Influence of Information Communication Technology in Building Customer Loyalty among Deposit Money Banks in Jos Metropolis, North Central Nigeria

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Abstract
This study was designed to investigate the role of information communication technology in building customer loyalty in money deposit banks in Jos Metropolis. The study employs the use of survey research method and sample size of nine deposit money banks was selected from the twenty one money deposit banks operating in Jos Metropolis. A structured questionnaire of one hundred and fifty was administered to respondents and only one hundred and twenty were duly filled and returned representing 80% response rate .The data of the study was analysed using simple percentage and descriptive statistical techniques. The hypotheses of the study were tested using Pearson product moment correlation coefficient and linear regression analysis. The result revealed that there is a significant relationship between automatic teller machine and customer loyalty. The research also discovered a significant positive relationship between mobile banking, internet banking and customer loyalty. The study concludes that when customers receive favourable and beneficial service using the latest technologies in their banking operations; this will lead to repeat purchases and customers' loyalty in the long run. It was recommended that investment in ICT is not - negotiable, it is therefore important for operators in the banking industry to pursue this with all sense of vigour, because improvement in the use of information technology will help maintain customers' loyalty and also excite customers.

Keywords: *Information Communication Technology, Automatic Teller Machine, Mobile Banking, Internet Banking, Customer Loyalty*

1.0 INTRODUCTION

Background to the study

The banking sector in Nigeria has undergone numerous changes throughout the last twenty years due toproductalteration in consumer preferences, wants,raising rivalry among banks, modification in demographics, societal drifts, information technologies enhancement,

merchandising regulation and the liberalisation of the banking industries. These transformations had pressured deposit money banks to bring in revolutionary opportunity delivery outlet via technological knowhow. The advent of these new technologies has helped in presenting qualitative services and products tocustomers.
Information technology (IT) has been defined by Oketunji (2000) as the use of computer and other technologies in the acquisition, storage, retrieval and dissemination of information. Banking environment in Nigeria has become highly competitive today and to withstand the pressure and growth in the dynamic market environment, banks in Nigeria are buying the latest technologies that is visible as an enabling resources that may help in developing better and more flexible structure that could respond quickly to forces of rapid changing market scenario (Rao and Lokeswam-Rao, 2015).

Information on technology permits sophisticated product development, better market facilities implementation of reliable methods for controlling of risks and aids the financial middlemen to cover geographical area and different markets. Rao and Lokaswam-Rao (2015) opined that internet has evolved as a critical channel for the delivery of banking services. Laudon and Laudon (2000) opined that bank managers cannot push aside the importance of information systems in the banking world, because it plays amajor role in our contemporary organisation. Laudon et al (2000) pointed out that the total cash flow of most successful companies in the world is linked to information system. The application of information and communication technology concepts, techniques, policies and implementation strategies to banking services has become a subject of primary significance and concerns to all banks and a precondition for national and international competition (Obasan,2011).

According to Jones, Earl and Sasser (1995), customer loyalty is the repeating purchase intention to specific products or services in the future. It is making customer feel committed when the gains are important to them, they will stay on. (Grossman, 1998).Loyalty is used to elucidate the readiness of a customer to keep on patronising a firm‘s goods and services over a long period of time and on a recurring and preferably elusive basis and willingly suggesting the firm’s products to friends and acquaintances. (Lovelock, 1996). From the foregoing, loyalty in banking industry is concerned with the number of customers and numbers of times, the customer goes to the bank to withdraw or deposit money, the more a customer patronises the bank, and the more the customer becomes loyal.
The hunt for suitable offerings through the banks has forced financial institutions to apply information communication technology in discharging their functions. Quality is very important to corporate achievement; it plays a crucial role in improving organizational productiveness. This is evidence by the work of Aremu, Ekpo and Mustapha (2013), who stated that quality management results in a higher financial institution overall performance and that it is totally believed that quality might exist in the functioning performance of a bank .Quality can be described as the totality of inherent characteristics of a product or service that allows on its capacity to increase the demand for that product or service at a fixed price and can best be measured with the aid of capturing customer perception on the performance of the product or service characteristics.(Goyit,2015).
Service superiority is known for its ability to directly influence consumer’s happiness and loyalty. Oppong, Adjei & Poku, (2014) revealed that satisfaction and service excellence are vital for buyer loyalty. A number of studies have investigated the relationship existing between customer behaviour have patterns and customer loyalty. Such studies include Kandampully and Suhartanto, 2000; Dimitriades, 2006; Olaranniwo, Hau and Udo, 2006; Chi & Qui, 2008; and Faullant, Matzaler & Fuller, 2008. These studies revealed that client satisfaction increases loyalty, influences repurchase intentions and leads to optimistic

communication; it also helps in the organisational objective of building consumer allegiance and boosting the proceeds of the organisation.

Globally, the application of information and communication technology is a leading technological discovery that has alters the way in which businesses are carried out in banking industries (Kiplagat, 2015). These products and services are produced mainly to work in a certain ways. However, the study is not always the case since there are issues which curtail their effectiveness and efficiency and hence satisfaction by end users of these technologies, as well as recipients of services provided through ICT platforms (Kiplagat 2015) .This research seeks to study the effects of information communication technology products and services on the perceived performance and satisfaction by its' customers hence leading to customers loyalty.

The independent variables for this study are the various ICT products and services adopted by these banks; precisely they are ATM card, internet banking and mobile banking. These products have direct impact on the perception of the customers of any Deposit Money Bank in Jos metropolis. The dependent variable for the study is customer loyalty which means a deeply held commitment to re-buy or re- purchase product or service consistently in the future thereby causing repetitive purchase of same brand. These include customer satisfaction and customer trust. The study attempts to explore how the adoption of information communication technology services in the banking industry influences customer loyalty.

Statement of the Problem

The improvement in client loyalty is solely the main dilemma banks are experiencing these days .This is credited to the increase in rivalry amongst the banks in recent times. Satisfying and maintaining customer is not-negotiable to deposit money banks in Nigeria, because pleasurable clients increase loyalty and influenced repurchase intention .Before the advent of information communication technology most banking operations in Nigeria had been carried out manually and this resulted in inefficiency in managing transactions from one ledger to every other without the aid of computer gadget (Ahmadu, 2014). Computation which should have been accomplished through computer or electronics machines were done manually, which led to extension of closing time when accounts were not balance on time (Sujabola,2013)

In Nigeria it has become increasingly difficult for Deposit Money Banks to satisfy and preserve their customers due to limited network between most banks and their branches, high costconnected with electronic banking implementation; customers are forced to wait in long queue for hours due power failure or outages.Worku, Tilahun and Tafa (2016) identified some of the problems of electronic banking to include machine goes out of order, machines out of cash, no printing statements, and cards get blocked and frequent breakdown down of ATM service. Other challenges faced by customers in using information communication technology in Nigeria include literacy level of most customers in Nigeria is low, lack of technical know –how, high risk associated with cash withdrawal using ATM at odds hours, poor communication links between banks and the e-payment infrastructures, unreliable machines, lack of mobile banking services, lack of fair distribution of automated teller machines all over the city, lack of suitable and regulatory framework for E- banking in the country and resistance to changes in technology among customers.

The adoption of information communication into the banking sector has significantly or positively affected the market values of most deposit money banks in Nigeria. Information and communication technology served as a promotional tool to attract new and existing customers to the bank. It is also faster and cheaper; it saves customer time and can be used to

make payment and transfer of money from one account to another. In spite of the numerous benefits accrued to banks and customers in adopting information and communication technology in Nigeria, some banks in Nigeria are nevertheless adamant about improving information technologies facilities in their banks. The implication is that these banks may continue to perform below expectations, considering these challenges, this research is aimed at determining the impact of information technology in building customer loyalty**.**

Research Questions

The following are research questions for the study:

(1)What is the relationship between ATM and customer loyalty of money deposit money bank in Jos Metropolis?

(2) What is the influence of internet banking on customer loyalty of Deposit Money Banks in Jos Metropolis?

(3)What is the relationship between Mobile Banking and customer loyalty of Deposit Money Banks in Jos Metropolis?

Research Objectives

Thus, the main objective of this study is to analyse the role of information technology in building customer loyalty of deposit money banks in Jos metropolis. Specifically, the study intends to achieve the following objectives.

(1) To determine the relationship between ATM and customer loyalty of Deposit Money Bank in Jos Metropolis

(2) To determine the influence of internet banking on customer loyalty of Deposit Money Bank in Jos Metropolis

(3) To analyze the relationship between mobile banking and customer loyalty of Deposit Money Bank in Jos Metropolis

Research Hypotheses

In this research work, the following hypotheses are formulated and tested

Ho 1: There no relationship between ATM and customer loyalty of Deposit Money Banks in Jos Metropolis;

Ho 2: Internet banking has no significant relationship with customer loyalty of Money Deposit Banks in Jos Metropolis.

HO 3: Mobile Banking has no significantly relationship with customer loyalty of Deposit Money Banks in Jos Metropolis;

2.0 LITERATURE REVIEW

Conceptual Framework

The principal concepts of this study are discussed in the paragraphs below.

Concept of Information Communication Technology

Oppong, Adjei and Poku (2014) defined information communication technology as amalgamation of computer and communication equipments that help to create, influence, amass, converse or circulate information. Similarly, Oketunji (2000) defines information communication and technology as the utilizing of processor and other equipments in the acquiring, shopping, retrieval and distribution of data or information.

These days, an array of information technology communication products are more and more being used in the banking sector of less developednations in reply to increased difficulty of the consumer and superior opposition originating from the increased internationalization of

the financial service sector. These products include Automated Teller Machines (ATMs) or Card System, Internet Banking and Mobile Banking.
For the purpose of this study the researchers focused on three products mentioned above

Automated Teller Machine (ATM) is a term which is connected to smart cards or debit cards. ATM joins a computer terminal, recording and maintaining system and cash vault in one unit allowing customers to enter the bank's book-keeping system with a plastic card containing a personal identification number (PIN) by punching a particular code number into the computer terminal linked to the bank's computerised record, it records 24 hours a day (Rose, 1999). The ATM was set up first to function as a dispensing machine; they are largely situated outside the banks, and are also located in airports, hospitals, schools, markets and places far from homes of customers (Oppong, Adjei and Poku, 2014). ATMs are able to offer a great variety of services such as making deposits, funds transfer between two or more accounts and bill payments. Banks tend to use this electronic banking device as all others for competitive advantage. It saves customer time in service delivery as alternative to queuing in the banking hall.

Mobile Banking (also known as M- banking) is a pecuniary services where mobile bank customers carry out balance investigation, credit transfers and other businesses according to instruction sent through the mobile phone (Amin, Baba and Muhammad, 2007). The word is used for performing balance checks, account transactions, payments, credit applications and other banking transactions through a mobile device such as a mobile phone or personal digital assistant (Worku, Tilahun and Tafa, 2016). Mobile banking is a functional technique that is supported by the use of telecommunication equipments. The variety of services may include facilities to carry out bank and stock market transactions, managed account and to access customized information. Mobile banking is used in several parts of the world with modest or no infrastructure, especially remote and rural areas.
From clients perspective accepting mobile banking services help customers in terms of expediency to carry out banking transactions anytime and anywhere, with no problem to use. Security is assured, as banking transactions are encrypted and password-protected (Dahlberg and Mallat, 2002)

Internet Banking: The idea of internet banking according to Essinger (1999) is to give clients access to their bank account through a website and to enable them carry out and perform certain transaction on their account in line with the stipulated rules and regulations that guide internet banking.Through internet banking, customers can inquire information and carry out most banking transaction such as account balance inquiry, inter-account transfers, and bill-payment via the internet (Wright and Ralston, 2002). Internet banking by its characteristics assists customers to complete and control their banking transaction. (Mensah, 2012)

Concept of Customer Loyalty
Customer loyalty is one of the mainlyrepeatedly discussed subjects in marketing and service literature; (Eshght, Haugton and Topi,2007).Oliver (1996) defined loyalty as a deeply held commitment to re- buy or re-purchase a preferred product or service consistently in the future ,thereby causing repetitive purchase of the same brand. This definition captures not only the spirit as well the behaviour causing repetitive purchasing of same brand .According to Jones, Earl, and Sasser (1995) customer loyalty is customer repeating purchased intention to some specific products or services in the future. It is making customers feel dedicated when the gains are important to them they will keep on (Grossman, 1998). Loyalty is used to explain

the readiness of a client to continue demanding a firm's goods and services over a long period of time and on a continual and preferably elusive basis and willingly recommending the firm's products to friends and associates (Lovelock, 1996).

Information Communication Technology and Customer Loyalty in Banking Sector

The speedy introduction of ICT has brought significant changes in the banking sector; it has change the mode of operation and also allows a significant enhancement in the variety of services provided to customers. According to Portuese, (2006) customer satisfaction with ICT is supported by comfort, web- site design, financial safety, interaction competencies, and performance capacity to satisfy desires and customer strength that would translate into customer loyalty. Similarly, Kiplagat (2015) pointed out that information technology offers a basis for banks to re-align their services to its customers to enhance their satisfaction level, which in the long run make the customers to become loyal to banks products and services.Tater, Tanwar and Murari (2011) opined that banks are using information communication technology as a strategic vehicle to stay competitive against other players in the same industry and they also found out a significant relationship between the adoptions rates of banking technologies and customer loyalty of different banks

Theoretical Framework.

The theoretical framework of this study is formulated around the following theories. Technology Acceptance theory (TAT) and Diffusion Innovation (DOI) theory:

Technology Acceptance Theory:TAT was proposed by Fred Davis (1985) in his doctoral thesis at the MIT Sloan School of management in 1985. He proposed that system use is a response that can be explained or predicted by user motivation, which in turn directly influenced by an external stimulus consisting of actual system featured and capability. (Chuttur, 2009). Technology Acceptance theory has been widely studied and accepted as a valid model in individual accepted behaviour across various information technologies and their users. Researchers like Yousafzai, Foxall, and Pallister 2007; King and He 2006; and Legris, Ingham, and Collerette 2003; More recently Oyeniran and Abina (2015) have all used the technology acceptance theory in their various studies. The model is evaluated on two key variables, perceived usefulness (PU) and perceived ease of use (PEOU). According to Elgahwash (2012), consumers will decrease their acceptance usage or even refuse to use a technology if they personally expect harm or loss is likely to occur while using the technology. The amount of danger that a consumer observes and their risk of acceptance are attitudinal factor that affect their adoption (Ying and Can, 2010). This model is appropriate for this study because customers of deposit money bank in Nigeria would consider the perceived advantages that would motivate them from using ATM and adopting Mobile Banking and Internet Banking.

Innovation Diffusion theory: Rogers (2003) popularised the innovation diffusion theory which was first introduced in 1962. Innovation diffusion theory explains how, why and at what role new ideas and technologies spread through cultures (Oladele and Agochukwu, 2016). Rogers (2003) explained the process of innovation diffusion as one which is dictated by uncertainty reductionin behaviour amongst potential adopters during the introduction of technological innovations. Innovation Diffusion Theory (IDT) consists of six major components: innovation characteristics, individual's user characteristics, adopter distribution over time, diffusion networks, innovativeness and adopter categories, and the individual adoption process. Arguably the most accepted of the six components of IDT is the characteristics of the innovation itself. Rogers (2003) identified five characteristics of

innovation; they arerelative advantage, compatibility, complexity, trialbility and observability, Rogers opined that these five characteristics are positively related to the adoption of new technology. For customers to adopt these new technology or innovation they must weigh the advantages of the innovation over what they have been using before, they must also consider whether the new technology is simple to use and suit their status and if they are convinced they will give it a trial.

Empirical Evidence

Dushyenthan (2013) in a study on the usage of information technology and its effect on the customer loyalty .The study of banking industries in Jaffna Sri – Lanka.A comparative study of state banks and private banks. Data were collected from primary and secondary sources .The data was analysed using the relevant descriptive statistics like frequency, percentage, mean and standard deviation. The hypotheses were tested using t -test independent sample one way ANOVA, Regression analysis, and Pearson Moment Correlation Coefficient. The findings of the study suggest that information communication technology contributes significantly to customer loyalty.

Idris, Olumoko and Ajemunigbohun (2013) studied the role of information technology in customers' service delivery and firm performance: Evidence from Nigeria's insurance industry. The study use survey research design which crosses examined the respondents. Three hypotheses were tested using t-test and simple frequency percentage. The study sampled 117 participants made up of IT managers, marketing managers, and underwriting managers drawn from 25 insurance companies. The study revealed that most customers don't use online services in their engagement with insurance companies

Elgahwash (2013) investigated the role of information and communication technologies in enhancing customer relationships in the Libyan Banking sector. The data was analysed using relevant descriptive statistics and Pearson Moment Correlation Coefficient, Regression analysis and Chi –Square were used to test the four hypotheses. The finding provides a useful insight for banks in developing banking strategies to meet customer needs and further maintain and increase the degree of relationship with customers. Oppong, Adjei and Poku (2014) studied the role of information technology in building customer loyalty in banking: A study of Agricultural Development Bank Ltd Sunyani Ghana. The research designed adopted for the study was descriptive. They used questionnaire to collect data from 128 customers. Data collected were analysed using simple percentage and correlation coefficient. The results of the study indicate that despite the introduction of IT in service delivery by Agricultural Development Bank in Sunyani Ghana, service quality is still low. However, IT has played the role of enhancing customer loyalty by making banking operations more personalised, convenient and time saving

Oyeniran and Abina (2015) investigated the factors influencing adoption of internet banking in Nigeria: An application of extended technology accepted model. Questionnaire was used to collect the data for the study; the data were analysed using regression analysis. The finding of the study revealed that perceived trust are significant determinants of adoption of internet banking.

Worku, Tiluhun and Tafa (2016) studied the impact of electronic banking on customer satisfaction in Ethiopia banking industry. Questionnaires was use to collect data for the study, 402 were properly filled and returned. The study used tables, percentages, and chi –square, t-test and regression analysis to test the three hypotheses. One of the findings of the study revealed e- banking improved customer satisfaction, reduced frequency of bank hall for banking service, reduced waiting time for customers.

3.0 METHODOLOGY

Research Design

The research employed the survey approach in the collection of the primary data .The survey approach was adopted since the study aimed at establishing relationship among variables.

Study Population, Sample Size and Sampling Technique

The study population consists of all the twenty –one Deposit Money Banks listed on the Nigeria Stock Exchange as at 14TH May, 2016.

Nine deposit money banks were selected to make the target group, four were selected from first generation banks, and three were selected from second generation banks, one each from banks whose merger took about three to four banks and foreign banks operating in Nigeria 150 questionnaires were distributed to the customers of the nine deposit money banks selected in Jos metropolis, only one hundred and twenty were dully filled and returned representing 80% response rate.

Research Instrument and Measurement

Questionnaire tagged "Information Technology and Communication, and Customer Loyalty Questionnaire (ICTCUQ) with four clusters were used to measure the independent and dependent variables that are important in the current study. These variables include automatic teller machine, mobile banking, internet banking and customer loyalty these sections of the study are developed based on the past literature and already used questionnaires. The scales of the study were adapted from the previous studies, customer loyalty with five items were taken from the study of Elgahwash (2013), automatic teller machine with five items was adapted from Kiplagat (2015), mobile banking has 5 items were adapted from Kiplagat (2015) and internet banking having 10 items was taken from the studies of Kiplagat (2015) and Oppong et al (2013

Method of Data Analysis

Pearson Moments Correlation Coefficient and Simple Linear regression analysis were use to analysed the three hypotheses.

Model Specification

Mathematically, the model is expressed as follows;.

$Y=\beta_o + \beta_i X_i U$

Where;

Y= Customer Loyalty, X_i= Internet Banking, β_o= Regression Constant; u= Error Terms.

4.0 DATA ANALYSIS AND DISCUSSION OF FINDINGS

Frequency counts, simple percentage, mean and standard deviation were used to analyze research questions, while Pearson Moment Correlation and Simple Linear Regression Analysis were used to test the three hypotheses.

Data Presentation, Analysis and Interpretation

Presentation of Data

The percentages, means and standard deviations of responses obtained from respondents in respects of research question one are presented in Table 1

Table 1: Descriptive Statistics for Variables on Card System Services (ATM)

S/no	Statement	SA	A	UD	D	SD	TOTAL	MEAN	S.D	DECISION
1	It is reliable and credible	29 (24.17%)	89 (74.16%)	2 (1.66)	-	-	120	4.22	0.46	Accept
2	It has reasonable transaction fees	55 (45.83)	51 (42.58)	7 (5.833	4 (3.32%)	3 (2.5%	120	4.26	0.90	Accept
3	I have confidence using ATM card	45 (37.5%)	62 (51.66%)	9 (7.5%)	1 .83%)	3 (2.5%)	120	4.21	.82	Accept
4	Understanding of which bottom to be chosen for the next	58 (48.33%)	57 (47.5%)	3 (2.5%)	1 (.83%)	1 (.83%)	120	4.42	.67	Accept
5	I enjoyed withdrawing cash using ATM Card than entry the banking hall	37 (30.83%)	45 (37.5%)	6 (5%)	18 (15%)	14 (11.66%)	120	3.60	1.12	Accept

Source: Researchers' Field work, 2016

The data in table 1 indicates the percentage, mean and standard deviation scores of the responses obtained from respondents in respect to question 1.The response pattern indicates that the respondents agreed that it is reliable and credible to use ATM card with a mean value of 4.22 and a standard deviation of 0.46. With a mean of 4.26 and standard deviation of 0.90 the respondents agreed that it has reasonable transaction cost. With a mean score of 4. 21 and standard deviation of 0.82, the respondents agreed that they have confidence in using ATM card .With a mean score value of 4.42 and standard deviation of 0.67 and mean score of 3.60 and standard deviation of 1.12. The respondents agreed that they know which button to pressed for the next step; the respondents also agreed that they enjoyed withdrawing cash using ATM Card than entry the banking hall.

Table 2: Descriptive Statistics for Mobile Banking

S\NO	Statement	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree	Total	Mean	Standard deviation	Decision
1	Easy to completetransaction	22 (18.33%)	57 (47.5%)	20 (16.67%)	12 (10%)	9 (7.5%)	120	3.59	1.19	Accept
2	Easy to understand process of banking using the phone	15 (12.5%)	45 (37.5%)	25 (20.83%)	25 (20.83%)	10 (8.3%)	120	3.15	1.20	Accept
3	Reasonable transfer fees	23 (19.17%)	47 (39.17%)	25 (20.83%)	16 (13.33%)	9 (7.5%)	120	3.49	1.16	Accept
4	Reliability of mobile banking system compared to retail banking	20 (16.67%)	31 (25.83%)	5 (4.17%)	15 (12.5%)	49 (40.83%)	120	2.65	1.60	Reject
5	I use mobile banking in my daily transaction	25 (20.83%)	32 (26.66%)	2(1.66)	46 (38.33%)	15(12.5.%)	120	2.60	0.84	Reject

Source: Field work, 2016

The response pattern in table 2 revealed that the respondents agreed that it is easy to complete transaction using mobile banking with a mean score of 3.59 and standard deviation of 1.12. And with a mean value of 3.15 and standard deviation of 1.20.With a mean score of 3.49 and standard deviation of 1.16 the respondents agreed that mobile banking has a reasonable transfer fees. With a mean score of 2.65 and standard deviation of 1.60, the respondents

disagreed about the reliability of mobile banking system compared to retail banking. The respondentsdisagreed that they use mobile banking in their daily transaction with a mean score of 2.60 and standard deviation of 0.84

Table 3: Descriptive Statistics for Perceived Performance of Internet– Banking with overall Customer loyalty

S\N	Statement	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree	Total	Mean	Standard Deviation	Decision	
1	Provide adequate records	47 (39.17%)	61 (50.83%)	6 (5%)	3 (2.5%)	3 (2.5%)	120	4.20	0.86	Accept	
2	Convenient hours of operation	36 (30%)	59 (49.17%)	12 (10%)	8 (6.67%)	5 (4.17%)	120	3.94	1.02	Accept	
3	Friendly environment with short waiting time	54 (45%)	56 (46.67%)	5 (4.17)	5 (4.17)	-	120	4.33	0.75	Accept	
4	Easy to use	49 (40.83)	56 (46.67%)	10 (8.63%)	5 (4.17%)	-	120	4.24	0.78	Accept	
5	Up to date information	36 (30%)	69 (57.5%)	11 (9.17%)	3(2.5%)	1 (0.83%)	120	4.15	0.71	Accept	
6	Connects immediately	10(8.3%)	17(14.16%)	8(6.67%)	45(37.5%)	40(33.33%)	120	2.26	0.87	Reject	
7	Feedback services	40(33.33%)	61(50.83%)	11 (9.17%)	5(4.17%)	2 (1.67%)	120	4.10	0.86	Accept	
8	Complete transaction quickly	22 (18.33%)	57(47.5%)	20(16.67%)	12(10%)	9(7.5%)	120	3.57	1.13	Accept	
9	Improve efficiencyand enhance effectiveness in banking transaction	45(37.5%)	65(54.16%)	9(7.5%)	1(0.83%)	-	120	4.30	0.64	Accept	
10	Internet banking is generally used by most customers of the bank	31 (25.8%)	20(16.66%)	5(%4.16)	15(12.5%)	49(40.83%)	120	2.74	1.07	Reject	

Source: Researchers' Field work, 2016

The data in table 3 indicates the percentages, means and standard deviation of responses obtained from respondents in respect to perceived performance of the banks with overall customer satisfaction. The responses pattern indicate that the respondents agreed that e-banking helps to provide accurate records, convenient hours of operations, friendly environment with short waiting time, easy to use up to date information,and complete transaction quickly, improve efficiency and enhance effectiveness in the banking transaction. Items 1, 2,3,4,5,7,8,9 were all accepted because the values were above the criterion values of 3.00. In item6 the respondents disagreed that internet banking connects immediately and in item 10 the respondents disagreed that internet banking is generally used by most customers of the various banks in Jos metropolis. They were rejected because their values were below the criterion values of 3.

Table 4: Descriptive Statistics for Variables on Customer loyalty

S\N	Statement	Extremely Satisfied	Satisfied	Neutral	Dissatisfied	Extremely Dissatisfied	Total	Mean	Standard deviation	Decision
1	I would classify myself as a loyal customer of my bank	22 (18.33%)	57 (47.5%)	20 (16.67 %)	12 (10%)	9 (7.5%)	120	3.59	1.12	Accept
2	I do not expect to switch to another bank to get better service in the future	15 (12.5%)	45 (37.5%)	25 (20.83 %)	25 (20.83%)	10 (8.33%)	120	3.15	1.20	Accept
3	I would continue to stay with my bank even if I had to pay more	10 (8.33%)	17 (14.16%)	8 (6.67%)	45 (37.5%)	40 (33.3 %)	120	2.23	0.83	Reject
4	I conduct all my banking affairs at one bank	14 (11.66%)	16 (13.33%)	20 (16.66 %)	54 (45%)	36 (30%)	120	2.80	1.11	Reject
5	I would recommend my banks to friends and acquaintances	(45%)	56 (46.67%)	5 (4.17%)	5 (4.17%)	-	120	4.32	0.75	Accept

Source: Field work, 2016

The response pattern in table 4 regarding questions 1and2 that respondents agreed that they are loyal customers of their banks with a mean score of 3.59 and standard deviation of 1.12, customer do not expect to switch to another to get better services has a mean score of 3.15 with a standard deviation of 1.20 which are above the criterion value of 3.00. In item 3 the respondents disagreed that they will stay with their banks even if they had to pay with a mean score of 2.23 and standard deviation of 0.86.The responses in items 4 shows that customers do not conduct their business transaction in one bank with a mean score of 2.80 and standard deviation of 1.11. Item 5 with a mean score of 4.32 and standard deviation of 0.75 agreed that they will recommend their banks to friends and acquaintances.

Test of Hypotheses 1, 2 and 3

H0 1: Automatic Teller Machine has no significant relationship with customer loyalty of Money Deposit Banks in Jos Metropolis.

Table 5:Pearson MomentCorrelation Coefficient Showing the Relationship between Card System (ATM) and Customer Loyalty.

ATM	Customer loyalty	
Trust: Pearson moment correlation	1.00	0.541**
Sig -2 (tailed)	.000	
N	120	120
Loyalty: Pearson moment correlation	0.541**	1.00
Sig – 2 (tailed)	.000	
N	120	120

** Correlation is significant at the level of 0.01 (2- tailed)

Table 5 shows a correlation coefficient of 0.541, the value indicates that there is a significant positive relationship between using ATM and customer loyalty .The null hypothesis is rejected while the alternative hypothesis is accepted, showing that there is a significant association between using ATM and customer loyalty. This finding agrees with the study of Kiplagat (2015) which research result shows that card system is strongly related to customer loyalty .This is further supported by Kuteli (2011) acknowledged the level of ATM use and adoption by banks as the mainfactor that influence customer satisfaction and loyalty.

Hypothesis 2: Internet Bankinghas no significant influence on customer loyalty of money deposit bank in Jos Metropolis.

Table 6: Model Summary

Model	R	R Square	Adjusted R Square	Std error of the estimate
1	.891	.794	.785	.31021

Predictors: (constant) Internet Banking

Dependent variable (customer loyalty)

The results from the table above showed that ATM, mobile banking and internet banking had 79.4% (R- Square = 0.794) predictive likelihood customer loyalty. R Square= 79.4% shows that the predictor variable explains 79.4% of the variation in customers withdrawal which was attributed to internet banking. From the results 20.6% of the differences are unexplained.

Table 7: ANOVA[a]

Model	Sum of Squares	df	Mean Square	F	Sig
Regression	42.196	5	8.439	87.696	.000
Residual	10.971	114	0.096		
Total	53.167	119			

(a) Predictors: (constant) Internet Banking
(b) Dependent variable : Customer loyalty

The P value in the study is than 5% level of significant as indicated by sign < 002.This means that the regression model was significant and therefore fit for the study.

Table 8: Linear Regression Analysis showing the relationship internet banking and customer loyalty

Coefficients [a]

	Unstandardised coefficient		Standardized coefficient		
Model	B	Std Error	Beta	t	Sig
Constant	.562	.199		4.077	
Internet banking	.493	.102	.516	4.825.005	

(a) Dependent variable: customer loyalty.

Y= 0.562+ 0.493X1
The regression equation above means that customer loyalty was highly influenced by better internet banking. If the predictor variable is constant at zero, customer loyalty will be 0.562.

Table 6, 7 and 8 show that R which is 0.891 (coefficient of relationship) explains the strength of the relationship between internet banking and customer loyalty. This means that there is strong positive link that exist between the variables .It therefore implies that a strong drop in the provision of information communication technology will lead to a resultant decrease in customer patronage. R^2= 0.794, it means that about 79% of the discrepancy in X (internet banking) is accounted for a 100% increase in Y (customer loyalty) the value of F= (87.696) Significant at 0.05 level of confidence. This result therefore indicates that the independent variable (information communication technology) greatlyadded to the variation in customer loyalty of these customer to their various banks. The value of t – computed for internet banking is 4.825, shows that it is greater than the table value of (1.960) .This suggests that the null hypothesis is rejected. This implies that there is a significant connection between information communication technology components and customer loyalty. This collaborates with the findings of Moutinho and Smith (2000), Joseph and Stone (2003) and Worku, Tilahum and Tafa (2016).They all agreed that internet banking is greatly linked with customer satisfaction, retention and switching

Hypothesis 3

Table 9: Pearson Moment Correlation Coefficient Showing the relationship between Mobile Banking and Customer Loyalty

	Mobile Banking	Customer Loyalty
Mobile Banking: Pearson Moment correlation	1	.620
Sig – 2 (tailed)	.000	
N	120	12O
Loyalty: Pearson moment correlation	.620	1
Sig – 2 (tailed)	.000	
N	120	120

** Correlation is significant at 0.01 Level (2 – tailed)

Table 9: Shows a correlation coefficient of 0.620, the value reveals that there is a positive link between mobile banking and customer loyalty. The null hypothesis is rejected while the alternative hypothesis is accepted, showing that there is a significant relationship between mobile banking and customer loyalty. This is in harmony with the results of Kiplagat (2015) whose study made known that mobile banking is easy to complete transaction and easy to understand the process of banking this leads to customer satisfaction, contentment is the most influential variable for customer loyalty.

5.0 CONCLUSION AND RECOMMENDATION

Conclusion

In conclusion, we can expressly say that this study discovers information communication technology is a critical factor that influences customer continuation and loyalty of customers of deposit money banks in Jos Metropolis. Our contribution to knowledge in this paper is in two folds; the review of the literature section provides a structured review of information communication technology concepts with citations to many authors in the field.

The study also showed that there is a significant relationship among ATM or card system, internet banking and mobile banking and customer loyalty of deposit money banks in Jos Metropolis. This demands that when customer gets positive and useful offerings, and use ultra-modern technologies in their banking operations, this can lead to repeat use of the services rendered by the banksand this will increase customer loyalty in the long run.

Nonetheless, as part of the limitation of this study, we advise users of this study not to generalize the findings of the research to reflect the exact state of affairs affecting banking industries in Nigeria. This study is limited to only nine deposit money banks in Jos Metropolis; we recommend that similar study should be replicated to cover the entire country.

Recommendations

Based on the research findings the following recommendations are made

1. Deposit Money Banks should make sure they provide extremely well-organized and dependable ATMs in the banking service units. This can be genuinely done through outsourcing the provision and the maintenance of ATMs to provide uninterrupted services. This will in no small measure assist the banks to increase satisfaction, patronage and repeat purchase or use of services continuously

2. Base on the findings of the study, deposit money banks should create awareness to their customers on the benefits connected with adopting mobile banking and internet banking in Jos Metropolis this can achieved by training customers to increase the use of mobile banking and internet banking system rather solely using the ATM card only

3. The research findings also indicate a positive relationship among ATM, Internet banking and Mobile banking with customer's loyalty, investment in information technologies is non - negotiable for deposit money banks in Nigeria. Banks should set aside a certain proportion of their profit to replaced faulty machines, maintained these machines regularly and also ensure constant supply of power to avoid stoppage in transactions.

4. Adequate monitoring of information technology facilities of the bank should be institutionalised, as to fast track bank customers who are responsive to the needs of their clients.

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