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Electronic payment system and customers' satisfaction: The case of Nigeria Naira redesign

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Abstract
In the wake of the CBN's policy to redesign the naira in Nigeria, the study assessed the degree of customer satisfaction with e-payment methods. Bank customers in University of Port Harcourt, Rivers State, were the subject of the investigation. Automated teller machines (ATMs), point of sale (POS), and mobile banking (MB) were included in the electronic payment methods that were chosen. The survey research design was used for the investigation. 140 bank customers from banks in University of Port Harcourt, Rivers state, make up the study's sample. The researcher's questionnaire served as the instrument for gathering data. The paired sample t-test method and descriptive approaches were used to examine the collected data. The results revealed that all of the e-payment systems' channels actual customer experiences considerably fell short of expectations, proving that bank customers in Port Harcourt were not satisfied with any of the e-payment system channels being used at this time of the CBN's currency (naira) redesign policy. According to the study's conclusions, the study recommends that the monetary authorities should work with commercial banks and other stakeholders to strategically put ATM machines in key locations to provide greater accessibility. In order to maintain their dependability, these machines need also be frequently restocked with cash. Banks should also keep looking for methods to enhance the effectiveness of the e-payment services by enhancing their networks and consistently soliciting feedback from clients.

Keywords: E-payment, Automated Teller Machines, Point of Sale, Mobile Banking, Currency Redesign

Introduction

Because of more people using online banking and shopping websites, the e-payment system has expanded during the past ten years. The term "e-payment" refers to a method of electronically or digitally transferring funds between two parties, which may include a bank, company, government, or individual customer. Money is transferred for a variety of reasons, including paying for services or goods or receiving reimbursement. Any payment that does not include the use of paper instruments is considered an electronic payment transaction. It should be highlighted that cheques might be viewed as an e-payment method in some nations due to technical advancements (Tan, 2004; Al-hosani and Tariq, 2020) [26, 3]. For the purposes of this study, an electronic payment system is a method for delivering banking services and goods over electronic channels (such as mobile banking, internet banking, point-of-sale terminals, automated teller machines, etc.), regardless of location, time, or distance. Deposit-taking, lending, account management, the provisions of financial advice, electronic bill payment, and the supply of other electronic payment products and services including electronic money are a few examples of such products and services.

Since Nigeria gained its independence in 1960, there have been numerous governments, constitutional amendments, economic policy changes, and banking reforms, all of which were primarily intended to improve social welfare and accomplish developmental objectives. However, there hasn't been a significant improvement in Nigeria's human development indicators. This raises concerns about the efficiency of the e-payment system with regard to banks consumers' satisfactions in Nigeria in the recent Central Bank of Nigeria's (CBN) currency (naira) redesign policy.

Redesigning a country's currency involves a sovereign state making changes to the existing unit of account. This can be done for a number of reasons, including enhancing the new currency's security characteristics, lowering inflation, investigating incomes from dubious sources, and many other economic factors that influence a country's financial situation. The Central Bank of Nigeria (CBN) declared that new naira notes would be released by December 15, 2022, and that older notes would no longer be accepted as legal cash by January 31, 2023. With this approach, the apex bank hopes to reduce currency fraud while also limiting the flow of money and inflation. The apex bank also noted the necessity to redesign the naira in order to address some, if not all, of the aforementioned issues because data at hand suggested that N2.73 trillion of the N3.23 trillion of currency in circulation were held outside the banking system and ostensibly by members of the public.

The effectiveness (performance) of the banking system in Nigeria hinges on how confident and satisfied bank clients (customers) are with the goods and services provided by the banks. Customer satisfaction is based on expectations and knowledge of the services being provided. Without a doubt, the use of electronic payment systems has improved customer satisfaction with the variety of services offered by financial institutions to their clients. Due to the fact that most tasks are completed at the customer's convenience and the end of the banking hall queuing system, customers perceive operating in modern banking to be highly simple and satisfying. Additionally, clients will benefit from quick service delivery, fewer trips to the bank physically, and less handling of cash, all of which will increase turnover.

The Nigerian banking sector, however, does not appear to have succeeded in providing high-quality services that satisfy their clients under the recent naira redesign program of the government through the CBN. Customers have continued to complain about numerous shortcomings of electronic payment methods, and lines are still visible in the banking halls.

Customers list the following shortcomings of automated teller machines (ATM) service: machine out of order, machine out of cash, no printing statements, cards get blocked, frequent breakdown of ATM service, unreliability of ATM service, insufficient technicians in all banks who resolve breakdown of ATM machine, insufficient alternative system which substitutes ATM service for the customer when temporary problem occur in the machine, inconvenience of E-banking. lack of services like mobile banking, dependable telebanking, credit card services, under-development of technological infrastructure, a dearth of innovative thinking in the field, network interruptions, a lack of regulatory framework that is appropriate for e-commerce, reluctance on the part of customers and service providers to adopt new technologies due to risk aversion, and many more.

Along with the surge in internet banking-related fraud, ATMs are also plagued by frequent outages, and the average user finds it difficult to conveniently access internet services. All of them have all but negated the use of electronic payment systems, especially under the CBN's most recent naira redesign program. Therefore, it is crucial to look at whether the development of electronic payment methods has actually increased customer satisfaction with banking services, particularly in light of the CBN's most recent naira redesign policy. These issues lead the researcher to investigate customer satisfaction with e-payment technologies in the Nigerian banking sector during the most recent CBN's naira redesign policy. This study aims to close a gap by comparing experience and expectations from use, or, more specifically, by comparing satisfaction with banks e-payment services in the context of the recent CBN naira redesign strategy/policy. The methodology used in this study is an improvement over previous methodologies in that it removes bias related to statements in the questionnaire that are persuading, suggestive, and misleading. Respondents are only asked to rate their experiences and express their expectations, and this study focuses on the CBN's recent naira redesign policy in Nigeria, which is different from previous studies. The introduction is the first section of the study. The second section examined relevant literature. Section three provided a full explanation of the methodological process, while Section four included the estimation and discussion of results. Section five contained concluding observations and policy implications.

Literature Review

Conceptual Clarifications

- **Electronic Payment System**

Delali (2010) [9] defined an electronic payment system as a type of financial exchange that is enabled by electronic communication between the buyer and supplier. The significance of electronic payment systems, according to Cobb extends far beyond the immediate comfort and security of cards to a larger area of contributing to overall economic development. According to Massimo and Garcia (2008) [19], the word "electronic payment system" can apply to any sort of electronic money transfer or, more broadly, to e-commerce, which is the payment for purchasing and selling products and services over the internet. E-payment systems were described by Ayodele as the electronic transfer of money through online transactions for B2B, B2C, P2P, and, most recently, A2C (administration to consumer) reasons. Tax payments to the government are addressed by A2C payments.

E-payment systems are defined by Humphrey, Kim, and Vale (2001) [14] as cash and associated transactions carried out through electronic methods. Usually, this calls for the usage of digital stored value systems and computer networks like the internet. With the help of this technology, bills can be paid immediately from the bank without the need for writing and mailing cheques. E-payment systems, as opposed to payment by cheque and cash, are described by Guttman (2003) [11] as credit card information or some other electronic means. It can also be described as the transfer of a payer's financial claim to a third party that the beneficiary accepts (Worku 2010) [28]. The term "electronic payment system" can also refer to quick, secure, and simple ways to conduct business over the phone, online, via card, or through other similar electronic channels. Customers have an alternative to paying their bills and debts with cash, checks, money orders, etc. Its primary goal is to decrease transactions involving cash and cheques. In the context of Nigeria, an electronic payment system is one that transfers money from one party to another via a computer without requiring any additional manual work beyond entering the payment information; it enables employers to electronically transfer money to suppliers, vendors, and pay employees' salaries (Agba, 2010) [1].

- **Customers' Satisfaction**

Customer satisfaction depends on expectations and

knowledge of the services being provided. The satisfaction theory makes use of a variety of psychological and physical factors. With the variety of options financial institutions now provide their clients, electronic payment services have benefited customer satisfaction. Customers perceive operating in modern banking to be very simple and satisfying because most tasks can now be completed at the customer's convenience, putting a stop to the time when customers had to wait in line in the banking hall (Ijeoma, Okpara, Akujor, and Mbah, 2020) [15]. According to Hansemark and Albinson (2004) [13], customer satisfaction is characterized as the general attitude that a customer has toward the services received or as an emotional reaction to the discrepancies between what the customer expected and what was provided. Customer satisfaction is also a judgment made after learning about a particular service being provided as to whether it fits the customer's expectations (Oliver, 1997) [22]. According to Kotler (2000) [18], satisfaction is a person's sense of delight and unhappiness based on how well a product or service appears to have performed in comparison to the person's expectations.

A person's thoughts about a specific good or service at a specific time are related to their level of satisfaction. According to the majority of studies, pre-consumption evidence (consumption expectation) is what determines enjoyment/satisfaction. This illustrates how a consumer had previously stated the product's rate of performance prior to consumption. Customers' knowledge of the product aids in comparing the expected product performance level, and judgments are made based on satisfaction comparisons when it comes to consumption. Customer satisfaction, which measures how well products or services met or exceeded consumers' expectations, is a key factor in customer retention. It consists of many tactics intended to maintain, fulfill, or surpass consumers' expectations in a highly competitive market like the banking sector. According to Saha and Zhao (2005) [25], a customer's satisfaction is the culmination of their perceptions, assessments, and psychological responses to their interactions with a product or service. In other words, it is the outcome of a cognitive and affective appraisal in which the performance as really experienced is contrasted with some consumption standard. Customers will be unsatisfied if the performance is judged to be below what they had expected, whereas they will be satisfied if the performance is perceived to be above what they had anticipated, which will result in positive behaviors or outcomes (Saha and Zhao, 2005) [25]. According to Odusina and Onakoya satisfied customers are more likely to be devoted, spend less time shopping, be less price-sensitive, and pay less attention to advertising from rival companies.

- **Currency Redesign**

Redesigning a country's currency involves a sovereign nation changing or modifying the current unit of exchange. This can be done for a variety of reasons, including enhancing the security characteristics of the new currency, lowering the money supply, lowering inflation, looking into incomes from dubious sources, and many other economic factors that have an impact on a country's financial situation. The Central Bank of Nigeria (CBN) declared that it will issue new naira notes by December 15, 2022, and that it would stop accepting the old notes as legal tender on January 31, 2023. The top bank hopes to reduce currency fraud with this strategy, which also attempts to control inflation and the money supply. The apex bank further highlighted that according to the statistics at hand, N2.73 trillion of the N3.23 trillion in currencies in circulation were reportedly held outside of the banking sector by members of the general population.

The Nigeria Experience

The Naira was recently redesigned, starting within the last 50 years. The metric to decimal conversion of the naira in 1973 led to the switch from pounds to the naira and kobo. The 20 naira note, at the time the biggest denomination, was launched in 1977. The N1, N5, and N10 notes were produced by the government in 1979. The change in all banknote colours occurred in 1984 for a similar purpose, which is consistent with the CBN's newly announced policy to issue new banknotes with the aim of reducing the rate of counterfeiting and trafficking. The N100 was introduced to the economy for circulation in 1999, followed by the N200 in 2000, the N500 in 2001, and the N1000 in 2005. All of these introductions took place under President Olusegun Obasanjo's administration. The N50, N10, and N5 banknotes were redesigned and changed to a polymer substrate on September 30, 2009, as a result of the N20 (polymer) banknote's performance and successful money supply.

The CBN's redesign of the naira had both beneficial and negative repercussions, notwithstanding the different monetary policy measures and justifications for the change. Positively, the redesign would allow the central bank to properly control the amount of money in circulation, easing the pressure on inflation in the economy. Additionally, the measure may enhance the country's security position as ransom payments may be stopped. However, compared to the anticipated benefits mentioned by the apex bank, the expense of revamping the Naira seems excessive. The budget deficit, inflation, underemployment, and young unemployment are all high and slowing GDP growth in Nigeria at the moment.

Global best practice in monetary policy dictates that nations redesign their currencies every five to eight years. Therefore, the apex bank's redesign of the Naira is justified; it's an essential step toward reducing the vast amounts of money in circulation outside the banking system. However, the issue goes beyond the redesign since Nigerians lack faith in the Naira in general. A redesign of the N200, N500, and N1000 notes was also announced on November 23, 2022, by President Muhammadu Buhari. The only difference between the new currency and the old currency at first glance is its colour, and the public does not find the expectation of a redesign to be alluring. Due to these colour resemblances, money can be lost during transactions in places with poor power supplies. The new naira can be massively replicated in colour, making it difficult to quickly detect counterfeits. As a result, counterfeits will be widely used in the economy. One option to stop this is for CBN to incorporate extra security elements to the redesigned naira.

The N20, N50, and N10 notes all share the same color as the newly designed Naira notes. The public's dissatisfaction with the new designs in terms of macroeconomic uncertainty has actually been voiced in opposition to it. However, on December 6, 2022, the CBN's Banking Supervision Department released a new policy with the following information that will be in compliance with the new naira redesign and cashless policy that will go into force on January 9, 2023:

1. The weekly cap on cash withdrawals for both persons and businesses is N100,000–N200,000.

2. A customer is only permitted to withdraw a total of N20,000 per day and N100,000 per week from an ATM.
3. The daily cap for cash withdrawals through POS is N20,000.

These CBN rules should be noted for three key reasons:

1. By redesigning the currency, remove all unused money from the economy.
2. Encourage cashless transactions, accountability, and traceability by imposing fees and limits on cash withdrawals. The goal is to maintain as much money as possible inside the financial system.
3. Lower ongoing printing costs in naira. The CBN spent nearly N58 billion to produce money worth about N2.5 billion.

The Nigerian economy would be affected by this strategy in both positive and negative ways. Positively, this strategy aims to encourage cashless transactions, enhance the usage of electronic payments, reduce vote-buying in the recent 2023 election and future elections in Nigeria, as well as reduce inflation. On the negative side, it would have enormous repercussions because it will drive many people to hoard cash at home, harm Nigerian enterprises and industry, and maybe lead to a decline in foreign direct investment (FDI). A drop in Nigeria's real GDP and other macroeconomic concerns are also anticipated to result from the slow expansion of many industries and businesses.

2.3. Theoretical Framework/Issues

The theories used in the study are the diffusion of innovation theory, the disconfirmation theory, and the negativity theory. The Disconfirmation theory, however, is the basis for the construction of hypotheses, discussions of the findings, and priori expectations in this work.

a. Negativity Theory

According to the Gupta, P. K. (2008) [10] idea, any deviation from expectations in performance will disrupt the person and result in negative energy. The disconfirmation procedure is the basis of negative theory. According to the negative theory, consumers would react badly to any disconfirmation when their expectations are high. As a result, if actual performance falls short of expectations or surpasses expectations, discontent will result. According to Ikechukwu's (2000) [16] idea, any deviation from expectations in performance will destabilize the person, creating "negative energy." The size of the gap will be inversely connected to how you feel about a product or service. This theory does not explain the disconfirmation's direction. It just serves to highlight the reality that any departure from expectations would enrage clients, who will then become dissatisfied.

b. Disconfirmation Theory

According to the disconfirmation theory, the size and direction of the disconfirmation experience that results from comparing service performance to expectations is correlated with satisfaction. In contrast to the Negative theory, this theory takes into account the direction of the mismatch between the user's expectations and their actual experience. The meta-analysis by Szymanski and Henard revealed that the disconfirmation paradigm is the most accurate predictor of client satisfaction. A modified definition of the disconfirmation hypothesis, given by Kannabira and Narayan (2005) [17], argues that the guest's fulfillment response is satisfaction. A product or service feature, or the product or service itself, is judged to have delivered (or is continuing to offer) a pleasurable level of consumption-related fulfillment, including levels of under- or over-fulfillment. According to this idea, when clients utilize the numerous electronic payment systems that the banks have advertised to the banking public, they will contrast their actual usage with their expectations.

Positive or negative disconfirmation is probably going to occur in some way. Confirmation takes place when the e-payment service performs as expected. When the actual experience does not match the expectation, disconfirmation takes place. In the positive aspect, when a customer uses the e-payment service, they typically experience greater value and satisfaction than they could have anticipated. In the negative aspect, the customer receives less value or satisfaction than anticipated. Customers will be satisfied with confirmation or a positive disconfirmation, but a negative disconfirmation will result in customer discontent (dissatisfaction).

Thus, the theory was chosen since it is pertinent to the current study, especially given the CBN's current naira redesign policy.

c. Innovation Diffusion Theory

In the year 2000, Robinson T. proposed the innovation diffusion theory. According to Robinson, individuals want to use technology as a modality to carry out a conventional activity. The most important aspect that affects an innovation's acceptance on a broad scale is complexity, followed by compatibility, relative advantage, trainability, and observability. A significant number of banks have benefited from information and communication technology in their operations to raise the bar of their performance. This most recent innovation was made possible by the extensive creation of websites and mobile applications that cater to the demands of bank customers. As long as there is internet connectivity, customers have the option of accessing bank services from wherever they are. This theory looks at how a new technical concept, artifact, technique, or innovative application of an existing one moves from conception to use. IDT asserts that among the relevant social system, technical innovation is timely transmitted through a specific media. Technological innovation goes through stages such as exposure (being made aware of it and understanding it), affiliation (forming a favorable attitude toward it), decision (committing to adopting it), implementation (putting it to use), and confirmation (reinforcing based on positive results). Many changes have been proposed to curb fraud and danger in online banking. Most users come from the educated class and have high social status; they are more receptive to both interpersonal and mass media forms of communication and have more interactions with change makers. Interpersonal medium is relatively more important at the persuasion stage whereas mass media medium are relatively more important at the experience level. Decisions about innovation may be made voluntarily (when an individual or institution has a genuine opportunity to accept or reject an idea) or mandatorily (where the decision is being imposed by another individual or organization that has the required authority, status, or technical expertise).

Barnes and Coritt (2013) [6] advise managers to grasp a particular technology's capability and what it tends to offer in

order to guarantee that its use is taken into account with their operations and that they are aware of the operational costs and limitations of that technology. Since most of its operations are conducted online, internet banking heavily depended on information and communication technologies. Customers have unrestricted access to their accounts even when they are not in the banking hall.

Table 1: Empirical Literature

Author/Year	Topic	Method of Data Analysis	Result/Finding	Recommendation
Alao and Sorinola (2015)	Cashless policy and customers' satisfaction: A study of commercial banks in Ogun State, Nigeria	Descriptive Statistics	The cashless policy in Ogun State dramatically increased consumer satisfaction. Additionally, the cashless policy, which is customer-friendly and progressive, dramatically increased customers' happiness through electronic channels.	Infrastructure needs to be updated for the policy to operate smoothly in Ogun State.
Nnamani and Makwe (2019) [21]	Impact of electronic banking on customer satisfaction	Statistical Mean and Chi-Square	Customer satisfaction has increased dramatically as a result of electronic banking products.	In order to promote greater use and lessen the pressures related to ATM accessibility, the fees associated with using point-of-sale terminals should be reduced.
Alhammadi and Tariq (2020) [4]	The impact of quality e-payment system on customer satisfaction	Descriptive Statistical Analysis	The satisfaction of e-payment consumers was positively impacted by the service quality of e-payment.	In order to develop innovative services and products and to lower transaction costs for users and businesses, banks and internet transaction facility providers must maintain a competitive environment.
Oyemakara (2020)	An investigation into the challenges faced by users of electronic payment platforms of Nigerian banks in Rivers State, Nigeria	Mean and Standard Deviation	Users of electronic payment platforms in Rivers State face difficulties such as slow internet service, subpar ATMs, extended periods of having to reverse incorrect or unsuccessful transactions, payment caps on USSD and mobile banking apps, vulnerability of mobile banking transactions to fraudsters' activities, mobile phone viruses, etc.	In partnership with IT businesses, banks in Rivers State could promote offering their consumers high-quality cellphones, PCs, and original antivirus at discounted rates with flexible payment terms.
Uwalaka and Eze (2020)	Effect of mobile banking on customers satisfaction in commercial banks in Anambra State	Frequency tables, Percentages and Multiple Regression Analysis	Customer satisfaction is significantly impacted by mobile banking's technological expertise and security. That instance, in a few South East Nigerian commercial banks, mobile banking significantly affects client satisfaction.	Banks must offer sufficient security for mobile banking operations. Bank customers' trust in mobile banking would be increased as a result.
Raji, Zameni and Abdulwakil (2021) [24]	Effect of electronic banking on customer satisfaction in Kwara State, Nigeria	Correlation and Regression Analyses	All of the independent factors and customer satisfaction have a positive association. In a similar vein, the regression result demonstrates that customer satisfaction is positively and significantly impacted by security, transactional speed, usability, reliability, and responsiveness.	To preserve or raise consumer satisfaction, bank managers should bolster these e-banking characteristics and take a closer look at the issues the responder raised.
Chukwu, Ubah and Njideka (2021) [7]	Electronic payment system and customer satisfaction in Nigerian banking system	The Descriptive Methods and the Paired Sample t-test Method.	Customers' actual experiences with all of the e-payment systems considerably fell short of their expectations, showing that bank customers were dissatisfied with all of the e-payment systems deployed in Awka..	In order to ensure greater accessibility, the monetary authorities should collaborate with commercial banks and other stakeholders to strategically install ATM machines in key locations. At the same time, banks should continue to look for ways to enhance the effectiveness of their e-payment services by regularly soliciting customer feedback.

Methodology

The study used primary data, which are data that were gathered specifically for the study. Rivers State's Port Harcourt is the chosen study area. According to Nigeria's 2006 population census, Port Harcourt, the state capital of Rivers State, has a population of around 1,481,000. Both students and non-student bank customers at the University of Port Harcourt in Port Harcourt, Rivers state, Nigeria, are included in the studies demographic. 140 bank customers at University of Port Harcourt, Rivers state, make up the study's sample. The researcher chose this sample size at random. Clients of United Bank for Africa (UBA), Fidelity Bank, First Bank, Access Bank, Zenith Bank, Sterling Bank, and Eco Bank are included in the sample, as are clients who are not students. Respondents were chosen for the study using probability sampling techniques called stratified sampling. Using this sample technique, the respondents were divided into several strata according to the different commercial banks operating in University of Port Harcourt and its surroundings. Respondents from United Bank for Africa

(UBA), Fidelity Bank, First Bank, Access Bank, Zenith Bank, Sterling Bank, and Eco Bank were included in each stratum. One hundred and forty (140) participants were divided into seven strata, each of which contained twenty (20) randomly chosen people.

The study questionnaire, which was created by the researcher, is the instrument used for data collecting. The questionnaire includes closed-ended inquiries pertaining to the study's goals. There are three (3) sections in the questionnaire: A-C. Section A of the questionnaire asks about the respondents' personal information, including their marital status, bank account status, level of education, and number of bank accounts; section B of the questionnaire asks about their expectations for e-payment systems. The real-world experiences of bank clients with e-payment systems are detailed in Section C. Four response options are shown on the questionnaire, ranging from strongly agree to strongly disagree. Tables and cross tables were used to present the data. The paired sample t-test method and descriptive approaches were used to examine the collected data. The mean difference and the t-statistic's values are among the criteria for analysis. The significance of the difference between the statistics (mean) of two samples will be shown by the t-statistic. Thus, in this era of the CBN's naira redesign policy, the difference between bank customers' experience and expectations, as well as the importance of the difference between their satisfactions with the banking system, were tested using the t-statistic. The critical value (t_{tab}) of the estimated t-statistic was used to test the study's hypotheses. If the associated t_{tab} value is less than the calculated t-statistic, the decision rule states that the significant effect hypothesis should be accepted. The null hypothesis is confirmed and the effect is said to be insignificant if the associated t_{tab} value is higher than the calculated t-statistic.

Data Presentation and Analysis

Data Presentation

Table 2: Demographic Data of Respondents

Variable	Categories	Frequency	Percentage
Bank	Access	20	14.29
	Eco	20	14.29
	Fidelity	20	14.29
	First	20	14.29
	Sterling	20	14.29
	UBA	20	14.29
	Zenith	20	14.29
	Total	**140**	**100**
Account Status	Savings Account Holder	52	37.1
	Current account holder	50	35.7
	Savings & Current account holder	38	27.2
	Total	**140**	**100**
Education	Primary	14	10
	Secondary	48	34.3
	Graduate	60	42.9
	Post Graduate	18	12.8
	Total	**140**	**100**
Customer Status	Non-Student Bank Customer	74	52.9
	Student Bank Customer	66	47.1
	Total	**140**	**100**
Marital Status	Divorced	8	5.7
	Married	64	45.7
	Single	68	48.6
	Total	**140**	**100**

***Source*:** Author's Compilation from Field Survey Results, 2023.

From Table 1, the distribution of sampled respondents by their preferred banking institution reveals that 14.29% of the respondents come from each of the selected seven financial institutions. The distribution of the sampled respondents by their account status reveals that 37.1% of respondents have savings accounts, 35.7% have current accounts, and 27.2% have both savings and current accounts. According to respondents' educational backgrounds, the majority (42.9%) are graduates, followed by secondary school graduates (34.3%), postgraduates (12.8%), and those with only an elementary education (10%). 48.1% of customers are students, compared to 52.9% who are not students. The majority of respondents (45,7%) are married; 48.6% are single; and 5.7% are divorced.

Data Analysis

The mean statistic and Paired Sample T-tests were used to analyze all of the data that were gathered. The criterion mean was determined as follows: Strongly Agreed (SA) = 4 points, Agree (A) = 3 points, Disagreed (D) = 2 points, and Strongly Disagreed (SD) = 1 point $\frac{4+3+2+1}{4} = \frac{10}{4} = 2.5$. A criterion mean value of 2.5 was chosen and any mean value above this criterion mean was accepted.

Automated Teller Machines and Customer Satisfaction in this era of Naira Redesign Policy of CBN

Objective One: To ascertain the level of customers' satisfaction in the use of Automated Teller Machines (ATM) in the Nigerian banking systems in this era of naira redesign policy of CBN.

Table 3: Paired Sample Test Results for ATMs

S/N	Questionnaire Items: Expectation	SA	A	D	SD	Total	$\bar{X}$	Remark
1	I expect ATMs to be very reliable in this era of naira redesign policy of CBN.	80 (320)	40 (120)	10 (20)	10 (10)	140 (470)	3.36	Accepted
2	I expect ATMs to be very easy to use in this era of naira redesign policy of CBN.	100 (400)	30 (90)	6 (12)	4 (4)	140 (506)	3.61	Accepted
3	I expect ATMs to be accessible (available) in this era of naira redesign policy of CBN.	90 (360)	40 (120)	7 (14)	3 (3)	140 (497)	3.55	Accepted
4	I expect ATMs to be cost efficient in this era of naira redesign policy of CBN.	70 (280)	60 (180)	5 (10)	5 (5)	140 (475)	3.39	Accepted
	Total	340	170	28	22	560	13.91	
	Grand Mean						3.48	Accepted
S/N	Questionnaire Items: Actual	SA	A	D	SD	Total	$\bar{X}$	Remark
1	ATMs have actually been very reliable in this era of naira redesign policy of CBN.	5 (20)	15 (45)	80 (160)	40 (40)	140 (265)	1.89	Rejected
2	ATMs have actually been very easy to use in this era of naira redesign policy of CBN.	40 (160)	60 (180)	30 (60)	10 (10)	140 (410)	2.94	Accepted
3	ATMs have actually been accessible (available) in this era of naira redesign policy of CBN.	25 (100)	25 (75)	85 (170)	5 (5)	140 (350)	2.50	Undecided
4	ATMs have actually been cost efficient in this era of naira redesign policy of CBN.	40 (160)	50 (150)	10 (20)	40 (40)	140 (370)	2.64	Accepted
	Total	**110**	**150**	**205**	**95**	560	9.97	
	Grand Mean						2.49	Rejected
	Mean Difference						3.94	
	Standard Deviation						1.25	
	Paired Sample t-test						37.31	

***Source*:** Author's computation 2023

As shown in the table 2 a positive mean difference of 3.94 indicate that the expectation of customers' satisfactions about ATM use exceeds their actual experience.

Paired Sample t-test

$t^* = \frac{E-A}{D/\sqrt{n}}$

Where

E = Expected Mean = 13.91

A= Actual Mean = 9.97

D= Standard Deviation = 1.25

N= Sample Size = 140

$t^* = \frac{13.91-9.97}{1.25/\sqrt{140}}$

$t^* = \frac{3.94}{1.25/11.8322}$

$t^* = \frac{3.94}{0.1056}$

$t^* = 37.311$

Then:

$t_{\alpha/2}$ (n-2) = $t_{0.05/2}$ (140-2) = $t_{0.025}$ (138) = 1.960

H_0: Automated Teller Machines (ATM) payments have no significant effect on customers' satisfaction in this era of naira redesign policy of CBN in Nigeria.

H_1: ATM payments have a significant effect on customers' satisfaction in this era of naira redesign policy of CBN in Nigeria.

Table 4: t-Statistics Results of the Paired Sample Test for ATMs

E-Payment System	Calculated t-statistic	Tabulated t-statistic
ATM	37.311	1.960

***Source*:** Author's computation 2023

As shown in table 3, the calculated t-statistic of 37.311 in absolute value is greater than the tabulated t-statistic of 1.960. This suggests a rejection of the null hypothesis; hence the alternate hypothesis is accepted. Therefore, an ATM payment has a significant effect on the customers' satisfaction in this era of naira redesign policy of CBN in Nigeria.

Point of Sales Terminal and Customers' Satisfactions in this era of Naira Redesign Policy of CBN

Objective Two: To ascertain the level of customers' satisfaction in the use of Point of Sale (POS) terminals in this era of Naira Redesign Policy of CBN.

Table 5: Paired Sample Test Results for POS

S/N	Questionnaire Items: Expectation	SA	A	D	SD	Total	$\bar{X}$	Remark
1	POS is supposed to be very reliable in this era of naira redesign policy of CBN.	82 (328)	36 (108)	18 (36)	4 (4)	140 (476)	3.40	Accepted
2	I expect POS to be very easy to use in this era of naira redesign policy of CBN.	74 (296)	46 (138)	14 (28)	6 (6)	140 (468)	3.34	Accepted
3	POS ought to be accessible (available) in this era of naira redesign policy of CBN.	50 (200)	54 (162)	28 (56)	8 (8)	140 (426)	3.04	Accepted
4	POS should be cost efficient in this era of naira redesign policy of CBN.	92 (368)	32 (96)	14 (28)	2 (2)	140 (494)	3.53	Accepted
	Total	298	168	74	20	560	13.31	
	Grand Mean						3.33	Accepted
S/N	Questionnaire Items: Actual	SA	A	D	SD	Total	$\bar{X}$	Remark
1	So far, POS has indeed been very reliable in this era of naira redesign policy of CBN.	14 (56)	16 (48)	52 (104)	58 (58)	140 (266)	1.90	Rejected
2	POS has indeed been very easy to use in this era of naira redesign policy of CBN.	20 (80)	14 (42)	80 (160)	26 (26)	140 (308)	2.20	Rejected
3	POS has been quite accessible (available) in this era of naira redesign policy of CBN.	22 (88)	28 (84)	84 (168)	6 (6)	140 (346)	2.47	Rejected
4	POS has indeed been efficient in this era of naira redesign policy of CBN.	48 (192)	54 (162)	28 (56)	10 (10)	140 (420)	3.00	Accepted
	Total	104	112	244	100	560	9.57	
	Grand Mean						2.39	Rejected
	Mean Difference						3.74	
	Standard Deviation						1.29	
	Paired Sample t-test						34.312	

***Source*:** Author's computation 2023

As shown in the table 4 a positive mean difference of 3.37 indicate that the expectation of customers' satisfactions about POS use exceeds their actual experience.

Paired Sample t-test

$t^* = \frac{E-A}{D/\sqrt{n}}$

Where

E = Expected Mean = 13.31

A= Actual Mean = 9.57

D= Standard Deviation = 1.29
N= Sample Size = 140

$t^* = \frac{13.31-9.57}{1.29/\sqrt{140}}$

$t^* = \frac{3.74}{1.29/11.8322}$

$t^* = \frac{3.74}{0.109}$

$t^* = 34.312$

Then:

$t_{\alpha/2}$ (n-2) = $t_{0.05/2}$ (140-2) = $t_{0.025}$ (138) = 1.960

H_0: Point of Sales Terminal (POS) payments have no significant effect on customers' satisfaction in this era of naira redesign policy of CBN in Nigeria.
H_1: POS payments have a significant effect on customers' satisfaction in this era of naira redesign policy of CBN in Nigeria.

Table 6: t-Statistics Results of the Paired Sample Test for POS

E-Payment System	Calculated t-statistic	Tabulated t-statistic
POS	34.312	1.960

***Source*:** Author's computation 2023

As shown in table 5, the calculated t-statistic of 34.312 in absolute value is greater than the tabulated t-statistic of 1.960. This suggests a rejection of the null hypothesis; hence the alternate hypothesis is accepted. Therefore, a POS payment has a significant effect on the customers' satisfaction in this era of naira redesign policy of CBN in Nigeria.

Mobile Banking and Customers' Satisfactions in this era of Naira Redesign Policy of CBN

Objective Three: To ascertain the level of customers' satisfaction in the use of Mobile Banking (MB) in this era of Naira Redesign Policy of CBN.

Table 7: Paired Sample Test Results for MB

S/N	Questionnaire Items: Expectation	SA	A	D	SD	Total	$\bar{X}$	Remark
1	MB is supposed to be very reliable in this era of naira redesign policy of CBN.	88 (352)	30 (90)	14 (28)	8 (8)	140 (478)	3.41	Accepted
2	I expect MB to be very easy to use in this era of naira redesign policy of CBN.	80 (320)	40 (120)	14 (28)	6 (6)	140 (474)	3.39	Accepted
3	MB ought to be accessible (available) in this era of naira redesign policy of CBN.	58 (232)	55 (165)	20 (40)	7 (7)	140 (444)	3.17	Accepted
4	MB should be cost efficient in this era of naira redesign policy of CBN.	91 (364)	34 (102)	12 (24)	3 (3)	140 (493)	3.52	Accepted
	Total	**317**	**159**	**60**	**24**	560	13.49	
	Grand Mean						3.37	Accepted
S/N	**Questionnaire Items: Actual**	**SA**	**A**	**D**	**SD**	Total	$\bar{X}$	Remark
1	So far, MB has indeed been very reliable in this era of naira redesign policy of CBN.	12 (48)	14 (42)	57 (114)	57 (57)	140 (261)	1.86	Rejected
2	MB has indeed been very easy to use in this era of naira redesign policy of CBN.	16 (64)	18 (54)	70 (140)	36 (36)	140 (294)	2.20	Rejected
3	MB has been quite accessible (available) in this era of naira redesign policy of CBN.	22 (88)	28 (84)	84 (168)	6 (6)	140 (346)	2.10	Rejected
4	MB has indeed been efficient in this era of naira redesign policy of CBN.	44 (176)	58 (174)	20 (40)	18 (18)	140 (408)	2.91	Accepted
	Total	**94**	**118**	**231**	**117**	560	9.07	
	Grand Mean						2.27	Rejected
	Mean Difference						4.42	
	Standard Deviation						1.30	
	Paired Sample t-test						40.22	

***Source*:** Author's computation 2023

As shown in the table 6 a positive mean difference of 4.42 indicate that the expectation of customers' satisfactions about MB use exceeds their actual experience.

Paired Sample t-test

$t^* = \frac{E-A}{D/\sqrt{n}}$

Where
E = Expected Mean = 13.49
A= Actual Mean = 9.07
D= Standard Deviation = 1.30
N= Sample Size = 140

$t^* = \frac{13.49-9.07}{1.30/\sqrt{140}}$

$t^* = \frac{4.42}{1.30/11.8322}$

$t^* = \frac{4.42}{0.1099}$

$t^* = 40.218$

Then:

$t_{\alpha/2}$ (n-2) = $t_{0.05/2}$ (140-2) = $t_{0.025}$ (138) = 1.960

H_0: Mobile Banking (MB) payments have no significant effect on customers' satisfaction in this era of naira redesign policy of CBN in Nigeria.
H_1: MB payments have a significant effect on customers' satisfaction in this era of naira redesign policy of CBN in Nigeria.

Table 8: t-Statistics Results of the Paired Sample Test for MB

E-Payment System	Calculated t-statistic	Tabulated t-statistic
MB	40.218	1.960

***Source*:** Author's computation 2023

As shown in table 7, the calculated t-statistic of 40.218 in absolute value is greater than the tabulated t-statistic of 1.960. This suggests a rejection of the null hypothesis; hence the alternate hypothesis is accepted. Therefore, a MB payment has a significant effect on the customers' satisfaction in in this era of naira redesign policy of CBN in Nigeria.

Discussion of Findings

In this era of the CBN's naira redesign program, the study sought to determine how the banking industry's electronic payment methods affected customers' satisfactions. The study looked at three e-payment methods: MB, POS, and ATMs. Reliability, usability, accessibility, and efficiency were used to gauge how well the e-payment systems performed. 140 bank clients were given questionnaires to fill

up their expectations and actual experiences using various e-payment systems. The Mean Statistic and Paired Sample T-test were used to examine the information obtained from the respondents. The results demonstrated that, during this time of the CBN's currency redesign program in Nigeria, bank clients are not ha ppy (satisfied) with the performance of various e-payment channels (ATM, POS, and MB). This result is consistent with that of Chukwu, Ubah, and Njideka (2021) [7], who found that none of the e-payment systems utilized in Akwa satisfied the bank clients.

The results of Nnamani and Makwe (2019) [21], Alhammadi and Tariq (2020) [3], Uwalaka and Eze (2020), and Raji, Zameni, and Abdulwakil (2021) [24], who found in different research that e-payment channels have greatly improved bank customers' satisfactions, are in contrast with this conclusion. This demonstrates that e-payment services in Nigeria still have a lot of issues and shortcomings, and that banks need to enhance them significantly—especially in light of the CBN's current currency (naira) redesign agenda.

Although the majority of the studies reviewed indicate that customers in Nigeria are satisfied with e-payment systems, this study discovered that when satisfaction is determined by the discrepancy between expectation and actual experience (as defined by the Disconfirmation Theory), bank customers do not appear to be content/satisfy with the use of e-payment systems. Although clients were pleased and satisfied with the cashless aspect of e-banking and its time-saving features, Haadi and Ajibola (2018) [12] discovered that internet network failure, bank fraud, and business loss as a result of unsuccessful e-transactions have been significant sources of unhappiness and dissatisfaction.

Conclusion and Policy Recommendation

The study consequently draws the conclusion that there is great space for improvement in light of the findings. The efficiency of doing banking transactions has really increased thanks to electronic payment technologies. However, especially in this time of the CBN's naira redesign policy, the bank customers are not happy and satisfied with the state and functionality of the inspected e-payment systems. By implication, despite the fact that the performance of these payment methods is subpar, bank customers would nevertheless favour their adoption. Customers are dissatisfied with their use of POS in the banking business due to the high costs associated with its use in this era of the CBN's naira redesign policy. Even though ATM banking is supposedly handy, it hasn't done anything to considerably raise customer satisfaction with banking services in this period of the CBN's currency (naira) redesign policy. This is possibly related to network problems, the inability to withdraw cash from the ATM, and service fees for using ATM banking. Additionally, despite being touted as handy, mobile banking hasn't done anything to considerably raise customer satisfaction with banking services at this time of the CBN's naira redesign policy. This is most likely connected to network problems, transaction failure and fees for using mobile banking.

Based on these the study recommends that:

1. To guarantee greater accessibility, the monetary authorities should coordinate with commercial banks and other stakeholders to strategically install ATM machines in key locations. To keep these devices dependable, they need also be frequently restocked with cash.
2. To promote higher use and relieve the pressures related to the accessibility of ATMs, the fees associated with using point of sale terminals and mobile banking should be reduced.
3. Banks must keep enhancing their networks and soliciting feedback from clients in order to find new ways to enhance the functionality of e-payment services.

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