Global Journal of Management and Business Research: C Finance
Volume 17 Issue 6 Version 1.0 Year 2017
Type: Double Blind Peer Reviewed International Research Journal
Publisher: Global Journals Inc. (USA)
Online ISSN: 2249-4588 & Print ISSN: 0975-5853

Electronic Payment System and Customers' Retention in Banks: Implications for Entrepreneurial Development in Nigeria

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Abstract- This paper delved into the relationship between Electronic Payment System and Customers' Retention in Banks for entrepreneurial development in Nigeria. It was discovered that virtually every transactions performed in the banks today make use of the electronics, irrespective of the class whether literate or illiterate. Yet, customers' keep increasing day by day and not forgetting that the machines put into use go faulty almost every time which have to be repaired almost immediately to avoid customers' being disappointed. The research engages comparative analysis of selected banks in Nigeria based on their long standing in the industry, competitiveness, and their level of ICT compliance. However, questionnaire was drawn to capture the grey area of EPS, customers' retention, entrepreneurial development in banks. A total of 200 respondents answered the questionnaire, SPSS was used to analyze the respondents' outcome and the result showed positive and significant relationship between Electronic Payment System and Customers' Retention.

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GJMBR-C Classification: JEL Code: F65

ELECTRONIC PAYMENT SYSTEM AND CUSTOMERS RETENTION IN BANKS IMPLICATIONS FOR ENTREPRENEURIAL DEVELOPMENT IN NIGERIA

Strictly as per the compliance and regulations of:

Electronic Payment System and Customers' Retention in Banks: Implications for Entrepreneurial Development in Nigeria

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Abstract- This paper delved into the relationship between Electronic Payment System and Customers' Retention in Banks for entrepreneurial development in Nigeria. It was discovered that virtually every transactions performed in the banks today make use of the electronics, irrespective of the class whether literate or illiterate. Yet, customers' keep increasing day by day and not forgetting that the machines put into use go faulty almost every time which have to be repaired almost immediately to avoid customers' being disappointed. The research engages comparative analysis of selected banks in Nigeria based on their long standing in the industry, competitiveness, and their level of ICT compliance. However, questionnaire was drawn to capture the grey area of EPS, customers' retention, entrepreneurial development in banks. A total of 200 respondents answered the questionnaire, SPSS was used to analyze the respondents' outcome and the result showed positive and significant relationship between Electronic Payment System and Customers' Retention.

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I. Introduction

The most significant development of the millennium which has substantially influence business operations in the world is the emergence of the information age. The remarkable progress achieved by information and communication technology (ICT) has made it possible for information to be digitalized and transmitted faster and cheaper in mega or tetra bytes. (Alabi, 2005). The application of ICT in Nigerian banks is done through the power and connectivity of personal computers locally and globally. Woherem (2000) claims that only the bank that overhand the whole of their payment and delivery system and apply ICT to their operations are likely to survive and prosper in the new millennium. Payment involves the transfer of funds from one person to another, thus a payment system rules and technology that make the exchange of payment possible in a banking system. A number of means of Electronic Payment System abound thereby leaving customers' with the choice of whichever they prefer and the knowledge to ICT today allow customers to choose whichever platform they like. The ability of banks also to engage in proper maintenance culture gives room for customers' retention thereby providing a means of survival for small and medium scale entrepreneur. Nigeria used to be cash based economy with over 90% of funds residing outside the banking sector as against the developed world where the money in circulation is 40% and 9% in the United Kingdom and United States respectively.

Before the emergence of modern banking system, banking operation was manually done, and that solely account for the inefficiency in handling transactions. This manual system involves posting of transactions from one ledger to another without the aid of computer system. Computations which should be done through computer or electronic machines were done manually, which sometimes lead to miscalculations due to human errors, which results in extension of closing hours when account is not balanced on time. (Siyanbola 2013 in Abubakar 2014). Ever since the introduction of Electronic Payment System, studies have shown that it enhanced services delivery in the banking industry and brought a great development in the Nigerian Banking Industry. However, a lot of problems are associated with the introduction of this electronic payment system out of which the following falls: low internet penetration, money laundry, and high cost of maintenance of e-payment machines, improper customers' identification and account verification of online purchases, literacy and concerns on risks. Studies by Ovia (2005), Mahdi and Zhila (2008) and Gonzaliz (2008) have revealed that, at least 50% of the over 800 banks in Africa offer one form of Electronic Payment Service or the other. It can be observed from the empirical review that little effort has been made in Nigeria on conducting a study that test the link between Electronic Payment System and customers' satisfaction. This also makes it important to find out empirically, the perception of Nigerian customers on internet banking services.

It is against this backdrop/background that this paper tends to investigate Electronic Payment System and Customers' Retention in banks for Entrepreneurial development in Nigeria. The motivation for this study stems from the fact that only limited empirical studies have so far been carried out in this area particularly in Africa. Conducting research of this nature using the

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Nigerian environment as a developing nation will reduce the knowledge gap to the barest minimum.

The following Research Questions are considered for the study:

1. What actually motivate customers' decision to stay with the bank they are operating with?
2. Does electronic banking lead to customer satisfaction?
3. Will quick resolution of banking errors encountered through electronic means influence customers retention in banks?
4. Does the introduction of electronic form of banking transaction increase customers' base of a bank?
5. How do banks sensitize customers especially the illiterates on the use of electronic form of banking transactions

The paper is organized as follows: Section 1 introduces the topic, sections 2 deals with literature review, 3 with methodology while 4 and 5 deals with analysis and conclusion respectively.

II. Literature Review

The Federal government of Nigeria through its agencies and the banking sector has taken significant strides in the last 15 years to modernise the payment system. The system has been unexploited, problematic and constrained by diverse challenges ranging from lack of adequate legal backing, credibility of the human element, integrity of data transmitted, to interconnectivity and interoperability (CBN 2010). The Nigeria payment system is predominantly cash based due to a culture informed largely by ignorance, illiteracy and lack of appreciation of other non-cash instruments (Ovia 2005). The development of Nigeria's national payment system has thus witnessed some remarkable achievements in the last ten years, evolving from paper payment systems to electronic payment instruments. The pace of development is described as high in terms of achievements within its short life span and the challenges encountered. The technological infrastructure put in place by the private stakeholders such as the banks and switching companies for the EPS, is also seen as current and of high standard, comparable to some payment infrastructures in other developed countries. For instance, the use of chip and pin electronic cards, currently used in Europe and just taking off in America, started in Nigeria five years ago. The CBN guided by the economic policies of the government and in collaboration with the bankers committee has introduced several measures to modernise the payment system in Nigeria with mixed results. (Briggs & Brooks 2011)

Computerization of the Nigerian Banking Industry is a kind of electronic banking, which involves an electronic form of money transmission. Electronic Banking Services are fully automated such that all transactions are concluded in a jiffy. It involves the use of computer network in dispensing cash and transfer of funds. But most customers however, still patronize bank branches in person and find interactions with human teller as very important. Customers enjoying electronic payment services are still not satisfied with the quality and efficiency of the services because of the huge logjam, breakdown and epileptic functioning of the machines. Some banks are lackadaisical about repairing these machines when they breakdown whereas there are a lot of experts around who can be called upon to repair and maintain them. Most customers are afraid they might be hooked up in a corner making them to loose their money. This is expressed in the number of times customers visits bank, their waiting time in banks, their queuing period also pose a lot of challenges to customers. Security of both bank staff and customers is also major source of concern as most of them are afraid the armed robbers may attack the bank.

The world has witnessed an upsurge of electronic payment instruments meant to facilitate trade and simplify payments, before the introduction of electronic payment into Nigerian banking system; customers had to walk into the banking hall to do transactions of all kind. They had to queue up and spend more hours to talk to a teller to make their transactions. Inconveniences caused by these long queues discourage most customers who sometimes renege from the queues in annoyance. For many years, bankers, IT experts, entrepreneurs, and others have advocated for the replacement of physical cash and the introduction of more flexible, efficient and cost effective retail payment solutions (Siyanbola 2013 in Ahmadu Abubakar 2014). Success in the electronic banking era is measured in the eyes of the customers. A bank has to profitably meet the needs of customers and continuously improve its ability in doing so. It has to be effective, accurate, reliable, helpful and understanding thereby retaining existing customers' and adding more customers. More so these days that banks saddle the responsibility of marketing to staff, it is not always easy to loose customers that are hard to win because of mal-functioning of machines and ill-satisfaction of customers.

Agboola (2001) studied the impact of computer automation on the banking services and discovered that electronic banking has tremendously improved the services of some banks to their customers. He made a comparative analysis between the old and new generation banks and discovered variation in the rate of adoption of the automated devices.

The 21st century has witnessed a dramatic evolution in the financial service industry as a result of the rapid advancement in technological transformation which has become known as e-developments. These changes have engulfed all areas of financial intermediation and financial markets such as e-finance, e-money, e-banking, e-brokering, e-exchange, e-supervision etc. This new information technology (IT) is turning into the most important factor in the future development of banking, influencing bank's marketing and business strategies. As a result of rapid advances in IT and intensive competition in the banking sector, the adoption of e-banking is being increasingly used as a channel of distribution for financial services (Mahdi & Mehrdad, 2010 cited in Ahmad Abubakar 2014)

Ahmadu Abubakar (2014) studied the effects of Electronic Banking on Growth of Deposit Money banks in Nigeria using all the deposit money banks in the country spanning between 2006 -2012. The study result showed that there exist a significant relationship between mobile banking and total deposits, internet banking and total assets of deposit money banks in Nigeria. However, the study further found out that there is no significant relationship between internet banking and total deposits, mobile banking and total assets of deposit money banks in Nigeria.

Dauda & Akingbade (2011) in their research Technology Innovation and Nigeria Banks performance: the assessment of employee's and customer's responses sampled fifteen banks in Nigeria and found out that there is a significant relationship between the use of the ICT and customers' satisfaction. They went further to test the relationship between technology innovation and Nigeria banks employees' performance and the realised that there is a significant and positive relationship between technology innovation and banks employees' performance.

Adeoye and Lawanson (2012) tested Customers Satisfaction and its Implications for bank Performance in Nigeria using a commercial bank in the Country 'Union Bank' with several interview from Individual and customers of the bank and resolved that Electronic Banking in Nigeria is yet to create any significant impact on service delivery, which will consequently lead to improved customer satisfaction.

Customer satisfaction leads to customers' retention and this is a measure of how products or services meet or surpassed customer expectations. In a competitive market like the banking industry, it consists of various strategies aimed at keeping, meeting or exceeding customers' expectations. Saha and Zhao (2005) see customers' satisfaction as a collection of outcome of perception, evaluation and psychological reactions to the consumption experience with a product / service. In other words, it is a result of a cognitive and affective evaluation where some consumption standard is compared to the actually perceived performance. Thus, if the performance perceived is less than expected, customers will be dissatisfied, and where the perceived performance exceeds expectations, customers will be satisfied and this would lead to positive behaviours or outcome (Saha and Zhao, 2005 and Yau, 2007). A satisfied customer tend to be loyal (Timothy et-al, 2007), takes less time, are less sensitive to prices (Gan et-al, 2006) and pay less attention to competitors advertising (Stum and Thiry, 1991). Umorok (2009) in his study noted that satisfied customers would not only continue their patronage, but would keep on referring prospect to the firm and that such continuous patronage is likely to lower the retention elasticity of the firm. Recent environmental changes, especially the rapid growth of competition and the changing consumer landscape, increased customer choice. Due to these changes businesses have witnessed a strategic move away from offensive marketing aimed mostly at getting new customers to defensive marketing focused on customer retention (Lee-Kelley et al 2002 in Mohammed Alnsour 2013). Customer retention is a critical factor in achieving customer satisfaction. (Danseh et al., 2012). It is an effective tool that banks can use to gain a strategic advantage and survive in today's banking competitive environment (Pal, 2011). Keeping the customer has become regarded as equally as, if not more important, than creating a new customer. There is a growing recognition that customers can be managed overtime since they have a life-cycle were they acquired, retained and can be grown in value (Ang and Buttle, 2006)

III. Methodology

This section deals with the methodological phase of the study that facilitates the data gathering and analyses. The research design for this study literally anchors on the types of data employed in the study and its sources and also setting the framework for data analysis. In this study, the exploratory method is adopted whereby questionnaires were used. The sampling design employed is probability simple random sampling technique, which is used to select respondents consisting of lecturers, students, businessmen/women, artisans, politicians, bank workers and civil/public servants. The inclusive criteria in this study were made up of selected commercial banks in Nigeria. The justification for choosing these banks is based on their long standing in the industry, competitiveness and their level of ICT compliance (Guaranty Trust Bank Plc, First Bank Plc and Skye Bank Plc). This research work is largely quantitative but also made use of qualitative technique based on views, perceptions and opinions of respondents on how best electronic payment system influences customers' satisfaction & retention.

More so, questionnaires are distributed to two hundred and fifty (250) targeted respondents operating in our banks, whereas only two hundred (200) were returned and used for the purpose of the presentation and analysis of the data, yielding a response rate of 80 percent. This response rate considered large enough and sufficient for statistical reliability and generalization

(Tabachnick & Fidell, 1996; Stevens, 2002 and Ansari, 2014). This high response rate undoubtedly improved the validity and reliability of the questionnaires since the greater the response rate is, the more accurate its estimate parameters in the population sampled (Pallant, 2002). Also, to guarantee the utmost precision of this work, the use of Statistical Package for Social Sciences (SPSS) software was employed. The mean and standard deviation of the administered questionnaire from both groups is shown in the appendix.

The multiple regression equation employed for the study is as shown below:

$$Y = a_0 + b_1(X_1) + b_2(X_2) + \cdots + b_n(X_n) + \mu \qquad (3.1)$$

Where;dependent variable (i.e. customers' satisfaction); regression constant; slope/gradient; independent variables (i.e. benefits from electronic payment system); and random variable.

The data shall be analyzed quantitatively using descriptive statistical analysis. Tables would be presented to calculate and interpret respondent's opinion from the questionnaire. Both descriptive and inferential statistics tools were employed in the analysis of data. Percentage ranking was used in the presentation of primary data. The method of data analysis in this research work is the qualitative in nature both values will be attached to it to make it quantitative method.

The t-test is defined as:

$$t = \frac{\rho}{\left(1-\rho^2/n-2\right)^{\frac{1}{2}}} \qquad (3.2)$$

The t-test represented by Equation (ii) is based on $n-2$ degrees of freedom.

Thus, the Analysis of Variance (ANOVA) is employed as a statistical method to investigate the influence of predictors (benefits from electronic payment system) on dependent (customers' retention) variables. The ANOVA test is based on F-test statistics for the reject of the null hypothesis "the predictor has no significant influence on the dependent" if the calculated F-Statistic is greater than tabulated F-Statistic i.e. Fc > F_T (Reject the null hypothesis). The F-test is expressed as:

$$F = \frac{RSS/(k-1)}{ESS/(n-k)} \qquad \text{(ii)}$$

Where RSS = Regression Sum of Square = Explained Variation $= \sum(\hat{y}-\bar{y})^2$; ESS = Error Sum of Square = Unexplained Variation $= \sum u^2$; $(k-1) and (n-k)$ are the degree of freedom; k is number of predictors; and n is total number of sample.

IV. Data Presentation, Analysis and Interpretation

Table 4.1: Benefits from Electronic Payment System and Customers' Retention

	Cost of Credit	Cash Risk	Informal Sector Control	Inefficiency and Corruption Control	Customers' Retention
Cost of Credit Significant (2-tailed)	1 .	0.832 0.000**	0.401 0.000**	0.309 0.002**	0.245 0.014*
Cash Risk Significant (2-tailed)	0.832 0.000**	1 .	0.442 0.000**	0.325 0.001**	0.256 0.010*
Informal Sector Control Significant (2-tailed)	0.401 0.000**	0.442 0.000**	1 .	0.489 0.000**	0.216 0.031*
Inefficiency and Corruption Control Significant (2-tailed)	0.309 0.002**	0.325 0.001**	0.489 0.000**	1 .	0.647 0.000**
Customers' Satisfaction Significant (2-tailed)	0.245 0.014*	0.256 0.010*	0.216 0.031*	0.647 0.000**	1 .

* Significant at the 0.05 level
** Significant at 0.01 level

Table 4.2

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	54.330	4	13.583	18.684	.000[a]
	Residual	69.060	95	.727		
	Total	123.390	99			

a. Predictors: (Constant), Inefficiency and Corruption Control, Cost of Credit, Informal Sector Control, Cash Risk

b. Dependent Variable: Customers' Retention

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-1.836	.600		-3.059	.003
	Cost of Credit	.031	.124	.035	.252	.802
	Cash Risk	.069	.126	.077	.544	.588
	Informal Sector Control	-.205	.112	-.172	-1.831	.070
	Inefficiency and Corruption Control	1.544	.198	.695	7.807	.000

a. Dependent Variable: Customers' Retention

Interpretation

The estimated result for electronic payment system and customers' retention derived is presented in table 4.1 above which revealed the impact of electronic payment system and customers' retention. The table reports the partial correlation of electronic payment system (i.e. cost of credit, cash risk, informal sector control, inefficiency and corruption control) and customers' retention. From the table, the partial correlation between customers' satisfaction and these three variables (cost of credit, cash risk and informal sector control) were found significant at 5% critical level while inefficiency and corruption control is significant at 1% critical level. Also, the table also shows the partial correlation of individual benefits from EPS with varying critical level.

Furthermore, the analysis of variance (ANOVA) table, table 4.2 reports that benefits from EPS (proxy by its target i.e. cost of credit, cash risk, informal sector control, inefficiency and corruption control and bank performance) has significant impact on customers' retention. In assessing the partial significance of the estimated parameters (benefits from EPS) for the considered variables, the t-statistics results are also presented in the table below table 4.2 tagged "coefficient". The table reports that cost of credit, cash risk and inefficiency and corruption control have positive influence on customers' satisfaction while informal sector control has negative impact on customers' retention. In addition, the result shows that inefficiency and corruption control is significant with customers' satisfaction at 5% critical level while informal sector control is significant at 10% critical level. Thus, cost of credit and cash risk was insignificant with customers' retention at 5% and 10% critical level. Invariably, the F-statistic result shows that all the incorporated benefits from EPS and customers' retention are simultaneously significant at 5% critical level.

V. Conclusion and Recommendations

This study investigates electronic payment system and customers' retention in developing economies with specific reference to Nigeria. The result of the study indicates a strong and positive relationship exist between EPS and customers' retention. Result further showed that EPS increases the ability to hold cash for transactionary, precautionary and speculative motive. EPS also reduces the volume of customers transacting business in the banking hall.

On the other hand, this study reveals that EPS caused lavish spending; increased crime rate and the illiterates sing EPS paved way for fraud on EPS.

By and large, the study EPS and customers' retention despite its shortcomings makes life easier for customers viz-a-viz cost reduction, time saving, easy access to cash even at odd time (mid-night for emergency), error on ATM has equally reduced.

From the study, it is recommended as a way of enhancing the efficiency of EPS for e-payment in developing economies with specific reference to Nigeria:

a. There should be continuous training, seminar and workshop. This will increase the knowledge of bank workers, customers in ICT skills.
b. Bankers Committee should work in hand with government to improve the level of supply power as the high cost of generating power affects the smooth deployments and running of EPS
c. The management team of all banks are advised to see to improving the internal control of their banks so as to reduce the fraud perpetrated through the use of EPS
d. There should be continuous sensitization of the populace of the use of EPS so that the queues, stress, logjam etc experienced of EPS will reduce and eventually eradicated
e. Government should come up with policies and regulatory framework that will favour both the governed and the govern so as to give everybody a sense of belonging in the society.

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