

EFFECT OF E-BANKING SERVICE ON CUSTOMERS SATISFACTION OF DEPOSIT MONEY BANKS IN FEDERAL CAPITAL TERRITORY, ABUJA

¹THOMAS, Ezekiel Zagi & ²ADAMU Mohammed Sani

¹Department of Business Administration, Nasarawa State University, Keffi.

²Department of Business Administration, Federal University of Kashere-Nigeria

Sanietc10@gmail.com

Abstract

This study examined effect of e-banking service on customers satisfaction of deposit money banks in federal capital territory, Abuja. The population comprises all the customers of deposit money banks in Federal Capital Territory Abuja and this study used survey research design. Concrab formula was used to determining the sample size 384 for this study. Primary source of data collection was used using 5-point likert scale questionnaire. Data were analyzed using Partial Least Squares Structural Equation Model (PLS-SEM). The study revealed responsiveness has positive and significant effect customers satisfaction also, ease of use has positive and significant effect on customers satisfaction. The study recommended that Banks should establish systems for collecting customer feedback regularly. This could include surveys, suggestion boxes, or digital platforms where customers can express their concerns and experiences.

Keywords: E-banking, Ease of Use, Responsiveness, and Customers Satisfaction

INTRODUCTION

Global banking industry has experienced a paradigm shift with the rapid-fire proliferation of electronic banking(e-banking), unnaturally altering the way financial services are delivered and experienced by customers (Hsiao, et al., 2019). E-banking encompasses a range of digital platforms, including online banking, mobile banking, and electronic fund transfers, enabling customers to access their accounts and conduct their financial transactions ever (Jayawardhena & Foley, 2018).

The advent of internet, e-commerce, ICT and the response by users to this technology has created numerous service delivery opportunities for businesses, financial institutions inclusive. One of these delivery channels is electronic banking (e-banking). E-banking provides an opportunity to everybody to easily and conveniently access banking activities, which may include retrieving account balance, electronic money transfer, bills payment and other services (Ololade & Ogbeide 2017). Furthermore, it has been explained that e-banking has increasingly become an essential aspect of modern-day banking services. The banking sector is identified as one of the industries that have adopted technology that helps in rendering better and quality services to customers that stimulates convenience and satisfaction (Ololade & Ogbeide, 2017). Technology is then essential in providing faster and more efficient services to customers. Technology acquisition must be based on actual needs and the proven ability to deliver customer friendly solutions. But with globalization, Nigerian banks have no choice but to adopt electronic banking services to enhance effective service delivery that transcends to customer satisfaction, if they really want to stay in the business race, let alone be profitable.

Electronic banking services have afforded banks the opportunities to impress customers which encourage them to keep their patronage. There is increasing demand for more profits, turnover of resources, guaranteed customer satisfaction and as well as new vision for strategic breakthrough in a competitive banking environment. As customers seek for multiple service providers for broad selection and convenience, bank also seek for streams of customers.

Today, the banking industry has moved into an era of menu-driven ultra-robust specialized software programmes called banking applications. These applications can carry out virtually all banking functions relying heavily on information collection, storage, transfer and processing (Ogunlowore & Oladele, 2014). The application of electronic banking products/services to banking operations has become a

subject of fundamental importance and concerns to all banks operating within Nigeria and indeed a condition for local and global completeness (Abdon & Noel 2023).

In a numerous country, the banking landscape has been gradationally transitioning from traditional brick-and-mortar banking to a further digitally acquainted model. E-banking has gained traction due to its implicit to enhance convenience, availability, and effectiveness for customers, while also reducing operational costs for banks (Sharma et al., 2018; Subedi & Adhikari 2019). The advent of Internet, electronic commerce, communication technology and users' response to this technology has opened opportunity for many businesses including the financial institution. Adoption of electronic banking service delivery is fast gaining ground in Nigeria. Different e-Banking channels such as electronic cards, internet banking and mobile banking services have been introduced. Online banking is the emerging issue, which is expanding rapidly in banking industry especially in African countries.

In recent times, banking activities in Nigeria have increasingly depended on the development of Information and Communication Technology (ICT). Rising numbers of financial institutions are introducing and expanding their offerings of electronic banking products. The introduction of universal banking practice in Nigeria and the adoption of electronic banking by deposit money banks have offered increased services to customers This is as a result of rapid technological progress and development in the financial market (Ozuru et al. 2010). There is faster delivery of information from the customer and service provider, thus differentiating Internet enabled electronic banking system from the traditional banking operation (Adukanya, et al. 2023). This transfer process makes money to be carried in information storage medium such as cheques, credit cards, and electronic means than its pure cash form. E-banking has thus become important channel to sell products and services; leading to a paradigm shift in marketing practices, resulting in high performance in the banking industry (Adukanya, et al. 2023). The banking industry has been undergoing changes since the mid-1990s, in the form of innovative use of information technology and development in electronic commerce (Kalakota & Whinston, 2015).

The importance of electronic payment system in any country can never be over emphasized, due to the dramatic transformation in technological advancements that is being experienced by the global financial industry. As customers seek for multiple service providers for broad selection and convenience, bank also seek for streams of customers. Parasuraman et al. (1988) opined that the growth of e-banking in a country depends on many factors, such as reliability, efficiency, security, website design, ease of use, responsiveness and communication etc. these factors are paramount to the satisfaction of the bank's customers. Parasuraman et al. (1988) opined that reliability is the ability of the service provider to perform the promised services accurately and consistently. Parasuraman et al (1988) propounded the service quality model which has the acronym SERVQUAL. Oladele (2016), identified the dimensions used by customer to measure service to include Tangibles, Responsiveness, Empathy, Assurance and Reliability. However, this study adopts five dimensions of e-banking service by Parasuraman et al (1988) such as Reliability, website design, ease of use, responsiveness and security.

Parminderjit et al (2013) ease to use is measured as the degree to which an individual feels it is easy to use a specific service. Pooya (2020) suggested that one of the most significant factors to be considered is the ease of use of internet banking websites and Apps. While Kundu (2015) suggests that attributes of ease of use and user friendliness are considered to be acceptable and are included in the initiative and difficulty attributes. Schwartz, (2019). viewed that security also refers to how the customers' perceived on the possibility of a seller to safeguard a consumer's pre-purchase decision. Customers' satisfaction holds the potential for increasing an organization's customer base, increase the use of more volatile customer mix and increase the firm's reputation. Consequently, obtaining competitive advantage is secured through intelligent identification and satisfaction of customer's needs better and sooner than competitors and sustenance of customer's satisfaction through better products/services.

Global banking industry has experienced a paradigm shift with the rapid-fire proliferation of electronic banking(e-banking), unnaturally altering the way financial services are delivered and experienced by

customers (Hsiao, et al., 2019). E-banking encompasses a range of digital platforms, including online banking, mobile banking, and electronic fund transfers, enabling customers to access their accounts and conduct their financial transactions ever (Jayawardhena & Foley, 2018).

The advent of internet, e-commerce, ICT and the response by users to this technology has created numerous service delivery opportunities for businesses, financial institutions inclusive. One of these delivery channels is electronic banking (e-banking). E-banking provides an opportunity to everybody to easily and conveniently access banking activities, which may include retrieving account balance, electronic money transfer, bills payment and other services (Ololade & Ogbeide 2017). Furthermore, it has been explained that e-banking has increasingly become an essential aspect of modern-day banking services. The banking sector is identified as one of the industries that have adopted technology that helps in rendering better and quality services to customers that stimulates convenience and satisfaction (Ololade & Ogbeide, 2017). Technology is then essential in providing faster and more efficient services to customers. Technology acquisition must be based on actual needs and the proven ability to deliver customer friendly solutions. But with globalization, Nigerian banks have no choice but to adopt electronic banking services to enhance effective service delivery that transcends to customer satisfaction, if they really want to stay in the business race, let alone be profitable.

Electronic banking services have afforded banks the opportunities to impress customers which encourage them to keep their patronage. There is increasing demand for more profits, turnover of resources, guaranteed customer satisfaction and as well as new vision for strategic breakthrough in a competitive banking environment. As customers seek for multiple service providers for broad selection and convenience, bank also seek for streams of customers.

Today, the banking industry has moved into an era of menu-driven ultra-robust specialized software programmes called banking applications. These applications can carry out virtually all banking functions relying heavily on information collection, storage, transfer and processing (Ogunlowore & Oladele, 2014). The application of electronic banking products/services to banking operations has become a subject of fundamental importance and concerns to all banks operating within Nigeria and indeed a condition for local and global completeness (Abdon & Noel 2023).

In a numerous country, the banking landscape has been gradationally transitioning from traditional brick-and-mortar banking to a further digitally acquainted model. E-banking has gained traction due to its implicit to enhance convenience, availability, and effectiveness for customers, while also reducing operational costs for banks (Sharma et al., 2018; Subedi, 2019). The advent of Internet, electronic commerce, communication technology and users' response to this technology has opened opportunity for many businesses including the financial institution. Adoption of electronic banking service delivery is fast gaining ground in Nigeria. Different e-Banking channels such as electronic cards, internet banking and mobile banking services have been introduced. Online banking is the emerging issue, which is expanding rapidly in banking industry especially in African countries.

In recent times, banking activities in Nigeria have increasingly depended on the development of Information and Communication Technology (ICT). Rising numbers of financial institutions are introducing and expanding their offerings of electronic banking products. The introduction of universal banking practice in Nigeria and the adoption of electronic banking by deposit money banks have offered increased services to customers This is as a result of rapid technological progress and development in the financial market (Ozuru et al. 2010). There is faster delivery of information from the customer and service provider, thus differentiating Internet enabled electronic banking system from the traditional banking operation (Adukanya, et al. 2023). This transfer process makes money to be carried in information storage medium such as cheques, credit cards, and electronic means than its pure cash form. E-banking has thus become important channel to sell products and services; leading to a paradigm shift in marketing practices, resulting in high performance in the banking industry (Adukanya, et al. 2023).

The banking industry has been undergoing changes since the mid-1990s, in the form of innovative use of information technology and development in electronic commerce (Kalakota & Whinston, 2015).

The importance of electronic payment system in any country can never be over emphasized, due to the dramatic transformation in technological advancements that is being experienced by the global financial industry. As customers seek for multiple service providers for broad selection and convenience, bank also seek for streams of customers. Parasuraman et al. (1988) opined that the growth of e-banking in a country depends on many factors, such as reliability, efficiency, security, website design, ease of use, responsiveness and communication etc. these factors are paramount to the satisfaction of the bank's customers. Parasuraman et al. (1988) opined that reliability is the ability of the service provider to perform the promised services accurately and consistently. Parasuraman et al (1988) propounded the service quality model which has the acronym SERVQUAL. Oladele (2016), identified the dimensions used by customer to measure service to include Tangibles, Responsiveness, Empathy, Assurance and Reliability. However, this study adopts five dimensions of e-banking service by Parasuraman et al (1988) such as Reliability, website design, ease of use, responsiveness and security.

Ali and Raza (2017) responsiveness can retain the interest of users and prompt response can help in enhancing user satisfaction and faithfulness. Yang et al. (2004) website design, colors section and image can improve electronic banking service quality and enhance the overall experience and satisfaction of users. Parminderjit et al (2013) ease to use is measured as the degree to which an individual feels it is easy to use a specific service. Pooya (2020) suggested that one of the most significant factors to be considered is the ease of use of internet banking websites and Apps. While Kundu (2015) suggests that attributes of ease of use and user friendliness are considered to be acceptable and are included in the initiative and difficulty attributes.

In today's economic environment, banks are required to become more effective in meeting the client expectation to mitigate for customers dissatisfaction, because service is critical for success. However, it is worrisome to note that despite these huge investments in technology, banks have continued to witness unending queues in the banking hall which defies the main purpose in which the technologies were invested upon. Even with the CBN naira redesign policy in 2023 which aimed at promoting internet banking adoption, the situation has deteriorated even more as customers prefer to spend longer time on queues than utilize the e-banking platforms available. Should this be allowed to continue, investment in technology by these banks will amount to zero turnover leading to decline in overall performance and hence the need for this study which examined effect of e-banking service on customer's satisfaction in Federal Capital Territory, Abuja.

The study seeks to achieve the following specific objectives which are to:

- i. Determine the effect of responsiveness on customer's satisfaction in Federal Capital Territory, Abuja.
- ii. Analyze the effect of ease of use on customer's satisfaction in Federal Capital Territory, Abuja.

LITERATURE REVIEW

Customer Satisfaction

Customer satisfaction is one of the most important concepts in the field of marketing studies today (Jamal, 2018). Broadly speaking, it links processes culminating in purchasing with post purchase phenomena such as attitude change, repeat purchase, and brand loyalty (Churchill & Surprenant, 2015). Oliver (1980) explains that the feeling of satisfaction arises when customers compare their perception of actual product/ service performance with expectations. A number of varying definitions have been proposed to clarify customer satisfaction. Yet the notion of comparing post product/service performance with pre-formed expectations seems to be common to most definitions. Customer satisfaction is a customer feeling that arises because of the customer's assessment of expectations and performance on a product or service (Kotler & Keller, 2016). Based on Kotler et al. (2020), satisfied customers are the key to profitability by taking customer satisfaction into account. Satisfied customers will continue to use the brand. Yulisetiari and Prahasta (2019), customers will be satisfied if they feel

comfortable with the services provided by the products they use. The higher the benefits obtained, the higher the satisfaction that will be felt by the customer

E-Banking Services

Singh and Sinha (2020) defined e-Banking as the practice of providing banking services to clients electronically, either at their place of business or house. According to Abid and Noreen (2006), e-Banking provides retail and small-value banking products and services through electronic channels as well as large-value electronic payment and other wholesale banking services delivered electronically. According to Drigă and Isac (2014), the banking industry has been more competitive in recent years, and banks are adopting unique tools and approaches to maintain customer retention and satisfaction, with e-Banking being one of them. Globalization, competition, and innovation, as well as client demands, are reshaping the banking business. The scholar added that banking services have seen significant changes in the previous 10 years as a result of the growth of a knowledge-based economy and society as information and communication technology has improved (Drigă & Isac, 2014).

According to Mohamud (2017), is a type of distance banking that handles not only the of information between customers' "living spaces" and the bank's physical facilities, but also solicitation, sales, distribution, and service access, all without requiring the customer and the financial institution representative to be in the same physical location at the same time. Most electronic business experts agree that E-banking provides access to all types of financial transactions 24 h a day, 7 days a week, through any advanced information system (Automated Teller Machines, Personal Computers, Internet, mobile phones, etc.) and for all types of financial transactions (Mohamud, 2017).

Responsiveness

Responsiveness refers to the willingness of the service holders to help clients and to give instant service. This measurement accentuates mindfulness and instantaneousness in managing client questions, solicitations, issues and protests (Hitt et al., 2016). Responsiveness is imparted to clients by the length of time they have to wait for assistance, answers to inquiries or thoughtfulness regarding issues. In other words, this service quality might be improved through responsiveness. This dimension focuses in the attitude and promptness in dealing with customer requests, questions, complaints and problems. It also focuses on punctuality, presence, and professional commitment etc., of the employees or staff. It can be calculated on the length of time customers wait for assistance, answers to questions etc. The conditions of responsiveness can be improved by continuously view the process of service delivery and employees' attitude towards requests of customers (Ramya, 2019). Responsiveness involves the willingness and ability of bank staff to help customers and provide prompt service. In the digital realm, this translates to the effectiveness of online customer support, chatbots, and automated responses. Swift responses to customer queries and technical issues contribute to a positive service quality perception (Zeithaml et al., 1990).

Ease of Use

Ayo et al. (2016) define perceived ease of use as the degree by which a user feels an innovation is relatively easy to use and understand. It signifies the extent to which the user of a system or technological innovation believes such a system or innovation is free of effort. It, hence, involves a user-side evaluation of the required mental and physical effort in the usage of a new technology (Ngozi, 2020, 2021; Tiwari et al., 2021; Wiratmadja et al., 2017). Chawla and Joshi (2019) describe perceived ease of use as a main determinant of user attitudes and behavioural intentions in adopting and using technology. As conceptualized by Jayathilaka et al. (2020), perceived ease of use reflects how well a certain system is conveniently appropriate for a user's plans, activities and needs. This definition underscores the importance of PU in influencing the adoption and usage of a technological system as users are always mindful of the effort required to use a system.

As pointed out by Kesharwani and Bisht (2012), there is a higher likelihood of customers using e-banking if there is ease of use in operation/process which can be influential to the continuous patronage of the

technology and benefits the user through reduction of transfer cost and work performance improvement. This definition highlights the fact that PEOU can positively affect a customer's intention to adopt and use an e-banking system.

Responsiveness and Customer Satisfaction

Beshir and Zelalem (2022) examine the direct effect of e-banking service quality dimensions on both customer satisfaction and customer loyalty of Commercial Bank of Ethiopia (CBE) in Bahir Dar. Quantitative research approach with explanatory research design was employed. The population of the study consisted of all customers of different banks in Bahir Dar City, who were using any of the e-banking facility and therefore were considered as respondents. The sample size for this study was 380 customers of the selected banks. Using convenience sampling technique, the data was gathered through already tested questionnaire from 380 E-banking service users of Commercial Banks of Ethiopia as respondents, in Bahir Dar Town. Seven service quality dimensions; efficiency, reliability, responsiveness, easiness, product portfolio, privacy and cost, derived from the SERVQUAL model with support of literature review were selected as forecasters of customer satisfaction and loyalty in E-banking. Structural Equation Model (SEM) and Confirmatory Factor Analysis (CFA) were used to analyse data. Research findings indicated significant impact of efficiency, responsiveness, easiness, privacy and Commission on Satisfaction and the significant impact of Satisfaction on loyalty.

Siti, and Melissa (2023) investigate the effect of electronic banking service quality on electronic banking customer satisfaction. The study investigated customer satisfaction based on the reliability, privacy and security, website design and customer service and support of electronic banking services. The research also examined the relationship between factors of electronic banking service quality and electronic banking customer satisfaction. The study was classified as quantitative research. The correlational and inferential analysis study was used to identify the relationship between factors of e-Banking service quality and customer satisfaction among the society in district of Bandar Penawar, Malaysia which consists of 6716 residences. 361 users (Krejcie & Morgan, 1970) were selected as respondents by using a random sampling technique to answer comprehensive questions regarding the measurement of e-Banking service quality and customer satisfaction. The questionnaire was designed through an extensive literature review, validated by content experts and distributed online to the respondents. The distributed questionnaire used a five-point Likert scale, point one for a strongly disagreement and point five for strongly agreement. The data that was collected for this study was analysed using the Statistical Packages for Social Science (SPSS) version 26.0. Coefficient correlation analysis was used to determine the association between e-Banking service quality and customer satisfaction, and multiple regression analysis was used to determine factors of e-Banking service quality factors that most affect e-Banking customer satisfaction during Covid 19. The results show that the relationship between the factors of e-Banking service quality and customer satisfaction is strong and significant. It also demonstrates that customer service and support is the factor of electronic banking service quality that has the greatest influence on electronic banking customer satisfaction.

Ease of Use and Customer Satisfaction

Ngozi, (2022) examine the effect of perceived ease of use and security of e-banking on customers' satisfaction in Abuja. The study used survey research design, all the customers of first bank were use as the population for the study, the sample size for the study is 400 The data of this study was collected from primary source using questionnaire to obtain responses from bank customers. The collected data was the analysed using correlation and regression analysis with the SPSS version 20. Consequently, the findings from the study showed that perceived ease of use and security positively and significantly influence customers satisfaction of first bank customers in Abuja. The correlation analysis showed that there is a significant and positive relationship between E-banking attributes and customer satisfaction. Therefore, the study recommends that banks should improve the user friendliness of their e-banking channels and increase the level of encryption of their security to improve customers experience and increase satisfaction.

Sarintan, (2024) examines the effect of ease of use and service quality on customer loyalty, with satisfaction as an intervening variable using mobile banking applications in Indonesia. The method used is quantitative descriptive with a purposive sampling technique. The sample for this research was 210 respondents. The data analysis method uses structural equation modelling SEM (Structural Equation Modelling) assisted by the AMOS version 25 and SPSS version 26 programs. This research shows that ease of use and service quality influence customer loyalty, ease of use and service quality influence satisfaction, and Satisfaction influences customer loyalty. Based on the research and data analysis results, it can be concluded that the ease of use and quality of m-banking services in Indonesia positively and significantly affect customer satisfaction, increasing customer loyalty to using m-banking applications.

Innovation Diffusion Theory

This study is anchored Innovation Diffusion Theory postulated by Roger (1983) explains individuals' intention to adopt a technology as a modality to perform a traditional activity. The critical factors that determine the adoption of an innovation at the general level are the following: relative advantage, compatibility, complexity, trialability and observability. Many banks have found it advantageous to adopt ICT in their operation to improve their efficiency. This is achieved through development of websites and mobile applications that suit the customer needs. Customers are therefore able to access their accounts anywhere if they are connected to the internet. This theory is concerned with the way a new technological idea, artefact or technique, or a new use of an old one, migrates from creation to use. According to ICT, technological innovation is communicated through channels, over time, among the members of a social system.

The Innovation Diffusion Theory, developed by Everett Rogers, is significant in various fields due to its insights into how new ideas, technologies, and innovations spread through a social system. The theory provides a framework for understanding how and why individuals adopt innovations at different rates. It identifies distinct adopter categories, including innovators, early adopters, early majority, late majority, and laggards, each with specific characteristics influencing their adoption decisions. By categorizing individuals into adopter groups, the theory enables researchers and practitioners to predict the rate at which an innovation is likely to be adopted within a population. This information is valuable for planning and strategizing the introduction of new products, technologies, or ideas. Innovation Diffusion Theory identifies key factors that influence the adoption process, including perceived attributes of innovations (relative advantage, compatibility, complexity, trialability, and observability), communication channels, social systems, and the characteristics of potential adopters. The theory highlights the importance of communication channels in the diffusion process. Understanding how information flows within a social system helps in designing effective communication strategies to promote the adoption of innovations. Different adopter groups may be reached through different channels. The Innovation Diffusion Theory provides a comprehensive framework for understanding the diffusion process of innovations, offering practical insights for individuals, organizations, and policymakers seeking to introduce and promote new ideas and technologies. The Innovation Diffusion Theory offers several benefits in various fields, providing valuable insights into the process of how innovations are adopted and spread within a social system.

One of the primary benefits of the Innovation Diffusion Theory is its ability to predict and explain the adoption patterns of innovations. By categorizing individuals into adopter groups and considering factors such as the perceived attributes of innovations, communication channels, and social systems, the theory helps anticipate how quickly or slowly an innovation will be adopted. Organizations and policymakers can use the theory to inform strategic planning related to the introduction of new products, technologies, or ideas. By understanding the characteristics of different adopter groups and the factors influencing adoption decisions, they can develop targeted strategies to facilitate the diffusion process. The theory emphasizes the importance of communication channels in the diffusion process. Understanding which channels are most effective for reaching different adopter groups enables communicators to tailor their messages and promotion strategies accordingly. Businesses can benefit from the theory by using insights

into adopter characteristics to inform product development. Innovations that align with the preferences and needs of early adopters and innovators may have a higher chance of successful diffusion.

The Innovation Diffusion Theory offers several benefits in various fields, providing valuable insights into the process of how innovations are adopted and spread within a social system. One of the primary benefits of the Innovation Diffusion Theory is its ability to predict and explain the adoption patterns of innovations. By categorizing individuals into adopter groups and considering factors such as the perceived attributes of innovations, communication channels, and social systems, the theory helps anticipate how quickly or slowly an innovation will be adopted. Organizations and policymakers can use the theory to inform strategic planning related to the introduction of new products, technologies, or ideas. By understanding the characteristics of different adopter groups and the factors influencing adoption decisions, they can develop targeted strategies to facilitate the diffusion process. The theory emphasizes the importance of communication channels in the diffusion process. Understanding which channels are most effective for reaching different adopter groups enables communicators to tailor their messages and promotion strategies accordingly. Businesses can benefit from the theory by using insights into adopter characteristics to inform product development. Innovations that align with the preferences and needs of early adopters and innovators may have a higher chance of successful diffusion. Innovations often come with inherent risks, and understanding the diffusion process can help mitigate these risks. By identifying potential barriers to adoption and areas of resistance, organizations can proactively address concerns and challenges.

METHODOLOGY

This study used survey research design. The population of this study comprises all the customers of deposit money banks in Federal Capital Territory. The sample size of 384 was determined using Cochran formula determination, Primary source of data collection was used using a 5-point Likert scale questionnaire. Data were analyzed using Partial Least Squares Structural Equation Model (PLS-SEM). The model is specified below:

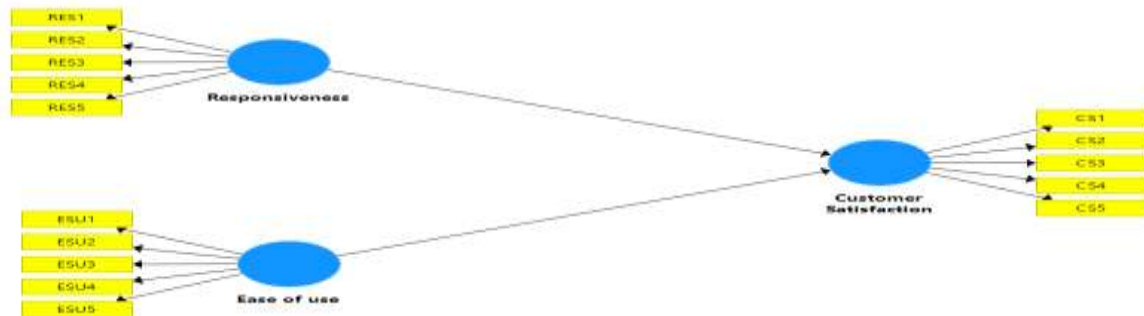


Figure1: Model Specification

Source: SMART, PLS Output, 2024

RESULTS AND DISCUSSIONS

Out of the four hundred and forty (440) distributed questionnaires, 415 were properly filled and returned giving a response rate of 94%. Subsequently, all further analyses were done using 415 responses data.

Table 1: Descriptive Statistics

variable	Mean	Median	Min	Max	SDV	Kurtosis	Skewness
RES	3.7	5.00	1	5	0.96	-1.59	-0.09
ESU	3.0	4.44	1	5	0.97	0.90	-0.98
CS	4.1	5.00	1	5	0.89	0.20	-0.68

Source: SMART, PLS Output, 2024.

Data on the study variables were described in Table 4.1 above in terms of the mean, minimum, maximum, standard deviation, skewness and kurtosis values. Responsiveness (RES) revealed an average value of 3.7 with a standard deviation value of 0.96. However, the minimum and maximum values stood

at 1 and 5 respectively. Ease of Use (ESU) had minimum and maximum values of 1 and 5 respectively however, it showed an average of 3.0 along with a standard deviation of 0.97. Furthermore, customer satisfaction (CS) showed a minimum value of 1 and a maximum value of 5 with an average value of 4.10 accompanied with a standard deviation value of 0.89. All the skewness and kurtosis values were less than 1 which shows that there is a normal distribution of data.

Assessment of Measurement Model

In assessing the measurement model, the researcher began by assessing the item outer loadings. As a rule, loadings above 0.708 are recommended, as they indicate that the construct explains more than 50 percent of the indicator's variance, thus providing acceptable item reliability (Hair, et al., 2019). However, Hair, et al., (2019) posited that low but significant indicator loading of 0.50 can be included hence justifying why indicators with loadings less than 0.708 and above 0.50 were not deleted from the model as seen in figure 2 below.

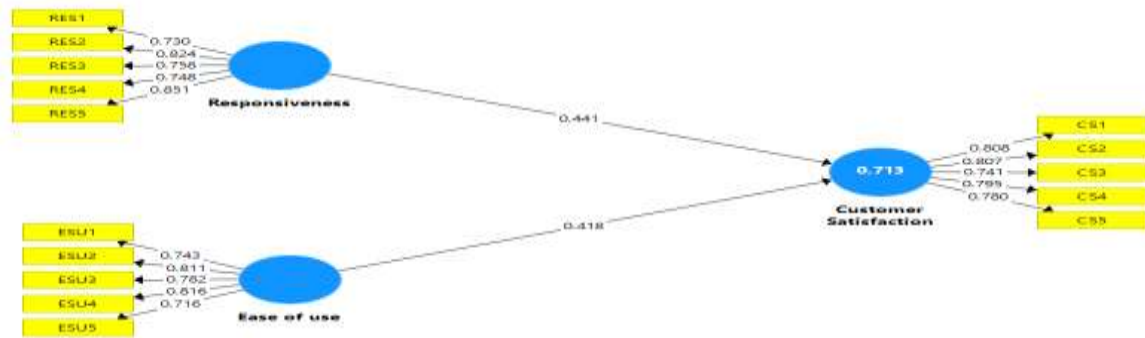


Fig 2: Indicator Loadings.
Source: SMART, PLS Output, 2024

Table 2: Reliability of study scale

S/N	Variables		Factor Loadings	Cronbach Alpha	Composite Reliability	Average Variance Extracted (AVE)	No of Items
1	Responsiveness (RES)	RES1	0.730	0.848	0.890	0.619	5
		RES2	0.824				
		RES3	0.758				
		RES4	0.748				
		RES5	0.851				
2	Ease of Use (ESU)	ESU1	0.743	0.833	0.882	0.600	5
		ESU2	0.811				
		ESU3	0.782				
		ESU4	0.816				
		ESU5	0.716				
3	Customer Satisfaction (CTS)	CS1	0.808	0.842	0.888	0.614	5
		CS2	0.807				
		CS3	0.741				
		CS4	0.795				
		CS5	0.780				

Source: SmartPLS Output, 2024

Composite reliability of Jöreskog's (1971) was applied to test for internal consistency of the study. All the values fall within the Hair, et al., (2019) rating of good consistency. The Cronbach alpha value was above 0.60 which is the minimum threshold as recommended by Sekaran (2010). To test for the convergent validity, the average variance extracted (AVE) was used. All the latent variables showed values greater than 0.50 which indicates that the constructs explain at least 50 percent of the variance of its items. According to Henseler, et al., (2015) the Fornell-Larcker criterion does not perform well when explaining discriminant validity, particularly when the indicator loadings on a construct differ only slightly. As a replacement, they proposed the Heterotrait-Monotrait (HTMT) ratio of the correlations which is the mean value of the item correlations across constructs relative to the (geometric) mean of the average correlations for the items measuring the same construct (Voorhees et al., 2016). Discriminant

validity problems are present when HTMT values are high than 0.90 for structural models (Henseler, et al., 2015).

Table 3: Heterotrait-Monotrait Ratio (HTMT)

	Ease of Use	Responsiveness	Customer Satisfaction
Ease of Use	1.000		
Responsiveness	0.548	1.000	
Customer Satisfaction	0.754	0.713	1.000

Source: SmartPLS Output, 2024

The variance inflation factor (VIF) was used to evaluate collinearity of the formative indicators. All the VIF values were less than 5 indicate the absence of critical collinearity issues among the indicators of formatively measured constructs (Hair, et al., 2019).

Model Goodness of Fit (GoF)

Sequel to the need to validate the PLS model, there is a need to assess the goodness of fit of the model as Hair, et al. (2017) suggested. This study used the standardised root mean square residual's (SRMR). The choice of this index was based on the fact that the SRMR provides the absolute fit measure where a value of zero indicates a perfect fit. The study adopted Hu & Bentler (1998) suggestion that a value of less than 0.08 represents a good fit while applying SRMR for model goodness of fit. The study result indicates an SRMR value of 0.030. This indicates the model is fit.

Assessing the Structural Model

Having satisfied the measurement model assessment, the next step in evaluating PLS-SEM results is to assess the structural model. Standard assessment criteria, which was considered include the path coefficient, t-values, p-values and coefficient of determination (R^2). The bootstrapping procedure was conducted using a resample of 5000.

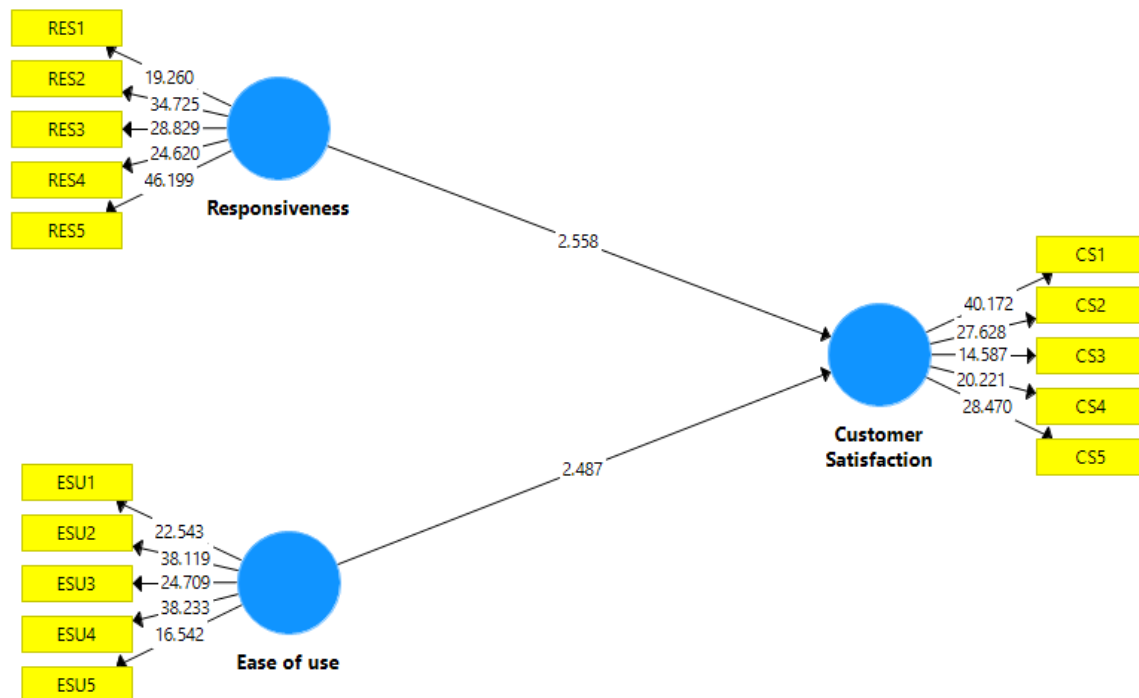


Fig. 3: Path Coefficients of the Regression Model.

Source: SMART, PLS Output, 2024

Coefficient of Determination

	R Square	R Square Adjusted
Customer Satisfaction	0.713	0.711

Source: SmartPLS Output, 2024

The R-square value stood at 71.3% indicating that e-banking service proxied by responsiveness and ease of use are responsible for 71% variation in the customers satisfaction. The remaining 29% variation could be explained by other factors not included in the study. Based on Hair, et al., (2019), the r-square is considered substantial. The result of the path analysis is presented in the table below:

Table 5: Path Coefficients

Variable	Path Coefficient *** (Beta)	t-value	p-value	Findings
Ease of Use -> Customer Satisfaction	0.418	2.487	0.013	Rejected
Responsiveness -> Customer Satisfaction	0.441	2.558	0.011	Rejected

Source: SmartPLS Output, 2024

The result from the analysis indicates that responsiveness has positive and significant effect on customer satisfaction in Federal Capital Territory, Abuja. Nigeria. The decision was reached based on the t-value of 2.487 which is greater than 1.964 and a beta value of 0.418 with a p-value of 0.013. The positive effect implies that higher levels of responsiveness from service providers lead to increased customer satisfaction. This finding is in agreement with that of Siti, and Melissa (2023) who found that responsiveness has positive and significant effect on the customer satisfaction.

The result from the analysis indicates that ease of use has positive and significant effect on customer satisfaction in Federal Capital Territory, Abuja. Nigeria. The decision was reached based on the t-value of 2.558 which is greater than 1.964 and a beta value of 0.441 with a p-value of 0.011. This implies that increased ease of use of products/services leads to higher customer satisfaction levels. This finding agrees with that of Ngozi, (2022) who made similar findings about ease of use and customer satisfaction.

CONCLUSION AND RECOMMENDATIONS

The study concluded that e-banking services has significant effect on customer satisfaction in in Federal Capital Territory, Abuja. Based on the study's findings,

- i. Banks should establish systems for collecting customer feedback regularly. This could include surveys, suggestion boxes, or digital platforms where customers can express their concerns and experiences. Also, they should invest in training programs for staff to improve their responsiveness to customer inquiries and issues. This includes active listening, problem-solving, and effective communication skills.
- ii. Banks should ensure that products, services, and digital interfaces (like websites and apps) are intuitively designed. Conduct usability testing to identify areas for improvement. They should also regularly solicit feedback from customers about their experiences with the ease of use. Use surveys and focus groups to identify pain points and areas for enhancement.

References

- Abdon R. A., & Noel, K. K. (2023) Relationship between reliability, assurance, the tangible clues of customer service and customer satisfaction and trust in Hotels in Uganda. *American Research Journal of Humanities Social Science (ARJHSS)*, 04,(10), 01-07
- Adukanya S. T, Nomhwange, S. T, & Hanmaikyur, T. J. (2023) online marketing and customer satisfaction of deposit money banks in Benue State-Nigeria. *International Academic Journal of Management and Marketing* 11(7) 32-51 DOI: 67321425661173
- Beshir, E. S., & Zelalem, B. A. (2020). The effect of e-banking service quality on customer's satisfaction and loyalty. *The Strategic Journal of Business & Change Management*, 7(3), 818 – 832
- Hair, J. F., Ringle, C. M. & Sarstedt, M. (2011) PLS-SEM: Indeed a Silver Bullet. *Journal of Marketing Theory and Practice*. 19(2), 139–152. <https://doi.org/10.2753/mtp1069-6679190202>.
- Khudhair, H. Y., Jusoh, A., Mardani, A., & Nor, K. Md. (2019). Quality seekers as moderating effects between service quality and customer satisfaction in airline industry. *International Review of Management and Marketing*, 9(4), 74–79. <https://doi.org/10.32479/irmm.8144>

- Melissa, P., Herlina, B., Hendra, W., & Hannes, W. (2020) The effects of website design quality and service quality on repurchase intention among shoppe customers in Jakarta, with Customer Trust as a Mediating Variable, *Advances in Economics, Business and Management Research*
- Ngozi, F. D. (2022) Effect of perceived ease of use and security of e-banking on customer satisfaction Wukari. *International Studies Journal*, 6(2) 22-56
- Ngozi, F. D. (2022) Effect of perceived ease of use and security of e-banking on customer satisfaction, *Journal of Innovative Social Science Human Resource*. 22(6) 23-45
- Ololade, B. & Ogbeide, S. (2017) E- Banking in Nigeria: Issues and challenges. *Research Journal of Finance and Accounting*. 8(6), 16.
- Raza S. A., Umer, A., Qureshi, M. A., & Dahri, A. S. (2020). Internet banking service quality, e-customer satisfaction and loyalty: the modified e-SERVQUAL model, *The Total Quality Management Journal*, 32(6), 1443-1466
- Raza, S.A., Umer, A., Qureshi, M.A. & Dahri, A.S. (2020) Internet banking service quality, e-customer satisfaction and loyalty: the modified e-SERVQUAL model. *Journal of Total Quality Management*. 32(6), 1443-1466. doi:10.1108/TQM-02-2020-0019.
- Rogers, E. M., & Singhal, A., (2013) "Diffusion of innovations: in an integrated approach to communication theory and research" *International Journal of Human-Computer Interaction*, 2(5). 409-419.
- Sarintan, A. K. (2024) The effect of ease of use and service quality on customer loyalty with satisfaction as an intervening variable, 5(5) 22745-5254
- Sathiyavany, N. & Shivany, S. (2018). E-Banking Service Qualities, E-Customer Satisfaction, and e-Loyalty: A conceptual Model. *The International Journal of Social Sciences and Humanities Invention*. 5(6), 4808-4819. doi:10.18535/ijsshi/v5i6.08.
- Schwartz, K. D. (2019) Data privacy and data security: What's the difference. ITProToday. <https://www.itprotoday.com/security/data-privacy-and-data-security-what-s-difference>.
- Singh, N., & Sinha, N. (2020). How perceived trust mediates a merchant's intention to use a mobile wallet technology. *Journal of Retailing and Consumer Services*, 52(July 2019), 101894. DOI: 10.1016/j.jretconser.2019.101894
- Siti, N., Aqiliyah, B. S. & Melissa, S. (2023) The effect of electronic banking service quality on customer satisfaction, *Romanian Journal of Information Technology and Automatic Control*, 33(2) 35-46, 2023
- Subedi, D. P. & Adhikari S. N. (2024) Impact of e-banking on service quality in nepalese commercial banks, *International Journal of Business and Management Invention (IJBMI)* 13(3) 41-53
- Yulisetiari, D. & Yongky, A. P. (2019). The effect of price, service quality, customer value, and brand image on customer satisfaction of 103 Telkomsel Cellular Operators in East Java Indonesia. *International Journal of Scientific & Technology Research*, 8(3): 5-9.