An Empirical Investigation of Automated Teller Machines (ATMs)and Customers' Satisfaction in Nigeria: A case study of Ilorin, Kwara State

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Abstract: *The paper examined the impact of Automated Teller Machines (ATMs) on customers' satisfaction in Ilorin metropolis, the capital city of Kwara state, Nigeria, using three purposively selected commercial banks in the city, that is; First Bank of Nigeria Plc., Guaranty Trust Bank Plc. and First City Monument Bank Plc. The objective is to ascertain the relationship between ATM usage and customers' satisfaction in Nigeria. The study employed primary data sourced through structured questionnaires as the data collection procedure. The questionnaires were administered to 180 customers (60 from each bank), selected randomly at the banks' ATM terminals during the course of transactions. Descriptive and inferential statistical technique tools such as tables, percentages and charts were used to present and analyze the data, while the chi-square technique was applied to test for the hypothesis. The result revealed that there is a significant relationship between ATM usage and customers' satisfaction. The study thus recommended among others, that restriction on cash withdrawals by customers per day should be abolished by Monetary Authority in order to enhance customer satisfaction and to promote financial inclusion in Nigeria.*

Keywords: ICT, Commercial banks, ePayment, Infrastructure, ATM, Remote-on-us withdrawals.

1. INTRODUCTION

Figure 1.1: A Modern ATM

Source: Researchers' arrangement based on Wikipedia, 2014

Information and Communication Technology (ICT) has become a very critical aspect of today's banking and financial services delivery in the world at large and Nigeria in particular. The Nigerian banking industry have engaged the use of ICT as a platform for effective and efficient means of conducting financial transactions now branded as the Electronic Banking System. In a recent research, Onyediemekwu and Oruan (2013) described Electronic Banking System as a technological banking platform that enable customers to assess banking services through intelligent electronic banking devices, such as Computers (Internet Banking), Personal Data Assistants (PDAs), Mobile phones (Mobile Banking and Mobile Money), Point of Sales Terminal (PoS), and Automated Teller Machines (ATMs). Though the emergence of electronic banking service can be said to still be in an embryonic stage in the country, however one of such electronic services that has proven successful in Nigeria in recent time is the Automated Teller Machine (ATM), although not without its own hitches; it tends to be the most popular and the most widely accepted means of electronic banking

service in the country, this can be traced partly to the fact that ATMs were the first well-known machines to provide electronic access for bank customers in Nigeria.

And with the dawn of ATM in Nigeria, banks' customers now have access to financial transaction outside the banking hall such as public place without the need for a cashier or bank teller. ATM is designed to perform the most important functions of banks staff through magnetic-stripe plastic card known as the ATM card, which is usually issued by the financial institution. The card contains a unique card number and some security information such as serial number, an expiration date, etc. The card is thus replacing Cheque, personal attendance of the customer, banking hour's restrictions and as well as paper based verification (Sultan and Komal, 2009). ATMs allow customers to perform a number of banking transactions such as withdrawing cash from one's account, making balance enquiries, transferring funds from one account to another and effecting payment of bills, usually done by imputing the four-digit Personal Identification Number (PIN) for the specific ATM card, known exclusively to the holder.

Figure 1.2: ATM Cards

Source: Researchers' arrangement based on Web image, 2014

Also, ATM provides 24 hours service round the clock. A customer can withdraw cash up to a certain limit anytime of the day or night and not wait to be attended to by the bank staff or be affected by the instability of the banking system. The technology promotes faster service delivery, as it is a common phenomenon in Nigeria banking institution to see queues inside the banking hall, struggling and at times, quarrelling for their turns to make withdrawals and deposits. Such situation has promoted the common trend of bank robbery because of the raw cash lying bare on the banking hall. Today, with the introduction of ATMs in Nigeria, the story has changed. Nigerians now engage in faster service delivery in withdrawal of cash. In addition, ATM gives convenience to bank customers. Now, ATMs are located in convenient places such as the airport, railway stations, hotels, etc., and not necessarily at the bank premises. It reduces the work load of bank staff. Since the ATM is a "do it yourself" service, thus bank staff are relieved from grumbles and cries of customers. Also, ATM is very beneficial to travelers. They need not carry large amount of cash with them. They can withdraw cash from this innovation since traders need not carry the chunk of their money to market any longer to make purchases and also reduce the fear of armed robbers (Elizabeth, 2014).

However, as noted still by Elizabeth (2014), various customer-unfriendly issues have been raised over the introduction of ATM in the banking industry of Nigeria, and the complaints and cries of bank customers over the ills of the ATM cannot be overlooked anymore in light of its raging discomforts to customers. Thus, Muhammad (2009) sited in Jegede (2014) postulated that the high level of ATM fraud tend to have overshadowed the improvements which it has brought into the service delivery system of the Nigerian financial institutions. Similarly, Ihejiahi (2009) in Jegede (2014) also noted that despite the reality that the introduction of ATM terminals as a banking instrument was lauded by several customers as an alternative to the frustrating queues that characterized the country's banking hall, the situation today has changed drastically, it has become a source of worry to users and providers (banks) because the function it was meant to provide has been eroded seriously. The first issue that comes to the fore is the efficiency of the ATM in Nigeria. The machine has been notable for gross flopping. This is partly due to lack of in-depth technical knowledge of the handlers. For instance, it is common for the ATM to deduct money from one's account without actual payment to the owner and only to re-credit such account in later whiles. Another hitch of ATM is the system failure which may deter the machine from dispensing cash or from issuing payment slips after transaction. One more problem worth stating is the long queues experienced at ATM terminals, due to ATM scarcity, thus; the

grossly scarce available ones have been hosting large numbers of customers from dawn to dusk. It is thus imperative at this time to examine the usage of ATM and the level of satisfaction derived by bank customers in Nigeria. The objective of this paper is therefore to examine the usage of Automated Teller Machine (ATM) and the level of customers' satisfaction in Ilorin Metropolis, the capital city of Kwara state, Nigeria, with a particular reference to three (3) selected commercial banks.

This paper is divided into five sections. Following this introductory part as the first section is the section two which embodied the review of theoretical and empirical literatures. The third section presents the methodology and section four discusses the findings while section five dwells on conclusion and policy recommendations.

2. REVIEW OF LITERATURES

2.1. Meaning of Automated Teller Machines (ATMs)

ATM as previously highlighted is the abbreviation of Automated Teller Machine, and it is an electronic appliance that gives out or receives cash deposits from account holders. A smart card is used to initiate and complete a transaction with the machine. The smart card or simply put, ATM card as widely called, has electronic chip that identifies each customer with respect to corresponding accounts belonging to the customer (Odewale, 2008).

2.2. Evolution of ATM

Many experts believe that the first automated banking was the creation of an American inventor and businessman named Luther Simjian. Simjian held patents on all kinds of things including – army flight simulator, a colour X-ray machine, a self-focusing camera among others, but he was best known for his work in the Bankograph, a machine that could accept cash or check deposits at any hour of the day or night. By 1960, Simjian managed to persuade a New York City bank to take a few of his automatic deposit machines. There was a microfilm camera inside the Bankograph that took a snapshot of every deposits. Customers received a copy of the photo as their receipt. Still, the Bankograph did not catch on, as it was not widely accepted as Simjian expected. By the end of the 1960s, however, times were changing, and a broader segment of the population became more comfortable with the idea of self-service and more willing to trust unfamiliar technologies and to give automated banking a try. In 1967, a Scottish inventor named John Shepherd Barron was struck with an idea that if vending machine could dispense chocolate bars, why couldn't they dispense cash? Consequently, out of his curiosity and strong desire, he came up with the concept of a self-service machine that will dispense paper currency giving users 24/7 availability. The Barclays, a London bank loved the idea, and Shepherd-Barron first ATM was installed in a branch on Enfield High Street not long afterward. Unlike modern ATMs Shepherd-Barron did not use plastic cards. Instead, it used paper vouchers printed with radioactive ink so that the machine could read them.

The first automated banking machine in the US was devised by a Dallas engineer and former professional baseball player named Donald Wetzel. Wetzel's machine used plastic cards like the ones we use today and instead of radioactive ink, the cards stored account information in magnetic strips. In September 1969, a chemical bank branch on Long Island installed the first of Wetzel's machines.

However, it took a corporate gamble and blizzard for the ATM to win the confidence of American's bank customers. In 1977, the chairman of Citi Bank took a huge risk, spending more than $100 million to install ATMs all over New-York City. That investment paid-off, the following January when a huge blizzard hit New-York, chumping 17 inches of snow on the city. Banks were closed for days and this made ATM usage increased by 20% within days, Citi Bank then launched an ad-campaign titled "The Citi Never Sleeps". Subsequently, almost every one of the country's bank followed Citi's lead. The era of ATM was on the go, and with the advent of electronic banking rapidly aided by Globalization, today there are almost 4 million ATMs around the world.

2.3.   Emergence and Development of ATM Transactions in Nigeria

The historical development of ATM in Nigeria can be traced to the earlier Mechanical Cash Dispenser installed by the National Cash Registers (NCR) in 1989 for the defunct Societe Generale Bank of Nigeria (SGBN). The trade name for SGBN's ATM was "Cash Point 24" Also, First Bank of Nigeria Plc., came up with their own ATM in December 1991, two years behind SGBN. They also gave a trade name "First Cash" to their ATM. And while that of SGBN was a drive-in-system that of the First Bank ATM was through-the-wall (Jegede, 2014). However, they were regarded at that time, as a highbrow facility, designed for those desirous of exclusive service.

Today, the story is different as the ATM technology now appears common and generally acceptable among banks' customers in the country. Presently, the use of ATM cards has been widely promoted. Though, the widely accepted popularity of ATM technology in Nigeria can be linked to the banking sector reforms that started in 2004, coupled with the earlier existence of Interswitch network in the country in 2003. The Central Bank of Nigeria (CBN) in 2004 then mandated commercial banks in the country to install ATM in the bank premises and other strategic locations to serve their customers as part of the reform policy, so as to achieve cashless economy and ensure efficiency of bank services in the country. And owing to this, Olatokun and Igbinedion (2009) cited in Emeka and Favour (2012) reported that the Nigeria's debit card transactions rose by 93% between January 2005 and March 2006 over previous year due to aggressive roll out initiatives of the Nigerian banks, powered by Interswitch Network. Correspondingly, the transaction volume grew from ₦1.6 million transactions in 2006 to over ₦500 million transaction in 2009 and the total number of ATMs has also grown remarkably from just 500 ATMs in 2006 to over 8,000 ATMs in 2009. The number of ATMs also stood at 10,221 as at end-June 2012, while the value of ATM transactions also increased during the period to ₦937.39 billion from ₦698.19 billion, representing an increase of 34.3%. This figure later increased further by end of the year to ₦1.3 trillion from the initial ₦937.39 billion it was in June 2012. And recently, the CBN announced that the value of financial transactions carried out through ATMs as at June, 2014 is at ₦1.7 trillion, up from the ₦1.3 trillion it was as at 2012. Similarly, the volume of ATMs deployed in the country rose from 10,727 in 2012 to 15,000 as at June 2014. The rapid development recorded over the ATM transactions in Nigeria can however not be unconnected to the huge emphasis and promotions of ATM usage by commercial banks through different ATM promotional schemes in the country. Banks no longer appear to want personal contact with their customers. Some banks have also resulted into penalizing their customers as it were, for not possessing an ATM card by debiting the account of such a customer for withdrawing below a certain amount across the counter (Fabunmi, 2011).

Thus, on the 6th November, 2012, the Bankers Committee of the CBN approved the immediate removal of the ₦100 charge on customers who use a different bank's ATM. This, the apex bank maintained will help in reducing the number of queues at ATM terminals. Consequently, the removal of this fee aided the patronage of ATM transaction in the country, and the number of times bank customers carry out ATM transactions using other banks' machines increased. For instance, from ₦33.4 million in January 2013, it rose to ₦66.8 million as at December 2013.

Interestingly, in a more recent development, on 1st September 2014, The CBN re-introduced charges on the use of ATMs, and presently, banks in Nigeria now charge customers ₦65 for using remote-on-us ATMs after the third of such withdrawals within a month. Remote-on-us ATMs withdrawals are withdrawals made from ATMs of other banks not the bank in which the account is domiciled. The CBN maintained that the re-introduction of the fee was necessitated as there is an increase in the rate at which bank customers indiscriminately make use of ATMs and this has retrogressed the profitability of banks and as well increased their over-head costs. Thus, the re-introduction of the fee will help to ameliorate the cost on banks, the apex bank maintained.

2.2.   Empirical Literature

Few researchers have discussed the impact of electronic banking services on customers' satisfaction in Nigeria and other parts of the world, with a number of such studies specifically focusing on ATM usage and the level of satisfaction of banks' customers. This segment will so review the recent of such studies.

According to Odusina (2014) while investigating the level of ATM usage and customers satisfaction in Nigeria using comparative analyzes of three banks in Ogun State Metropolis of Nigeria. The study employed primary data, sourced through questionnaires which were administered to a total of 200 respondents, cutting across the three banks. The data were analyzed using the Chi-square statistical tool, the study thus revealed that there is a positive and significant relationship between ATM usage and customers' satisfaction. Alex (2014) examined the impact of e-banking on customer services and profitability of banks in Ghana. The random sampling technique was used to select ten banks and two hundred and fifty customers all in Accra for the study. The study found that e-banking has impacted positively on customer service and profitability of banks, though the study identified a number of challenges, it thus recommended among others that there should be 24/7 monitoring of ATMs so that any failure is addressed as soon as possible to guarantee customer retention.

Ogunlowore and Oladele (2014) also examined the impact of electronic banking on satisfaction of corporate bank customers in Nigeria. Data were collected with a structured questionnaire and also analyzed with descriptive statistics while the hypotheses of the study was tested using Chi-square technique. The study revealed that there is a significant relationship between electronic banking and customers' satisfaction and also suggested that critical infrastructure like power, security and telecommunication should be strengthened to ensure the application of electronic banking in Nigeria and optimum satisfaction on the part of customers. Alabar (2012) conducted research in electronic banking services and customers' satisfaction in the Nigerian banking industry. He sampled 400 respondents of some selected banks across the six geo-political zones of the country. Using regression analysis, the study revealed that electronic banking services has significant effect on customers' satisfaction in Nigeria.

Similarly, Ebiringa (2010) investigated the effect of ATM infrastructure on the success of e-payment. The analysis of the study was based on primary data collected from the users of ATMs. A total of 1141 users of ATM were sampled. The data were analyzed using the factor analysis simulation model. The study also modelled five strategic decision clusters, in which inadequate availability of quality infrastructure was identified as the most critical limitation to the efficient e-payment via ATMs. The study thus concluded that provision of adequate infrastructure such as power is critical for effective integration of the Nigerian banking system to the global network of electronic payment via ATMs; and for this to be possible, the study advocated for concerted effort by stakeholders to resolve the lingering crises in the energy sector.

Contrarily, Chinedu, et al (2012) analyzed the negative effect of the ATM as a channel for delivery banking services in Nigeria. Using a sample of 600 respondents, conveniently selected from two states of the federation. The data were analyzed using Chi-square. The study found that the ATM system of delivery banking service not only contribute to the increasing rate of bank fraud, but equally lures Nigerians into profligate expenditures. They therefore recommended that banks should strive to increase their security layers to subvert the tricks of web scammers and limit the amount which customers may be allowed to withdraw at a time.

In another instance, Alabar and Agema (2013) also investigated the effect of information and communication technology and customer satisfaction in the Nigerian banking industry. The study employed primary data and four hundred banks' customers were served with questionnaire and the regression analysis was used in testing the hypothesis. The study discovered that the present state of ICT had significant influence on customer satisfaction. They therefore suggested that banks should raise the standard of ICT based services to customers in the country. Fenuga and Oladejo (2010) investigated the effect of electronic payment on customer service delivery in Nigerian banks. 100 respondents were stratified proportionately amongst customers of the selected banks with the aid of questionnaire which was randomly administered to customers

of four selected commercial banks in the country. Chi-square and regression analysis were employed to analyze the data. The study concluded that electronic payment has significant impact on the services rendered by the banking industry in Nigeria. Adewoye (2013) equally examined the impact of mobile banking on service delivery in the Nigerian banks. The study employed primary data sourced through questionnaires, which were administered to staff and customers of some selected banks in the country. The data collected were analyzed using Chi-square statistical technique. The results of the findings shows that mobile banking improve banks service delivery in a form of transactional convenience, saving time and so on. To this end, the study recommended that banks management should create awareness to inform the public about the benefits delivered on the e-banking service products.

Also, Jegede (2014) investigated the effect of ATM on the performance of Nigerian banks. Questionnaires were used to collect the data from a convenience sample of 125 employees of five selected banks in Lagos state with Interswitch network. The data were analyzed statistically using the Chi-square technique, which was done electronically via the Software Package for Social Science (SPSS version 20.0). The result therefore indicated that less than the benefits, the deployment of ATMs terminals have averagely improved the performance of Nigerian banks. The researcher thus recommended in conformity with Chinedu, et al (2012) recommendations, that banks should strive to increase their security layers so as to subvert the tricks of web scammers and also limit the amount which customers may be allowed to withdraw at a time and the provisions of extra security layer that can prevent third party from making use of someone else's ATM card for unauthorized withdrawals. Olanipekun et al (2013) examined the impact of e-banking on human resources performance and customer satisfaction. Primary data was adopted for the study which was sourced via a structured questionnaire administered to fifty randomly selected respondents. The Chi-square technique was used to analyze the data. The study revealed that introduction of electronic banking has impacted positively on the bank's human resource performance and has also enhanced customers' satisfaction. They therefore recommended that critical infrastructure that will aid the usage of e-banking products should be provided.

Lastly, Ray and Ghosh (2014) empirically examined the impact of internet banking service quality dimensions on customer satisfaction. The study employed pre-structured questionnaire in collecting the primary data from a sample of 120 respondents through personal contact, field survey and email. The data were analyzed through SPSS version 21.0. The analysis revealed that there are three dimensions of service quality, namely; Assured service, Service efficiency and convenient service, which impact customer satisfaction and that customers are more satisfied with additional service dimensions like trustworthiness, sincerity, accessibility and awareness.

Meanwhile, from the previous research efforts, one could say with all modest that the relationship between ATM usage and the level of satisfaction derived by banks' customers has received a fair share of empirical studies and a number of recommendations from both administrative and monetary analysts across the globe. However, as it is observed, none of these studies have investigated the relationship between customers' satisfaction and ATM usage in the Ilorin metropolis thus creating a research gap, which necessitated the study.

2.3 Theoretical Framework

The theoretical framework of this study is based on Tasmin at al (2013a) model, which is a modification of Kano's model. Originally, the Kano's Model was developed by a chief lecturer and a principal consultant in the field of quality management named; Professor Noriaki Kano in the mid-1980's. The model is based on the concept of product or service development and customer satisfaction. The model suggests three basic beliefs or attributes, which are; the most be or basic needs, the one dimensional or performance needs, and the attractive or excitement needs, which could influence and satisfy customers' needs. Tasmin et al in 2013 remodeled the Kano's theory in the context of ATM service on customer's service delivery. They explained this using the three key attributes of Kano's Model, by slightly modifying the Kano's Model diagram as thus:

Figure 2.1: Modified Version of Kano's Model
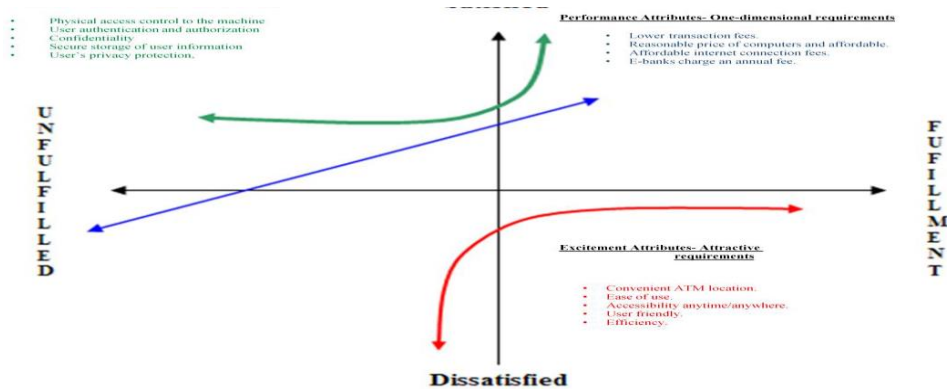
Source: Tasmin et al, (2013b)

a) *The must be or Basic Needs:*

These are the king of needs that customers become dissatisfied when performances of such service are low. Conversely, even with the high performance of the must be or basic needs, customer satisfaction does not rise above the neutral level of satisfaction. A very good example in the context of ATM is the security level, meaning that having secured ATM banking transaction in terms of location, systems and other related issues do not raise the level of customer satisfaction. Whereas, absence of it will cause customer dissatisfaction (Tan & Pawitra, 2005) in Tasmin et al (2013a).

b) *The One Dimensional or Performance Needs:*

These are the kind of needs that if fulfil, they lead to high customer satisfaction. Conversely, if these needs are not satisfied, customers become dissatisfied due to cost (bank charges). Electronic banking is likely to be the performance need, whereas low bank charges in terms of cost related may result in high customer satisfaction (Amoah-mensah, 2011)) in Tasmin et al (2013a).

c) *The Attractive or Excitement Needs:*

These are the kind of needs that customer has satisfaction simultaneously with the increase of those products/services. However, the attractive or excitement needs do not decrease in customer satisfaction, because of the decrease in attributes needs. For example, with the convenience of electronic banking, customer may feel dissatisfied if the ATM does not have some attribute of conveniences in terms of extra function keys, 24/7 service and cash deposition. Conversely, if the ATM does provide such additional service customers will be highly delighted and satisfied (Xu *et al*., 2009) in Tasmin et al, (2013b). This means that in a competitive environment, satisfying basic needs and performance needs of an organization (banks) could not only satisfy the needs of customers. As such organization have to streamline their strategy towards enhancing service delivery that will excite and over satisfy the customer's need (Baytollah *et al*, 2012; Ankit, 2011; Musiime & Biyaki, 2010) in Tasmin et al, (2013a).

In a nutshell, since this model provides an in-depth understanding to the importance of service delivery to customers and identify some basic behavioral factors to be managed to secure customers' satisfaction. It is therefore adopted in order as to serve as basis for banks in Nigeria to stage-manage their decision towards enhancing effective and efficient customer service delivery in the aspect of electronic banking in the country particularly, the ATM services.

3. RESEARCH METHOD

The methodology for the study is mainly of field survey. The population consists of respondents drawn from customers of First Bank of Nigeria Plc., Guaranty Trust Bank Plc. And First City Monument Bank Plc. The choice of the banks stems from the widely acclaimed customer-friendly standard of the banks and the fact that the researchers are customers to two of the banks. The study employed primary source of data through the use of questionnaire, distributed and collected from a sample of 180 customers (60 in each bank), selected randomly at the banks' ATM terminals during the course of transactions. Descriptive and inferential statistical

tools such as tables, percentages and charts will be used to present and analyze the data, while Chi-square technique will be employed to test the possibility of any relationship between ATM usage and customers' satisfaction in Nigeria.

The Chi-square formula is given as

$$X^2 = \sum \frac{(O - E)^2}{E}$$

Where:

O = Observed Frequency

E = Expected Frequency

$\sum$ = Summation sign (Sigma), and

X^2 = Chi-square

4. RESULTS AND DISCUSSION

A total of 180 questionnaires were administered to the banks' customers, 60 to each of the three sampled banks. And of this total, 163 were retrieved out of which 1 was discarded because it was not properly answered. Hence, only 162 questionnaires were accurately answered and analyzed upon, which represents a response level of 90%. More specifically, 56, 48 and 58 were from customers of First Bank of Nigeria Plc., Guaranty Trust Bank Plc. and First City Monument Bank Plc. respectively.

4.1. Data Analysis

Though the questionnaire covered various issues, only the relevant findings are reported here as thus:

Table 4.1: Demographic Profile of the Respondents

Response		FBN		GTB		FCMB		Total	Cumm%
		Frequency	%	Frequency	%	Frequency	%		
Gender	Male	33	59	30	63	41	71	104	64
	Female	23	41	18	37	17	29	58	36
	TOTAL	**56**	**100**	**48**	**100**	**58**	**100**	**162**	**100**
Age	18-25 years	8	14	6	13	6	10	20	12
	26-35 years	28	50	17	35	32	55	77	47
	36-45 years	10	18	5	10	11	20	26	16
	46-55 years	3	5	20	42	7	12	30	19
	Above 55 years	7	13	-	0	2	3	9	6
	TOTAL	**56**	**100**	**48**	**100**	**58**	**100**	**162**	**100**
Occupation	Civil Servant	12	21	19	40	41	41	55	34
	Self Employed	20	36	11	23	12	21	43	27
	Professional	14	25	9	19	17	17	33	20
	Student	10	18	5	10	12	21	27	17
	Undecided	-	0	4	8	0	0	4	2
	TOTAL	**`56**	**100**	**48**	**100**	**58**	**100**	**162**	**100**
Educational Attainment	Adult Education	-	0	1	2	2	3	3	2
	Primary Education	4	7	5	10	5	9	14	9
	Secondary Education	20	36	11	23	22	38	53	32
	Tertiary Education	31	55	31	65	29	50	91	56
	No Education	1	2	-	0	-	0	1	1
	TOTAL	**56**	**100**	**48**	**100**	**58**	**100**	**162**	**100**

Source: Research Survey, 2014

NOTE: FBN = First Bank of Nigeria Plc.

GTB = Guaranty Trust Bank Plc.

FCMB = First City Monument Bank Plc.

The table above presents the demographic profile of the respondents. The table indicates that there are 104 males (64%) and 58 females (36%). This implies that males make use of ATM services than the females in Nigeria. Thus, conforming to the earlier studies of Tasmin et al (2013b), that male patronize online banking more than their female counterpart. And out of 162 sampled respondents, 20 (12%) respondents were between 18 and 25 years; 77 (47%) respondents were between 26 and 35 years. Another 26 (16%) were between 36 and 45 years, while 30 (19%) respondents were of the age bracket 46 to 55 years. And, 9 respondents, representing about 6% were above 55 years. Implying that majority of the customers that patronize banks are the most active population who are between ages 26 and 35 years. Similarly, on the occupational distribution of the respondents, the percentage distribution of the Civil Servants was 34%, 27% for Self-Employed customers, while 20% were into some form of professional businesses, and just about 17% were students and about 2% were undecided about their occupation. The implication of this is that Civil Servants form the larger percentage of banks' customers and as well as active users of ATMs in the country. This correspondingly agrees with the study of Babatunde (2012), that Civil Servants form the majority of the banks' customers in Nigeria. And the academic attainment of the respondents showed that majority of the users of ATMs had tertiary education,

followed by secondary education which represent about 56% and 32% of the total respondents respectively. This thus implies that those with less education use ATM services less than the way well educated customers do in the country.

Question (7): Years of Using ATM in Nigeria

Table 4.2: Distribution of responses on years of experience with ATM usage

Response	FBN		GTB		FCMB		Total	Cumm%
	Frequency	%	Frequency	%	Frequency	%		
A year or less	7	13	11	23	9	15	27	17
2-3 years	12	21	10	21	34	59	56	34
4-5 years	22	39	10	21	10	17	42	26
6-8 years	12	21	12	25	5	9	29	18
9 years and above	3	5	5	10	-	0	8	5
TOTAL	56	100	48	100	58	100	162	100

Source: Research Survey, 2014

From the above table, the analysis revealed that the 17% of the respondents have had a year or less experienced with use of the ATMs in the country, and about 34% had just between 2 to 3 year' experience with the machine, also 26% have had a 4 to 5 years' experience, while 18% have had between 6 to 8 years' experience with the use of the machine and just about 5% indicated to have been using ATMs for transaction for at least 9 years in the country. This thus confirms the assertion that the emergence of electronic banking is still in it embryonic phase in the country, particularly ATM transaction, with over 51% of the sampled customers having just about 4 years' experience with the machine.

Figure 4.1: Years of experience with ATM usage
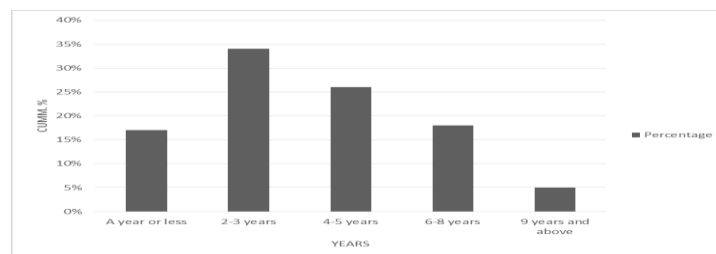
Source: Researchers' computation using Excel 2013

Question (8): ATMs are easy to use

Table 4.3: ATMs are easy to use

Response	FBN		GTB		FCMB		Total	Cumm%
	Frequency	%	Frequency	%	Frequency	%		
Strongly agreed	13	23	19	40	20	34	52	32
Agree	29	52	18	38	23	39	70	43
Disagree	12	21	5	10	9	16	26	16
Strongly disagreed	2	4	4	8	5	9	11	7
Undecided	-	0	2	4	1	2	3	2
TOTAL	56	100	48	100	58	100	162	100

Source: Research Survey, 2014

The above table shows that 32% and 43% of the respondents strongly agreed and agreed respectively to the assertion that ATMs are easy to use, 2% were undecided while 16% and 7% agreed and strongly agreed to the fact that ATMs are easy to use. This thus implies that ATMs are easily used or operated by majority of banks' customers in Nigeria, following the over 75% of the sampled size agreeing to the assertion.

Figure 4.2: ATMs are easy to use
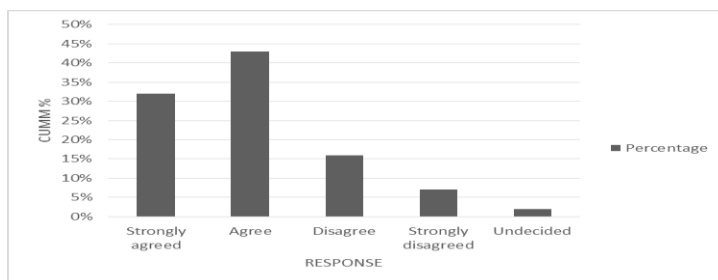
Source: Researchers' computation using Excel 2013

*Question (9): ATM has reduced the frequency of my visit to the banking hall for withdrawal transactions*

Table 4.4: Distribution of responses on frequency of visit to banking hall for cash withdrawal

Response	FBN		GTB		FCMB		Total	Cumm%
	Frequency	%	Frequency	%	Frequency	%		
Strongly agreed	13	23	7	15	3	5	23	14
Agree	12	22	11	22	16	28	39	24
Disagree	19	34	23	48	19	33	61	38
Strongly disagreed	8	14	7	15	19	33	34	21
Undecided	4	7	-	0	1	1	5	3
TOTAL	**56**	**100**	**48**	**100**	**58**	**100**	**162**	**100**

Source: Research Survey, 2014

Also, from table 4.4 above, it is evidenced that 38% and 21% of the sampled size strongly disagreed and agreed respectively to that fact that the introduction of ATMs have reduced the frequency of their visit to the banking hall for cash withdrawal purposes, 3% were however undecided about it, and about 14% and 24% agree and strongly agree respectively to the statement. This therefore means that majority of banks' customers in Nigeria still consider it necessary to visit their bank branch for withdrawal motives, contrary to the argument that ATMs reduce the in-flocks of people into the banking hall for cash withdrawals.

Figure 4.3: ATM has reduced the frequency of Visit to the Banking hall for cash withdrawal
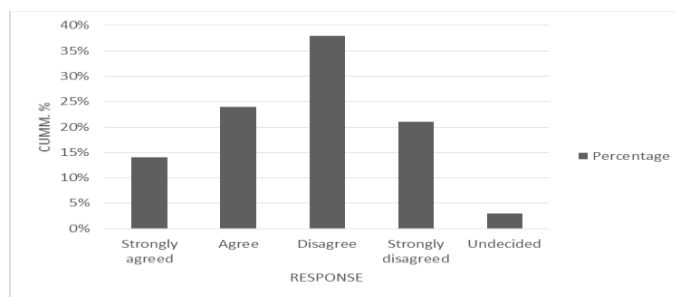
Source: Researchers' computation using Excel 2013

*Question (11): Are you satisfy with the current ATM service of your bank?*

Table 4.5: Distribution of responses on ATM usage and Customer Satisfaction

Response	FBN		GTB		FCMB		Total	Cumm%
	Frequency	%	Frequency	%	Frequency	%		
Highly satisfied	21	38	9	19	17	29	47	29
Satisfied	12	21	17	35	21	36	50	31
Dissatisfied	9	16	12	25	19	33	40	25
Highly Dissatisfied	5	9	6	13	1	2	12	7
Undecided	9	16	4	8	-	0	13	8
TOTAL	**56**	**100**	**48**	**100**	**58**	**100**	**162**	**100**

Source: Research Survey, 2014

From the table 4.5 above, it is clear that only about 7% and 25% of the respondents were highly dissatisfied and dissatisfied respectively with the ATM service of their banks, and while 8% were undecided 31% and 29% indicated to be satisfied and highly satisfied respectively. This thus implies that larger proportion of banks' customers in Nigeria are satisfied with the quality of ATM services of their banks.

Figure 4.4: ATM Usage and Customer Satisfaction
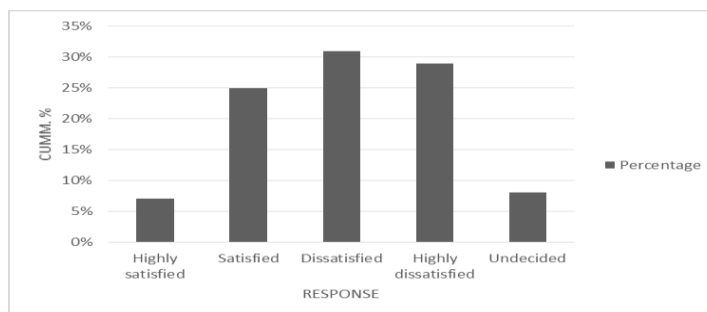
Source: Researchers' computation using Excel 2013

Question (12): Re-introduction of ₦65 ATM service charge has reduced the rate of my ATM transaction
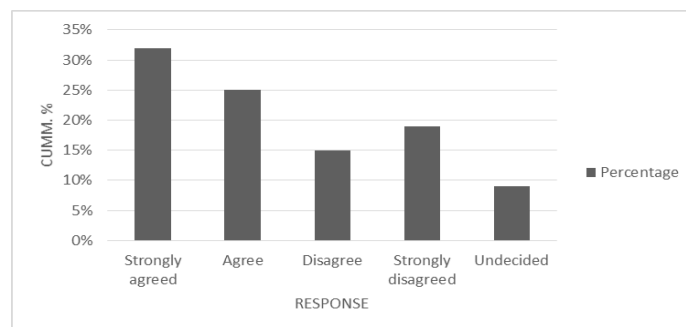
Table 4.6: Distribution of responses on effect of ₦65 ATM service charge and ATM usage

Response	FBN		GTB		FCMB		Total	Cumm%
	Frequency	%	Frequency	%	Frequency	%		
Strongly agreed	8	14	14	29	30	52	52	32
Agree	11	19	20	42	10	17	41	25
Disagree	15	27	5	10	5	9	25	15
Strongly disagreed	20	36	1	2	9	16	30	19
Undecided	2	4	8	17	4	6	14	9
TOTAL	**56**	**100**	**48**	**100**	**58**	**100**	**162**	**100**

Source: Research Survey, 2014

Table 4.6 shows that 32% and 25% of the respondents strongly agreed and agreed respectively with the statement that re-introduction of ₦65 ATM service charge has reduced their ATM transaction, 9% were undecided while 19% and 15% strongly disagreed and disagreed respectively with the assertion. One can thus conclude that most users of ATMs have reduced their transaction owing to the recent re-introduction of ₦65 ATM service charge by the Central Bank of Nigeria (CBN).

Figure 4.5: ₦65 ATM Service Charge as Reduced the Rate of my ATM Transaction

Source: Researchers' computation using Excel 2013

*Question (13): Commonest problem of ATM transaction of my bank branch*

Table 4.7: Distribution of responses on problems associated with ATM transaction

Response	FBN		GTB		FCMB		Total	Cumm%
	Frequency	%	Frequency	%	Frequency	%		
Power failure	5	9	0	0	1	2	6	4
Network failure	18	32	19	39	25	43	62	38
Inadequacy of ATMs	11	20	8	17	10	17	29	18
Restriction to certain cash withdrawals	10	18	12	25	10	17	32	20
Poor interconnectivity of ATMs' network	8	14	9	19	9	16	26	16
Shortage of ATM experts or engineers	4	7	0	0	3	5	7	4
TOTAL	56	100	48	100	58	100	162	100

Source: Research Survey, 2014

The above presents the problems associated with ATM transaction in the sample banks. The table revealed that 4% of the respondents consider the most common problem of ATM of their bank branch to be power failure, 38% perceived the problem to be network failure, 18% indicated the problem to be inadequacy of ATMs, 20% believed it is restriction to certain cash withdrawals, 16% think it is poor interconnectivity of ATMs' network among banks, and the shortage of ATM experts and engineers was supported by just 4% of the respondents. The conclusion here is that network failure ranks the first of the problems of ATMs in Nigeria.

Figure 4.6: Problems associated with ATM transaction
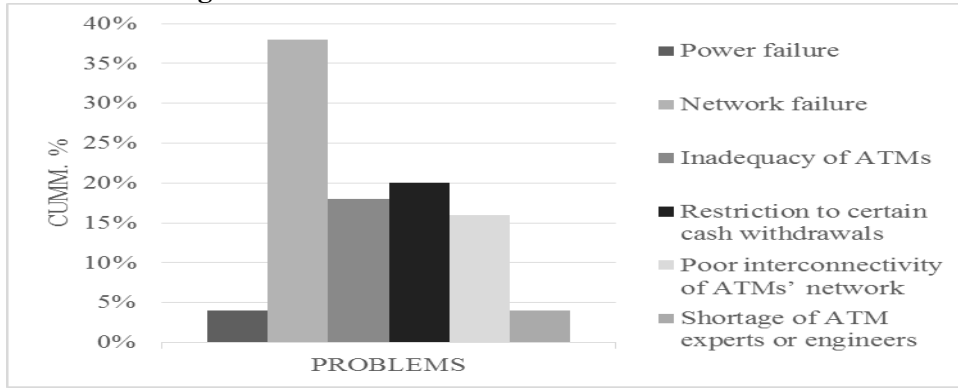
4.2 HypothesisTesting

The hypothesis tested in this paper is to find out whether ATM has significantly improved customer satisfaction in Nigeria. The hypothesis is thus stated as follows:

Ho: Banks' customers are not significantly satisfied with the usage of ATM in Nigeria

H1: Banks' customers are significantly satisfied with the usage of ATM in Nigeria

To test the hypothesis, table 4.5 above is remodified as thus:

Table 4.8: Modified Version of Table 4.5

222ponse	Banks			Row Total
	FBN	**GTB**	**FCMB**	
Highly satisfied	21	9	17	47
Satisfied	12	17	21	50
Dissatisfied	9	12	19	40
Highly dissatisfied	5	6	1	12
Undecided	9	4	0	13
Column Total	56	48	58	162

Source: Research Survey, 2014

Table 4.9: Contigency Table

Observed (O)	Expected (E)	Residual (O-E)	Square of Residual $(O\text{-}E)^2$	Square of Residual/Over Expected $\dfrac{(O-E)^2}{E}$
21	16.2469	4.7531	22.5920	1.3905
9	13.9259	-4.9259	24.2645	1.7424
17	16.8272	0.1728	0.0299	0.0018
12	17.2840	-5.284	27.9207	1.6154
17	14.8148	2.1852	4.7751	0.3223
21	17.9012	3.0988	9.6026	0.5364
9	13.82	-4.8272	23.3019	1.6852
12	11.8519	0.1481	0.0219	0.0018
19	14.3210	4.679	21.8930	1.5287
5	4.1481	0.8519	0.7257	0.1749
6	3.5556	2.4444	5.9751	1.6805
1	4.2963	-3.2963	10.8656	2.5291
9	4.4938	4.5062	20.3058	4.5186
4	3.8519	0.1481	0.0219	0.0057
0	4.6543	-4.6543	21.6625	4.6543
			$X^2 =$	20.8589

Source: Researchers' computation, 2014

$$DF = (r\text{-}1)\,(c\text{-}1)$$

$$= (5\text{-}1)\,(3\text{-}1)$$

$$= 8$$

Chi-sqaure Tabulated at 5% significance level = 15.5073

Therefore; X^2 cal. = 20.8589

X^2 tab = 15.5073

Since the Chi-square tabulated is less than the calculated i.e. X^2 cal. = 20.8589 > X^2 tab = 15.5073, the decision is therefore to reject the null hypothesis and accept the alternate hypothesis and conclude that Banks' customers are significantly satisfied with the usage of ATMs in Nigeria. This thus agrees with the findings of Odusina (2014) and Ogunlowore and Oladele (2014) who found out that customers are significantly satisfied with the usage of ATM and that a significant relationship exist between electronic banking and customers' satisfaction in Nigeria respectively.

5. CONCLUSION AND RECOMMENDATIONS

The quest to finding a lasting solution to the various customer-unfriendly issues facing the users of ATMs in Ilorin metropolis, such as service failure, debiting accounts without dispensing cash to customers, and ATM scarcity which many perceived to be responsible for the long queues at most ATM terminals in the city necessitated the study. And so far, the study have been able to ascertain that there exist a significant relationship between ATM usage and customers' satisfaction in the city. The empirical analysis also establishes that majority of ATM users in Ilorin metropolis are civil servants. While on the other hand, this study reveals that bank customers still consider it necessary to visit their bank branch for cash withdrawal

purposes, despite the argument that ATMs reduced in-flocks of customers into the banking halls. It further reveals that the recent introduction of ₦65 ATM service charge has reduced the rate of ATM transaction by the users. And lastly, the study identifies network failure, ATM scarcity, restriction to certain cash withdrawals, and poor interconnectivity of ATMs' network among banks respectively, as the problems of ATMs in the country. This study therefore comes to the conclusion that Banks customers are satisfied with the usage of ATM in Nigeria, but many unfriendly issues associated with ATM operation in the country need to be fixed in order to further guarantee maximum satisfaction to the users. It is in this interest that the following recommendations are suggested:

1. Banks should intensify investment in Information and Communication Technology (ICT) products, by acquiring sophisticated internet gadgets that would reduce the incessant problem of service failure associated with ATMs, as well as ensuring free flow of transactions in regards to ATMs interconnectivity among various banks.

2. Monetary Authority in the country should provide adequate regulatory framework that will ensure customer protection and security of transactions through collaborative effort with security agencies and other relevant ICT firms, so as to ensure customers' confidence in the use of ATMs.

3. Also, Banks should intensify effort to deploy ATMs to some other strategic places of the country, so as to ease the tension of inadequacy of the machine in the country.

4. Lastly, the Monetary Authority should mandate banks to set up ICT training centers for their staff, to acquire the necessary ICT skills needed to maintain and repair ATMs whenever there is mechanical errors.

5. Restriction on cash withdrawals by customers per day should be abolished by Monetary Authority in order to enhance customer satisfaction and to promote financial inclusion in Nigeria.

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APPENDIX I

Questionnaire

Department of Economics,
Faculty of Social Sciences,
Kogi State University,
Anyigba.
Kogi State.
7th July, 2014.

Dear Respondent,

This questionnaire is designed to obtain information from you concerning your present position and personal perceptions on the use of Automated Teller Machine (ATMs) in the Ilorin Metropolis. Thus, answers to the questionnaire should be as much as possible reflect your individual opinion and situation, and all information given will be strictly for research purpose, and as such will be treated with utmost confidence. We therefore crave your indulgence to provide information to the questionnaire honestly and truthfully. Thank you.

Mohamed I. D & Dada R. M

Instruction: Please tick (√) where appropriate in the box to indicate your answer to the question.

SECTION A: DEMOGRAPHIC DATA

1) What is your Gender?   Male [   ]   Female [   ]

2) What is your age bracket? 18-25 years [   ]   26-35 years [   ]   36-45 years [   ]   46-55 years [   ]   Above 55 years [   ]

3) What is your occupation? Civil servant [   ] Self-employed [   ] Professional [   ] Student [   ] Undecided [   ]

4) What is your educational attainment?   Adult Education [   ] Primary Education [   ] Secondary school [   ] Tertiary education [   ]

5) What is your income per month?   ₦22, 000 and below [   ]   ₦22, 100-N32, 000 [   ]   ₦32, 100-N60, 000 [   ] ₦60, 000 and N90, 000[   ] ₦100, 000 and above   [   ]

SECTION B: ATM RELATED ISSUES

6) What type of bank account do you operate? Savings [   ] Current [   ] Fixed [   ] Savings and Current [   ] All [   ]

7) Years of using ATM in Nigeria. A year or less [   ] 2-3 years [   ] 4-5 years [   ] 6-8 years [   ] 9 years and above [   ]

8) ATMs are easy to use.   Strongly agreed [   ] Agreed [   ] Disagreed [   ] Strongly disagreed [   ] Undecided [   ]

9) ATM has reduced the frequency of my visit to the banking hall. Strongly agreed [   ] Agreed [   ] Disagreed [   ] Strongly disagreed [   ] Undecided [   ]

10) Human Tellers are still very important. Strongly agreed [   ] Agreed [   ] Disagreed [   ] Strongly disagreed [   ] Undecided [   ]

11) Are you satisfy with the current ATM services of your bank? Highly satisfied [   ] Satisfied [   ] Dissatisfied [   ] Highly dissatisfied [   ] Undecided [   ]

12) Re-introduction of ₦65 ATM service charge has reduced the rate of my ATM transaction. Strongly agreed [   ] Agreed [   ] Disagreed [   ] Strongly disagreed [   ] Undecided [   ]

13) Commonest problem of ATM transaction.   Power failure [   ] Inadequacy of ATMs [   ] Restriction to certain cash withdrawals [   ] Poor interconnectivity of ATMs' network among banks [   ] Shortage of ATM experts or engineers [ ]

14) What are your suggestions to improving ATM operations in Nigeria?

_____

_____

_____