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Examining the Effect of E-Banking Services on Customer Satisfaction in Deposit Money Banks in Adamawa State Capital, Nigeria

Ahmed Ishaq Adamu
Lecturer, Department of Accounting, ModibboAdama University (MAU)Yola, Nigeria
Dr. Mohammed Mahmud Kakanda
Lecturer, Department of Accounting, ModibboAdama University (MAU) Yola, Nigeria
Sagir Danladi
Lecturer, Department of Accounting, ModibboAdama University (MAU) Yola, Nigeria

Abstract:
This study examined the effect of e-banking services on customer satisfaction in deposit money banks in Adamawa State capital. Three deposit money banks (First Bank, Guaranty Trust Bank, and United Bank for Africa) operating in Yola were selected for this study. The independent variable is e-banking services that are represented by Internet banking, Automated Teller Machine Service (ATM), Short Message Service (SMS) banking, and mobile banking. The convenience sampling technique was used to select 150 customers of the three sampled banks. 150 Questionnaires were distributed to the respondents where 115 were found valid and used for analysis purposes. With the aid of the statistical package for social sciences (SPSS) version 20, the data were analyzed using descriptive statistics, correlation, and multiple regression. From the regression result, internet banking and ATM service have a significant positive effect on customer satisfaction in the selected deposit money banks in Adamawa State capital. But SMS banking has an insignificant positive effect on customer satisfaction, while mobile banking has an insignificant negative effect on customer satisfaction of the sampled banks. Hence, the study recommends that management of deposit money banks in Nigeria, specifically in Adamawa State capital (Yola) should do everything possible to ensure that internet banking and ATM service are in addition provided to customers effectively.

Keywords: *ATM services, customer satisfaction, e-banking, internet banking, mobile banking, SMS banking*

1. Introduction

In every economy, banks play a pivotal role by offering various financial services to different people. Specifically, banks offer services for people desiring to save their money and other valuables and offer finances to new businesses aiming to invest and to existing ones that wish to expand. This significant help in ensuring the economic growth of a nation. When offering banking services decades back, account books are given to customers that opened a savings account, while check books are given to customers with current accounts for the operational purpose (Timothy, 2012). Today, the banking industry in almost every economy of the world has rolled into a period of 'menu-driven ultra-generous specialized software' referring to as banking applications that significantly assist banks in customer data gathering, storing, processing, and transfers with ease.

The utilization of electronic banking (hereinafter, e-banking) services and products in banking operations has become a theme of concern and discussion to all banks. Whatever the case, e-banking services have been advantageous to the banks through inspiring their clients to continue banking with them. It is information and communication technology (ICT) that gave birth to e-banking and makes it achievable for banks and customers in developing economies to enjoy similar e-banking services provided by banks in the developed economies.

Coherently, Guraău (2002) opines that in today's world, it is rare to see a bank in any economy, even banks in the most remote area that does not offer one among the various types of e-banking services. The author further buttresses that ICT is the vibrant asset that has transmuted many areas of life, ranging from businesses, commerce, and services. It is a well-known fact that e-banking services are now used by both developed and developing economies as a competitive strategy in running their businesses and satisfying customer needs.

According to Allen *et al*. (2001), electronic banking has been among the services tools that give the chance to utilize the internet to improve business transactions that cause customer satisfaction. Furthermore, the authors state that e-banking involves the procurement of data or services by a bank to its clients using a computer. Whereas, Daniel (1999) discourses that e-banking involves a more erudite service that provides customers with the chance to get access to their accounts and carry out financial transactions (transfer money to settle liabilities, pay bills, and buy items online, etc.) using the internet, all to ensure that the needs of customers are satisfied.

Considering the Nigerian banking industry, Madueme (2009) documents that with globalization, banks in Nigeria have no option than to hold onto e-banking services to promote a positive means of delivering services that raises beyond customer satisfaction, and for them to meet the stiff competitions in the industry. Additionally, the late merger and acquisitions in the Nigerian banking industry have drawn the attention of many banks to start utilizing various machine-driven tools in certifying the delivery of effective customer service that ensure that the needs of customers are satisfied that may lead to expansion and a higher rate of return.

1.2 Objectives of the study

The main objective of this study is to examine the effect of e-banking services on customer satisfaction in deposit money banks in Adamawa State capital. The specific objectives are to:

- Examine the effect of internet banking on customer satisfaction in deposit money banks in Adamawa State capital.
- Assess the effect of Automated Teller Machine (ATM) service on customer satisfaction in deposit money banks in Adamawa State capital.
- Examine the effect of Short Message Service (SMS) banking on customer satisfaction in deposit money banks in Adamawa State capital.
- Determine the effect of mobile banking on customer satisfaction in deposit money banks in Adamawa State capital.

2. Literature Review

In the world of electronic commerce, it is pertinent to banks to note that they should provide e-banking services to continue operating for a perpetual period. As such, most banks in both developed and developing economies are offering e-banking services with varying levels of complexities ranging from account inquiry, check book order, bank statement download, fund transfer, bill settlement, investing in stock, and insurance term payment (Tan &Teo, 2000).

Consequent to the increasing rate of e-banking services across the globe, banks are faced with firm competition in enticing and maintaining customers using their e-banking platforms (Shankar &Jebarajakirthy, 2019). In essence, offering high-quality electronic banking services by banks is regarded as a fundamental approach for acquiring a competitive advantage in the service delivery platform (Butt &Aftab, 2013; Makanyeza&Chikazhe, 2017). Relatively, Brun*et al*. (2014) opine that the loyalty and satisfaction of customers to the e-banking system is highly dependent on the enhancing of the e-banking services offered by the banks.

Normally, banks that failed to offer e-banking services to their clients may lose them (their clients) to their competitors. Consequently, major banks (both national and international) in Nigeria have implemented and are still implementing the use of ICT in their day-to-day business operations.

Like in the developed economies and other developing economies, competition in the Nigerian banking industry is becoming stronger as additional companies come into the market. Relatively, Adewuyi (2011) states that in response to the stiff competition in the Nigerian banking industry, banks are directing their market techniques in the direction of increasing the satisfaction and loyalty of their customers through the use of enhanced e-banking service quality.

Despite all these efforts, little has impacted the behaviors of many customers and their satisfaction is significantly affected. Case in point, there are congestions in the banking halls of various banks in Nigeria to deposit or withdraw money or to get other banking services. In addition, to reduce the long queues in the banking halls, banks have provided Automated Teller Machines (ATMs) outside the banking halls to reduce congestions and enhance their service quality. Yet, congestions are still found in the banks and long queues at the ATMs can be seen at every bank.

Therefore, this has called for a continual strengthening and intensifying electronically-based services that range from internet banking, short message service (SMS) banking, mobile banking, telephone banking, ATM services, and lots more. These services were adopted by banks to comfort the pressure usually found at the banking halls. Most banks in Nigeria have established measures to prevent their customers from the usual face-to-face banking through the introduction of transactional charges on it while making the electronic transactions almost free if not little charges.

However, despite all the efforts put in place by banks to reduce congestions in the banking halls and queues at the ATMs to satisfy the needs of their customers, yet, queues and congestions still exist at the banking halls in the Nigerian banks, of which banks in the Adamawa State capital are not exempted. The question that arises from the above argument is that why customers are still preferring being in queues and spending more hours in banking transactions than being in their comfort zones and banking electronically despite the e-banking services provided by their respective banks? It is against this background this study attempts to answer the question of whether e-banking services have any effect on customer satisfaction in banks located at Adamawa State capital, North-east Nigeria.

Nevertheless, in other to answer a similar question raised by this study, numerous studies were conducted. For instance, Sardana and Bajpai (2020) studied the effect of e-banking service quality on customer satisfaction in India. Based on convenient sampling, the study used primary data of two private sector banks in the Delhi region to produce a 5-factor structure. The exploratory factor analysis produces dimensions of efficiency, trust, fulfilment, responsiveness, and systems critical to e-service quality satisfaction. Regression results show trust and privacy as the most critical factor influencing e-banking service quality perceptions. Further, the study provides theoretical and managerial recommendations for increasing online banking adoption and improving overall customer satisfaction customer loyalty except for website design. The mediation effects of initial trust varied between high and low-involved consumers. The study implies that establishing a loyal customer base is an important goal for banks. Hence, the study demonstrates which specific EBSQ dimensions banks should emphasize to enhance consumers' initial trust and loyalty toward e-banking services.

In a study by Isobor*et al*. (2018), e-banking was found to improve both customers' satisfaction and caused economic growth in Nigeria. For the study, the authors selected customers (who were as well the respondents) based on electronic banking and their use of the banks' electronic services. Out of the 107 questionnaires retrieved from the respondents, only 100 were useable and used for analysis. For testing the hypothesis developed in the study, a statistical parametric test called Paired Sample t-test was employed to test the significance through the use of the SPSS statistical package. The study recommends adequate legislation on all aspects of e-banking so that both the operators of the system and the public can be adequately protected. Also, banks should charge low or no fees for e-banking services to motivate their customers to take advantage of e-banking services.

Further, Okoye*et al*. (2018) examined the effect of technology-based financial service delivery on customer satisfaction in the Nigerian banking sector. To carry out the study, the researchers obtained data using questionnaires and oral interviews from 120 customers of three selected (based on convenience sampling technique) Deposit Money Banks within Ogun and Lagos states Nigeria. The technique for data analysis was the analysis of variance (ANOVA) using Statistical Package for Social Sciences (SPSS). The study found that the independent variables (technology-based financial services) (proxied by; time-saving, convenience, crime reduction, reliability, risk reduction, and ease of use) have a significant positive impact on the dependent variable (customer satisfaction). This is an indication that electronic-based banking has enhanced customer satisfaction in Nigeria. It is recommended that more service points and user-friendly customer-oriented financial products be provided to support this initiative.

Using the technology acceptance model (TAM) put forward by Davis (1989) and the use of questionnaires, Ankrah (2012) surveyed the greater Accra region with a sample size of 6 banks and 360 customers. The author finds that all the banks are engaged in internet banking and had business websites. Customers of the banks are also found to be generally inspired and satisfied with the banks. Though, the study finds out that most of the banks' customers do not visit the websites of the banks and do not patronize SMS banking though all the banks had this product (Abor, 2005). Customers are also found not to be patronizing the internet banking platform of the banks. This implies that customers are not fully satisfied with the e-banking services of banks in the great Accra region in Ghana.

More so, Khatri and Upadhyay (2013) utilize data from five banks and 60 of their customers to analyze internet banking. They found that though the majority of the sampled customers of the banks use the internet and have some knowledge about internet banking, the majority are yet to develop the attitude to make use of the internet banking facility provided by the banks. However, the authors argued that the under-utilization of internet banking in the country (Nepal) is a result of inadequate awareness and the fear of security. Poor internet infrastructural development in the country was also cited as the major challenge of internet banking in the country.

Relatively, Ahmad and Al-Zu'bi (2011) study the adoption of electronic banking in Jordan and the impact it has on customer satisfaction, loyalty, and positive word of mouth. In using purposive sampling, they selected 179 customers from 24 commercial banks. The study finds a positive effect of internet banking on customer satisfaction and loyalty.

Previous studies have attempted to investigate the effect of electronic banking services on customer satisfaction and/or customer loyalty, yet, these studies (as presented above) pay less attention in considering the majority of the e-banking tools (internet banking, SMS banking, mobile banking [using banks' mobile apps], automated teller machine services) as a group but in piece-meal. In addition, similar studies in Nigeria were mostly conducted in the Southern part of Nigeria while limited studies were conducted from Northern Nigeria especially in the northeast. As a result, this study aims to investigate the effect of e-banking services on customer satisfaction in banks (deposit money banks- regarded as commercial banks that accepts deposits payable on demand, transferable by cheque, or otherwise usable for making payments) in Adamawa State capital.

3. Research Methods and Data

For this study, a survey research design is used by this study which enables the collection of firsthand information and enables generalizations to be conducted using findings generated from a sample size, which is representative of the whole population. Out of the 15 branches of deposit money banks operating in the capital of Adamawa State, active customers of the three (3) big banks (drivers of e-banking in Nigeria) (First Bank Holdings, Guaranty Trust Bank, and United Bank for Africa-UBA)) are considered the population of this study. However, due to the nature of the population (customers of the banks) which is difficult to cover for data collection purposes, as such, convenience sampling is utilized.

For data collection from the customers of the selected banks, a structured questionnaire is distributed to the various customers at the banks' premises through the help of three research assistants. After the data collection period, a total number of one hundred and fifty (150) customers of the selected banks have participated in the survey. This, therefore, meant that the sample size could not be predetermined based on the fact that all the customers of the selected banks cannot be present at the same time. Explicitly, fifty (50) questionnaires were administered to customers of each of the selected banks. However, the total number of questionnaires used for the analysis in this study was one hundred and fifteen (115) because thirty-five (35) were found invalid due to wrong filling of the questionnaires. Important to note, the questionnaire was designed using a five-point Likert scale (1=Strongly disagree; 2=Disagree; 3=Neutral; 4=Agree; and 5=Strongly agree).

3.1. Variables Measurements

The measurements in this study were adopted from various sources to suit the study. Four constructs (internet banking, ATM services, SMS banking, and mobile banking) were used to proxied e-banking services while customer satisfaction represents itself. Specifically, the scale for internet banking was adopted from George and Kumar (2014) and Parasuraman et al. (2005). Whereas the scale items for ATM services, SMS banking, Mobile banking, and customer

satisfaction were adopted from Teye et al. (2020). Hence, Table 1 presents the measurements of variables and items used in this study.

S/N	Independent Variables (e-banking Services)
1	Internet Banking
	It is easy to find information on the website
	It is easy to navigate on the website
	I can complete my transaction quickly
	The Information provided on the website is well organized
	The website loads fast, easy login and logout
	The website is simple to use
	The website is useful for my banking transaction
	The website is available in a language that I can understand
2	Automated Teller Machine (ATM) Services
	It takes less time to secure an ATM card
	ATM provides timely service
	The multipurpose functions of ATMs have made life smarter and convenient
3	Short Message Service (SMS) Banking
	I receive messages on any transactions made
	You can check your balance at any time
	Safe and convenient when transacting
	Reliable and assurance when transacting
	Performance meets your expectation
4	Mobile Banking
	Mobile banking is preferred than using the bank hall
	Account details strongly protected from intruders
	Safe and convenient in security wide
	Reliable and assurance
	Performance meets your expectation
	Dependent Variable
1	Customer Satisfaction
	I am satisfied with the services of the bank
	There is the availability of information about e-banking
	am satisfied with the information about e-banking
	My bank ensures that customer needs and expectation are met
	The services are easy to use
	Accessible to any service at any time

Table 1: Variables and Their Items of Measurements
Source: George and Kumar (2014); ParasuramanEt Al. (2004), and Teye Et Al. (2020)

3.2. Technique for Data Analysis

For this study, data were analysed using descriptive statistics, Pearson correlation, and multiple regression. The Statistical Package for Social Sciences (SPSS) version 20 was used in performing the multiple regression analysis. Before conducting the analysis, data were entered into SPSS windows. Data were cleaned and coded for entry into the SPSS window by the researcher. Computer editing was done after keying in of the data was completed.

Equally important, in achieving the objectives of this study, the following statistical model was specified:

$CSF_i = \beta_0 + \beta_1 IBN_i + \beta_2 ATM_i + \beta_3 SBN_i + \beta_4 MBN_i + \varepsilon_i$

Where: CS = Customer Satisfaction
IBN = Internet Banking
ATM = Automated Teller Machine Service
SBN = SMS Banking
MBN = Mobile Banking
β_0 = Regression intercept;
β_1, β_4 = Parameters to be estimated;
ε = Error term

4. Presentation and Discussion of Results of Analysis

The analysis conducted in this study includes descriptive statistics, correlation analysis, and multiple regression. Before presenting and discussing the results of these analyses, the result of the demographic profile of the respondents is presented thus:

Item	Frequency	Perc. (%)
Gender		
Male	75	65.2
Female	40	34.8
Total	115	100.0
Age Category		
Below 30 years	38	33.0
30-39years	33	28.7
40-49years	30	26.1
50-59years	9	7.8
60 years & above	5	4.3
Total	115	100.0
Education Level		
Secondary	21	18.3
Diploma/NCE	42	36.5
Graduate (Degree)	45	39.1
Postgraduate	7	6.1
Total	115	100.0
Years with the bank		
1-3years	28	24.3
4-6years	30	26.1
7-9years	43	37.4
10 years & above	14	12.2
Total	115	100.0

Table 2: Demographic Profile of the Respondents
Source: Field Survey (2021)

The descriptive analysis of the respondents' features from Table 2 reveals that 75(65.2%) are male while 40(34.8%). This indicates that almost half of banks' customers that participated in this survey are male, showing that males frequently go to the bank in Yola metropolis than their female counterparts. Besides this, respondents were also asked regarding their age category, where 38(33%) are in the age bracket of below 30 years, whereas the age bracket of 31-39 years is 33(28.7%), 40-49years are 30(26.1%), 50-59 years are 9(7.8%) and 60 years and above are 5(4.3%).

Concerning the educational qualification of the respondents, 21(18.3%) are secondary school leavers, 42(36.5%) are NCE/Diploma holders, 45(39.1%) of the respondents are graduates, while the remaining 7(6.1%) are postgraduates. Finally, considering the number of years a customer has been operating with the bank, the result from Table 2 shows that 28(24.3%) respondents have 1-3 years with the bank, 30(26.1%) have 4-6 years, 43(37.4%) respondents have 7-9 years, while the remaining 14(12.2%) respondents have accounts with their respective banks for almost 10 years and above.

4.1. Reliability Test

Different types of testing reliability are used. However, the most popular method used by researchers to test the inter-item consistency and reliability is the Cronbach alpha coefficients (Sekaran&Bougie, 2010). It indicates the extent to which answers of the respondents to all the items are consistent. After running a reliability test using SPSS v20 for Windows, it was found that all the measures had a high-reliability standard ranging from 0.72 to 0.95. This is in line with the criterion that a Cronbach alpha coefficient of 0.60 is considered average reliability, while a coefficient of 0.70 or higher indicates that the instrument has a high-reliability standard (Sekaran&Bougie, 2010). The result of the reliability test is displayed in Table 3.

Scale Name	No. of Items	Cronbach's Alpha Coefficient	No. of Items Dropped	No. of Items Retained for the Main Analysis
1. Customer Satisfaction	6	0.913	Nil	6
2. Internet Banking	8	0.903	Nil	8
3. ATM Services	3	0.766	Nil	3
4. SMS Banking	5	0.781	Nil	5
5. Mobile Banking	5	0.848	Nil	5

Table 3: Result of Reliability Test
Source: Developed by the authors for this study from SPSSv20 output

4.2. Descriptive Statistics

The result of descriptive statistics involving mean, standard deviation, minimum, maximum with skewness and kurtosis is presented in Table 4 thus:

	N	Min	Max	Mean	Std. Deviation	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
Customer Satisfaction	115	1.00	4.83	3.7101	.96505	-1.159	.226	.336	.447
Internet Banking	115	1.00	5.00	3.6967	.88699	-1.118	.226	.802	.447
ATM Services	115	1.33	5.00	3.4957	.96363	-.545	.226	-.503	.447
SMS Banking	115	1.40	5.00	3.3461	.89259	-.307	.226	-.398	.447
Mobile Banking	115	1.00	5.00	3.8417	.85573	-1.515	.226	2.595	.447

Table 4: Descriptive Statistics
Source: Authors' Analysis (2021)

The result of descriptive statistics in Table 4, it shows that customer satisfaction (the dependent variable) has a mean value of 3.71. This is above 'Neutral' (3) on the five-point Likert scale and close to 'Agree' (4). Meaning that bank customers agree that they are satisfied with the e-banking services of their banks in Adamawa State capital (Yola). Moreover, in consideration of internet banking, the descriptive statistics from Table 4 show that it has a mean of 3.69(3.70), indicating that customers are satisfied with the internet banking of their banks in Yola (Adamawa State capital). Further, ATM service has a mean value of approximately 3.5, showing that customers are somewhat satisfied with the ATM service of their banks. Still, the result from Table 4 shows that customers of the sampled banks are indifferent regarding satisfaction with SMS banking of their banks because the result shows that it has a mean score of 3.4 which is close to 'Neutral' on the scale. Finally, the result from Table 4 depicts that mobile banking has a mean score of 3.84, close to 4 (Agree) on the scale. Meaning that customers are satisfied with the mobile banking of their banks in Yola (Adamawa State capital).

Additionally, Table 4 has the results of Skewness and Kurtosis which are used to determine the normality of data in a study. Based on the result of the descriptive statistics in Table 4, all the variables are found to be normally distributed, for the reason that the value for skewness is between -0.307 and -1.515; while that of kurtosis is between 2.595 and -0.503. The results portray that the data of the study are within the acceptable level of normality assumption of 3.00 for skewness and 10.00 for kurtosis (Kline, 2015).

4.3. Correlation Result

Correlation analysis is used to explain the level by which one variable is related to another (Asteriou& Hall, 2007). This study measures the relationship between independent variables with the dependent variable. The correlation result is presented in Table 5 as follows:

	Variables	1	2	3	4	5
1	Customer Satisfaction	1				
2	Internet Banking	0.947***	1			
3	ATM Services	0.786***	0.746***	1		
4	SMS Banking	0.634***	0.631***	0.621***	1	
5	Mobile Banking	0.683***	0.742***	0.612***	0.514***	1

Table 5: Correlation Matrix
*** = *Significance at the 0.01 Level (2-Tailed)*

The correlation result from Table 5 shows that all the independent variables have a significant positive relationship with the dependent variable at a 1% level of significance. Specifically, internet banking has a significant positive relationship with customer satisfaction with a correlation coefficient of 0.947. Considering ATM services and SMS banking, they also displayed a significant positive relationship with customer satisfaction having correlation coefficient values of 0.786 and 0.634 respectively. Further, mobile banking has a significant correlation with customer satisfaction with a coefficient of 0.683. Equally important, none of the correlation coefficients between the explanatory variables is up to 0.80 (the threshold) (Gujarati, 2009). Meaning that there is an absence of multicollinearity among the variables.

4.4. Multiple Regression Result

To accomplish the general purpose of this study, which is aimed at examining the effect of e-banking services on customer satisfaction in listed deposit money banks in Adamawa State capital (Yola), multiple regression was used in analyzing the data collected. The regression result is shown in Table 6 as follows:

Variables	Coefficient	t-statistics	p>t
Constant	-0.117	-0.872	0.385
Independent:			
Internet Banking	0.924	16.351***	0.000
ATM Services	0.182	4.092***	0.000
SMS Banking	0.023	0.553	0.581
Mobile Banking	-0.079	-1.646	0.103
Observations		115	
R^2		0.913	
Adj. R^2		0.910	
F (4, 110)		287.53***	

Table 6: Ordinary Least Square (Ols) Regression Result
*Note: ** and *** = Significant at 5% and 1% Levels*

From the multiple regression results in Table 6, the value of R-squared (R2) is 0.913. This means that the regression model explains 91.3% of the variation in customer satisfaction. As a result, the outcome is considered reasonable. Furthermore, the R2 value of 91.3% is an indication that the variance in customer satisfaction was statistically accounted for by the regression equation (independent variables). The same result from Table 6 also reveals that the model is significant (F=4, 110; p<0.01), indicating the validity of the model utilized.

In regards to examining the objectives of this study, the beta (β) coefficients are employed. The higher the beta coefficient of a particular independent variable, the greater impact it has on a dependent variable. In this model, the explanatory variable with the largest beta coefficient is internet banking (IBN) (β=0.924) and is found to be statistically and positively significant at the 0.01 (p<0.01) level. This shows that an increase in the effectiveness of internet banking as an e-banking service tool of Nigerian deposit money banks by 1(100%), would result in to increase in customer satisfaction by 0.924(92.4%). This finding is in line with that of Okoye et al. (2018). Moreover, this result is an indication that internet banking has a significant positive effect on customer satisfaction in deposit money banks in Nigeria, specifically Adamawa State capital.

Relatively, the beta coefficient score for ATM services is 0.182, which makes the second largest contribution in explaining the variability of customer satisfaction in the model. More so, the result is found to be statistically positively significant (p<0.01) at 0.01 level, which means that an increase in better ATM service by 100% will lead to better customer satisfaction by 18.2%. This also portrays that ATM service has a significant positive effect on customer satisfaction in the deposit money banks in Nigeria, specifically Adamawa State capital (Yola). This finding corroborates with the finding by Isobor et al. (2018).

On the other hand, SMS banking has a positive, but insignificant effect on customer satisfaction (β=0.023; p>0.10) in deposit money banks in Adamawa State capital. Relatively opposite, mobile banking has a negative, but insignificant effect on customer satisfaction (β=-0.079; p>0.10) in the Nigerian banking industry. This is an indication that SMS banking and mobile banking have no significant effect on customer satisfaction in deposit money banks in Nigeria, specifically Adamawa State capital (Yola).

5. Policy Recommendation

Based on the findings documented by this study, it, therefore, recommends that the management of deposit money banks in Nigeria should do everything possible to ensure that internet banking, as well as ATM service, are additionally provided to customers effectively. For the reason that they have a significant positive effect on their customers' satisfaction. The management of the banks should improve their server, website performance, its ease of use to customers, and its language friendly. With regards to ATM service, maintenance should be observed always, and cash should be readily available to in the machines at all times for withdrawals by customers.

Moreover, the management of deposit money banks in Nigeria should as a matter of urgency improve their SMS banking and mobile banking to satisfy the needs of their customers. SMS banking used by customers is unstructured supplementary service data (USSD) codes which most of the time now do not smoothly carry out financial transactions until multiple trials are made by customers. Considering mobile banking, most of the banks' mobile apps hooked up in the process of carrying out transactions or processes slowly under a 3G or 2G internet connection. These problems should be urgently taken care of by the management of the banks to satisfy the needs of their customers.

6. Conclusion

This study made a significant contribution made by this study in examining the effect of e-banking services (internet banking, ATM services, SMS banking, and mobile banking) on customer satisfaction in deposit money banks in Nigeria with specific interest to three selected banks in Yola (Adamawa State capital). The study found that internet banking and ATM services have a significant positive effect on customer satisfaction in the sampled banks in this study. Whereas SMS banking has an insignificant positive effect on customer satisfaction, mobile banking has an insignificant effect on customer satisfaction.

However, despite the significant contribution made by this study, it has its flaws. For instance, the study concentrated on the actual customers of the three selected banks in Yola only while there are lots of customers of other banks available in the study area. Again, the study is limited to only four e-banking services (internet banking, ATM service, SMS banking, and mobile banking) while other available e-banking services can be explored. Additionally, purposive sampling was used in selecting the study sample size where only 150 respondents were arrived at. This makes the generalization of results difficult. Hence, future studies can use this opportunity to fill the research gap by using another dependent variable like customer retention against e-banking services. In addition, other e-banking services can be considered by other studies. Moreover, future studies can use customers of other deposit money banks in Yola metropolis or other States to examine their views on e-banking services and satisfaction. Lastly, future studies can increase the size of samples after increasing the number of banks so that generalization of results can be made with ease and accuracy.

7. References

i. Abor, J. (2005). Technological innovations and banking in Ghana: an evaluation of customers' perceptions. *IFE Psychologia: An International Journal*, *13*(1), 170-187.
ii. Adewuyi, I. D. (2011). Electronic banking in Nigeria: Challenges of the regulatory authorities and the way forward. *International journal of economic development research and investment*, *2*(1), 149-156.
iii. Ahmad, A. E. M. K., & Al-Zu'bi, H. A. (2011). E-banking functionality and outcomes of customer satisfaction: an empirical investigation. *International journal of marketing studies*, *3*(1), 50-65.
iv. Allen, F., McAndrews, J., &Strahan, P. (2001). E-Finance: An Introduction, Center for Financial Institutions Working Papers 01-36, Wharton School Center for Financial Institutions, University of Pennsylvania.
v. Ankrah, E. (2013). Customer satisfaction of electronic products and services in Ghanaian banks. *Information and Knowledge Management, 3*(1), 7-18.
vi. Brun, I., Rajaobelina, L., &Ricard, L. (2014). Online relationship quality: scale development and initial testing. *International Journal of Bank Marketing*, *32*(1), 5-27.
vii. Butt, M. M., &Aftab, M., (2013). Incorporating attitude towards Halal banking in an integrated service quality, satisfaction, trust and loyalty model in online Islamic banking context. *International Journal of Bank Marketing, 31*(1), 6-23.
viii. Daniel, E. (1999). Provision of electronic banking in the UK and the Republic of Ireland. *International Journal of bank marketing, 17*(2), 77-83.
ix. George, A., & Kumar, G. G. (2014). Impact of service quality dimensions in internet banking on customer satisfaction. *Decision*, *41*(1), 73-85.
x. Gujarati, D. N. (2009). *Basic econometrics*. Tata McGraw-Hill Education.
xi. Guraău, C. (2002). Online banking in transition economies: the implementation and development of online banking systems in Romania. *International journal of bank marketing, 20*(6), 285-296.
xii. Isibor, A. A., Omankhanlen, A. E., Okoye, L. U., Achugamonu, B. U., Adebayo, M. E., Afolabi, G. T., &Ayodeji, O. E. (2018). Impact of Electronic Banking Technology on Customers' satisfaction and Economic Growth in Nigeria. *International Journal of Civil Engineering and Technology*, *9*(12), 536-544.
xiii. Khatri, J. R., &Upadhyaya-Dhungel, K. (2013). Internet banking in Nepal: Use and challenges. *Banking journal*, *3*(2), 57-77.
xiv. Kline, R. B. (2015). *Principles and practice of structural equation modeling*. Guilford publications.
xv. Madueme, I. S. (2009). Banking efficiency and information technology in Nigeria: An empirical investigation. *International Journal of Economic and Development Issues*, *8*, 1-2.
xvi. Makanyeza, C., &Chikazhe, L. (2017). Mediators of the relationship between service quality and customer loyalty. *International Journal of Bank Marketing, 35*(3), 540-556.
xvii. Okoye, L. U., Omankhanlen, A. E., Okoh, J. I., &Isibor, A. A. (2018). Technology-based financial services delivery and customer satisfaction: A study of the Nigerian banking sector. *International Journal of Civil Engineering and Technology*, *9*(13), 214-223.
xviii. Parasuraman, A., Zeithaml, V. A., & Berry, L. L. (1985). A conceptual model of service quality and its implications for future research. *Journal of marketing*, *49*(4), 41-50.
xix. Sardana, S., &Bajpai, V. N. (2020). E-banking service quality and customer satisfaction: an exploratory study on India. *International Journal of Services and Operations Management*, *35*(2), 223-247.
xx. Sekaran, U., &Bougie, R. (2010). *Research methods for business: A skill building approaches*(5th ed.). United Kindom: John Wiley & Sons Ltd.
xxi. Shankar, A., &Jebarajakirthy, C. (2019). The influence of e-banking service quality on customer loyalty. *International Journal of Bank Marketing*. https:// doi.org/10.1108/IJBM-03-2018-0063.
xxii. Tan, M., &Teo, T. S. (2000). Factors influencing the adoption of Internet banking. *Journal of the Association for Information Systems*, *1*(1), .5.
xxiii. Teye, M., Apolikame, G., Badu, F., & Osei, F. K. (2020). *E-Banking Services, Customer Relationship Management and Customer Satisfaction of Some Selected Rural Bank in Ghana* (Doctoral Dissertation).
xxiv. Timothy, A. T. (2012). Electronic banking services and customer satisfaction in the Nigerian banking industry. *International Journal of business and management tomorrow*, *2*(3), 1-8.