bank branches (Kumar et al., 2017). It provides enhanced service availability and speed by enabling customers to conduct transactions anytime and anywhere, driven by technological advancement and the growing demand for accessible financial services (Pikkarainen et al., 2004). The incorporation of real-time updates, improved security features, and tailored financial solutions has further elevated the quality of banking services (Zhou, 2013). This study explores how different aspects of internet banking affect customer loyalty at Zenith Bank by analyzing satisfaction levels, evaluating service quality, and assessing customer retention patterns. A recent J.D. Power survey reported in Barron's (2024) revealed a decline in customer satisfaction especially among checking account holders due to issues such as delays in resolving disputes and difficulty in accessing customer support. As Nigeria's financial sector continues its digital expansion, understanding how reliable and efficient internet banking shapes customer perceptions and strengthens relationships is crucial (Tan & Teo, 2000; Oghenerukevwe & Uju, 2020).

### **Digital Payment**

Digital financial systems enable customers to carry out transactions via secure electronic channels, replacing traditional payment methods like cash and checks with modern alternatives such as mobile payment applications, debit and credit cards, and online payment platforms (Zhou et al., 2018). The surge in digital payments is largely driven by the widespread adoption of smartphones, the rapid growth of e-commerce, and continuous

advancements in payment technologies that offer speed, ease of access, data encryption, and biometric security features (Mekonnen & Yimam, 2019; Mallat, 2007). This research focuses on how the adoption of digital payment methods by Zenith Bank influences customer loyalty by improving service quality, enhancing customer satisfaction, and increasing retention rates. The convenience and reliability of digital transactions contribute to superior customer experiences, fostering trust and cultivating long-term relationships (Chen et al., 2019). Given the growing popularity of digital payments in Nigeria, examining their impact on customer loyalty is essential for financial institutions to refine digital service offerings and strengthen customer engagement strategies (Oghenerukevwe & Uju, 2020).

### **Customer Loyalty**

Customer loyalty is rooted in sustained consumer commitment to a brand, shaped by satisfaction levels, perceived value, and overall experiences encompassing both behavioral and attitudinal dimensions (Oliver, 1999; Dick & Basu, 1994). In the context of digital services, Siddiqi et al. (2024) emphasize that loyalty reflects a consumer's consistent preference for a product or service, regardless of external influences such as competitors' marketing efforts. In the banking sector, loyalty is influenced by the quality of service, transaction efficiency, and reliability, and is further reinforced through advancements in mobile and internet banking (Loyalty360, 2018; Kumar et al., 2017). This research examines how Zenith Bank's digital financial services impact customer satisfaction, enhance service quality, and boost retention, all of which are critical components in cultivating customer loyalty (Oliver, 1999; Chen et al., 2019). As digital banking becomes increasingly significant in Nigeria, gaining insights into its role can help Zenith Bank maintain a competitive advantage and ensure long-term sustainability by strengthening customer relationships (Oghenerukevwe & Uju, 2020).

### **Customer Satisfaction**

Customer satisfaction is a critical benchmark for success in the banking industry, as it fosters customer loyalty, encourages repeat patronage, and secures a competitive market position (Oliver, 1980; Kotler & Keller, 2016). The conceptual framework underpinning this research integrates three core dimensions—service quality, transactional simplicity, and overall customer experience (Parasuraman et al., 1988). Fu (2024) explores the dynamic relationship between digital financial services, customer engagement, and satisfaction, revealing a strong positive correlation between customer satisfaction and the quality of digital banking services. Digital innovations in finance enhance satisfaction by offering improved accessibility, convenience, and operational efficiency (Lin, 2018; Chen et al., 2019). This study evaluates how Zenith Bank's adoption of digital services influences customer satisfaction by assessing improvements in service quality and user contentment (Zeithaml et al., 2002). As digital banking rapidly expands across Nigeria, analyzing customer satisfaction is essential for banks to remain competitive and responsive to evolving consumer expectations (Oghenerukevwe & Uju, 2020).

**Service Quality**

Service quality reflects how well a service meets or surpasses customer expectations, playing a crucial role in shaping customer satisfaction, loyalty, and retention (Parasuraman et al., 1988). In a study on Nigeria's e-commerce sector, Ojochide et al. (2023) identified responsiveness, privacy, fulfillment, and compensation as key determinants of customer satisfaction and loyalty. Within the banking industry, digital tools such as mobile banking, internet banking, and digital payments are increasingly employed to enhance service quality by improving transactional reliability, convenience, and responsiveness (Zeithaml, 2000; Lin, 2018). This research explores the impact of Zenith Bank's digital banking platforms on service quality, focusing on how technological adoption fosters operational efficiency, seamless customer support, and simplified banking experiences. Achieving a competitive edge in the digital age requires banks to prioritize digital solutions that enhance service delivery, as superior service quality cultivates customer trust and long-term loyalty (Grönroos, 1990). As Nigeria's banking landscape continues to evolve, service excellence driven by digital innovation becomes essential in sustaining customer satisfaction and loyalty (Oghenerukevwe & Uju, 2020).

**Customer Retention**

Customer retention, defined as a firm's capacity to sustain enduring relationships while reducing customer turnover, is a vital strategy that significantly boosts profitability (Reichheld & Sasser, 1990). In the highly competitive banking sector, retention hinges on the quality of services provided, the degree of customer satisfaction, and the overall customer experience (Kotler & Keller, 2016). The integration of digital financial tools such as mobile banking, internet banking, and digital payment platforms has become instrumental in enhancing accessibility, efficiency, and personalized service delivery, thereby fostering stronger customer loyalty (Lin, 2018). Zenith Bank's implementation of these technological innovations is aimed at elevating service quality and satisfaction to achieve higher retention rates. Gómez-Vargas et al. (2023), employing churn prevention strategies driven by customer lifetime value and predictive analytics can significantly bolster retention outcomes, highlighting the importance of personalized approaches in maintaining a loyal client base. In the context of Nigeria's rapidly evolving digital banking environment, comprehending the impact of these innovations on customer loyalty is crucial for banks seeking to retain customers and maintain a strategic advantage (Oghenerukevwe & Uju, 2020).

**Theoretical Review**

The study explored three key theories that provide a foundation for understanding the relationships between digital financial innovations and customer loyalty. These theories include the Technology Acceptance Model (TAM), the SERVQUAL Model, and the Customer Relationship Management (CRM) Theory.

### **Technology Acceptance Model (TAM)**

In order to describe how people come to accept and use new technologies, Davis (1989) created the Technology Acceptance Model (TAM). According to TAM, two key elements influence customers' acceptance of a technology: perceived usability and perceived benefit. The degree to which a person thinks that utilising a technology will be effortless is known as perceived ease of use, whilst the degree to which they think that using the technology will improve their everyday life or job performance is known as perceived usefulness (Davis, 1989).

The Technology Acceptance Model (TAM) builds upon the Theory of Reasoned Action (TRA) and applies it specifically to technology adoption. According to this model, perceived usefulness has a direct impact on users' attitudes toward a technology and their intention to adopt it, ultimately shaping their actual usage behavior (Venkatesh & Davis, 2000). TAM has been extensively used across multiple fields, such as information systems, e-commerce, and mobile applications, to analyze how users embrace new technologies.

Recent studies have reaffirmed the applicability of TAM in analyzing user acceptance of digital technologies. Research has shown that the model effectively explains adoption behaviors in areas such as mobile banking and digital financial services. For example, Lin (2018) demonstrated that perceived usefulness and ease of use strongly influence users' willingness to adopt mobile banking. Additionally, other studies have confirmed TAM's predictive power in assessing the uptake of internet banking and digital payment platforms, underscoring its versatility across various technological settings (Venkatesh et al., 2016).

In this study, TAM proves highly relevant as it provides a framework for evaluating customer perceptions of Zenith Bank's digital financial innovations including mobile banking, internet banking, and digital payment solutions in terms of their perceived usefulness and ease of use. Analyzing these perceptions is essential for determining how such innovations impact customer satisfaction and loyalty. For instance, if Zenith Bank's mobile app is viewed as user-friendly and beneficial to the banking experience, customers are more likely to adopt and remain engaged with the service, thereby increasing retention rates (Chen et al., 2019).

This study leverages TAM to examine how Zenith Bank's digital financial services specifically their perceived ease of use and usefulness influence customer satisfaction and loyalty. Such an analysis offers critical insights into the key drivers of digital adoption, enabling the bank to refine its services and align them more effectively with customer expectations.

### **SERVQUAL Model**

According to the SERVQUAL Model, which was created by Parasuraman, Zeithaml, and Berry (1988), service quality can be assessed across five key dimensions: assurance, responsiveness, empathy, tangibles, and reliability. These dimensions collectively influence customer satisfaction and are essential for comprehending service performance. The

SERVQUAL Model measures the difference between customer expectations and perceptions of service performance (Parasuraman et al., 1988).

The ability of the service provider to provide dependable and consistent service is referred to as reliability. Being responsive means being ready to assist clients and offer timely support. Assurance has to do with staff members' expertise, politeness, and capacity to inspire trust in clients. The ability of the provider to comprehend and cater to the unique needs of clients is referred to as empathy. Tangibles encompass the physical appearance of facilities, equipment, and personnel (Parasuraman et al., 1988).

Contemporary studies have reaffirmed the SERVQUAL Model's effectiveness in measuring service quality across diverse sectors, particularly in banking. Research indicates that SERVQUAL's dimensions effectively evaluate customer perceptions of banking services, showing strong relationships between service quality factors and customer satisfaction levels (Kwortnik & Thompson, 2009). The model has proven especially valuable in examining how service quality impacts customer loyalty, as superior service quality consistently leads to greater satisfaction and sustained customer commitment (Zeithaml, Berry, & Parasuraman, 1996).

The SERVQUAL Model is highly relevant to this study on "Digital Financial Innovation and Customer Loyalty in Zenith Bank." As Zenith Bank adopts digital financial innovations like internet banking, mobile banking, and digital payment systems, it is critical to assess how these innovations affect the five dimensions of service quality. The study seeks to determine whether these digital tools improve service reliability, assurance, responsiveness, empathy, and tangibles. For instance, mobile banking may improve responsiveness by enabling faster transaction processing, while digital payment systems may improve tangibles by offering a more user-friendly interface (Sweeney & Webb, 2007). Using the SERVQUAL Model, the study will provide light on how customers' opinions of service quality and general satisfaction are impacted by Zenith Bank's digital financial innovations. This assessment will assist in determining whether these innovations contribute to increased levels of customer loyalty and retention and meet or surpass customer expectations. The results will be helpful in determining how successfully the bank's digital products meet the demands and expectations of its clients in a cutthroat financial market.

### **Customer Relationship Management (CRM) Theory**

The strategic management of a business's relationships with both present and potential clients is the main focus of customer relationship management, or CRM, theory. CRM is focused on using customer data to develop business relationships, increase customer loyalty, and improve service delivery (Buttle, 2009). The basic purpose of CRM is to understand customer wants and behaviors to create tailored experiences, hence boosting customer happiness and retention (Payne & Frow, 2005).

CRM entails managing client relations and streamlining procedures across several touchpoints by utilising technology and data analytics. In order to develop a comprehensive picture of the client, this involves keeping note of their preferences, past purchases, and interactions. Businesses can anticipate client wants, enhance customer service, and customise their marketing plans by evaluating this data (Chen & Popovich, 2003). To make sure that every department is using the same strategy for managing client connections, CRM systems frequently interact with other corporate functions, including marketing, sales, and customer support (Nguyen, Simkin, & Canh, 2019).

CRM is essential for improving customer experiences and cultivating loyalty, according to recent studies. Effective CRM techniques, for instance, enable more individualised and responsive service, which improves customer happiness and retention, according to study by Nguyen and Simkin (2017). CRM systems analyse customer data to assist organisations find chances for cross-selling and up-selling in addition to helping them retain clients (Järvinen & Karjaluo, 2015).

Regarding the research on "Digital Financial Innovation and Customer Loyalty in Zenith Bank," CRM Theory is quite pertinent. Zenith Bank's CRM procedures may be greatly impacted by the adoption of digital financial advances including online banking, mobile banking, and digital payment systems. Zenith Bank can provide more individualised service and focus marketing efforts by employing these digital tools to collect and analyse consumer data more effectively (Patterson & Spreng, 1997).

The purpose of the study is to investigate how Zenith Bank's digital financial innovations improve customer loyalty by improving CRM practices. The study will shed light on how well these innovations work to build enduring relationships with customers by evaluating how they enhance customer interactions and service delivery. By comprehending how digital CRM tools affect client retention and happiness, Zenith Bank will be able to increase customer service and boost overall business performance.

### **Hypotheses Development**

The knowledge base's theoretical framework and empirical review serve as the foundation for the section on developing hypotheses. The theories that follow are derived from previous study findings as well as the connections among digital payment systems, mobile banking, online banking, customer happiness, service quality, and customer retention.

### **Mobile Banking and Customer Satisfaction**

In the banking industry, mobile banking has become a crucial component affecting client happiness. Alalwan et al. (2018) state that the adoption of mobile banking is greatly impacted by a number of elements, including social influence, facilitating conditions, performance expectancy, effort expectancy, and trust. Together, these elements improve the client experience by offering dependability, accessibility, and convenience. Additionally, Oghenerukevwe and Uju (2020) showed that digital banking elements like

usability and accessibility greatly boost consumer satisfaction. In light of the increasing dependence on mobile banking, the following hypothesis is put forth:

H01: Mobile banking does have a significant influence on customer satisfaction at Zenith Bank.

### **Internet Banking and Service Quality**

By providing users with tools for effective transaction processing, account management, and access to financial goods, internet banking significantly influences the quality of services. According to Flavián et al. (2016), the adoption of internet banking is greatly influenced by physical bank characteristics such branch availability, service quality, and dependability. According to Shankar and Jebarajakirthy (2019), customer happiness and loyalty are greatly impacted by aspects of e-banking service quality such assurance, responsiveness, and dependability. Reputable online banking services improve client satisfaction and build confidence. Thus, the following hypothesis is put forth:

H02: Internet banking does have a significant impact on service quality at Zenith Bank.

### **Digital Payment Systems and Customer Retention**

The way that consumers engage with banks has been completely transformed by digital payment technologies, which make transactions safe, quick, and easy. Nigeria's cashless strategy greatly increased financial inclusion by enticing marginalised people to use digital financial services, according to Olorunsegun (2020). In a similar vein, Amin (2016) discovered that excellent online banking services boost e-customer happiness and loyalty, two important factors that influence client retention. Banks can increase client loyalty and retention by offering strong digital payment solutions. Therefore, it is assumed that:

H03: Digital payment systems does have a significant effect on customer retention at Zenith Bank.

### **Methodology**

The study is conducted in Abuja, the capital city of Nigeria, which serves as the administrative and political hub of the country and has experienced rapid urbanization and economic growth, making it an ideal setting for investigating the impact of digital financial innovations on customer loyalty. The research adopts a descriptive research design, which is well-suited for investigating the effect of digital financial innovation and customer loyalty, as it allows for the systematic collection of data to describe the characteristics of a specific population or phenomenon accurately. The population of the study comprises 115 employees at Zenith Bank, covering different cadres, including management, operational, and marketing staff. Given the relatively small population, the census methodology technique is employed, ensuring that all 115 employees are part of the study, thereby capturing the full scope of perspectives and experiences. The primary source of data collection is structured questionnaires administered to the employees and selected

customers, divided into two sections: Section A collects demographic information, while Section B uses a 5-point Likert scale to gather data on digital financial innovation and customer loyalty. Data analysis involves quantitative techniques, including descriptive statistics and simple linear regression analysis, conducted using SPSS software. To ensure the validity and reliability of the research instrument, the questionnaire undergoes content validity testing through expert review and reliability testing using Cronbach's Alpha, with values of 0.82 for Digital Financial Innovation, 0.78 for Customer Loyalty, and an overall value of 0.80, all exceeding the acceptable threshold of 0.7, indicating the instrument's reliability. This methodology ensures the collection of accurate and relevant data to address the research questions and objectives while maintaining the reliability and validity of the findings.

### Model Specification

The study variables comprised of both the dependent variable and independent variables. The dependent variable (Customer loyalty) was proxy by customer satisfaction, service quality and customer retention, and the independent variables (Digital financial innovation) was proxy by mobile banking, internet banking and digital payment systems.

### Theoretical Model

$$Y = \alpha + \beta_i X_i + \epsilon \dots\dots\dots 3.1$$

Where:

Y = dependent variable (that is customer satisfaction, service quality and customer retention)

$\alpha_0$  = intercept

$\beta_i$  = the parameter of the predictor variables

X represents the predictor variable (mobile banking, internet banking and digital payment systems)

$\epsilon$  denotes the stochastic error component. Empirical frameworks are formulated as:

$$CS_i = \beta_0 + \beta_1 MB_i + \epsilon_i \dots\dots\dots 3.2$$

$$SQ_i = \beta_0 + \beta_1 IB_i + \epsilon_i \dots\dots\dots 3.3$$

$$CR_i = \beta_0 + \beta_1 DPS_i + \epsilon_i \dots\dots\dots 3.4$$

Where:

CS= Customer Satisfaction, And

SQ= Service Quality

CR= Customer Retention

MB= Mobile Banking

IB= Internet Banking

DPS= Digital Payment Systems

Ethical Consideration

Ethical principles were considered in the data collection process. This is to ensure adherence to participants rights and data intergrity. Participation was done only if the participant provides informed consent, and they have the right to withdraw at anytime without any consequence. Also, the researchers anonymised the data before the analysis and reporting to ensure anonymity and confidentiality. Furthermore, clearance was obtained from the management of the Zenith before questionnaires were administered on the participants.

Results and Discussion

Data Presentation

Table 4.1 Response Rate

|                                          |     |
|------------------------------------------|-----|
| Questionnaire Distributed                | 138 |
| Returned Questionnaire                   | 117 |
| Percentage of returned Questionnaire     | 85% |
| Unreturned Questionnaire                 | 21  |
| Percentage of not returned Questionnaire | 15% |

Source: Field Survey, (2024)

Table 4.1 shows the response rate for the distributed questionnaires. Out of 138 questionnaires distributed, 117 were returned, representing an 85% return rate, while 21 questionnaires were not returned, accounting for 15%. The high response rate of 85% indicates a strong level of participation and suggests that the data collected is sufficiently representative of the target population. This enhances the reliability of the study's findings, as the sample size provides an adequate basis for analyzing the effect of digital financial innovation on customer loyalty in Zenith Bank, FCT-Abuja.

Test of Hypotheses

Hypothesis One:

H<sub>01</sub>: Mobile banking does not have a significant influence on customer satisfaction at Zenith Bank.

$CS_i = \beta_0 + \beta_1 MB_i + \epsilon_i$  .....3.2

Table 4.2.1 Model Summary

| Model                         | R                 | R Square | Adjusted R Square | Std. Error of the Estimate |
|-------------------------------|-------------------|----------|-------------------|----------------------------|
| 1                             | .736 <sup>a</sup> | .542     | .536              | .41667                     |
| a. Predictors: (Constant), MB |                   |          |                   |                            |

Derived from SPSS output version 27.0

Table 1 presents the model summary, highlighting key indicators of the relationship between mobile banking (MB) and the dependent variable. The R value of 0.736 reflects a strong positive correlation, while the R Square value of 0.542 indicates that approximately 54.2% of the variation in the dependent variable can be explained by mobile banking. This means that more than half of the changes observed in the outcome variable are attributable to the influence of MB, suggesting a substantial explanatory power of the model. Furthermore, the Adjusted R Square value of 0.536 refines this estimate by adjusting for the number of predictors in the model, providing a more accurate reflection of its generalizability. This slight reduction from the R Square confirms that the model remains robust without being overfitted. Hence, with both R Square and Adjusted R Square exceeding the 0.5 threshold, the model is considered a good fit, affirming that mobile banking has a significant and reliable influence on the dependent variable.

**Table 4.2.2 ANOVA<sup>a</sup>**

| Model                                 |            | Sum of Squares | df  | Mean Square | F      | Sig.              |
|---------------------------------------|------------|----------------|-----|-------------|--------|-------------------|
| 1                                     | Regression | 4.434          | 1   | 4.434       | 37.773 | .000 <sup>b</sup> |
|                                       | Residual   | 13.499         | 115 | .117        |        |                   |
|                                       | Total      | 17.932         | 116 |             |        |                   |
| a. Dependent Variable: CS             |            |                |     |             |        |                   |
| b. Predictors: (Constant), MB         |            |                |     |             |        |                   |
| Derived from SPSS output version 27.0 |            |                |     |             |        |                   |

Table 4.2.2 presents the ANOVA results for testing hypothesis that mobile banking does not have a significant influence on customer satisfaction at Zenith Bank. The F value of 37.773 with a significance level (Sig.) of 0.000 indicates that the model is statistically significant. This means that the regression model significantly predicts customer satisfaction based on mobile banking. The Sum of Squares for regression (4.434) and residual (13.499) shows the variance explained by mobile banking and the unexplained variance, respectively. The p-value of 0.000, being less than 0.05, leads to the rejection of the null hypothesis ( $H_{01}$ ), confirming that mobile banking has a significant influence on customer satisfaction at Zenith Bank. This implies that mobile banking plays a critical role in enhancing customer satisfaction.

**Table 4.2.3 Coefficients<sup>a</sup>**

| Model                     |            | Unstandardized Coefficients |            | Standardized Coefficients | t     | Sig. |
|---------------------------|------------|-----------------------------|------------|---------------------------|-------|------|
|                           |            | B                           | Std. Error | Beta                      |       |      |
| 1                         | (Constant) | 2.663                       | .287       |                           | 9.285 | .000 |
|                           | MB         | .421                        | .068       | .497                      | 6.146 | .000 |
| a. Dependent Variable: CS |            |                             |            |                           |       |      |

Derived from SPSS output version 27.0

Table 4.2.3 displays the regression coefficients for testing Hypothesis One, which examines the influence of mobile banking (MB) on customer satisfaction (CS) at Zenith Bank. The Unstandardized Coefficient (B) for mobile banking is 0.421, indicating that for every unit increase in mobile banking service quality, customer satisfaction increases by 0.421 units. The t-value of 6.146 and a p-value of 0.000 demonstrates that the relationship between mobile banking and customer satisfaction is statistically significant. The Standardized Coefficient (Beta) of 0.497 further indicates a moderate positive influence of mobile banking on customer satisfaction. Since the p-value is below 0.05, the null hypothesis is rejected, validating that mobile banking significantly influences customer satisfaction at Zenith Bank. This suggests that improving mobile banking services can effectively enhance customer satisfaction.

### Hypothesis Two:

$H_{02}$ : Internet banking does not have a significant impact on service quality at Zenith Bank.

$$SQ_i = \beta_0 + \beta_1 IB_i + \epsilon_i \dots\dots\dots 3.3$$

**Table 4.3.1 Model Summary**

| Model                         | R                 | R Square | Adjusted R Square | Std. Error of the Estimate |
|-------------------------------|-------------------|----------|-------------------|----------------------------|
| 1                             | .882 <sup>a</sup> | .778     | .776              | .24255                     |
| a. Predictors: (Constant), IB |                   |          |                   |                            |

Derived from SPSS output version 27.0

Table 4.3.1 presents the model summary for Hypothesis Two, which tests whether internet banking (IB) has a significant impact on service quality (SQ) at Zenith Bank. The R value of 0.882 indicates a strong positive correlation between internet banking and service quality. The R Square value of 0.778 suggests that 77.8% of the variance in service quality is explained by internet banking, showing a substantial impact. The Adjusted R Square of 0.776 confirms that the model is a good fit. With a low Standard Error of the Estimate (0.24255), the model's predictions are precise. Based on these results, the null hypothesis ( $H_{02}$ ) is rejected, implying that internet banking significantly impacts service quality at Zenith Bank. This indicates that enhancing internet banking services could lead to improvements in service quality, benefiting both the bank and its customers.

**Table 4.3.2 ANOVA<sup>a</sup>**

| Model                         |            | Sum of Squares | df  | Mean Square | F       | Sig.              |
|-------------------------------|------------|----------------|-----|-------------|---------|-------------------|
| 1                             | Regression | 23.666         | 1   | 23.666      | 402.255 | .000 <sup>b</sup> |
|                               | Residual   | 6.766          | 115 | .059        |         |                   |
|                               | Total      | 30.431         | 116 |             |         |                   |
| a. Dependent Variable: SQ     |            |                |     |             |         |                   |
| b. Predictors: (Constant), IB |            |                |     |             |         |                   |

Derived from SPSS output version 27.0

Table 5 presents the ANOVA findings for Hypothesis Two, which examines whether internet banking (IB) significantly impacts service quality (SQ) at Zenith Bank. The F-statistic of 402.255 with a p-value of 0.000 indicates that the regression model is statistically significant, meaning that internet banking has a significant impact on service quality. The large Sum of Squares for regression (23.666) compared to the residual (6.766) further confirms that the majority of the variance in service quality is explained by internet banking. Given the significance level, the null hypothesis (Ho2) is rejected, affirming that internet banking positively influences service quality at Zenith Bank. This suggests that improvements in internet banking will likely enhance the overall quality of service experienced by customers.

**Table 4.3.3 Coefficients<sup>a</sup>**

| Model |            | Unstandardized Coefficients |            | Standardized Coefficients | t      | Sig. |
|-------|------------|-----------------------------|------------|---------------------------|--------|------|
|       |            | B                           | Std. Error | Beta                      |        |      |
| 1     | (Constant) | .127                        | .194       |                           | .656   | .513 |
|       | IB         | .954                        | .048       | .882                      | 20.056 | .000 |

a. Dependent Variable: SQ

Derived from SPSS output version 27.0

Table 4.3.3 provides coefficient analysis for Hypothesis Two, assessing the impact of internet banking (IB) on service quality (SQ) at Zenith Bank. The unstandardized coefficient (B = 0.954) indicates that for every unit increase in internet banking, service quality increases by 0.954 units. The t-value of 20.056, with a p-value of 0.000, signifies that this effect is highly significant. The standardized coefficient (Beta = 0.882) shows a strong positive relationship between internet banking and service quality. Given these findings, the null hypothesis (Ho2) is rejected, confirming that internet banking significantly and positively impacts service quality at Zenith Bank. This suggests that enhancing internet banking services can greatly improve customer perceptions of service quality.

### Hypothesis Three:

H<sub>03</sub>: Digital payment systems does not significantly affect customer retention at Zenith Bank.

$$CR_i = \beta_0 + \beta_1 DPS_i + \epsilon_i \dots\dots\dots 3.4$$

**Table 4.4.1 Model Summary**

| Model | R                 | R Square | Adjusted R Square | Std. Error of the Estimate |
|-------|-------------------|----------|-------------------|----------------------------|
| 1     | .765 <sup>a</sup> | .586     | .582              | .31878                     |

a. Predictors: (Constant), DP

Derived from SPSS output version 27.0

Table 4.4.1 presents the model summary for Hypothesis Three, which examines whether digital payment systems (DP) significantly affect customer retention at Zenith Bank. An R-value of 0.765 signifies a strong positive relationship between digital payment systems and customer retention. The R Square value of 0.586 implies that 58.6% of the variations in customer retention are attributable to changes in digital payment systems. The Adjusted R Square of 0.582 supports the stability of the model. Given these results, the null hypothesis (Ho<sub>3</sub>) is rejected, implying that digital payment systems have a significant effect on customer retention at Zenith Bank. This highlights the importance of efficient and reliable digital payment systems in maintaining customer loyalty.

**Table 4.4.2 ANOVA<sup>a</sup>**

| Model                         |            | Sum of Squares | df  | Mean Square | F       | Sig.              |
|-------------------------------|------------|----------------|-----|-------------|---------|-------------------|
| 1                             | Regression | 16.532         | 1   | 16.532      | 162.689 | .000 <sup>b</sup> |
|                               | Residual   | 11.686         | 115 | .102        |         |                   |
|                               | Total      | 28.218         | 116 |             |         |                   |
| a. Dependent Variable: CR     |            |                |     |             |         |                   |
| b. Predictors: (Constant), DP |            |                |     |             |         |                   |

Derived from SPSS output version 27.0

Table 4.4.2 presents ANOVA findings for Hypothesis Three, which tests the effect of digital payment systems (DP) on customer retention (CR) at Zenith Bank. The F-statistic of 162.689 is highly significant, with a p-value of 0.000, indicating that the regression model is statistically significant. This suggests that digital payment systems have a meaningful impact on customer retention at Zenith Bank. As a result, the null hypothesis (Ho<sub>3</sub>) is rejected, affirming that digital payment systems significantly influence customer retention. This finding underscores the crucial role of robust digital payment infrastructure in fostering customer loyalty and retention in banking services.

**Table 4.4.3 Coefficients<sup>a</sup>**

| Model                     |            | Unstandardized Coefficients |            | Standardized Coefficients | t      | Sig. |
|---------------------------|------------|-----------------------------|------------|---------------------------|--------|------|
|                           |            | B                           | Std. Error | Beta                      |        |      |
| 1                         | (Constant) | .882                        | .247       |                           | 3.566  | .001 |
|                           | DP         | .778                        | .061       | .765                      | 12.755 | .000 |
| a. Dependent Variable: CR |            |                             |            |                           |        |      |

Derived from SPSS output version 27

Table 4.4.3 shows coefficients for Hypothesis Three, which examines the effect of digital payment systems (DP) on customer retention (CR) at Zenith Bank. The unstandardized coefficient (B) for DP is 0.778, with a t-value of 12.755 and a highly significant p-value of

0.000, indicating that digital payment systems have a strong and positive influence on customer retention. The standardized beta coefficient (0.765) further supports the significant contribution of DP to CR. Consequently, the null hypothesis ( $H_{03}$ ) is rejected, confirming that digital payment systems significantly impact customer retention. This implies that enhanced digital payment solutions lead to higher customer loyalty at Zenith Bank, emphasizing the importance of reliable digital payment services for retaining customers.

### Discussion of Findings

The study's findings provide valuable insights into how Zenith Bank's digital financial innovations contribute to customer loyalty. The impact of digital payment systems, online banking, and mobile banking on customer happiness, service quality, and customer retention is clarified by the data analysis using the hypotheses that were developed.

#### **H<sub>01</sub>: Mobile banking does not have a significant influence on customer satisfaction at Zenith Bank.**

The null hypothesis ( $H_{01}$ ) has been rejected based on the results of the regression analysis, which show that mobile banking significantly improves customer satisfaction at Zenith Bank. This result is consistent with the findings of Alalwan et al. (2018), who highlight how convenience and ease of use can improve customer satisfaction with mobile banking apps. Similarly, Gomber et al. (2018) point out that mobile banking platforms increase customer satisfaction by improving service timeliness and efficiency. In support of these empirical findings, this study also shows that Zenith Bank's mobile banking app's usability, security, and functionality have a favourable impact on customer satisfaction. The results, however, are in contrast to those of Olorunsegun (2020), who noted that low adoption rates and network infrastructure issues prevented mobile banking from considerably improving consumer satisfaction in several developing nations. This implies that whereas mobile banking enhances happiness in places with sophisticated technology infrastructure, obstacles still exist in places where adoption is difficult. The findings also support the Technology Acceptance Model (TAM), which holds that when consumers believe mobile banking is practical and simple to use, they are more inclined to embrace it. According to the survey, Zenith Bank's mobile banking services meet TAM's requirements since users find the platform useful and easy to use, which eventually increases customer happiness.

#### **H<sub>02</sub>: Internet banking does not have a significant impact on service quality at Zenith Bank.**

The results show that Zenith Bank's service quality is greatly impacted by internet banking, which is why  $H_{02}$  was rejected. Key characteristics including accessibility, dependability, and efficient customer service are essential for improving service quality. These findings are consistent with Flavián et al. (2016), who discovered that dependable online banking platforms enhance service perceptions by providing seamless experiences. Similarly,

respondents stated that Zenith Bank's internet banking system runs dependably and offers effective support services, enhancing service quality perceptions. This study supports Oni and Ayo's (2019) emphasis on the positive correlation between internet banking, customer satisfaction, and operational efficiency. The findings, however, are in contrast to those of Asongu and Nwachukwu (2018), who discovered that in certain African regions, internet banking did not significantly improve service quality because of connectivity issues and technological limitations. This suggests that infrastructure development affects how effective internet banking is. The SERVQUAL Model, which identifies responsiveness, assurance, and dependability as crucial aspects of service quality, supports the findings even more. Zenith Bank's internet banking had a positive impact on all three of these factors, which in turn strengthened customer perceptions of service quality.

**H03: Digital payment systems do not significantly affect customer retention at Zenith Bank.**

According to the report, Zenith Bank's customer retention is greatly impacted by digital payment systems, which is why H03 was rejected. According to Akinci et al. (2016), who stressed that trust in digital payment systems increases customer loyalty, these systems' security, dependability, and usability are critical in keeping customers. Customer trust is increased by Zenith Bank's digital payment platforms' high level of security, which eventually raises retention rates. According to respondents in this study, Zenith Bank's digital payment efficiency has a major impact on their continued patronage, supporting Jebarajakirthy's (2019) assertion that dependable digital payment systems are crucial for preserving customer loyalty in cutthroat financial markets. These findings, however, are in contrast to those of Oghenerukevwe and Uju (2020), who contended that transaction delays and security concerns have prevented digital payment systems from significantly increasing retention in certain Nigerian banks. This suggests that the efficacy of digital financial innovations may differ amongst institutions. The results are consistent with the Customer Relationship Management (CRM) Theory, which holds that companies that use technology to improve customer experiences—like safe online payment methods—build closer bonds with their clients and increase retention rates.

All things considered, this study proves that Zenith Bank's customer satisfaction, service quality, and retention are greatly impacted by technological developments in the financial industry, including digital payment systems, online banking, and mobile banking. Although these conclusions are supported by a number of empirical research, some opposing viewpoints contend that regional technical infrastructure acts as a moderator. The study's findings are supported by theoretical frameworks like SERVQUAL, CRM theory, and TAM, which offer a solid basis for comprehending these interactions.

### Conclusion and Recommendations

This study has provided valuable insights into the impact of digital financial innovations on customer loyalty at Zenith Bank, with a specific focus on mobile banking, internet banking, and digital payment systems. The findings reveal a strong positive relationship between the adoption of these digital services and customer satisfaction, service quality, and retention. Mobile banking, through its ease of use, reliability, and security features, significantly enhances customer satisfaction, confirming that customers are more likely to remain loyal to banks that offer seamless and efficient mobile platforms. Similarly, internet banking has exhibited great influence on service quality, as the availability of efficient, secure, and accessible online services fosters positive customer experiences, further contributing to customer loyalty.

Digital payment systems emerged as a critical factor in customer retention, with secure and reliable payment platforms being essential for sustaining long-term customer relationships. The study underscores the importance of maintaining up-to-date, customer-centric digital platforms that meet the evolving needs of users in the digital age. These findings are consistent with the Technology Acceptance Model (TAM), which highlights the importance of perceived usefulness and ease of use in determining customer adoption of new technologies, as well as the SERVQUAL model, which emphasizes the significance of service quality dimensions such as reliability, assurance, and responsiveness in customer satisfaction.

The study confirms that digital innovations are not only beneficial but essential for banks seeking to enhance customer loyalty in today's highly competitive banking industry. Zenith Bank, in particular, has successfully leveraged mobile banking, internet banking, and digital payment systems to meet customer expectations and secure their loyalty. However, ongoing innovation and improvement are necessary to sustain this competitive advantage and ensure that digital financial services continue to align with the evolving preferences of customers. By prioritizing user experience, security, and reliability, banks can build stronger, longer-lasting relationships with their customers, positioning themselves for sustained success in the digital economy.

According to the results of this study, subsequent professional recommendations are made:

- i. The study reveals that mobile banking significantly influences customer satisfaction at Zenith Bank, with customers appreciating ease of use and reliability. To further enhance customer satisfaction, it is recommended that Zenith Bank continually upgrade its mobile banking platform by incorporating more user-friendly features, improving security measures, and ensuring minimal service interruptions. Alalwan et al. (2018) emphasized that continuous improvement of mobile banking applications is crucial in sustaining customer satisfaction and loyalty in the digital age. By focusing on user-centered design and security enhancements, banks can solidify their customer base and maintain a competitive edge.

- ii. To ensure sustained service quality, Zenith Bank should focus on optimizing its internet banking platform by integrating advanced security protocols and minimizing system downtimes. Gomber et al. (2018) emphasized that seamless and secure online banking experiences are integral to enhancing service quality. Additionally, a customer support system that promptly addresses technical issues or concerns will ensure that the bank retains its high service standards. This will align with the SERVQUAL model, which underscores the importance of reliability and assurance in improving service quality.
- iii. The study finds that digital payment systems significantly affect customer retention. Therefore, it is recommended that Zenith Bank further strengthen the security, efficiency, and reliability of its digital payment platforms to ensure consistent performance. Oghenerukevwe and Uju (2020) found that secure digital payment systems are critical to maintaining customer trust and loyalty. In addition, the bank should integrate feedback mechanisms to continuously improve these systems based on customer input, ensuring that they remain responsive to evolving market demands. This aligns with the principles of the Customer Relationship Management (CRM) theory, which stresses the importance of understanding and addressing customer needs for long-term retention.

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