

## The Effect of Financial Technology (Fintech) Adoption on Customer Service Delivery: A Study of OPay Digital Services, Nigeria

Edodi, Hope Ukam (Ph.D)<sup>1</sup>, Akaegbu, Juliana Baby (Ph.D)<sup>1</sup>, Uwah, Inemesit Enobong (Ph.D)<sup>2</sup>, Okon, Emmanuel Ekpenyong (Ph.D)<sup>1</sup>, Ogar, Godwin Wonah<sup>1</sup>, Etta, Patricia Omini<sup>1</sup>

<sup>1</sup>Department of Business Management, University of Calabar, Calabar, Nigeria  
[hopeedodi@gmail.com](mailto:hopeedodi@gmail.com), 08069059787, [Julakaegbu83@ymail.com](mailto:Julakaegbu83@ymail.com), 07032615255,  
[okonemmanuel2018@gmail.com](mailto:okonemmanuel2018@gmail.com), 08032738173, [godwinogar139@gmail.com](mailto:godwinogar139@gmail.com), 08105412041,  
[pattyettah@gmail.com](mailto:pattyettah@gmail.com), 09049233596

<sup>2</sup>Department of Business Administration, Akwa Ibom State University, Nigeria  
[inemesituwah@aksu.edu.ng](mailto:inemesituwah@aksu.edu.ng), 08034921199

---

### Abstract

*This study examines the effect of financial technology (fintech) adoption on customer service delivery, with a specific focus on OPay Digital Services in Nigeria. The rapid growth of digital financial platforms has significantly transformed how customers access and experience financial services, shifting expectations towards faster, more reliable, and user-friendly interactions. As one of the leading fintech platforms in Nigeria, OPay provides a relevant context for examining how the adoption of innovative technologies influences service quality. The study adopts a quantitative research design, using primary data collected through structured questionnaires administered to active OPay users. Fintech adoption is examined across key dimensions, including mobile application usability, transaction processing speed, system reliability, and the availability of digital features. Customer service delivery is assessed using indicators including responsiveness, service efficiency, accessibility, and overall customer satisfaction. Data analysis is conducted using regression techniques to determine the nature and strength of the relationship between fintech adoption and service delivery outcomes. The findings are expected to reveal that fintech adoption has a significant positive effect on customer service delivery within OPay Digital Services. Specifically, improvements in platform usability, transaction speed, and system reliability are anticipated to enhance customer satisfaction and the overall service experience. The study also highlights the importance of continuous technological innovation and user-centered design in maintaining high service standards in a competitive digital financial environment. This research contributes to the growing discourse on fintech and service delivery in emerging economies by providing empirical evidence from Nigeria. It offers practical insights for fintech providers on how to optimize digital platforms to meet evolving customer expectations and sustain competitive advantage in the financial services sector.*

---

**Keywords:** fintech adoption, customer service delivery, digital banking, customer satisfaction, OPay.

### INTRODUCTION

The financial services industry has undergone a profound transformation in recent years, driven largely by advancements in financial technology (fintech). Fintech refers to the integration of innovative digital technologies into financial services to improve their delivery, efficiency, and accessibility (Financial Stability Board, 2017). Globally, fintech has reshaped traditional banking

systems by enabling faster transactions, reducing operational costs, and enhancing customer experience. In emerging economies such as Nigeria, the adoption of fintech has accelerated rapidly due to increased mobile phone penetration, improved internet connectivity, and a growing demand for convenient financial solutions (Ozili, 2018).

In Nigeria, fintech platforms such as OPay have revolutionized the way financial services are delivered. OPay offers a wide range of services including mobile payments, money transfers, bill payments, and savings solutions, all accessible through digital channels. These platforms have significantly expanded financial inclusion by providing services to individuals who were previously underserved or excluded from the formal banking sector (Demirgüç-Kunt et al., 2021). As a result, customers now expect financial services to be not only accessible but also fast, reliable, and user-friendly.

Customer service delivery has become a critical factor in determining the success and competitiveness of fintech firms. Unlike traditional banking systems, where service delivery often involves physical interactions, fintech platforms rely heavily on digital interfaces and automated systems. This shift places greater emphasis on factors such as mobile application usability, transaction speed, system reliability, and the availability of innovative features. According to Parasuraman, Zeithaml, and Berry (1988), service quality is a key determinant of customer satisfaction and loyalty, and this principle remains relevant in the digital financial landscape. In the context of fintech, efficient service delivery translates into quick response times, seamless transactions, and consistent platform performance.

Despite the rapid growth of fintech in Nigeria, challenges related to service delivery persist. Issues such as network failures, transaction delays, security concerns, and poor user interface design can negatively affect customer experience and satisfaction (Akinwale & Kyari, 2020). These challenges highlight the need for fintech providers to continuously improve their technological capabilities and adopt user-centred approaches in designing their platforms. Understanding how fintech adoption influences customer service delivery is therefore essential for enhancing service quality and sustaining customer trust.

Although several studies have examined fintech adoption and its impact on financial inclusion and economic development, there is still limited empirical research focusing specifically on its effect on customer service delivery in the Nigerian context. Moreover, few studies have explored this relationship using specific fintech platforms such as OPay, which has gained widespread usage across the country. This gap in the literature necessitates a focused investigation into how different dimensions of fintech adoption influence service delivery outcomes.

This study, therefore, seeks to examine the effect of fintech adoption on customer service delivery, using OPay Digital Services in Nigeria as a case study. The study focuses on key dimensions of fintech adoption, including mobile application usability, transaction processing speed, system reliability, and availability of digital features, and evaluates their impact on customer service indicators such as responsiveness, efficiency, accessibility, and customer satisfaction. By employing a quantitative research approach and regression analysis, the study aims to establish the nature and strength of the relationship between fintech adoption and service delivery. The findings of this study are expected to contribute to both academic and practical knowledge. Academically, the study adds to

the growing body of literature on fintech and service delivery in emerging economies. Practically, it provides valuable insights for fintech providers, policymakers, and stakeholders on how to enhance digital service delivery and meet evolving customer expectations. Ultimately, improving customer service delivery through effective fintech adoption can help firms like OPay maintain a competitive advantage in an increasingly digital financial environment.

## **STATEMENT OF THE PROBLEM**

The rapid adoption of financial technology (fintech) has significantly transformed the delivery of financial services in Nigeria, with platforms such as OPay playing a central role in enhancing financial accessibility and convenience. These platforms promise faster transactions, improved accessibility, and seamless user experiences, thereby raising customer expectations regarding service quality and efficiency. However, despite these advancements, concerns about the consistency and effectiveness of customer service delivery within fintech platforms remain prevalent.

In practice, many users of digital financial services continue to experience challenges such as transaction delays, failed payments, system downtimes, limited customer support responsiveness, and difficulties in navigating mobile applications. These issues undermine user trust and satisfaction, which are critical for the sustainability and growth of fintech firms. While fintech adoption is generally assumed to improve service delivery, the extent to which specific dimensions of fintech such as application usability, transaction speed, system reliability, and availability of digital features translate into improved customer service outcomes is not yet fully established, particularly in the Nigerian context.

Furthermore, existing studies on fintech in Nigeria have largely focused on financial inclusion, digital payments adoption, and economic growth, with limited empirical attention given to customer service delivery as an outcome variable. Even fewer studies have examined this relationship using specific fintech platforms like OPay, which has gained widespread usage among individuals and small businesses. This creates a gap in knowledge regarding how fintech adoption directly influences service delivery performance from the users' perspective.

Therefore, the problem this study seeks to address is the lack of empirical evidence on the effect of fintech adoption on customer service delivery, particularly within OPay Digital Services in Nigeria. Without such insights, fintech providers may struggle to identify which aspects of their technology investments most significantly enhance customer experience and satisfaction. This study thus aims to bridge this gap by systematically examining the relationship between fintech adoption and customer service delivery.

## **OBJECTIVES OF THE STUDY**

- The broad objective of this study is to examine the effect of fintech adoption on customer service delivery, using OPay Digital Services in Nigeria as a case study. The specific objectives are:
- To examine the effect of mobile application usability on customer service delivery in OPay Digital Services.
- To determine the influence of transaction processing speed on customer service efficiency and responsiveness.
- To assess the impact of system reliability on customer satisfaction and overall service experience.

- To evaluate how the availability of digital features affects accessibility and quality of service delivery.

## **LITERATURE REVIEW**

### **Concept of Fintech Adoption**

Financial technology (fintech) adoption refers to the acceptance and use of digital platforms to deliver financial services efficiently and conveniently. The theoretical foundations of fintech adoption are largely rooted in the Technology Acceptance Model (TAM) and the Unified Theory of Acceptance and Use of Technology (UTAUT), which emphasize perceived usefulness, perceived ease of use, and performance expectancy as critical determinants of technology adoption (Davis, 1989; Venkatesh et al., 2003).

Empirical studies indicate that factors such as trust, usability, convenience, and technological efficiency significantly influence users' willingness to adopt fintech platforms (Hasan et al., 2021). In the Nigerian context, fintech adoption has been driven by the increasing demand for convenience, accessibility, and speed in financial transactions (Ozili, 2018). Similarly, Etuk et al. (2024) found that performance expectancy and effort expectancy significantly influence consumers' adoption of mobile financial technology services in Calabar, Nigeria.

These findings suggest that the effectiveness of fintech platforms depends largely on how well they satisfy users' expectations in terms of functionality, convenience, and service delivery.

### **Mobile Application Usability and Customer Service Delivery**

Mobile application usability refers to the extent to which a fintech application is easy to use, understandable, and efficient in helping users accomplish specific financial tasks. This concept is closely linked to perceived ease of use in the Technology Acceptance Model (Davis, 1989).

Studies have consistently shown that applications with intuitive interfaces and user-friendly navigation systems significantly improve customer experience and satisfaction (Utami et al., 2021). Customers are more likely to continue using fintech platforms that simplify transactions and reduce operational complexity.

Furthermore, usability contributes positively to customer service delivery by improving accessibility, responsiveness, and transaction efficiency. Conversely, poor usability may result in frustration, transaction errors, and reduced customer trust in digital financial services.

### **Transaction Processing Speed and Service Efficiency**

Transaction processing speed refers to the rate at which financial transactions are executed and completed on a fintech platform. Speed is considered a critical determinant of customer satisfaction and performance expectancy in technology adoption studies (Venkatesh et al., 2003).

According to Ozili (2018), one of the major reasons customers adopt digital financial services is the ability to perform transactions quickly and conveniently. Fast transaction processing reduces waiting time, enhances service efficiency, and improves customer experience.

However, transaction delays, failed payments, and prolonged processing times can negatively affect customer trust and satisfaction. Therefore, fintech firms are expected to maintain efficient processing systems capable of supporting real-time or near-instant transactions.

### **System Reliability and Customer Satisfaction**

System reliability refers to the ability of a fintech platform to consistently function without errors, failures, or service interruptions. Reliability is a major component of electronic service quality and plays a significant role in influencing customer satisfaction (Parasuraman et al., 1988).

Reliable systems ensure that financial transactions are completed accurately and securely, thereby improving customer trust and confidence in digital financial services. Studies have also shown that reliability, security, and trust significantly influence users' perceptions and adoption of fintech services (Hasan et al., 2021).

In contrast, system failures, network instability, and transaction reversals may discourage customers from continuously using fintech applications. Therefore, maintaining stable and reliable systems is essential for effective customer service delivery.

### **Availability of Digital Features and Service Accessibility**

Availability of digital features refers to the variety of financial services and functionalities offered by fintech platforms, such as transfers, bill payments, airtime purchases, savings options, and investment services.

The Technology Acceptance Model emphasizes perceived usefulness as a key determinant of technology adoption (Davis, 1989). Fintech platforms that provide multiple useful services are more likely to attract and retain customers.

Research has shown that customers prefer platforms that integrate diverse financial services into a single application because such platforms improve convenience and accessibility (Utami et al., 2021). In developing economies such as Nigeria, the availability of multiple digital services also reduces dependence on traditional banking systems and improves financial inclusion.

### **Customer Service Delivery in Fintech**

Customer service delivery in fintech refers to the effectiveness, responsiveness, efficiency, reliability, and accessibility of services provided through digital financial platforms.

According to Parasuraman et al. (1988), dimensions such as responsiveness, reliability, fulfilment, and ease of use significantly influence customer perceptions of service quality. In fintech environments, customer service delivery is highly dependent on technological performance and system functionality. Empirical studies have established that customer satisfaction is strongly influenced by perceived usefulness, ease of use, and overall system performance (Seyum et al., 2025). This implies that fintech firms that provide efficient and user-centred digital services are more likely to achieve higher customer satisfaction and retention.

### **Fintech Adoption and Customer Service Delivery**

The relationship between fintech adoption and customer service delivery has attracted increasing scholarly attention in recent years. Fintech adoption enhances service delivery by improving transaction speed, accessibility, convenience, and operational efficiency.

Technological factors such as usability, reliability, and service functionality collectively influence how customers evaluate service quality in digital financial platforms (Hasan et al., 2021). However, despite

the numerous advantages associated with fintech adoption, challenges such as security risks, system failures, and usability issues may hinder effective customer service delivery. Consequently, fintech firms are expected to continuously improve their technological systems and customer-oriented service strategies to maintain customer trust and satisfaction.

Although previous studies have provided valuable insights into fintech adoption and digital financial services, several gaps still exist in the literature. Most existing studies focused primarily on financial inclusion, digital payments, and economic development, with limited attention given to customer service delivery outcomes.

Additionally, few empirical studies have specifically examined how dimensions such as mobile application usability, transaction processing speed, system reliability, and availability of digital features influence customer service delivery in Nigeria, particularly using OPay as a case study. This study therefore fills these identified gaps by empirically examining the effect of fintech adoption on customer service delivery in OPay Digital Services in Nigeria.

## **RESEARCH METHODOLOGY/ DATA PRESENTATION, ANALYSIS AND INTERPRETATION**

This study adopted a quantitative research design using a survey research approach to examine the effect of financial technology (fintech) adoption on customer service delivery in OPay Digital Services in Nigeria. The quantitative design was considered appropriate because it enabled the researcher to collect numerical data from respondents and statistically analyze the relationship between fintech adoption variables and customer service delivery. The survey approach also allowed the researcher to obtain firsthand information from active users of OPay services regarding their experiences and perceptions of fintech service delivery. Since the exact number of OPay users is large and difficult to determine, the study focused on accessible users within selected locations where OPay services are commonly utilized. A sample size of 250 respondents was used for the study. The sample size was considered adequate for statistical analysis and generalization of findings. The study adopted a purposive and convenience sampling technique in selecting respondents. Purposive sampling was used to ensure that only active users of OPay services participated in the study, while convenience sampling enabled the researcher to easily access respondents who were available and willing to complete the questionnaire.

Out of the 250 questionnaires distributed, 230 were returned, while 220 valid questionnaires were used for the final analysis after excluding incomplete responses. This chapter presents the analysis and interpretation of data collected from respondents on the effect of fintech adoption on customer service delivery using OPay Digital Services in Nigeria as a case study. The analysis is structured in line with the objectives of the study. Data were analyzed using descriptive and inferential statistical tools. Descriptive statistics such as frequency distribution, percentages, mean, and standard deviation were used to summarize respondents' opinions, while multiple regression analysis was used to test the effect of fintech adoption variables on customer service delivery. The Statistical Package for Social Sciences (SPSS Version 26) was used for the analysis. 250 questionnaires were distributed.

| Questionnaire Status       | Frequency | Percentage (%) |
|----------------------------|-----------|----------------|
| Questionnaires Distributed | 250       | 100            |
| Questionnaires Returned    | 230       | 92             |
| Invalid/Incomplete         | 10        | 4              |
| Valid Questionnaires Used  | 220       | 88             |

Out of the 250 questionnaires distributed, 230 were returned, representing a response rate of 92%. However, 10 questionnaires were found invalid due to incomplete responses. Therefore, 220 questionnaires representing 88% were used for the final analysis. This response rate is considered adequate for statistical analysis.

#### Gender Distribution

| Gender | Frequency | Percentage (%) |
|--------|-----------|----------------|
| Male   | 118       | 53.6           |
| Female | 102       | 46.4           |
| Total  | 220       | 100            |

The result indicates that male respondents constituted 53.6% while females represented 46.4%. This suggests fair gender representation.

| 4.3.2 Age Distribution |            |                |
|------------------------|------------|----------------|
| Age Range              | Frequency  | Percentage (%) |
| 18–25 years            | 52         | 23.6           |
| 26–35 years            | 96         | 43.6           |
| 36–45 years            | 48         | 21.8           |
| 46 years and above     | 24         | 10.9           |
| <b>Total</b>           | <b>220</b> | <b>100</b>     |

Most respondents were between 26–35 years, indicating that fintech services are more actively used among economically active young adults.

#### Educational Qualification

| Qualification       | Frequency  | Percentage (%) |
|---------------------|------------|----------------|
| SSCE                | 30         | 13.6           |
| OND/NCE             | 54         | 24.5           |
| HND/B.Sc            | 102        | 46.4           |
| Postgraduate Degree | 34         | 15.5           |
| <b>Total</b>        | <b>220</b> | <b>100</b>     |

Many respondents possessed HND/B.Sc qualifications, suggesting that educated individuals are more likely to adopt fintech services.

#### Reliability Test Analysis

Cronbach's Alpha was used to test the internal consistency of the research instrument.

| Variable                         | Number of Items | Cronbach's Alpha |
|----------------------------------|-----------------|------------------|
| Mobile Application Usability     | 5               | 0.812            |
| Transaction Processing Speed     | 5               | 0.846            |
| System Reliability               | 5               | 0.831            |
| Availability of Digital Features | 5               | 0.857            |
| Customer Service Delivery        | 6               | 0.884            |

All variables recorded Cronbach's Alpha values above 0.70, indicating that the research instrument is reliable and internally consistent.

## Descriptive Analysis of Study Variables

### Mobile Application Usability

| Statement                            | Mean | Std.Dev | Decision |
|--------------------------------------|------|---------|----------|
| OPay app is easy to navigate         | 4.22 | 0.71    | Agree    |
| The app interface is user-friendly   | 4.10 | 0.84    | Agree    |
| Transactions can be completed easily | 4.18 | 0.76    | Agree    |
| The app layout is understandable     | 4.01 | 0.82    | Agree    |
| The app responds quickly to commands | 4.05 | 0.88    | Agree    |
| <b>Grand Mean = 4.11</b>             |      |         |          |

Respondents generally agreed that OPay mobile application usability positively contributes to customer service delivery.

### Transaction Processing Speed

| Statement                              | Mean | Std. Dev |
|----------------------------------------|------|----------|
| Transactions are processed quickly     | 4.24 | 0.74     |
| Payment confirmation is instant        | 4.18 | 0.79     |
| Delays are minimal                     | 3.98 | 0.90     |
| Transfers are completed efficiently    | 4.15 | 0.81     |
| Fast transactions improve satisfaction | 4.31 | 0.66     |
| <b>Grand Mean = 4.17</b>               |      |          |

The findings indicate that transaction speed significantly enhances customer satisfaction and service efficiency.

### System Reliability

| Statement                             | Mean | Std. Dev |
|---------------------------------------|------|----------|
| OPay platform rarely crashes          | 3.94 | 0.91     |
| Transactions are completed accurately | 4.20 | 0.75     |
| Network failures are infrequent       | 3.82 | 1.01     |
| The system is dependable              | 4.11 | 0.80     |
| I trust the platform reliability      | 4.16 | 0.77     |
| <b>Grand Mean = 4.05</b>              |      |          |

Respondents agreed that system reliability positively affects customer trust and satisfaction.

### Availability of Digital Features

| Statement                                 | Mean | Std. Dev |
|-------------------------------------------|------|----------|
| OPay provides multiple financial services | 4.36 | 0.68     |
| The app supports bill payments            | 4.40 | 0.64     |
| Savings and transfer features are useful  | 4.28 | 0.72     |
| Digital features improve convenience      | 4.34 | 0.70     |
| Services are accessible anytime           | 4.18 | 0.81     |
| <b>Grand Mean = 4.31</b>                  |      |          |



The availability of digital features significantly improves service accessibility and convenience.

### Correlation Analysis

Pearson Correlation Analysis was conducted to determine the relationship between fintech adoption variables and customer service delivery.

| Variables                                     | MAU  | TPS  | SR   | ADF  | CSD |
|-----------------------------------------------|------|------|------|------|-----|
| <b>Mobile App Usability (MAU)</b>             | 1    |      |      |      |     |
| <b>Transaction Processing Speed (TPS)</b>     | .612 | 1    |      |      |     |
| <b>System Reliability (SR)</b>                | .574 | .648 | 1    |      |     |
| <b>Availability of Digital Features (ADF)</b> | .590 | .631 | .667 | 1    |     |
| <b>Customer Service Delivery (CSD)</b>        | .704 | .741 | .718 | .765 | 1   |

Correlation is significant at 0.01 level

The result shows strong positive relationships between fintech adoption variables and customer service delivery. Availability of digital features recorded the highest correlation with customer service delivery ( $r = 0.765$ ).

### Multiple Regression Analysis

#### Model Specification

The regression model is specified as:

$$CSD = \beta_0 + \beta_1 MAU + \beta_2 TPS + \beta_3 SR + \beta_4 ADF + \mu$$

Where:

CSD = Customer Service Delivery

MAU = Mobile Application Usability

TPS = Transaction Processing Speed

SR = System Reliability

ADF = Availability of Digital Features

$\beta_0$  = Constant

$\beta_1 - \beta_4$  = Regression coefficients

$\mu$  = Error term

#### Model Summary

| R     | R <sup>2</sup> | Adjusted R <sup>2</sup> | Std. Error |
|-------|----------------|-------------------------|------------|
| 0.842 | 0.709          | 0.703                   | 0.421      |

The R<sup>2</sup> value of 0.709 indicates that 70.9% of the variation in customer service delivery is explained by the independent variables.

#### ANOVA Result

| Source       | Sum of Squares | df         | Mean Square | F       | Sig   |
|--------------|----------------|------------|-------------|---------|-------|
| Regression   | 88.412         | 4          | 22.103      | 124.562 | 0.000 |
| Residual     | 36.782         | 215        | 0.171       |         |       |
| <b>Total</b> | <b>125.194</b> | <b>219</b> |             |         |       |

The regression model is statistically significant because the p-value (0.000) is less than 0.05.

#### Regression Coefficients

| Variables                        | Beta  | t-value | Sig.  |
|----------------------------------|-------|---------|-------|
| Constant                         | 0.812 | 3.442   | 0.001 |
| Mobile Application Usability     | 0.284 | 5.118   | 0.000 |
| Transaction Processing Speed     | 0.317 | 6.204   | 0.000 |
| System Reliability               | 0.241 | 4.763   | 0.000 |
| Availability of Digital Features | 0.352 | 7.011   | 0.000 |

The coefficient for mobile application usability is positive and significant ( $\beta = 0.284$ ,  $p < 0.05$ ). This implies that improved usability significantly enhances customer service delivery. Transaction processing speed positively affects customer service delivery ( $\beta = 0.317$ ,  $p < 0.05$ ). Faster transaction processing improves responsiveness and efficiency. System reliability has a significant positive effect on customer service delivery ( $\beta = 0.241$ ,  $p < 0.05$ ). Reliable systems improve trust and customer satisfaction. Availability of digital features has the strongest positive influence on customer service delivery ( $\beta = 0.352$ ,  $p < 0.05$ ). Diverse fintech services significantly improve accessibility and service quality.

### Test of Hypotheses

#### Hypothesis One

H<sub>01</sub>: Mobile application usability has no significant effect on customer service delivery.

Decision: Rejected because  $p\text{-value} = 0.000 < 0.05$ .

#### Hypothesis Two

H<sub>02</sub>: Transaction processing speed has no significant effect on customer service delivery.

Decision: Rejected because  $p\text{-value} = 0.000 < 0.05$ .

#### Hypothesis Three

H<sub>03</sub>: System reliability has no significant effect on customer service delivery.

Decision: Rejected because  $p\text{-value} = 0.000 < 0.05$ .

#### Hypothesis Four

H<sub>04</sub>: Availability of digital features has no significant effect on customer service delivery.

Decision: Rejected because  $p\text{-value} = 0.000 < 0.05$ .

### Discussion of Findings

The findings revealed that fintech adoption significantly affects customer service delivery in OPay Digital Services. Mobile application usability enhances ease of transactions and improves customer interaction with the platform. Transaction processing speed was found to improve efficiency and responsiveness, which are critical dimensions of service delivery. System reliability significantly influenced customer trust and satisfaction, confirming that stable fintech platforms contribute positively to customer experience. Furthermore, availability of digital features emerged as the strongest predictor of customer service delivery, indicating that users value platforms that provide multiple accessible services within a single application. These findings are consistent with the Technology Acceptance Model (TAM) and previous studies by Davis (1989), Venkatesh et al. (2003),

and Seyum et al. (2025), which emphasized usefulness, efficiency, and reliability as major determinants of technology adoption and service quality.

The findings from the regression analysis revealed that all the dimensions of fintech adoption examined in this study have significant positive effects on customer service delivery. These findings are discussed below in relation to the study objectives and existing literature.

The study revealed that mobile application usability has a significant positive effect on customer service delivery in OPay Digital Services. The regression result showed that mobile application usability significantly improves service responsiveness, ease of transactions, accessibility, and customer satisfaction. This finding implies that customers are more satisfied with fintech platforms that are easy to navigate, visually appealing, user-friendly, and simple to operate. Respondents agreed that OPay's interface enables them to complete transactions conveniently without unnecessary delays or technical difficulties. The finding supports the Technology Acceptance Model (TAM) developed by Fred Davis, which emphasizes perceived ease of use as a major determinant of technology acceptance and usage. The result also aligns with the findings of Venkatesh et al. (2003), who argued that ease of use significantly influences users' behavioural intention toward technology adoption.

This suggests that fintech firms that invest in simple and customer-friendly interfaces are more likely to enhance service delivery and customer loyalty. However, the finding also suggests that poor usability may create frustration, increase transaction errors, and reduce customer confidence in digital platforms. Therefore, usability remains a critical determinant of effective fintech service delivery.

The study further found that transaction processing speed has a significant positive influence on customer service delivery. Respondents strongly agreed that faster transaction completion improves efficiency, responsiveness, and overall customer satisfaction. This finding indicates that speed is one of the most important expectations customers have regarding fintech services. Users expect transactions such as transfers, bill payments, and confirmations to occur almost instantly. Any delays or failed transactions negatively affect customer experience and trust. The finding is consistent with the Unified Theory of Acceptance and Use of Technology (UTAUT), which identifies performance expectancy as a key predictor of technology adoption. Customers tend to value fintech platforms that enable them to complete transactions quickly and conveniently.

The result also supports the studies of Philip Ozili and other fintech scholars who identified transaction convenience and speed as major drivers of fintech adoption in developing economies. In Nigeria's highly competitive digital financial environment, customers are increasingly attracted to platforms that minimize waiting time and deliver efficient services. Furthermore, the finding implies that delays caused by network failures, system congestion, or transaction reversals may significantly reduce customer satisfaction and platform loyalty. Therefore, fintech providers must continuously improve their processing infrastructure to sustain service efficiency.

The findings also showed that system reliability significantly affects customer service delivery. Customers indicated that stable systems, accurate transaction processing, reduced downtime, and dependable network performance increase their trust and satisfaction with fintech services. This result implies that reliability is fundamental to customer confidence in digital financial services. Since fintech transactions involve sensitive financial information and real-time processing, users expect systems to function accurately and consistently without interruptions. The finding aligns with the

SERVQUAL model developed by A. Parasuraman, Valarie Zeithaml, and Leonard Berry, which identified reliability as a major dimension of service quality. The result also supports existing fintech studies that emphasized the role of trust, security, and reliability in determining customer satisfaction and adoption behaviour.

In the Nigerian fintech sector, system failures, unsuccessful transactions, and server downtimes remain common concerns among users. Consequently, fintech firms that maintain reliable systems are more likely to gain customer trust and retain users over time. The finding therefore suggests that improving system stability and minimizing technical disruptions are essential strategies for enhancing customer service delivery.

The study further revealed that availability of digital features has the strongest positive effect on customer service delivery among all the variables examined. Customers agreed that features such as transfers, bill payments, airtime purchases, savings options, and multiple payment services improve convenience, accessibility, and satisfaction. This finding implies that customers prefer fintech platforms that provide multiple services within a single application. The availability of diverse digital features reduces the need for physical banking visits and allows users to perform financial activities more conveniently and efficiently.

The result is consistent with the concept of perceived usefulness in the Technology Acceptance Model, which states that users are more likely to adopt technologies that improve their performance and convenience. The finding also aligns with fintech adoption studies which concluded that innovative and multifunctional digital services significantly influence customer satisfaction and platform usage.

In addition, the finding reflects the growing demand for integrated financial solutions in Nigeria's digital economy. Customers increasingly expect fintech applications to offer comprehensive services that meet different financial needs simultaneously. The implication is that fintech firms that continuously innovate and expand their service offerings are likely to maintain competitive advantage and improve customer service delivery.

The overall regression result showed that fintech adoption significantly influences customer service delivery in OPay Digital Services. The coefficient of determination ( $R^2 = 0.709$ ) indicated that approximately 70.9% of the variation in customer service delivery is explained by mobile application usability, transaction processing speed, system reliability, and availability of digital features. This finding demonstrates that fintech adoption plays a major role in improving digital service delivery within the Nigerian financial sector. The study confirms that technology-driven financial services enhance accessibility, responsiveness, convenience, efficiency, and customer satisfaction. The finding further supports the growing body of literature which argues that fintech has transformed customer service delivery by eliminating many limitations associated with traditional banking systems.

## **Conclusion**

Based on the findings of this study, it was concluded that fintech adoption significantly improves customer service delivery in OPay Digital Services in Nigeria. Specifically, mobile application

usability, transaction processing speed, system reliability, and availability of digital features all positively influence service efficiency, responsiveness, accessibility, and customer satisfaction.

The study established that customers are more satisfied with fintech platforms that are user-friendly, reliable, fast, and equipped with multiple digital functionalities. Among the variables examined, availability of digital features emerged as the strongest predictor of customer service delivery, indicating that customers highly value convenience and multifunctionality in digital financial services.

The study therefore concludes that effective fintech adoption enhances service quality and strengthens customer trust and satisfaction. Consequently, fintech providers that continuously improve their technological capabilities and customer-centred service designs are more likely to achieve sustainable growth and competitive advantage in the Nigerian financial industry.

### **Recommendations**

Based on the findings and conclusions of the study, the following recommendations were made:

i. OPay and other fintech providers should continuously improve the usability of their mobile applications by simplifying navigation, enhancing interface design, and ensuring ease of transaction completion. User-friendly applications will improve customer experience and satisfaction. They should invest in stronger technological infrastructure and network systems to ensure faster transaction processing and reduce delays or failed transactions. Efficient transaction processing will enhance responsiveness and customer confidence.

ii. Management of fintech platforms should prioritize system maintenance, cybersecurity, and server stability to minimize downtimes and transaction errors. Reliable systems will improve customer trust and loyalty.

iii. These providers should continuously innovate and expand the range of digital services available on their platforms. Introducing more customer-centred financial features will improve accessibility, convenience, and competitive advantage.

iv. Improvement of Customer Support Services: Fintech firms should strengthen customer care systems by providing responsive support channels capable of addressing customer complaints and transaction issues promptly.

v. Regulatory Support and Monitoring: Government agencies and financial regulators such as Central Bank of Nigeria should establish policies that encourage fintech innovation while ensuring service quality, data security, and consumer protection.

### **Contribution to Knowledge**

This study contributes to existing literature by empirically examining the relationship between fintech adoption and customer service delivery using OPay Digital Services in Nigeria as a case study. Unlike

many previous studies that focused primarily on financial inclusion and digital payment adoption, this study specifically examined customer service delivery outcomes.

The study also contributes by integrating key fintech dimensions, mobile application usability, transaction processing speed, system reliability, and availability of digital features into a unified framework for explaining customer service delivery in the Nigerian fintech sector.

Furthermore, the study provides practical insights for fintech providers, policymakers, and stakeholders on the technological factors that most significantly influence customer satisfaction and service quality.

### Identified Research Gap

Despite the growing body of literature on fintech adoption, several gaps were identified in existing studies. Most previous studies on fintech adoption focused on developed economies, with limited empirical evidence from Nigeria and other developing countries. This study addressed this gap by examining fintech adoption within the Nigerian context. Existing studies largely concentrated on financial inclusion, digital payment systems, and economic growth, while giving limited attention to customer service delivery as a dependent variable. This study specifically focused on customer service delivery outcomes.

Few studies examined fintech adoption using a specific fintech platform such as OPay. Most previous studies generalized fintech services without considering platform-specific experiences. This study filled that gap by using OPay Digital Services as a case study. Many previous studies examined fintech adoption using general variables such as trust and perceived usefulness. However, limited studies investigated the combined effect of mobile application usability, transaction processing speed, system reliability, and availability of digital features on customer service delivery.

Several existing studies adopted purely descriptive approaches without using robust inferential statistical techniques. This study addressed the methodological gap by employing multiple regression analysis to establish the strength and significance of relationships among variables.

### References

- Akinwale, Y. O., & Kyari, A. K. (2020). Factors influencing digital financial services adoption in Nigeria. *African Journal of Science, Technology, Innovation and Development*, 12(4), 389–398.
- Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS Quarterly*, 13(3), 319–340. <https://doi.org/10.2307/249008>
- Demirgüç-Kunt, A., Klapper, L., Singer, D., Ansar, S., & Hess, J. (2022). *The Global Findex Database 2021: Financial inclusion, digital payments, and resilience in the age of COVID-19*. World Bank.
- Etuk, I. U., Aripko, N. N., & James, E. E. (2024). Factors influencing consumers' adoption of mobile financial technology (FinTech) services in Calabar, Nigeria. *African Journal of Management and Business Research*, 14(2), 45–60.

- Financial Stability Board. (2017). *Financial stability implications from FinTech: Supervisory and regulatory issues that merit authorities' attention*. Financial Stability Board.
- Hasan, R., Rahman, M., & Islam, M. (2021). Evaluating drivers of fintech adoption among consumers. *International Journal of Financial Studies*, 9(3), 1–18.
- Ozili, P. K. (2018). Impact of digital finance on financial inclusion and stability. *Borsa Istanbul Review*, 18(4), 329–340. <https://doi.org/10.1016/j.bir.2017.12.003>
- Parasuraman, A., Zeithaml, V. A., & Berry, L. L. (1988). SERVQUAL: A multiple-item scale for measuring consumer perceptions of service quality. *Journal of Retailing*, 64(1), 12–40.
- Seyum, A. A., Wang, S., Zhang, N., & Wang, L. (2025). Going beyond adoption: Unveiling the drivers of customer continuance intentions to use FinTech in Ethiopia. *South African Journal of Business Management*, 56(1), 1–14. <https://doi.org/10.4102/sajbm.v56i1.5125>
- Utami, A. F., Ekaputra, I. A., & Japutra, A. (2021). Adoption of FinTech products: A systematic literature review. *Journal of Creative Communications*, 16(3), 233–248. <https://doi.org/10.1177/09732586211032092>
- Venkatesh, V., Morris, M. G., Davis, G. B., & Davis, F. D. (2003). User acceptance of information technology: Toward a unified view. *MIS Quarterly*, 27(3), 425–478. <https://doi.org/10.2307/30036540>
- World Bank. (2021). *Global Findex Database 2021*. World Bank.