

Mobile Money Services, Benefits and Challenges, Evidence from Selected Communities in Epe Local Government, Lagos State, Nigeria

¹, EYINADE Michael

Department of Business Administration and Management, Moshood Abiola Polytechnic, Abeokuta, Ogun State

², ADEBAYO Adeyinka Taoheed

*Department of Business and Finance
Crescent University ABEOKUTA, Ogun State*

³, FADEYI Akeem Akintunde

Department of Business Administration and Management, Moshood Abiola Polytechnic Abeokuta Ogun State

Abstract

This study explores the dual nature of mobile money services in Nigeria, focusing on their benefits and challenges within five communities of Epe Local Government Area (LGA), Lagos State. Mobile money platforms like MTN MoMo, Airtel SmartCash PSB, and Paga have enhanced financial inclusion by bridging the gap between traditional banking systems and underserved populations. Key benefits identified include improved accessibility to financial tools, business empowerment, and reduced dependence on cash. However, the study also highlights significant challenges, including fraud, operational inefficiencies, regulatory gaps, and socio-economic disparities. Using a descriptive survey design and structured questionnaires, findings reveal the uneven adoption of mobile money services, with gender and geographic disparities further complicating its impact. The study recommends strengthening regulatory frameworks, promoting digital literacy, and enhancing technological infrastructure to create a secure and inclusive mobile money ecosystem. These insights contribute to the broader discourse on financial inclusion in emerging markets.

Keywords: Mobile Money, Financial Inclusion, Fraud, Regulatory Framework, Nigeria.

Date of Submission: 25-04-2025

Date of acceptance: 04-05-2025

I. Introduction

Mobile money has emerged as a revolutionary tool for financial inclusion, offering a convenient, efficient, and accessible means of conducting financial transactions in regions where traditional banking systems are limited. Defined as the use of mobile devices to perform financial activities such as transfers, payments, and savings, mobile money bridges the gap between the banked and unbanked populations, particularly in developing economies like Nigeria (World Bank, 2022; Aron & Muellbauer, 2019). With approximately 36% of Nigerian adults lacking access to formal financial services, mobile money platforms have become indispensable in driving socio-economic development and reducing financial exclusion (Global Findex Database, 2021).

The evolution of mobile money in Nigeria began with the Central Bank of Nigeria's (CBN) financial inclusion strategy in 2012, aimed at providing underserved populations access to financial tools through digital platforms. This has led to the proliferation of key players like MTN MoMo, Airtel SmartCash PSB, Paga, and OPay, which collectively facilitate billions of naira in transactions annually (CBN, 2023; Statista, 2023). These platforms leverage Nigeria's growing smartphone penetration, now exceeding 44%, to deliver services ranging from microloans to digital payments (Business Day, 2024; Monye, 2022). By enabling financial services in rural and low-income areas, mobile money has transformed the economic landscape, empowering small businesses and enhancing cashless transactions (PwC, 2023; Tengeh & Gahapa Talom, 2020).

Despite its transformative potential, mobile money also presents significant challenges. Fraudulent activities such as phishing, unauthorized transactions, and identity theft remain widespread, undermining trust in the system (Nigeria Deposit Insurance Corporation, 2022; FITC, 2022). In 2021 alone, financial institutions reported over ₦14 billion in losses due to mobile money fraud (NDIC, 2022). Operational inefficiencies, such as delayed transactions and poor network reliability, further complicate user experiences, particularly in rural areas where infrastructure is inadequate (Youvan, 2024; KPMG, 2023).

Additionally, socio-economic and cultural barriers, including limited digital literacy and gender disparities, exacerbate financial exclusion in Nigeria. Women, especially in rural areas, face systemic challenges such as low mobile phone ownership and restricted access to digital services, further entrenching inequalities (KPMG, 2023; World Bank, 2022). Regulatory gaps also persist, with weak enforcement of consumer protection measures and inadequate interoperability among platforms hindering seamless transactions (Osabutey & Jackson, 2024; PwC, 2023).

This study focuses on mobile money adoption in Epe Local Government Area, Lagos State, examining its benefits, challenges, and implications for financial inclusion. By addressing these issues, the study aims to contribute to a safer and more inclusive financial ecosystem in Nigeria.

II. Literature Review

Evolution of Mobile Money in Nigeria

Mobile money has been a game-changer in the financial services sector, providing accessible alternatives to traditional banking systems. Its emergence in Nigeria aligns with global trends where mobile technologies are leveraged to enhance financial inclusion (Aron & Muellbauer, 2019; Lashitew, Van Tulder, & Liasse, 2019). The Central Bank of Nigeria (CBN) initiated a financial inclusion strategy in 2012 to address the high percentage of unbanked adults, particularly in rural areas. This strategy led to the introduction of the Payment Service Bank (PSB) model, which enables non-traditional financial institutions, such as telecom operators, to provide basic financial services (CBN, 2023; Monye, 2022).

Since its inception, Nigeria's mobile money ecosystem has grown exponentially. Transactions exceeded ₦20 trillion in 2022, a 50% year-on-year increase, driven by rising smartphone penetration and expanding agent networks (Statista, 2023; Business Day, 2024). Prominent platforms like MTN MoMo, Airtel SmartCash PSB, Paga, and OPay have played pivotal roles, providing services ranging from person-to-person transfers to bill payments and micro-lending (GSMA, 2023). However, despite these advancements, systemic issues such as fraud, operational inefficiencies, and regulatory gaps continue to undermine the full potential of mobile money (Nigeria Deposit Insurance Corporation, 2022; PwC, 2023).

Benefits of Mobile Money

Mobile money offers numerous socio-economic benefits, making it a critical tool for financial inclusion and economic empowerment in Nigeria. Mobile money has significantly reduced financial exclusion by providing accessible banking services to unbanked populations. Platforms like Airtel SmartCash PSB and MTN MoMo eliminate the need for physical bank branches, enabling users in rural areas to conduct financial transactions via mobile devices (World Bank, 2022; Statista, 2023). According to the Global Findex Database (2021), mobile money has helped reduce Nigeria's unbanked population from 41% in 2011 to 36% in 2021.

Mobile money facilitates financial transactions for small businesses and informal traders, enabling them to access credit, save securely, and improve operational efficiency. For instance, OPay's integration with Point-of-Sale (POS) devices has allowed merchants to accept digital payments, expanding their customer base (PwC, 2023; GSMA, 2023). Users benefit from the convenience of transferring money, paying bills, and accessing financial tools without visiting bank branches. The introduction of USSD codes has further enhanced accessibility for non-smartphone users, particularly in rural areas (Anunobi, 2024; NDIC, 2022).

Digital transactions reduce the risks associated with carrying physical cash, such as theft and loss. Mobile money platforms also offer features like biometric authentication and transaction encryption to enhance user security (CBN, 2023; KPMG, 2023). Mobile money supports Nigeria's push for a cashless economy, reducing reliance on physical currency and enabling traceable transactions. This shift not only lowers the costs associated with printing cash but also curbs financial crimes such as money laundering (World Bank, 2022; NDIC, 2022).

Challenges of Mobile Money

Despite its benefits, mobile money faces significant challenges that hinder its broader adoption and impact. Fraudulent activities, including phishing, SIM swaps, and unauthorized transactions, are prevalent within Nigeria's mobile money ecosystem. In 2021, over ₦14 billion was lost to mobile money fraud, highlighting significant vulnerabilities (NDIC, 2022; KPMG, 2023). Platforms like OPay and PalmPay have been criticized for inadequate consumer protection measures, leaving users susceptible to financial losses (Nigeria Deposit Insurance Corporation, 2022).

The regulatory framework governing mobile money remains fragmented and insufficient. Key issues include the lack of interoperability among platforms, weak data protection laws, and inadequate enforcement of fraud prevention measures (Osabutey & Jackson, 2024; PwC, 2023). Users often encounter difficulties transferring funds between different platforms, creating inefficiencies and limiting financial integration (CBN, 2023). Delayed transactions, poor network reliability, and inadequate customer service disrupt users' financial

activities. For example, platforms like PalmPay and MTN MoMo frequently face complaints about unresolved disputes and slow transaction reversals (Youvan, 2024; World Bank, 2022).

Mobile money adoption is uneven across demographic groups, with rural populations, women, and low-income individuals facing significant barriers. These include limited mobile phone ownership, poor network coverage, and low digital literacy (KPMG, 2023; Amoah, Korle, & Asiama, 2020). Gender-specific challenges further exacerbate inequalities, as cultural norms and systemic barriers restrict women's access to financial services (Kofman & Payne, 2021). The prevalence of fraud and operational inefficiencies has eroded user trust in mobile money platforms. This trust deficit discourages adoption and limits the perceived benefits of mobile money, particularly among first-time users (Chen, Jiang, & Xiao, 2023; NDIC, 2022).

Regulatory Frameworks and Consumer Protection

The regulatory landscape for mobile money in Nigeria aims to promote financial inclusion while ensuring consumer protection. However, gaps in implementation and enforcement undermine these objectives. The Payment Service Bank (PSB) model, introduced by the CBN, allows telecom operators to offer basic banking services. While this initiative has enhanced financial inclusion, it lacks mechanisms to address interoperability issues and data security concerns (CBN, 2023; Osabutey & Jackson, 2024).

Existing consumer protection measures, such as biometric authentication and two-factor verification, are insufficient to combat the growing sophistication of fraud schemes. Users frequently report unresolved disputes and inadequate grievance mechanisms, highlighting the need for stricter regulatory oversight (NDIC, 2022; PwC, 2023). Mobile money platforms often collect sensitive user information, but weak data protection laws leave this data vulnerable to breaches. Incidents of data misuse by third-party providers further erode confidence in the system (Gozman & Willcocks, 2019; Statista, 2023).

Theoretical Frameworks

Diffusion of Innovation Theory (DOI): Developed by Rogers (2003), DOI examines how innovations spread within societies, focusing on attributes such as relative advantage, compatibility, complexity, trialability, and observability. Mobile money's rapid adoption in Nigeria can be attributed to its relative advantage over traditional banking systems and its compatibility with users' needs in rural and underserved areas (Statista, 2023; World Bank, 2022). However, challenges like low digital literacy and complex transaction processes hinder its trialability and observability, particularly in rural communities (Adeoye & Ogunlana, 2023).

Technology Acceptance Model (TAM): TAM, introduced by Davis (1989), explores user acceptance of technology based on perceived usefulness (PU) and perceived ease of use (PEOU). In Nigeria, mobile money's PU is evident in its ability to facilitate cashless transactions, while its PEOU is enhanced through user-friendly interfaces and USSD codes for non-smartphone users (CBN, 2023; KPMG, 2023). Nonetheless, external variables such as poor network coverage and limited regulatory enforcement negatively impact adoption (Osabutey & Jackson, 2024; GSMA, 2023).

2.7 Empirical Review

Numerous studies affirm that mobile money significantly enhances financial inclusion by providing banking services to underserved populations. For instance, a study by Aron and Muellbauer (2019) found that mobile money platforms bridged the financial divide in rural areas, offering services such as transfers and savings to individuals without formal bank accounts. Similarly, Aker and Wilson (2020) showed that mobile money adoption reduced the unbanked population in sub-Saharan Africa by 15% between 2010 and 2020. In Nigeria, research by Monye (2022) revealed that platforms like MTN MoMo and Airtel SmartCash PSB were instrumental in reducing the financial exclusion rate from 41% in 2011 to 36% in 2021.

A study by Tengeh and Gahapa Talom (2020) found that small businesses in Nigeria that adopted mobile money experienced a 25% increase in revenue due to reduced transaction costs and expanded customer reach. Similarly, Gaschler (2021) reported that traders using mobile money platforms like OPay and PalmPay benefited from cashless transactions, enabling quicker turnover and better financial management. In the Nigerian context, Paga has been identified as a critical enabler of small-scale enterprises, particularly in rural areas, where traditional banking infrastructure is limited (PwC, 2023).

Mobile money's socio-economic impact extends beyond financial transactions. For example, a study by Amoah, Korle, and Asiama (2020) found that mobile money improved financial literacy among rural women in Ghana, empowering them to save and manage resources effectively. In Nigeria, Osabutey and Jackson (2024) highlighted the role of mobile money in enhancing financial security for low-income households, allowing them to access emergency funds during crises. However, gender disparities remain a challenge, as women in rural areas face systemic barriers such as limited phone ownership and cultural restrictions, as noted by KPMG (2023).

Despite its benefits, mobile money faces significant challenges, including fraud, operational inefficiencies, and trust issues. A report by the Nigeria Deposit Insurance Corporation (NDIC, 2022) found that over ₦14 billion was lost to mobile money fraud in 2021, with phishing and SIM swaps being the most common scams. Mudiri (2013) further noted that operational inefficiencies, such as delayed transactions and unresolved disputes, discourage adoption. Regulatory gaps exacerbate these challenges, as highlighted by Gozman and Willcocks (2019), who argued that weak enforcement mechanisms undermine the effectiveness of consumer protection measures. The digital divide remains a significant barrier to mobile money adoption. Research by Kofman and Payne (2021) showed that limited digital literacy and inadequate infrastructure disproportionately affect rural populations and women. In Nigeria, rural areas like Epe Local Government Area face systemic challenges, including poor network coverage and a lack of mobile money agents, as highlighted by Adeoye and Ogunlana (2023).

III. Methodology

This study adopts a descriptive survey design to explore the benefits and challenges of mobile money adoption in Epe Local Government Area (LGA), Lagos State. The design is suitable for capturing the experiences, behaviors, and perceptions of mobile money users in the study area (Creswell, 2018). The study population comprises residents of five communities: Epe Central, Ibeju-Epe, Odo-Mola, Mojoda, and Naforija, chosen for their blend of rural and semi-urban settings. A sample size of 100 respondents was selected using simple random sampling to ensure representativeness. Each community contributed 20 respondents to the study. Primary data was collected using structured questionnaires, designed to gather quantitative insights on accessibility, usage patterns, challenges, and perceptions of mobile money platforms. Data were analyzed using descriptive statistics, including tables, graphs, and percentages, to identify key trends and relationships. The methodology ensures a comprehensive understanding of mobile money's impact on diverse socio-economic groups in Epe LGA, enhancing the study's validity and relevance.

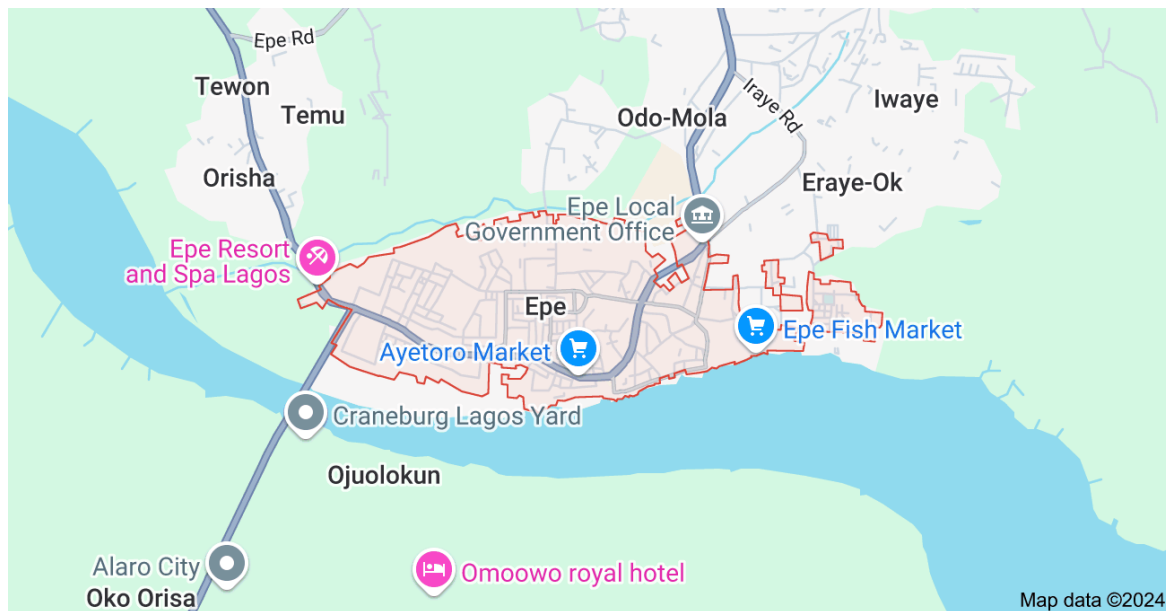


Fig 1: The Study Area. Source: <https://g.co/kgs/tN6Xp77>

IV. Findings and Discussion

Table 1: Demographic Characteristics of Respondents

Category	Subcategory	Frequency	Percentage (%)
Age Distribution	18–25 years	30	30%
	26–35 years	40	40%
	36–45 years	20	20%
	46–55 years	5	5%
	Above 55 years	5	5%
Gender Distribution	Male	60	60%
	Female	40	40%
Occupation	Trader	35	35%
	Artisan	25	25%
	Farmer	20	20%

	Civil Servant	10	10%
	Other (e.g., Student)	10	10%
Educational Qualification	No Formal Education	5	5%
	Primary Education	15	15%
	Secondary Education	50	50%
	Tertiary Education	30	30%
Community Distribution	Epe Central	20	20%
	Ibeju-Epe	20	20%
	Odo-Mola	20	20%
	Mojoda	20	20%
	Naforija	20	20%

The demographic profile of the 100 respondents provides a foundation for understanding the adoption and impact of mobile money services in Epe LGA. The largest proportion of respondents (40%) fell within the 26–35 years age group, followed by 30% in the 18–25 years category. This highlights the dominance of young, technologically savvy users in mobile money adoption, aligning with findings by Aron and Muellbauer (2019). Older adults (46 years and above) constituted only 10%, reflecting lower adoption rates due to limited digital literacy and resistance to technological change. Male respondents accounted for 60%, while females made up 40%, indicating a gender disparity consistent with studies like Kofman and Payne (2021). This reflects systemic barriers women face, including limited mobile phone ownership and cultural restrictions. Fifty percent of respondents had secondary education, while 30% attained tertiary education, suggesting that literacy positively influences mobile money usage. Those with no formal education constituted only 5%, supporting the argument by Amoah, Korle, and Asiama (2020) that low education levels impede digital financial inclusion.

Table 2: Accessibility and Usage Patterns

Category	Subcategory	Frequency	Percentage (%)
Availability of Mobile Money Agents	Strongly Agree (SA)	30	30%
	Agree (A)	40	40%
	Neutral (N)	10	10%
	Disagree (D)	15	15%
	Strongly Disagree (SD)	5	5%
Affordability of Mobile Money Services	Strongly Agree (SA)	20	20%
	Agree (A)	50	50%
	Neutral (N)	15	15%
	Disagree (D)	10	10%
	Strongly Disagree (SD)	5	5%
Mobile Network Availability	Strongly Agree (SA)	25	25%
	Agree (A)	35	35%
	Neutral (N)	20	20%
	Disagree (D)	15	15%
	Strongly Disagree (SD)	5	5%
Accessibility Without Smartphones	Strongly Agree (SA)	30	30%
	Agree (A)	40	40%
	Neutral (N)	10	10%
	Disagree (D)	15	15%
	Strongly Disagree (SD)	5	5%
Preferred Mobile Money Platforms	Airtel SmartCash PSB	30	30%
	MTN MoMo	25	25%
	Paga	20	20%
	OPay	15	15%
	PalmPay	10	10%
Common Transactions	Money Transfers	50	50%
	Bill Payments	20	20%
	Savings	15	15%
	Business Payments	10	10%
	Other (e.g., Airtime Top-Up)	5	5%

Seventy percent of respondents agreed that mobile money agents were readily available in their communities, especially in urbanized areas like Epe Central. However, respondents from rural areas like Odo-Mola and Mojoda cited limited agent availability, corroborating findings by the World Bank (2022) on rural-urban disparities in financial services. Network availability was rated positively by 60% of respondents, yet rural users complained about frequent outages, consistent with studies by Adeoye and Ogunlana (2023), which highlighted infrastructural challenges in rural Nigeria. The most popular mobile money platforms were Airtel SmartCash PSB (30%) and MTN MoMo (25%), attributed to their strong brand presence and extensive agent networks. Money transfers were the most frequent transaction type (50%), followed by bill payments (20%) and savings (15%). These findings align with those of PwC (2023), which emphasized the role of mobile money in simplifying financial transactions.

Table 3: Benefits of Mobile Money

Category	Subcategory	Frequency	Percentage (%)
Convenience and Accessibility	Strongly Agree (SA)	35	35%
	Agree (A)	40	40%
	Neutral (N)	10	10%
	Disagree (D)	10	10%
	Strongly Disagree (SD)	5	5%
Time Savings	Strongly Agree (SA)	30	30%
	Agree (A)	45	45%
	Neutral (N)	10	10%
	Disagree (D)	10	10%
	Strongly Disagree (SD)	5	5%
Reduction in Dependence on Cash	Strongly Agree (SA)	25	25%
	Agree (A)	40	40%
	Neutral (N)	15	15%
	Disagree (D)	15	15%
	Strongly Disagree (SD)	5	5%
Business Empowerment	Strongly Agree (SA)	20	20%
	Agree (A)	35	35%
	Neutral (N)	15	15%
	Disagree (D)	20	20%
	Strongly Disagree (SD)	10	10%
Financial Inclusion and Socio-Economic Benefits	Strongly Agree (SA)	25	25%
	Agree (A)	40	40%
	Neutral (N)	20	20%
	Disagree (D)	10	10%
	Strongly Disagree (SD)	5	5%

Mobile money has significantly enhanced financial inclusion, especially for rural and low-income populations. Platforms like Airtel SmartCash PSB and Paga have enabled users to access basic financial services without requiring traditional bank accounts. Respondents highlighted the convenience of conducting transactions from their mobile phones, supporting findings by the Global Findex Database (2021) that mobile money reduces financial exclusion. Traders and artisans (60% of respondents) reported increased operational efficiency and customer reach due to mobile money adoption. For instance, POS integrations by OPay allowed merchants to accept digital payments, aligning with Tenge and Gahapa Talom's (2020) findings on economic empowerment through mobile money. Seventy-five percent of respondents agreed that mobile money reduced the time spent on financial transactions. This was particularly beneficial for traders who operate outside traditional banking hours. Features like USSD codes also improved accessibility for non-smartphone users, as noted by Statista (2023). Mobile money has minimized risks associated with carrying physical cash, such as theft and loss. Sixty-five percent of respondents agreed that digital payments made their financial activities more secure and traceable, aligning with KPMG (2023).

Table 4: Risks and Challenges

Category	Subcategory	Frequency	Percentage (%)
Prevalence of Fraud and Unauthorized Transactions	Strongly Agree (SA)	30	30%
	Agree (A)	40	40%
	Neutral (N)	10	10%
	Disagree (D)	15	15%
	Strongly Disagree (SD)	5	5%
Poor Network Connectivity	Strongly Agree (SA)	25	25%
	Agree (A)	35	35%
	Neutral (N)	15	15%
	Disagree (D)	20	20%
	Strongly Disagree (SD)	5	5%
High Transaction Fees	Strongly Agree (SA)	20	20%
	Agree (A)	30	30%
	Neutral (N)	25	25%
	Disagree (D)	15	15%
	Strongly Disagree (SD)	10	10%
Delayed Transactions and Unresolved Disputes	Strongly Agree (SA)	30	30%
	Agree (A)	35	35%
	Neutral (N)	15	15%
	Disagree (D)	15	15%
	Strongly Disagree (SD)	5	5%
Lack of Trust in Mobile Money Services	Strongly Agree (SA)	25	25%
	Agree (A)	30	30%
	Neutral (N)	20	20%

	Disagree (D)	15	15%
	Strongly Disagree (SD)	10	10%

Seventy percent of respondents reported experiencing or knowing someone who faced fraud, including phishing and unauthorized transactions. Platforms like OPay and PalmPay were frequently mentioned in fraud complaints, highlighting vulnerabilities in consumer protection. This aligns with NDIC's (2022) report of ₦14 billion lost to mobile money fraud in 2021. Delayed transactions and unresolved disputes were common complaints. Sixty-five percent of respondents cited dissatisfaction with grievance resolution mechanisms, especially on platforms like PalmPay. This mirrors PwC's (2023) findings that operational inefficiencies discourage mobile money adoption. Half of the respondents identified high transaction fees as a barrier, particularly for low-income users. This supports the argument by Aron and Muellbauer (2019) that excessive costs deter adoption among financially vulnerable groups. Women and rural populations faced greater challenges accessing mobile money services. Female respondents reported higher incidences of fraud and lower trust in the system, consistent with Kofman and Payne (2021). Rural users highlighted poor network connectivity and limited agent availability as major obstacles, corroborating findings by the World Bank (2022).

Table 5: Perception of Regulation and Consumer Protection

Category	Subcategory	Frequency	Percentage (%)
Perception of Regulation Effectiveness	Strongly Agree (SA)	15	15%
	Agree (A)	35	35%
	Neutral (N)	20	20%
	Disagree (D)	20	20%
	Strongly Disagree (SD)	10	10%
Data Privacy and Fraud Prevention	Strongly Agree (SA)	20	20%
	Agree (A)	30	30%
	Neutral (N)	25	25%
	Disagree (D)	15	15%
	Strongly Disagree (SD)	10	10%
Grievance Resolution Mechanisms	Strongly Agree (SA)	10	10%
	Agree (A)	25	25%
	Neutral (N)	20	20%
	Disagree (D)	30	30%
	Strongly Disagree (SD)	15	15%
Overall Reliability and User Protection	Strongly Agree (SA)	15	15%
	Agree (A)	30	30%
	Neutral (N)	20	20%
	Disagree (D)	25	25%
	Strongly Disagree (SD)	10	10%

Fifty percent of respondents felt that regulatory frameworks like the Payment Service Bank (PSB) model were moderately effective in promoting financial inclusion. However, gaps in enforcement and interoperability were frequently criticized. This aligns with Osabutey and Jackson's (2024) critique of Nigeria's fragmented regulatory landscape. Half of the respondents acknowledged improvements in fraud prevention measures, such as biometric authentication, but highlighted persistent vulnerabilities like phishing. These concerns reflect Gozman and Willcocks' (2019) findings on the inadequacy of data protection laws. Only 35% of respondents were satisfied with dispute resolution processes. Poor customer service and delayed transaction reversals were major complaints, particularly on platforms like OPay. This supports PwC's (2023) assertion that weak grievance mechanisms erode trust in mobile money.

V. Discussion of Findings

The findings highlight the dual nature of mobile money services in Epe LGA, revealing both their transformative potential and persistent challenges. While mobile money has enhanced financial inclusion, empowered small businesses, and reduced cash dependency, issues like fraud, operational inefficiencies, and socio-economic disparities limit its impact. The dominance of younger, educated respondents in mobile money adoption underscores the importance of digital literacy, as highlighted by Amoah, Korle, and Asiamah (2020). Gender and geographic disparities emphasize the need for targeted interventions to address barriers faced by women and rural users, consistent with findings by Kofman and Payne (2021). Operational inefficiencies and fraud remain critical challenges, reflecting broader systemic issues in Nigeria's mobile money ecosystem. Platforms must invest in technological upgrades and customer support to build user trust and ensure reliability. Additionally, regulatory bodies like the Central Bank of Nigeria must strengthen enforcement mechanisms and address gaps in interoperability and data protection.

VI. Conclusion and Recommendations

Mobile money has revolutionized financial transactions in Nigeria, offering significant benefits such as enhanced financial inclusion, business empowerment, and reduced cash dependency. In Epe Local Government Area, platforms like MTN MoMo and Airtel SmartCash PSB have improved access to financial tools, especially for traders and low-income users. However, the study highlights persistent challenges, including fraud, operational inefficiencies, and systemic barriers affecting rural populations and women. These challenges undermine the potential of mobile money to fully bridge Nigeria's financial inclusion gap. To address these issues, stakeholders should strengthen regulatory frameworks to improve consumer protection, data security, and platform interoperability. Service providers must invest in technological upgrades and user education to enhance system reliability and digital literacy, particularly in underserved areas. Affordable transaction fees and efficient grievance mechanisms are also critical to fostering trust and widespread adoption. By implementing these measures, mobile money can contribute more effectively to Nigeria's socio-economic development.

References

- [1]. Amoah, A., Korle, K., & Asiamah, R. K. (2020). Mobile money as a financial inclusion instrument: what are the determinants?. *International journal of social economics*, 47(10), 1283-1297.
- [2]. Aron, J., & Muellbauer, J. (2019). *The Economics of Mobile Money: harnessing the transformative power of technology to benefit the global poor*. Centre for the Study of African Economies.
- [3]. Afriyie, B. S. (2022). *Exploring Methods Cybersecurity Managers Need to Implement to Minimize Cyber-Frauds in Mobile Money Services in Ghana* (Doctoral dissertation, Colorado Technical University).
- [4]. Anunobi, S. (2024). *Mitigating Security Vulnerabilities in Offline USSD Payments in non-Smartphones: Enhancing User Privacy*.
- [5]. Ahmad, A. H., Green, C., & Jiang, F. (2020). Mobile money, financial inclusion and development: A review with reference to African experience. *Journal of economic surveys*, 34(4), 753-792.
- [6]. Akintola, A. S. (2024). *Scaling Financial Inclusion to Drive Banks' Annual Deposit Increase in Sub-Saharan Africa (Improving the Percentage of Banked Adult Population Using Nigeria's Financial Access Data Modelling)* (Master's thesis, Universidade NOVA de Lisboa (Portugal)).
- [7]. Business Day, (2024). Nigerian payments report 2024: Online transfers dominate, ATM transactions decline.
- [8]. Bianchi, M., Bouvard, M., Gomes, R., Rhodes, A., & Shreeti, V. (2023). Mobile payments and interoperability: Insights from the academic literature. *Information Economics and Policy*, 65, 101068.
- [9]. Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77–101.
- [10]. Bryman, A. (2016). *Social research methods* (5th ed.). Oxford University Press.
- [11]. Creswell, J. W. (2017). *Research design: Qualitative, quantitative, and mixed methods approaches* (4th ed.). Sage Publications.
- [12]. Central Bank of Nigeria (CBN). (2023). *Annual Financial Inclusion Report*. CBN Publications.
- [13]. CBNC Africa, (2022). *Airtel SmartCash PSB begins operation*.
- [14]. Chen, F., Jiang, G., & Xiao, J. J. (2023). Mobile payment use and payment satisfaction: mediation and moderation analyses. *International Journal of Bank Marketing*, 41(4), 727-748.
- [15]. Dudu-Eniola, O. (2023). *Analysing the use of fintech for cross-border remittance as a livelihood strategy-A case of Nigeria*.
- [16]. David-West, I. A. (2022). *Mobile Money in Nigeria: Challenges and Prospects* (Doctoral dissertation, California Baptist University).
- [17]. FITC (2022). *Reports of Frauds and Forgeries in Nigerian Banks: First Quarter 2022*.
- [18]. Gozman, D., & Willcocks, L. (2019). The emerging Cloud Dilemma: Balancing innovation with cross-border privacy and outsourcing regulations. *Journal of Business Research*, 97, 235-256.
- [19]. Gaschler, F. (2021). *Fintech in Africa: how digital payment tech is bringing financial services to the unbanked* (Master's thesis, Universidade NOVA de Lisboa (Portugal)).
- [20]. Global Findex Database. (2021). *Financial inclusion: Nigeria's profile*. World Bank Publications.
- [21]. Hendriks, S. (2019). The role of financial inclusion in driving women's economic empowerment. *Development in Practice*, 29(8), 1029-1038.
- [22]. Kofman, P., & Payne, C. (2021). Digital financial inclusion of women: An ethical appraisal. *Handbook on ethics in finance*, 133-157.
- [23]. KPMG. (2023). *Fraud and Financial Crime: 2023 Regulatory Challenges*. KPMG Reports.
- [24]. Lashitew, A. A., Van Tulder, R., & Liasse, Y. (2019). Mobile phones for financial inclusion: What explains the diffusion of mobile money innovations?. *Research Policy*, 48(5), 1201-1215.
- [25]. Monye, O. (2022). *Digital financial inclusion and regulation*. Routledge.
- [26]. MTN Group, (2020). *MTN Group furthers financial inclusion*. Available at <https://www.mtn.com/mtn-group-furthers-financial-inclusion/>
- [27]. Mohammed Abdul, S. S. (2024). Navigating Blockchain's Twin Challenges: Scalability and Regulatory Compliance. *Blockchains*, 2(3), 265-298.
- [28]. National Bureau of Statistics (2022) Report. *Nigeria Launches its Most Extensive National Measure of Multidimensional Poverty*.
- [29]. Nigeria Deposit Insurance Corporation (NDIC). (2022). *Mobile money fraud in Nigeria: Causes and solutions*. NDIC Research Series.
- [30]. Osabutey, E. L., & Jackson, T. (2024). Mobile money and financial inclusion in Africa: Emerging themes, challenges and policy implications. *Technological Forecasting and Social Change*, 202, 123339.
- [31]. Oyadeyi, O. (2024). Banking innovation, financial inclusion and economic growth in Nigeria. *Journal of the Knowledge Economy*, 15(2), 7014-7043.
- [32]. PwC. (2023). *Leveraging mobile money for economic growth in Nigeria*. PwC Nigeria Insights.
- [33]. Sirakova-Yordanova, G. (2024). Banks Go Beyond Banking: The Expansion Towards Non-Banking Services. In *Proceedings of the International Conference on Business Excellence* (Vol. 18, No. 1, pp. 391-404). Sciendo.
- [34]. Statista. (2023). *Smartphone penetration in Nigeria 2023*. Statista Reports.
- [35]. Siano, A., Raimi, L., Palazzo, M., & Panait, M. C. (2020). Mobile banking: An innovative solution for increasing financial inclusion in Sub-Saharan African Countries: Evidence from Nigeria. *Sustainability*, 12(23), 10130.

- [36]. Sule, M. J., Zennaro, M., & Thomas, G. (2021). Cybersecurity through the lens of digital identity and data protection: issues and trends. *Technology in Society*, 67, 101734.
- [37]. Tade, O., & Adeniyi, O. (2020). Dimensions of electronic fraud and governance of trust in Nigeria's cashless ecosystem. *International Journal of Offender Therapy and Comparative Criminology*, 64(16), 1717-1740.
- [38]. Tengeh, R. K., & Gahapa Talom, F. S. (2020). Mobile money as a sustainable alternative for SMEs in less developed financial markets. *Journal of Open Innovation: Technology, Market, and Complexity*, 6(4), 163.
- [39]. Tengeh, R. K., & Gahapa Talom, F. S. (2020). Mobile money as a sustainable alternative for SMEs in less developed financial markets. *Journal of Open Innovation: Technology, Market, and Complexity*, 6(4), 163.
- [40]. World Bank. (2022). The state of financial inclusion in sub-Saharan Africa. World Bank Publications.