# AUTOMATED TELLER MACHINE (ATM) AS A TOOL FOR EFFICIENT BANKING SERVICE DELIVERY IN JIMETA YOLA, ADAMAWA STATE

By

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#### **ABSTRACT**

Over the years, there have been allegations from several stakeholders on the inefficiency of banking services such a long queue in the banking halls, delays in cashing money and the long queues in Automated Teller Machine (ATM) dispensing points. The paper therefore, examines the importance of ATM as a tool for improving the efficiency of banking services. This was done by itemizing some of the causes of inefficiency in banking services in order to determine the importance of ATM in improving banking services. The study employed the use of survey method where questionnaire and interview were used. One hundred and forty-two users of ATM from two banks were purposively selected for the study in Jimeta Metropolis, Yola Adamawa state. The data was analyzed by the aid of descriptive statistics. The findings show that, ATM has significantly improved the efficiency of banking services by decongesting banks, reducing delays, time saving and accessibility of banking services to customers almost 24 hours. Similarly, it has been revealed that the causes of banking inefficiency are: insecurity, lack of adequate ATM, service unavailability and single server have been the contributing factors to queues and congestion in the banks. It further revealed that majority of ATM subscribers have a good knowledge on the services offered by ATM. The study concludes that ATM has positively influenced service delivery of deposit money banks in Jimeta, Adamawa State. The study recommends that banks should have more ATM dispensing points, improve their services and also to establish more branches within the state to reduce the time spend by customers.

**Keywords:** ATM, decongesting banks, reducing delays, time saving and accessibility

#### Introduction

The world is changing, so is banking and all the activities around it. Globally Banking has evolved into different developments over the last two decades. The desire to bring satisfaction to the customers makes banking industry to develop multiple time-savings and service satisfying products. These services are backed by the skill of modern development in Information Technology. Information Communication and Technology (ICT) has the ability of improving banks in the world including Nigeria to offer a better quality services for customer (Surjadjaja, Ghosh & Antony, 2003). The growth of Information Communication and Technology (ICT), in Nigeria has gone through important changes; these changes have transformed the dimensions of financial services that are delivered to their customers. Nowadays in Nigeria, the modern banking has lots of alternative models available for services delivery. These models of services include Automated Teller Machine (ATM), Mobile Money Services or Tele-Banking, Internet Banking and Point of Sale (POS). The most common dimension of all services delivery in the banking industry is the introduction of Automated Teller Machines (ATMs), although not without its own challenges; but it still attracted widespread acceptance and usage offering variety of service to customers, (Kolodinsky, Hogarth & Hilgert, ATMs are known by various names in the world including, Automated Banking Machines, Money Machines, Bank Machines, Cash Machines, Hole-in-the-Wall and Cash Point or Bancomat [in Europe and Asia]. ATMs has become a way of life in Nigeria, and many banks in Nigeria made ATMs compulsory with some transactions like money withdrawal.

Automated Teller Machines (ATM) is a self-service banking that accepts deposits and dispenses cash and most ATM's users carry out other banking transactions (e.g. statement ordering, balance enquiries, cheque ordering, instructions for transfer between the cardholder's accounts, and depositing cash and Bills payment). In the past six years, the number of ATMs worldwide has grown by a half million, and estimates from the ATM Industry Association (ATMIA) reveal that the number of ATMs in the world exceeded 1.5 million at the end of 2005, and by 2011, an estimated 2 million ATMs will be deployed (Crosby and Killifer 2007). In Nigeria most ATM are connected to interswitch network, Interswitch is an interconnectivity of banks aims to be financial solution provider. A survey conducted by Intermarc Consulting Limited revealed that ATM services

providers especially the banks and non-financial institutions stood as the most popular e-business platform in Nigeria (Intermarc Consulting Limited, 2007). The development of this interswitch it has helped a lot in allowing most of the banks to share ATM and Point of Sales System, which give customers access to withdraw from machine necessarily not belonging to the bank where their account resides.

Thus, the ATM as one of the products of ICT has transformed the financial institution positively by easing enquiry; saving time and improving service to customers (Idowu et al, 2002). The Financial Service had involved the use of ICT as an avenue for effective and efficient service delivery to customers and solving the challenges of paper-based transaction in the past which resulted to long queues and congestions in our banking halls. Banks have understood that one way to offer an excellent service is through the use of it (ICT) which is now branded as the E-banking. Oruan and Onyediemekwu (2013) described E-banking system as technological banking channels that relief customer in assessing banking services through intelligent E-banking machines such as ATM and computers (internet banking).

Automated Teller Machines (ATM) is a computerized machine that helps customers or clients of a financial institution in accessing banking transaction both in the public place or within the banking premises without the need for a human clerk or bank teller. The effort of Central Bank of Nigeria (CBN) in the year 2004, was to reforms the banking, towards improved banking services, and to achieve cashless economy and decongest the banking halls; directed the deposit money banks in Nigeria to install Automated Teller Machine for them to be relevant in the moves of information technology and Banks in the Nigeria has adopt medium of this Self Service (ATMs) technology for effective and efficient services delivery to their customers.

Therefore, this paper seeks to examine the importance of ATM as a tool of improving efficient banking service delivery and secondly to examine customers' perception towards ATM in controlling queues in banks in Jimeta, Adamawa State

# **Theoretical Framework**

In this paper Technology Acceptance Model (TAM) is reviewed as the theoretical framework. The Model (TAM) as presented by Davis (1989) aimed at predicting and explaining ICT usage behavior, that is, what causes potential adopters to accept or reject the use of information technology. Theoretically, TAM is based on the Theory of Reasoned Action (TRA). In TAM, two theoretical constructs, perceived usefulness and perceived ease of use, are the fundamental determinants of system use, and predict attitudes toward the use of the system, that is, the user's willingness to use the system. Perceived usefulness refers to "the degree to which a person believes that using a particular system would enhance his or her job performance", and perceived ease of use refers to "the degree to which a person believes that using a particular system would be free of effort" (Davis, 1989, 320). The paper assert that consumers have positive attitudes towards ATMs based on dominant perceptions of convenience, accessibility and ease of use. This is because the longer a customer stays with a bank the more utility the customer generates. This is as result of a number of factors relating to the time the customer spends with a bank. Without usage of technology the banking sector cannot provide customers with a satisfactory service

### Concept of the automated teller machine (ATM)

Automated Teller Machine 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, 2000) cited in Mohammed, and Dada, (2014). According to Emenika and Peter (2016) Automated Teller Machine (ATM), also known as a automated banking machine (ABM) or CashMachine and by several other names, is a computerized telecommunications device that provides the clients of a financial institution with access to financial transactions in a public space without the need for a cashier, human clerk or bank teller. And most modern ATMs, the customer is identified by inserting a plastic ATM card with a magnetic stripe or a plastic smart card with a chip that contains a unique card number and some security information such as an expiration date. Authentication is provided by the customer entering a personal identification number (PIN). Using an ATM, customers can access their bank accounts in order to make cash withdrawals, credit card cash advances, and check their account balances as well as purchase prepaid cell phone credit (Emenika and Peter, 2016).

Thus the idea behind the ATM was to automate the duties of a bank teller which subsequently will remove the "face to face" interaction between the customer and the bank teller. In the service sector such as banks, the ATM technology is used to standardize services by way of reducing the employee/customer interaction. The ATMs are expected to provide the same service wherever the customer goes. It is also expected that the service provided by the ATM from one customer to the other will be consistent, for example, the speed of the transaction process

There are some numerous services that are carried out on the ATM such as withdrawals, cash deposit, balance enquiries, funds transfer between accounts and payments of utility bills. The original fundamental nature of the ATM was for the use of cash withdrawals which was expected on a 24/7 hour (Gabriel et al, 2015). But later the ATM technology incorporated the deposit facility where the customer was able to deposit either cash and is a good substitute for the night safe facility which banks were providing, but to a few customers for the purpose of cash and cheque deposits. Customers are also able to check their account balances off the ATM which gives the actual bank balance as well as the balance available to the customer for withdrawal purposes. A mini statement showing the most recent (usually the last five (5) debit/credit) transactions on the account can also be obtained off the ATM, reducing the frequency of the customer going into the bank which contributes to the reduction of congestion in the banking hall

## Automated Teller Machine (ATM) service quality

Organizations are aware that quality of service rendered or provided promulgates strategic competitiveness in dynamic business environment. There is a significant relationship between quality of service and firms' performance based on improved productivity, increased market share, enhanced customers' attraction and loyalty, improved staff morale and sustained profitability (Lassar et al, 2000). Use of ATM has become exceedingly admirable and popular among customers as convenient mode of Banking Transactions. This technological innovation has transformed the Banking Business. Banks in Nigeria and worldwide are aggressively adopting ICT modes of transactions which include ATM. The benefits of using ATM have given new desire in dimensions of quality of service and Banks are offering new choices to customers. According to Lovelock, (2000), service quality depends on:

- i. A secure and convenient location of ATMs
- ii. Adequate number of ATMs
- iii. User-friendly system and
- iv. Functionality of ATMs

Davies, and Curry, (1996), revealed some of the factors that influence customers' satisfaction and management about ATM service quality which include:

- i. Costs involved in the use of ATM by the customer
- ii. Efficient and reliable functioning of ATM.

It was also depicted that the United States customers' perception of ATM service quality by Joseph & Stone, (2003), that Banks should have:

- i. User-friendly ATMs
- ii. Convenient locations of ATMs
- iii. Secure positions of ATMs and
- iv. Adequate number of ATMs installed for essential dimensions of ATM service quality.

### **Customer accessibility to automated teller machines (ATM)**

According to Gabriel et al, (2015), one of the key factors in determining viable improvement in such a turbulent banking environment is the method of delivery of banking services/products. Convenient and value driven allocation channels add worth to the service offered. ATMs must provide convenience to the customer. In this regard, ATMs are located at convenient places such as within the bank premises (on site ATMs) and away from the bank premises (off site ATMs), such as at the airports, super markets, fuel filling stations and shopping malls. New-age banks operate with minimal number of physical branches and use remote banking for the bulk of their operations. The remote channels are used to provide basic services while more sophisticated services are provided on a face to face basis. Customers have less time to spend on activities such as visiting a bank and therefore want a higher degree of convenience and accessibility (Delvin, 2001). Since attitudes are less beyond the control of banking executives, attitudes are difficult to change. But to understand consumer attitudes toward ATM is extremely important, but managers can help predict the usage rate and evaluates the future growth of the channel. Therefore, it is imperative for mangers to understand that attitudes are developed from personal experiences and learning with reality, as well as information from both inside and outside the banking halls and derived could be direct and indirect experiences in life.

# Automated teller machine (ATM) perceptions

Automatic Teller Machines (ATMs) are gadgets or devices that are used in public areas. In most parts of the world, bank customers make use of ATMs. These machines are recognized as a basic banking tool saddled with the responsibility of dispensing cash and providing basic information about financial status. This machine (ATM) is perceived as a box whose technology is hidden and mode of operation unthinkable. However, acceptance of ATMs has been a major challenge as most bank customers are not willing to change from the traditional banking methods especially since this has to do with strictly private financial matters. Meanwhile, banks are continuously intensifying efforts in ATM campaign in order to encourage its wide acceptance and adoption. This has strictly been focused on reliability issues surrounding the ATM Technology (Odewale, 2000).

### The Nigerian experience of (ATM)

In Nigeria, the ATM was introduced in 1989 by the defunct Societe Generale Bank. Since then, ATMs appear to have spread their arms across Nigeria. The banking industry no doubt has witnessed development in technology just like any other sector; the use of the automated teller machine is one of these as it affects banking operations entirely. With the adoption of Self Service technology by the banks, ATMs have continued to service the public; they offer convenience to customers and provide banking services well beyond the traditional service period (Batiz, 2005). It therefore encourages a cashless society. Thus, eliminating the risk of loss of cash through theft or fire as witnessed in the past, creating a win-win scenario for parties concerned. At inception, the few banks that had these machines restricted customers to accessing the machines from their banks alone. This cannot be said today, as technology solutions have been made available to the banks to enable users make withdrawals from ATMs of other banks. However, the usage of ATM in Nigeria is just advancing beyond withdrawals, checking of account balance and purchase of airtime, despite the desire for its multifunctional services (pay bills or make utility/tax payments, calls, stock transaction and purchase of tickets).

Service delivery in banks is personal, customers are either served immediately or join a queue (waiting line) if the system is busy. A queue

occurs where facilities are limited and cannot satisfy demand made against them at a particular period. However, most customers are not comfortable with waiting or queuing (Olaniyi, 2004). The danger of keeping customers in a queue is that their waiting time may amount to or could become a cost to them (i.e. bank customers). According to Elegalam (1978), customers are prepared not to spend more cost of waiting / queuing. The time wasted on the queue would have been judiciously utilized elsewhere (the opportunity cost of time spent in queuing).

# Impact of Automated Teller Machine on banking

Bank customers in Nigeria have a mutual sign-of-relief when the Automated Teller Machine (ATM) was introduced as an instrument to aid banking operations in 2006. The starter of the ATM by financial institutions changed the face of banking in Nigeria, but with some inherent challenges. According to Adeoti (2011), the use of ATM is safe and convenient. The ATM has made settlement of bills in the Nigerian banking system easy and saver. These benefits have resulted into phenomena growth in number of ATMs in Nigeria. The growth of ATMs in Nigerian banks has risen from 83% in 2006 to 289% in 2007 (Adeoti, 2011). Almost all banks introduced the ATM in their bank premises in 2007. Another great impact of automated teller machine and information Technology is that it contributes immensely to the promotion of marketing of banking services. With the service of Information Technology, funds can be moved from one account to another at the push of a button, essential information relating to a transaction could be made available thousands of miles away within minutes. Today, banks are developing and deployed better personalized services through the use of automated teller machine. For example, in Nigeria today, banks are providing customers with "Access Terminals" with which they (customers) can access their balances and view or print movement in their accounts. These are special services, enjoyed by special customers, which has been impossible hitherto.

Moutinho, (1992) established that ATM facility resulted in speed of transactions and saved time for customers. Other value added services of ATM include college fee payment, online collection of application fee, mobile top up, religion/trust Donation, bill settlement, insurance premium payment, and funds transfer card to account, amongst others. Increased ATM usage is also helped by the fact that customers have now known the flexibility of using ATMs of other banks, as most of the banks are part of

major interbank networks. The interbank networks have brought together ATMs of several banks so that consumers would gain access to any of the participating banks ATMs. Banks find it cheaper to pay membership fees to these networks as against setting up additional units in expensive-to-deploy areas

However, the advantages of safety and convenience of ATM has unfortunately been lessened by the frauds that are perpetrated by 'plastic money'. The increase in number of customers using ATM has also increased the propensity to fraudulent practices by the ATMs fraud perpetrators. Ihejiahi (2009), expressed concern about the lack of cooperation among banks in the fight to stem the incidence of ATM related frauds now plaguing the industry. He expressed that the silence among banks on ATM frauds makes it difficult for banks to share vital information that will help curb the menace. Muhammad (2010) postulates that the level of ATM fraud tends to have overshadowed the improvements which it has brought into the service delivery systems of Nigerian financial institutions. Similarly, 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 (Amel, 1986).

#### Contribution of (ATM) to banking

ATM have become competitive weapon to a commercial bank for multiple reasons, first, automation replaces labor and improves the traditional labor transaction process. With the introduction of automated equipment, the automation contributed to reduction in labor errors, shortened processing time, efficiency of banks and improve services quality. Agboola (2006) indicated that although only a bank that have ATM in 1998, and by 2004, fourteen of them have installed the technology. He observed that the adoption of ICT in banks has produced largely positive outcomes such as improved customer services, more accurate records, ensuring convenience in business time, prompt and fair attention and faster services. ATMs have been acclaimed to be able to process routine transactions and therefore a close substitute to Teller labour Labour substitution arises, therefore, when the use of ATM reduces Tellers' work with the attendant decrease in labour demand of banks. So banks with heavy personnel expense pressure tend to install more ATM to replace Teller labour costs. Chin-S et al., (2008) confirmed that ATM intensity has positive effect on bank efficiency. In addition, they found that bank scale is also positively related to cost efficiency, while non-performing loans and salary level have negative impact.

It was also reported by Laderman (1990) that ATM could reduce human resource costs of tellers and branch establishment costs. With the coming of Automated Teller Machine (ATM) bank offices and designated places, such as Airports, high profile eateries and Shopping Centres have been felt by the public as mind of revolution blowing in the banking sector in Nigeria over the couple of years. To a large extent, the adoption of ATM of the banks have helped the banking sectors to achieve its goal as banking halls are being decongested with the installation of facility across the country. ATM has increased the financial profile and added financial muscles to banks. So banks have acquired and installed more ATMs in order not to lose their customers to competitors (Awe, 2002).

# Queuing and banking

Olaniyi (2004), in his study of the First bank of Nigeria, explored the applicability and extent of usage of queuing models in achieving customer satisfaction at the lowest cost. In the study it was observed that a single server is not effective when arrival rate exceeds service rate, while the existing two-server system was not optimally utilized. The use of a four server system, although eliminated waiting but at a higher cost which is not optimal too. The study therefore recommended a three server system for the bank for optimal costs, training of staff on application of queue models, multi-skilling, leveraging use of IT in banking, improving service environment and improvement of staff- customer relationship. According to Osman et al. (2010), despite increased use of internet banking in the world some customers fear that they would lose their money to swindlers and are particularly careful about the high risk expectation during money transfer between accounts. Other risks include financial risk, loss of confidentiality, time risk, performance risk, and psychological risk. The study carried out in Turkey also showed that there is a significant relationship between risk perception and level of income. High income customers have high social, time and security risk perceptions. However, with increased use of internet banking time risk perception reduces.

# Effects of queuing

Delays and queuing problems are most common features not only in our daily-life situations, such as bank or postal office, at a ticketing office, in public transportation or in a traffic jam but also in more technical environments, such as in manufacturing, computer networking and telecommunications. Queuing models provide the analyst with a powerful tool for designing and evaluating the performance of queuing systems. According to Sokefun (2011), Customer service satisfaction is derived largely from the quality and reliability of products and services. However, almost every Nigerian bank encounters similar problems in meeting customer 's expectation of services and customer satisfaction. For example, the issue of money transfer in banks is one major problem that customers of certain banks have been made to experience. In most cases the customer hardly receives the payment of the money transferred into account immediately. The long queues and huge crowds in the banking halls can be highly devastating and discouraging most times, especially when the weekend is near and when salary is paid. Most times, these long queues are as a result of the breakdown of the computers used by the cashiers, sometimes it occurs as a result of the cashiers, pushing duty to one another as to who is to attend to the customers. On the word of Zeithaml (2000), the major problems in measuring the relationship are; the time lags between measuring customer satisfaction and profit improvement, the number of other variables influencing performance such as pricing, convenience, transaction methods and system, customer care and so on should be included in the relationship because they explain the causality between satisfaction and result.

However, the problems faced by banks in delivering effective services to customers include; insufficient legal system, high provisions for non-performing loans, high lending rates, poor management, political instability, high pricing of financial services, higher risks and low profitability. These have in turn affected their quality of service offered. Most times, these negative effects limit the number of prospective customers who patronize banking services. This is because a customer who has once been disappointed by a bank 's services decides to tell others not to use that same service. Gabriel et al (2015), said, once banks have cut waiting lines, such acts cease to be customer services, furthermore, waiting time from the viewpoint of service industry has effect of the number of customers that are willing to patronize a particular bank. In order to build a

cordial and lasting relationship with the customers, the bank must supply the best service to maximize customer satisfaction and increase service efficiency by providing prompt or timely service. Waiting for service is typically a negative consumer experience and cause unhappiness, frustration, and anxiety by consumer. Due to this, there must be ways in which queues must be reduced so as to make consumers patronized banking services.

### Methodology

In this study, the researcher adopted a survey methodology as research design. This is where the researcher used an area Jimeta using bank customers of first bank as old and GTBank as new generation bank which was compared in terms of efficient service delivery. The study was conducted at the bank road in Jimeta, Adamawa State Metropolis which is located in Yola North in Adamawa State as the geographical scope. The questionnaires were administered for the two days at the bank branches, because it is the main branch and with large number of customers there to used ATM.

To get the required information, one hundred and forty-two (142) customers of the two banks using Automated Teller Machines (ATMs) were purposively selected in Jimeta Metropolis. The source of data collection for the study is primary data. The primary data were sourced through a well-structured questionnaire and interview to obtain information needed on ATM service delivery. The questionnaires were divided into section A and B, section A comprises of gender, education, occupation and type of account the customers have, while section B covers all the research objectives and which give the respondents to choose either highly satisfactory (HS), Satisfactory (S), fairly satisfactory (FS) and not satisfactory (NS) and SA= strongly agree, A= agree, D= disagree and SD= strongly disagree. The data collected were analyzed using descriptive statistics.

# **Data Presentation and Discussion of Major findings**

To have access to the information required for the study, one hundred and forty-two (142) customers of the two banks using Automated Teller Machines (ATMs) were purposively selected in Jimeta Metropolis. One hundred and forty-two questionnaires were produced and distributed to the respondents but only seventy-one were retrieved for the data analysis.

The data analysis on the background information and characteristics of the respondents are presented below.

**Table 1: Gender of the Respondents** 

Gender	Old gen. bank		New gen. bank		
	Frequency	Percentage	Frequency	Percentage	
Male	47	66.2	43	60.6	
Female	24	33.8	28	39.4	
Total	71	100%	71	100%	

Source: Field Survey, 2015

Table 1 revealed that, 66.2% (47) of the respondents were males and 33.8% (24) are females, while new generation banks, 60.6% (43) are males and 39.4% (28) are females. It can be seen from Table 4.1 that 66.2% of the respondents were males which patronized old generation banks ATM service against the new generation banks of 60.6%, and the 39.4% were females which patronized the new generation banks ATM services against the old generation banks ATM service. This finding implies that more males possess ATM enabled accounts relative to their female counterparts at the branch and also can imply that males make use of ATM services than the females in Nigeria. Thus, conforming to the studies of Tasmin et al (2013), that male patronize online banking more than their female counterpart both old and generations banks.

**Table 2: Educational Qualification** 

Qualification	Old gen. bank		New gen. bank	
	Frequency	Percentage	Frequency	Percentage
SSCE	9	12.7	13	18.3
Dip/NCE	32	45	25	35.2
B.Tech/B.Sc	30	42.3	33	46.5
Others	0	0	0	0
Total	71	100%		100%

Field Survey, 2015

Table 2 shows that 12.7% (9) and 18.3% (13) are the respondents which hold senior school certificate examination both old and new

generation bank while 45% (32) and 35.2% (25) are diploma/ NCE and 42.3% (30) and 46.5% (33) represents those that hold degree certificates, both old and new generation bank ATM services. Findings indicate that most of the customers are literate that patronized both old and new generation banks ATMs services, Dip./NCE and university graduate, implying that the ATMs services of the new generation bank is fast and management is interested delivering quality services without congestions.

This finding suggests that most of the respondents are literate. And the academic attainment of the respondents showed that majority of the users of ATMs had tertiary education, followed by secondary education which represents about 12.7% and 18.3% of the total respondents respectively. This implies that those with less education use ATM services less than the way well educated customers do.

**Table 3: Occupation of the Respondents** 

Occupation	Old gen. bank		New gen. bank	
	Frequency	Percentage	Frequency	Percentage
Civil servant	17	24	21	30
Business	13	18.3	23	32
men/women				
Students	41	57.7	27	38
	71	100%	71	100

Source: Field Survey, 2015

From Table 3, it can be seen that majority of the respondents 57.7% were students whom patronised old banks ATMs services against new generation banks 38%. While 18.3% and 32% were businessmen or women, the civil servants 24%, and 30% respectively for both old and new generation banks. The implication of this is that Civil Servants form the larger percentage of banks' customers and as well as active users of ATMs for the new generation banks than old banks. This correspondingly agrees with the study of Babatunde (2012), that Civil Servants form the majority of the banks' customers in Yola Nigeria.

Table 4: What is of Most Concern to You in Choosing the Use of ATM?

Items	Old gen. bank		New gen. bank	
	Frequency	Percentage	Frequency	Percentage
Queue in	32	45.0	41	57.7
banking hall				
Cashier not	25	35	20	28.2
fast				
Single paying	14	20	10	14.1
point				
	71	100%	71	

Source: Field Survey, 2015

From Table 4, the old is 45% and new 57.7% respondents, because of queue in banking hall, while cashier is not fast and single paying point respectively for both old and new banks are 35% against 28.2% and 20% against 14.1%. The findings show that customers both in the old and new banks accept the use of ATMs services because is fast and aid in queuing management, which is without visiting the banking hall.

Table 5: Which of these Strategies Highly Contribute Queues and Congestions Control?

Items	Old ge	Old gen. bank		New gen. bank		
	Frequency Percentage 1		Frequency	Percen	tage	
Mobile	21	29.6	18	25.4	39	
banking						
ATM	39	54.9	40	56.3	79	
Internet	7	9.9	8	11.3	15	
banking						
Telephone	2	2.8	3	4.2	5	
banking						
POS	2	2.8	2	2.8	4	
Total	71	100%	71	100%		

Source: Field Survey, 2015

Table 5 shows 30% (21) against 25.4% (18) respondents that choose mobile banking, while 56% against 55% choose ATM and the internet and telephone banking are 11% against 10% and POS 4.1% against 3%

respondents for both the new and the old banks in Jimeta, Yola. Based on these it reveals that the customer of the new generation banks patronizes ATMs services and mobile banking more than the old generation banks.

Table 6: Which of these are Fast and Efficient when Transacting in Your Bank?

Items	Old gen. bank		New gen. bank		
	Frequency Percentage		Frequency	Percentage	
ATM service	49	69	61	85.9	
Banking hall	22	31	10	14.1	
Total	71	100%	71	100%	

Source: Field Survey, 2015

Table 6 shows that 85.9% against 69% respondents for both the new and old generation banks choose the use of ATMs services than the banking hall service of 14.1% and 31%. It implies that the customers of new generation banks patronize the use of ATMs services more which has the highest percentage of 85.9% while 31% goes to the old generation banks. This implies that most of the customers prefer ATM service to banking hall.

Table 7: Do you prefer a Bank with Shorter Queues?

Items	Old gen. bank		New	New gen. bank		
	Frequency	Percentage	Frequency	Percentage		
Yes	58	81.7	60	84.5		
No	13	18.3	11	15.5		
	71	100%	71	100%		

Source: Field Survey, 2015

Table 7 shows that, the old bank has 81.7% which prefer a bank with a shorter queue and the new bank is 84.5%, while old bank that say no is 18.3% against the new bank 15.5%. It implies that both old and new generation banks customers prefer a banks with less and shorter queue.

**Table 8: Descriptive Statistics** 

	Mean	Std. deviation	Analysis N
Lack enough ATM	12.5000	5.46809	6
Insecurity	12.3333	4.76095	6
Inefficiency	12.1667	6.33772	6
Single point payment	12.0000	6.72309	6
Services unavailability	12.3333	7.42069	6

Source: Field Survey, 2015

Table 8 is a descriptive statistic for the variables under investigation. Looking at the, mean, standard deviation and number of respondents (N) who participated in the survey. Looking at the mean, it reveals that services unavailability and insecurity has the same mean of 12.3% and with their std. deviation 7.42% and 4.76%, while lack of available ATM has the mean of 12.5%, std. deviation 5.46%, inefficiency has the mean of 12.16% with the std. deviation 6.3% and single point payment or server 12.0% and std. deviation 6.72%. This implies that services unavailability, lack of enough ATM and insecurity especially in the other part of the State contribute to queues and the congestions in our banks today. This is because most of the bank branches are closed and the customers were transferred to the town and lack of reasonable number of ATM at the bank premises stock with money has contribute to long queues and the congestions in the banking hall.

**Table 9: Descriptive Statistics** 

	Mean	Std.	Analysis
		deviation	N
Enjoy the use of ATM	12.5000	7.23187	6
ATM influence visit to bank hall	12.1667	8.28050	6
Satisfied with number of ATM	12.1667	6.94022	6
ATM reduces queues	13.5000	7.06399	6
ATM preferable to banking hall	13.0000	8.64870	6

From Table 9 it indicates that the satisfied with ATM number at the bank branches have negative relationship to the other variables. While ATM influence visit to the banking hall, ATM reduce queues are highly correlated and enjoying the use of ATM have positive relationship. It is

clear that customers were highly satisfied with ATM services and also preferable for their daily transactions.

## **Research Findings**

From the above analysis of data, the insecurity in the other part of the Adamawa State, services unavailability and lack of enough ATM stock with money daily for customers, cashier not fast at the counter and the single point payment in most of the banks have led to long queues and congestions in our banks today. The findings showed that ATM highly influences customer's visits to the banking hall. Because, the use of ATMs appeared to be 24/7 hour and convenient compared with using the teller in the banking hall. Moreso, the finding reveals that lack of enough ATM, insecurity, services unavailability, single point payment and inefficiency negatively affects both old and new generation banks in increasing queues and congestions. Furthermore, it reveals that, the ICT (the ATM, Internet banking, Mobile banking, Tele-banking, and POS) has help in improving the banking system.

#### Conclusion

The study concludes that among the ICT gadgets such as mobile banking, internet banking, tele-banking, POS and ATM. The ATM has significantly reduced queue control and management congestions to banks. Therefore, ATM has positively influence service delivery of commercial banks in Jimeta Adamawa State, Nigeria

#### Recommendations

From the conclusion, the study recommended the following:

- i. The findings from the customers' perspective shows that congestions and the long queues could be reducing if the banks could install more ATM at their premises and stock with money 24/7 especially during the month-ends or salary payment. Thus, it would be good for the banks to increase their server point of payment when arrival rate exceeds service rate. Improve their services and work on their staff to be fast and efficient.
- ii. The findings show that insecurity in other part of the State of Adamawa, has contribute to long queues and crowd or congestions to the banks; thus, it would be good for the banks to increase the number of their branches and increases the paying point to three

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- servers, especially whenever there are much crowd in the bank waiting for services.
- iii. Also the banks should employ more staff and improve their security where by the customers would patronise the use of mobile banking, internet banking, tele-banking and POS.

#### **REFERENCES**

- Adeoti, J. (2011). Automated Teller Machine (ATM) frauds in Nigeria: the way out.
- Agboola, A. (2006). Information and communication technology (ICT) in banking operations in Nigeria: An evaluation of recent experiences. Retrieved December 25, 2007, from <a href="http://unpan1.un.org/intradoc/groups/public/documents/AAP">http://unpan1.un.org/intradoc/groups/public/documents/AAP</a> <a href="http://unpan1.un.org/intradoc/groups/public/documents/">http://unpan1.un.org/intradoc/groups/</a> <a href="http://unpan1.un.org/intradoc/groups/">http://unpan1.un.org/intradoc/groups/</a> <a href="http://unpan1.un.org/intradoc/groups/">http://unpan1.un.org/intradoc/groups/</a> <a href="http://unpan1.un.org/intradoc/groups/">http://unpan1.un.org/intradoc/groups/</a> <a href="http://unpan1.un.org/intradoc/groups/">http://unpan1.un.org/intradoc/groups/</a> <a href="http://unpan1.un.org/intradoc/groups/">http://unpan1.un.org/intradoc/groups/</a> <a href="http://unpan1.un.org/intradoc/groups/">http://unpan1.un.org/intradoc/groups/</a> <a href="http://unpan1.un.org/intradoc/groups/">http://un
- Amel, D. F. (1986). Consumer use of automated teller machines. Working papers in Banking, Finance,& Microeconomics, No. 86-5, Financial Structure Sect ion, Division of Research and Statistics, Board of Governors of the Federal Reserve System.
- Awe, O.I., 2002. Management information system. Lagos: Gilgal Publications
- Batiz-Lazo, B., & Barrie, A. (2005). The business and technological history of automated teller machines in the UK, 1967-2005, a Primer. Conference Abstracts, 16-17th June. Queen Mary, University of London.
- Central Bank of Nigeria (2010). Standard and Guidelines on Automated Teller Machine (ATM) Operations in Nigeria, Central Bank of Nigeria Publication.
- Chin S Ou, Shin Yuan Hung, David C. Yen and Fang Chun Liu (2008). Can Automated Teller Machine Investment Improve Bank Cost Efficiency?: Proceeding Of The Third Workshop On Knowledge Economy And Electronic Commerce, 97-103.
- Crosby C. and Killifer V. (2007): <u>Beyond the ATM, ATM Marketplace, NetWorld Alliance, (Online)</u> Available at: <u>www.atmmarketplace.com</u>
- Davis, F. D., Bagozzi, R. P., & Warshaw, P. R. (1989). User acceptance of computer technology: A comparison of two theoretical models. *Management Science*, 35(8), 982-1003
- Davies, F., Moutinho, L., & Curry, B. (1996). "ATM users' attitudes: a neural network analysis". *Marketing Intelligence & Planning 14/2*, 26–32.

- Emenika, O. and Peter, A, (2016) impact of automated teller machine on banking services delivery in Nigeria: a stakeholder analysis
- Elegalam, (1978), "Customer Retention Versus Cost Reduction Technique", A Paper presented at the Bankers Forum held in Lagos.
- Gabriel et al, (2015), assesses the impact of the ATM technology in delivering service quality in the banking industry. A case of GCB bank LTD
- Idowu, P.A, Alu, A.O. and Adagunodo, E.R. (2002): The Effect of Information Technology on the Growth of the Banking Industry in Nigeria. *The Electronic journal on Information system in developing countries*, 10(2): 1-8.
- Ihejiahi R, (2009). How to fight ATM fraud online. *Nigeria Daily News*, June 21, P. 18
- Intermarc Consulting (2007). "ATM emerges Nigeria's most popular e-banking service". The Nation- 5<sup>th</sup> November, 2007. Online-Available at: <a href="http://www.thenationonlineng.com/dynamicpage.asp?id=36290">http://www.thenationonlineng.com/dynamicpage.asp?id=36290</a>
- Kolodinsky, J. M., Hogarth, J. M., & Hilgert, M. A. (2004). The adoption of electronic banking technologies by US consumers. International Journal of Bank Marketing, 22(4/5), 238-259.
- Laderman, E. S. (1990). The Public Policy Implications of State Laws Pertaining to Automated Teller Machines. Federal Reserve Bank of San Francisco Economic Review, 1(2), 43-58.
- Lassar W. M., Manolis C., and Winsor R. D., 2000, "Service Quality Perspectives and Satisfaction in Private Banking", *Journal of Services Marketing*, vol. 14. No. 3 pp. 244-271.
- Lovelock, C. H. (2000). "Functional integration in service: understanding the links between marketing, operations, and human resources". In Swartz, T.A. and Iacobucci, D.
- Mouthiho, L. (1992) Customer satisfaction measurements: prolonged satisfaction with ATMs. *International Journal of Bank Marketing*, 10 (7): 30-7
- Muhammad, A. K (2010): An Empirical study of Automated Teller Machine Service Quality and Customers Satisfaction in Pakistani Banks. European Journal of social sciences. Vol. 13 No. 3. 333-334
- Odewale, A. T (2000): A Decision framework for Automated Teller Machine Investment: An application to the Nigerian Banking Sector.

- M sc. Dissertation. Potchefstroom campus of the North-West University.
- Olaniyi. T. A. (2004). An Appraisal of Cost of Queuing In Nigerian Banking Sector: A Case study of First Bank of Nigeria Plc, Ilorin. *Ilorin Journal of Business and Social Sciences9*(1)and(2) 139 145.
- Onyediemekwu, O. and Oruan, M. K (2013): Empirical Evaluation of Customers use of Electronic Banking Systems in Nigeria., African Journal of Computing and ICTs Vol. 6 No 1. 7-20
- Osman, D, Sukru, Y, Mustafa K, and Jamaluddin H. (2010) Customer Risk Perceptions of Internet Banking – A Study in Turkey the Journal of Applied Business Research November, December 2010, 26(6)
- Sokefun A. O, (2011) Customer Service and Its Effect on the Banking Business in Nigeria, Redeemer's University Mowe, Ogun State. Department of Financial Studies JORIND 9(2) December, 2011. ISSN 1596 8308.
- Surjadjaja, H., Ghosh, S. and Antony, J. (2003), "Determining and assessing the determinants of e-service operations", *Managing Service Quality*, Vol. 13 No. 1, pp. 39-53.
- Zeithaml V. (2000) Service Quality, Profitability and the Economic worth of Customers: What we know and what we need to learn. Journal of Academy of Marketing Science, 28(1), 67. http://www.investopedia.com/terms/b/bank.asp#ixzz2A9byIi4N