

Automated Teller Machine (ATM) and Customers' Satisfaction

By

**Joy Bose JAMES
MGS1606527**

**DEPARTMENT OF BUSINESS ADMINISTRATION
FACULTY OF MANAGEMENT SCIENCES
UNIVERSITY OF BENIN
BENIN CITY**

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**A PROJECT SUBMITTED TO THE DEPARTMENT BUSINESS ADMINISTRATION,
FACULTY OF MANAGEMENT SCIENCES, UNIVERSITY OF BENIN, BENIN CITY,
IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE AWARD OF
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DECLARATION

I, **Joy Bose JAMES** with matriculation number **MGS1606527** of the Department of Business Administration, Faculty of Management Sciences. University of Benin City, Benin City, hereby certify that the work contained in this project is mine. That it has not been submitted to any other body for award of a degree or any other award.

Joy Bose JAMES

Date

CERTIFICATION

This is to certify that this project work was carried out by **Joy Bose JAMES** with Matriculation Number: **MGS1606527** in the Department of Business Administration, Faculty of Management Sciences, University of Benin, Benin City, in partial fulfilment of the requirements for the award of Bachelor of Science (B.Sc.) Degree in Business Administration.

Prof. Andrew E. Tafamel
(Project Supervisor)

Date

Dr. S. A. Adekunle
(Project Coordinator)

Date

Prof. Osarumwense V. Iguisi
(Head of Department)

Date

DEDICATION

This project is dedicated to God Almighty for His divine direction, provision and protection throughout the duration of my study in the University of Benin.

ACKNOWLEDGEMENTS

My utmost gratitude goes to God Almighty for giving me the drive in starting this program and for the continued strength to go all the way to the end successfully.

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ABSTRACT

This study investigated the impact of automated teller machine (ATM) on customers' satisfaction. The objectives of the study was: to ascertain how Automated Teller Machine (ATM) enhances customer's satisfaction in Ovia North-East LGA, Benin City; to examine the influence of ATM service quality on customer's satisfaction in Ovia North-East LGA, Benin City; to examine the influence of ATM proximity on customer's satisfaction in Ovia North-East LGA, Benin City, and to ascertain the impact of ATM security and privacy on customer's satisfaction in Ovia North-East LGA, Benin City.

The study made use of the cross sectional research design, and questionnaire which was made up of well-framed series of questions related to the research topic was used for data collection. Data was analysed using descriptive statistics and linear regression analysis. The linear regression (ANOVA) analysis was used to test the close relationship between the variables and also tested the hypotheses of the study. The analysis was conducted using the Statistical Packages for Social Sciences (SPSS 22) software. Findings from the study revealed that there exist a significant relationship between ATM usage and customers' satisfaction in Ovia North-East LGA, Benin City; there is a significant relationship between ATM service quality and customers' satisfaction in Ovia North-East LGA, Benin City; there is a significant relationship between ATM proximity and customers' satisfaction in Ovia North-East LGA, Benin City; and there is a significant relationship between ATM security/privacy and customers' satisfaction in Ovia North-East LGA, Benin City.

The study then recommended that in order to increase the convenience for users, banks need to strengthen the card payment system together, further expanding card acceptance points such as ATMs, it is important for banks to check ATMs periodically, taking into account the high demand for cash withdrawal of customers; monitor closely and regularly the amount of cash remaining in each ATM including weekends and holidays, banks should also meticulously monitor the operating status of ATMs, prompt repair and remedy abnormal incidents occurring to ATMs, the ATMs should be located in so many places especially busy places for proximity purposes and reducing the amount of time spent in the queue before accessing the ATM services, the banks should make sure that the cost of using the ATM is kept as minimum as possible, as this will encourage more people to use these services, which in turn will help reduce congestion in the banks, banks should deploy ATMs that are friendly oriented, meaning those that are made easier to use, banks should also consider placing ATMs in the public places as an important strategy to customer satisfaction, which will stimulate ease of access to both ATMs and finances, and banks should create more awareness on how to ensure self-security to customers, such as to stop responding to unnecessary email and text message except otherwise, sharing pin with others and so on.

CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

The growth of electronic banking in any country depends on many factors, some among such factors are; adequate internet access, new online banking features, household growth of internet usage, legal and regulatory frameworks (Singh, 2016). Electronic banking is expected to offer quicker and dependable services to customers in comparison to those in manual systems of banking. Electronic banking systems not only generate latest viable returns but also get better dealings with customers (Singh, 2016).

Automated Teller Machines (ATM) are devices used by bank customers to process account transactions, a user inserts into the ATM a special plastic card that is encoded with information on a magnetic strip, this contain an identification code that is transmitted to the bank's central computer by modem (Singh & Arora, 2011). To prevent unauthorized transactions, a personal identification number (PIN) must also be used by the user using a keypad (Singh & Arora, 2011). The computer then permits the ATM to complete the transaction; most machines can dispense cash, accept deposits, transfer funds, and provide information on account balances. Banks have formed cooperative, nationwide networks so that a customer of one bank can use an ATM of another for cash access, by extension all commercial bank's ATM in Nigeria are inter-connected (Okoro, 2010).

ATM are speedily replacing in-bank withdrawal where customers will have to queue-up before being attended (Tillya, 2013). Banks have ATM networks that help customers get quick service and manage their accounts. Banks therefore obtain benefits such as reserve funds, efficacy, more noteworthy buyer inclusion, customers' satisfaction, and loyalty if they provide quality services through electronic managing account networks such as ATM (Al-Hawari & Ward, 2016). ATM has the advantage of transferring money from one account to another (Khan, 2018), in addition to the convenience of withdrawing money wherever the customer is located.

Kotler and Armstrong (2010) opined that customers' satisfaction is the extent to which products/services performance matches a customer's expectation. It is the measure of how well products and services are ready to meet the customer's expectations and this is vital for a business success (Kotler & Armstrong, 2010).

Customers' satisfaction is identified by a response that pertains to a specific focus and occurs at a specific time (Habte & Mesfin, 2019). It is directly connected to customers' needs and well-known as a key driving factor in the formation of customers' future purchase intentions (Joshi, 2019). Satisfaction is a person's feeling of pleasure resulting from comparing a product perceived performance in relevancy to his or her expectation (Kotler & Keller, 2016). Customers' level of satisfaction is determined by his or her cumulative experience at the purpose of contact with the service provider which depends on product/service quality (Sureshchander, Rajendran & Anantharaman, 2017).

However, among the more modern banking services such as electronic banking, internet banking, point of sales (POS) transactions, money transfer, ATMs seems to be the most popular with 96 percent awareness level (Omankhanlen, 2017). Therefore, it is against this background that this study sought to examine the level of customers' satisfaction on ATMs services in Benin City.

1.2 Statement of the Research Problem

In recent times in Nigeria, customers of banks are no longer only concerned about safety of their funds and increase return on investments but demand efficient, fast and convenient services (Adewuyi, 2019). Customers want a bank that will offer them services that will meet their particular needs and support their business goals at any given time, even after working hours. All these are only achievable through the use of ATMs (Adewuyi, 2019).

Inspite of this impressive impact of ATMs to bank customers, a lot of them do not subscribe to its use, owing to several complaints from some ATM users who complain about problems arising from fraudulent activities of ATM fraudsters and normal challenges, such as telecommunication break down, lack of power supply which makes most ATM machines in Nigeria to run on generators, UPS and inverters (Edojariogba, 2014). As such, doubt is expressed about the impact of Automated Teller Machines (ATM) on customers' satisfaction (Edojariogba, 2014).

When ATM was first introduced, it was meant to reduce the unnecessary traffic in the banking hall, make customers have quick access to their money and make life convenient to a certain level. However, according to Adeniran and Junaidu (2019) 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 seriously abused. It has become a money spinner for fraudsters, who have found new haven in compromising innocent people's personal identification numbers (pin). ATM behavior can change during what is called "stand-in" time, where the bank dispensing the cash is unable to access databases that contain account information (possibly for database maintenance), that is, when there is network problem (Ayo, Adewoye & Oni, 2010). ATMs at times can also deduct money from the account without actually dispensing money; these, among others, are the challenges of this money dispensing machine. With all the problems and incompetence of this money dispensing machine in Nigeria; we can also say it has recorded some success. The level of satisfaction intended to be provided by these machines is reduced by technological and processing failures, the perception that the service delivery mode is expensive and the insecurity regarding standalone ATMs. All these create customer dissatisfaction (Joshi, 2019). Hence, it is against this, the researcher sought to investigate ATM usage and satisfaction by bank-customers in Ovia North-East LGA, Benin City.

1.3 Research Questions

Flowing from the research problem, this study attempted to provide solutions to the research questions:

- i. how does ATM enhance customer's satisfaction in Ovia North-East LGA?
- ii. what is the influence of ATM service quality on customer's satisfaction in Ovia North-East LGA, Benin City?

- iii. what is the influence of ATM proximity on customer's satisfaction in Ovia North-East LGA, Benin City?
- iv. do ATM security and privacy have any impact on customer's satisfaction in Ovia North-East LGA?

1.4 Objectives of the Study

The broad objective of this study was to determine what effect automated teller machine (ATM) has on customers' satisfaction. This study specifically identified the following objectives:

- i. to ascertain how Automated Teller Machine (ATM) enhances customer's satisfaction in Ovia North-East LGA, Benin City.
- ii. to examine the influence of ATM service quality on customer's satisfaction in Ovia North-East LGA, Benin City.
- iii. to examine the influence of ATM proximity on customer's satisfaction in Ovia North-East LGA, Benin City.
- iv. to ascertain the impact of ATM security and privacy on customer's satisfaction in Ovia North-East LGA, Benin City.

1.5 Hypotheses of the Study

To achieve the objectives of this study, the study tested the hypotheses which were stated in null form as follows:

- i. Ho: There is no significant relationship between ATM usage and customer's satisfaction in Ovia North-East LGA, Benin City.
- ii. Ho: There is no significant relationship between ATM service quality and customer's satisfaction in Ovia North-East LGA, Benin City.
- iii. Ho: There is no significant relationship between ATM proximity and customer's satisfaction in Ovia North-East LGA, Benin City.
- iv. Ho: There is no significant relationship between ATM security/privacy and customer's satisfaction in Ovia North-East LGA, Benin City.

1.6 Significance of the Study

The following group of people will benefit from the study under investigation:

- i. **Bank Executives:** The study would enable banks executives and indeed the policy makers of the banks to be aware of Automated teller Machine as a major product of electronic commerce in Nigeria with a view to making strategic decisions.
- ii. **Bank Customers:** The study would be of immense benefit to banks customers by increasing their awareness on the importance of using ATM and thus be encouraged to patronize it.
- iii. **Financial Institutions:** The research would provide answers to factors militating against the operation of Automated Teller Machine (ATM) in Banks.

- iv. **Research/Academia:** This work would also be useful to student, scholars and researchers who may wish to undertake a similar study as they will use it as reference point to their own work.

1.7 Scope of the Study

In terms of content, the scope of the study is Automated Teller Machine (ATM) and customers' satisfaction: A case study of bank-customers in Ovia North-East LGA, Benin City. The parameters that will be of main interest to the researcher include; customer satisfaction, benefits of ATM, factors contributing to underutilization of ATM and security and privacy on ATM usage. Our geographical scope will be bank-customers in Ovia North-East LGA, Benin City, though the findings of this study will have far reaching implications for banks-customers and Banks in Nigeria.

1.8 Limitations of the Study

This study had many limitations, since conclusions will be based on primary data, all emanating from human behavior which cannot be avoided or predicted, also access to certain materials was restricted, coupled with other academic works and finance. These are the major factor militating against this study.

1.9 Definition of Terms

Automated Teller Machine (ATM): Automated Teller Machine refers to a machine that acts as a bank teller by receiving and issuing money to and from the Automated Teller Machine account holders/ users.

Customer's Satisfaction: Customer satisfaction is defined as "the number of customers, or percentage of total customers, whose reported experience with a firm, its products, or its services (ratings) exceeds specified satisfaction goals.

Machine: A machine is a tool containing one or more parts that uses energy to perform an intended action. Machines are usually powered by mechanical, chemical, thermal, or electrical means, and are often motorized.

Bank: A bank is a financial institution and a financial intermediary that accepts deposits and channels those deposits into lending activities, either directly by loaning or indirectly through capital markets.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter examined the concept and dimensions of automated teller machine (ATM) and customers' satisfaction. And also the theoretical and empirical studies on the relationship between automated teller machine and customers' satisfaction and review of theories

2.2 Conceptual Review

2.2.1 Customer Satisfaction

Cacioppo (2015) defined Customer satisfaction as the state of mind that customers have about a company when their expectations have been met or exceeded over the lifetime of the product or service.

According to Musiime and Biyaki, (2010), customer satisfaction is a person's feelings of pleasure or disappointment resulting from comparing a product's perceived performance or outcome in relation to his or her expectations.

Customer satisfaction according to Kotler and Armstrong (2010), is seen as the extent to which products/ services performance matches a client's expectation, and also measures the extent to which products and services are ready to meet the customer's expectations. They reiterated that customers' satisfaction is vital for a business success.

In the view of Habte and Mesfin (2019), customers' satisfaction is identified by a response that pertains to a specific focus and occurs at a specific time. It is directly connected to client's needs and well-known as a key influencing factor in the formation of client's future purchase intentions. Joshi, (2019), opined that customers' satisfaction could be a person's feeling of pleasure or displeasure appointment resulting from comparing a product perceived performance in relevancy to his or her expectation. This is determined by customers' level of fulfillment is determined by his or her cumulative experience at the purpose of contact with the service provider

Moreso, Kotler (2001) added that customer satisfaction is the general evaluation based on business activities carried out by organizations in relation to client opinions that has been collected over a period, because of the customer using organizations goods or services, as this could be measured on to the degree of customer loyalty.

Increased customers' satisfaction have created a competitive climate whereby the quality of the relationship between the customer and bank has taken on a greater significance in some cases than the product itself (Musiime & Biyaki, 2010). They pointed out that, the banking industry strives to succeed by putting the topic of rapid and changing customers needs to their agenda, and this can be achieved through good customer care and offering attractive services or products that other competitors may not offer (Musiime & Biyaki, 2010). Therefore, customer satisfaction is seen as a key performance indicator within business, as this occupies a central position in marketing and practice (Cardozo, 2015).

As noted by Mwatsika (2014), customer satisfaction with regards to ATM usage/services, is a response to the experience of ATM transactions which occurs at a particular time and is based on customers' accumulated experience of ATM services from their respective banks whereas the customer satisfaction with banks can be regarded as a culmination of banking experience enjoyed over time whether it meets expectations or not.

2.2.2 Automated Teller Machine (ATM)

Automated Teller Machine (ATM) is a product of technological development developed to enhance quick service delivery as well as diversified financial services such as cash deposits, withdrawals, funds transfer, transactions such as payment for utilities credit card bills, cheque book requests and other financial enquiries (Odusina, 2014). Automated Teller Machine (ATM) provides electronic access to customers in a convenient way (Meena, 2015). ATM machine brings convenience and relief to the customer, it has also been observed as one of the most frustrating experience that customers experience with their bank thereby generating a mixed response at some points from the customer (Meena, 2015).

Wu and Wang (2007) had the view that the ATM is an innovative service delivery mode that offers diversified financial services with or no visitation to the banking hall in terms of cash withdrawal, funds transfer, cash deposits, payment for utility and credit card bills, cheque book requests, and other financial enquiries.

The Automated Teller Machine (ATM) is an electronic banking outlet which allows customers to complete basic transactions without the aid of a branch representative or teller (Ugwuishiwi, Ezema & Ugwuegbu, 2013). It was developed as a result of need for self-service technology (SST) in financial service delivery by financial institutions. In the manual banking, transactions are done in a way that customers walk into the bank to fill tellers, withdrawal booklets or cheque (Ugwuishiwi, Ezema & Ugwuegbu, 2013). The e-banking system is a technological banking platform adopted in Nigeria banking industry that enable customers to perform their banking services with the ease of reliability, conveniently and high rate of connectivity 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) (Onyedemekwu & Oruan, 2013).

Automated Teller Machine (ATM), also known as an automated banking machine (ABM) or Cash Machine 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. On 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 or CVV. Authentication is provided by the customer entering a personal identification number (PIN) (Adeniran & Junaidu, 2014). 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 (Jedege, 2014).

The major types of electronic cards in Nigeria include debit cards and credit cards. Debit cards are linked to bank customer accounts and offer immediate confirmation of payment while credit cards can be used for accessing local and international networks and were widely accepted in most countries, the underlying infrastructure and operational rules are often provided by global trusted service provider such as Visa and Master card, in addition to local lines (Jedege, 2014).

ATMs are known by various other names including automated banking machine (ABM) in the United States, Automated Transaction Machine or Cashpoint in the United Kingdom, Money Machine, Bank Machine, Cash Machine, Hole-In-The-Wall, Autoteller after the Bank of Scotland's usage, Cashline Machine as in the Royal Bank of Scotland's usage, MAC Machine in the Philadelphia area, Bankomat in various countries particularly in Europe and including Russia, Multibanco after a registered trade mark, in Portugal, Minibank in Norway, Geld Automaat in Belgium and the Netherlands, and All Time Money in India (Jedege, 2014).

2.2.3 The Usage of Automated Teller Machine (ATM)

The advent of electronic banking in the global business environment has help consumers depend immensely on the use of the Automatic Teller Machine (ATM) to meet their daily banking needs. The Automated Teller Machine (ATM) was introduced into the Nigeria market in 1989 but was first installed by National Cash Registers (NCR) for the Defunct Society Genera Bank in 1987

(Ogbuji, Onuoha & Izogo, 2012). Adeoti (2011) disclosed that in Nigeria, the first bank to introduce ATM was the Moribund Societe General (SGBN) in 1990. Sequel to the introduction of ATM cards, the value card was the only acceptable payment card for financial transaction during this period. It was called an e-purse (electronic purse) because it enabled customers or users to do their business transactions without necessarily carrying cash. However, the ATM is one of the most frequently delivery and convenience electronic products of banks as it permits customers to carry out transactions in the bank freely without stress. Thus, the bank itself and their customers benefit in several ways such as cutting down the cost per transaction, increase the efficiency of bank staff with minimum workload, it help to increase accuracy of work, speed, save time of the bank customer, money and efforts of customers (Okoro, 2014).

Adepoju and Alhassan (2010) posited that bank customers trust the use of the Automatic teller machine (ATM) to carry out their daily business transactions but the presence of e-fraudsters has scared some customers away from using the ATM. However, Maenpaa, Kale, Kuusela and Mesiranta (2008) also posited that the provision of security stands for the reliable innovation that the bank can make for their customers so as to ensure that electronic banking transactions can be completed immediately, confidentially and safely without the fear of the unknown. ATM is an e-payment facility that provides the card holder self-serving financial services anytime of the day. It is an easy, relatively safe and convenient method of performing financial transactions without the bank and its human tellers. Siyanbola (2013) defined Automated Teller Machine (ATM) as a

computerized device that provides the customers of a financial institution with access to financial transactions in a public place without a need for assistance from bank teller or any official.

The Automated Teller Machine (ATM) is an innovative service delivery mode that offers diversified financial services like cash withdrawals funds transfer, cash deposits, payment of utility and credit card bills, cheque book requests and other financial enquiries (Abdulrahman & Premalatha, 2015). The advent of electronic banking in the global business environment had help consumers depend immensely on the use of the Automatic Teller Machine (ATM) to meet their daily banking needs. Adepoju and Alhassan (2010) explained that bank customers depends and trust the use of the Automatic teller machine (ATM) to carry out their daily business transactions but the presence of e-fraudsters has scared some customers away from using the ATM. However, Maenpaa, Kale, Kuusela and Mesiranta (2008) added that the provision of security stands for the reliable innovation that the bank can make for their customers so as to ensure that electronic banking transactions can be completed immediately, confidentially and safely without the fear of the unknown. Mirza, Beheshti, and Wallstrom (2009) opined that the issues relating to safety and security of the ATM include the inability to use ATMs in an isolated place during in the evening or midnight. This therefore means that majority of ATM stands in use nowadays are located in other places such as malls and grocery stores. However, banks should develop a high degree of innovation which can be help them make charges from other aspects of customers transaction other than placing discouraging charges on ATM (Yitbarek & Zeleke, 2013).

Onyesolu, Asogua and Chukwuneke (2016) opined that the usage of ATMs by banks include the need to increase market share and the fact that the cost of a single transaction performed by an ATM is far less than the cost of a transaction conducted by a teller since ATMs, are able to handle more transactions per unit than tellers. However, Onyesolu, Asogua and Chukwuneke (2016) posited that the problems associated with the usage of ATMs in Nigeria are the maximum amount of daily withdrawals exceeded, issuer or switch inoperative, out of service, unable to dispense cash, user app not available, insufficient fund, double debiting of account, printer unable to print receipt and service in progress available shortly. Bada and Karupiah (2015) are of the view that lack of network, waiting time, service charge and out of service as some of the problems affecting ATM services in Nigeria.

2.2.4 ATM Service Quality

Service quality is related to requirements (Crosby, 2016). Service quality is the comparison of perceived performance and expected performance (Kang, 2016). Service quality is the customer's overall impression of the relative inferiority/superiority of an organization and its service offerings (Bitner, Booms & Tetreault, 2010). The firm's ability to create and sustain competitive advantage depends upon the high level of service quality provided by the service provider (Yoo & Park, 2007). Therefore, providing a consistently high quality service quality can differentiate one Bank ATM service from others.

Survive quality has five dimensions, which are reliability, assurance, responsiveness, tangibles, and empathy. In extant literature, service quality is found to increase repurchases and decrease customer tendency to switch to other brands. Service quality is a strong advertising cliché for Banks' ATM services in Nigeria because a firm with the ability to deliver quality service is positioned to have a larger customer base compared to other competitors in the market (Akinyele, 2010).

Service quality is the customer's overall impression of the relative inferiority/superiority of a firm and its offerings (Bitner et al. cited in Adeleke & Aminu, 2012). From the foregoing, banks in Nigeria should endeavour to improve the quality of their service in terms of network strength, availability of funds on their ATM, low withdrawal charges and transfer rate among others in order to attract and retain more customers hence, customer satisfaction. Service quality is the most important goal of service industries going by studies that linked customer satisfaction with good service quality (Saha, Hassan & Uddin, 2014). Quality of service is provided to uphold customer satisfaction as the alternative to retaining and expanding the customer base, sustaining customer satisfaction they further argue, is crucial to banks continuous existence since no bank can long survive without loyal customers. (Saha, Hassan & Uddin ,2014), service quality is derived from the interaction between customers and service providers and classifies it into process quality and output quality, adding that process quality is the customers' subjective remark on services while output quality refers to customer measurement of service achievement.(Lethinen & Lethinen, 2016). Dimensions used by consumers to measure service

quality include tangibles, responsiveness, empathy, assurance and reliability (Oladele, 2016). The judgment of high and low service quality depends on how a customer perceived the actual service in context of reliability, responsiveness, completeness, access/convenience, courtesy, communication, credibility and security (Lovelock, 2014)

2.2.5 ATM Proximity

According to Min and Melachrinoudis (2016), the proximity allocation of commercial banking facilities involves three layers of services (automatic teller machines, branch bank offices, and main banks). They refer ATMs as the lowest layer, branch bank offices as the next level and the main banks as the highest level and they remark that the variety of services grow up respectively. They point out that the location of higher level facilities may affect the usage of lower level facilities by the customers. Therefore, Min and Melachrinoudis (2016) asserted that a good proximity is suitable for the successive establishment of banking facilities, most especially, the ATM.

With a convenient proximity, a small branch or store can attract more customers and increase its sales, especially for bank branches or ATMs (Al-Zyood, 2018). When choosing the proximity for a branch, each bank should take into account different factors, such as income levels, branch functions, competition, land value, growth potential and number of nearby financial institutions (Al-Zyood, 2018). Different criteria need to be taken into account when deciding on the proximity of ATMs, including the number of businesses and local people, the level of spending,

the labor force and living habits, income level, purpose of ATMs, competitors' activities and number and proximity of ATMs in the same range (Rachmawati, Farda, Rijanta, & Kurniarto, 2019).

The proximity of ATMs has an influence on consumers' attitude towards its usage (Wambugu, 2017). Wambugu (2017) pointed out the reasons for customers' satisfaction with current ATMs proximity, include their closeness to customers' shopping sites or workplaces, while the main reason for dissatisfaction is their farness from customers' living places. Robbins (2016) stated that ATM proximity still remains one of the most important factors that consumers consider when using the ATM, hence the proximity of banking structures such as ATMs plays a significant role on its usage. The convenience of ATM proximity is also listed as a factor that influence customers' acceptance of technology-based banking (Curran & Meuter, 2015).

These automated machines may also attract more young people if placed at the right proximity as they are more familiar with modern technology. ATM also bears a great opportunity to promote banking services through advertisements that may appear on screen or attached around the booth. To take advantages of these benefits, ATMs should be stationed in close proximity that are visible and inviting, while also convenient, accessible and secure, such as a central business district with high number of commercial establishments (Wambugu, 2017).

2.2.6 ATM Security and Privacy

Despite the potential benefits of ATM, the security of e-banking especially ATM has been the concern of many bank customers since its introduction in Nigeria. Interestingly, there is growing interest among researchers as regards the issue of ATM security and privacy, since it is the most common form of e-banking services that is readily used by bank customers especially in developing countries like Nigeria (Adepoju & Alhassan, 2018; Anthony & Princewill, 2011; Charles & Ukpere, 2019; Al Sawalqa, 2016). Isaca (2017) opined that the key to controlling transaction risk lies in adapting effective policies, procedures, and controls to meet the new risk exposures introduced by e-banking. Basic internal controls including segregation of duties, dual controls, and reconcilements remain important (Isaca, 2017). Information security controls, in particular, become more significant requiring additional processes, tools, expertise, and testing. Banks should determine the appropriate level of security and privacy controls based on their assessment of the sensitivity of the information to the customer pertaining to their usage of ATM services in order not to be cut-up in the web of ATM fraud (Isaca, 2017).

Al Sawalqa (2016) posited that privacy and security contributes significantly to the customers' financial needs satisfaction on ATM services. Aderonke and Charles (2015) asserted that network security and the security of the system in terms of privacy are the major concerns of the users and constitute hindrance to intending users of ATM usage among bank customers. This view was supported by Ezeoha (2015) who stated that customers are afraid of security issues as it related to ATM, and banks should therefore put in place appropriate security measures and also educate their customers on the rising level of e-fraud.

Alao (2019) posited that the colossal amount of money lost in Nigeria to ATM fraud through ATM card cloning, PIN theft among others is alarming, he therefore suggested that it is important for banks to install security cameras at the ATM locations to track the activities of fraudsters in order to protect its customers from falling victim. Adepoju & Alhassan (2018) added that not so many security tools are adequately put in place by some banks as regards the use of ATM, and this has resulted to fear of ATM usage among bank customers. Charles & Ukpere (2019) also reported that ATM is the most widely used e-payment system in Nigeria and identify theft as the most prominent problems hindering the wider adoption of e-banking, and suggested that banks should adopt a unified (single) smart cardbased ATM card with biometric-based cash dispenser for all banking transactions. This according to them is to reduce the number of ATM cards carried by an individual and the biometric facility is to introduce another level of security in addition to the PIN which is currently being used (Charles & Ukpere, 2019). Moreso, the ‘go cashless’ campaign presently raising awareness in the Nigeria banking sector has opened doors for biometric authentication of customer transactions.

2.3 Empirical Review

2.3.1 Automated Teller Machine (ATM) Usage and Customers’ Satisfaction

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 (2016) 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 (2018) 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 (2015) 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.

Ray and Ghosh (2016) 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.

Olanipekun (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.

Muhammed (2010), empirically studied ATM Service Quality and Customer Satisfaction in Pakistani Banks using data from 500 customers of multinational and national banks. He used regression analysis to test his six hypotheses. The most captivating hypothesis in his study was the sixth hypothesis, he found that 'ATM Service Quality has positive and significant relationship with customer satisfaction'.

Singh (2019), studied the ‘Impact of ATM on Customers’ Satisfaction’ comparatively studying three banks in India conducted his research using 360 respondents from the three banks, he used the F-ratio statistics to test the difference in the customers satisfaction of the three banks. He concluded that Material satisfaction level is the highest in State Bank of India, followed by ICICI and then to HDFC bank.

2.3.2 ATM Service Quality and Customer Satisfaction

Quality is related to requirements (Crosby, 2016). Quality is the comparison of perceived performance and expected performance (Kang, 2016). Service quality is the customer’s overall impression of the relative inferiority/superiority of an organization and its service offerings (Bitner, Booms & Tetreault, 2010). The firm's ability to create and sustain competitive advantage depends upon the high level of service quality provided by the service provider (Yoo & Park, 2007). Therefore, providing a consistently high quality service quality can differentiate one bank ATM service from others.

Survive quality has five dimensions, which are reliability, assurance, responsiveness, tangibles, and empathy. In extant literature, service quality is found to increase repurchases and decrease customer tendency to switch to other brands. Service quality is a strong advertising cliché for the financial sectors in Nigeria because a firm with the ability to deliver quality service is

positioned to have a larger customer base compared to other competitors in the market (Akinyele, 2010).

Service quality is the customer's overall impression of the relative inferiority/superiority of a firm and its offerings (Bitner et al. cited in Adeleke & Aminu, 2012). From the foregoing, the financial sector (banks) in Nigeria should endeavour to improve the quality of their ATM service in terms of network strength, availability of funds in the ATM machines, instalment of modern ATM machines and low withdrawal charges rate among others in order to attract and retain more customers hence, customer satisfaction.

Moutinho and Smith, (2010), observed that ATM facility has resulted in speed of transactions and saved time for customers, while 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, funds transfer card to account, others. Increased ATM usage is also helped by the fact that customers now have 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 (Moutinho & Smith, 2010).

Adepoju and Alhassan (2010) explained bank customers depends and trust the use of the Automatic teller machine (ATM) to carry out their daily business transactions but the presence of e-fraudsters has scared some customers away from using the ATM. However, Maenpaa, Kale, Kuusela and Mesiranta (2018) added that the provision of security stands for the reliable

innovation that the bank can make for their customers so as to ensure that electronic banking transactions can be completed immediately, confidentially and safely without the fear of the unknown.

Onuoha and Izogo (2012) stated that the usage of ATMs include the need to increase market share and the fact that the cost of a single transaction performed by an ATM is far less than the cost of a transaction conducted by a teller since ATMs, are able to handle more transactions per unit than tellers.

2.3.3 ATM Proximity and Customer Satisfaction

ATM is one of the most important banking facilities as it enable customers to access their bank accounts 24 hours a day, even in the weekends (Wijesekara & Kandambi, 2015). However, if the nearest ATM is many kilometres from a customer's residential place, it would be undesirable for them to travel there, since one of the key benefits of ATM is accessibility or convenience (Wijesekara & Kandambi, 2015).

Wambugu (2017) stated that consumers always want to conduct their financial business at their favorite location, and banks also benefits from positioning ATMs at consumers' desired places, as transactions at an ATM only cost about half as much as these transactions conducted in the banking hall (Awaghade, Dandekar, & Ranade, 2014). These automated machines may also attract more young people if placed at the right location as they are more familiar with modern

technology, and it also bears a great opportunity to promote banking services through advertisements that may appear on screen or attached around the booth (Awaghade et al., 2014). However, in order for banks to take advantages of these benefits, ATMs should be located in places that are visible and inviting, while also convenient, accessible and secure, such as a central business district with high number of commercial establishments (Awaghade et al., 2014).

The location of ATMs has an influence on customers' attitude towards their utilization (Mansour, Eljelly, & Abdullah, 2016). Wambugu (2017) stated the reasons for customers' satisfaction with current ATMs location to include their closeness to customers' shopping sites or workplaces, while the main reason for dissatisfaction is their farness from customers' living places. Robbins (2016) posited that bank location still remains one of the most important factors that customers consider when choosing a bank, hence the location of banking structures such as brick-and-mortar branches and ATMs would also play a significant role on customer usage and satisfaction. The convenience of location is also listed as a factor that influence customers' acceptance of technology-based banking (Curran & Meuter, 2015).

With a convenient location, a small branch or store can attract more customers and increase its sales, especially for bank branches or ATMs (Al-Zyood, 2018). When choosing a location for a branch, each bank should take into account different factors, such as income levels, branch functions, competition, land value, growth potential and number of nearby financial institutions (Al-Zyood, 2018). Different criteria need to be taken into consideration when deciding on the location for ATMs installations, including the number of businesses and local people, the level of

spending, the labor force and living habits, income level, purpose of ATMs, competitors' activities and number and location of ATMs in the same range (Rachmawati, Farda, Rijanta, & Kurniarto, 2019).

2.3.4 ATM Security/Privacy and Customer Satisfaction

Indeed, research indicates different dimensions of ATM service quality, security and privacy. Lovelock (2010) identified secure and convenient location, adequate number of ATM, user-friendly system, and functionality of ATM as essential dimensions of ATM service quality. Davies, Moutinho & Curry (2016) examined the factors that influence customers' satisfaction about ATM service quality; these factors include security and privacy involved in the use of ATM, and efficient functioning of ATM. Joseph and Stone (2013) examined the United States customers' perception of ATM quality and found that user-friendly, convenient locations, secure positions, and the numbers of ATM provided by the banks are essential dimensions of ATM service quality. In a case study of Botswana, Mobarek (2017) established speed of operation, and waiting time and customers' privacy as the important predictors of ATM service quality.

Stemper (2010) stressed that the positive dimension of ATMs based on the privacy and security of transaction. Effective service delivery in ATM system guarantees quality excellence and superior performance and provide autonomy to the customers (Lovelock, 2010). Yavas, Benkenstein & Stuhldreier (2014) argued that customers' focused ATM delivery system that

fulfills their needs and maximize operational performance are essential dimensions of bank ATMs to achieve and sustain competitive advantage.

Similarly, Dilijonas, Krikšciunien, Sakalauskas & Simutis (2019) examined the essential aspects of ATM service quality in Baltic States of Estonia, Latvia and Lithuania. They identified essential resources (adequate number of ATMs, convenient and secure location and user-friendly system); important dimensions of operation of ATM (maximum speed, minimum errors, high uptime, cash backup); and value-based aspects (quality service at reasonable cost, and maximum offering to cover maximum needs of customers) as vital facets. Based on prior studies, Al-Hawari & Ward (2016) compiled a list of five major items about ATM service quality that include convenient, privacy and secured locations, functions of ATM, adequate number of machines and user-friendliness of the systems and procedures. The study found that these items constitute important aspects of ATM service quality.

Joseph and Stone (2013), through focused group study in the United States, found that easy access to location, user-friendly ATM, privacy and security are important factors that influence majority of bank customers' perception of ATM service quality. Patri'cio, Fisk & Cunha (2013) undertook a qualitative study of a Portuguese bank regarding customers' use of multi-channel offerings. The study identified accessibility and speed of operation as strong predictors of customers' satisfaction, whereas lack of privacy, security dimension and technical failures were main causes of dissatisfaction.

Rugimbana and Iversen (2014) studied the perceived attributes of ATM service quality and their marketing implication. They found that privacy and security and ease of use are important aspects, whereas complexity and unreliability (risk) were causes of dissatisfaction. Leblanc (1990) in a study of ATM users in Canada, established that major reasons for using ATM were accessibility, freedom to do banking at all times, and to avoid waiting lines. The study also found the users' apprehension about the risk associated with its use and complexity of the machine in executing the transactions.

Moutinho (2012) examined the relationship of the dimensions of usage rate and performance expectation with customers' prolonged satisfaction with ATM services. The results indicated that usage rate had a negative association with customer perceived prolonged satisfaction whereas performance expectations found to have positive and significant predictor of customers' prolonged satisfaction. Moutinho and Brownlie (2018) found that accessibility and location of ATM significantly affect users' satisfaction. The research found that customers were willing to accept new offerings through ATMs. Waiting in queue to use the ATM was the major cause of dissatisfaction among the users.

Chong, Ooi, Lin and Tan (2010) uncovered in Vietnam that security and privacy as significant factors in the customer satisfaction of ATM usage. Each client anticipates insurance for their cash and individual data from their banks. In the studies of USA, Australia, and Pakistan, security and privacy were considered as important ATM service quality dimensions (Joseph &

Stone, 2013; Al-Hawari, Ward & Newby, 2019). Subsequently, the present examination accepts that security and privacy in ATM usage is linked to consumer satisfaction.

2.4 Summary of Empirical Review

The summary of empirical review is presented below:

S/N	Authors	Countries	Objective	Methodology	Findings/Results
1	Odusina (2014)	Nigeria	The level of ATM usage and customers satisfaction in Nigeria	Questionnaires and Chi-square statistical tool	The study thus revealed that there is a positive and significant relationship between ATM usage and customers' satisfaction
2	Alex (2016)	Ghana	Impact of e-banking on customer services and profitability of banks	Questionnaire and the Statistical Package for Social Sciences (SPSS) analysis.	The study found that e-banking has impacted positively on customer service and profitability of banks, though the study identified a number of challenges.
3	Ogunlowore and Oladele (2018)	Nigeria	Impact of electronic banking on satisfaction of corporate bank customers	Questionnaire and descriptive statistics/Chi-square technique	The study revealed that there is a significant relationship between electronic banking and customers' satisfaction
4	Alabar (2015)	Nigeria	Electronic banking services and customers' satisfaction	Questionnaire and regression analysis	The study revealed that electronic banking services has significant effect on customers' satisfaction in Nigeria.
5	Olanipekun (2013)	Nigeria	Impact of e-banking on human resources performance and	Questionnaire and Chi-square technique	The study revealed that introduction of electronic banking has impacted positively on

			customer satisfaction		the bank's human resource performance and has also enhanced customers' satisfaction.
6	Muhammed (2010)	Pakistan	ATM Service Quality and Customer Satisfaction	Questionnaire and regression analysis	The study found that 'ATM Service Quality has positive and significant relationship with customer satisfaction'.
7	Singh (2019)	Indian	Impact of ATM on Customers' Satisfaction	Questionnaire and F-ratio statistics	The study found that material satisfaction level is the highest in State Bank of India, followed by ICICI and then to HDFC bank.
8	Joseph and Stone (2013)	United State	Customers' perception of ATM quality	Questionnaire and regression analysis	The study found that user-friendly, convenient locations, secure positions, and the numbers of ATM provided by the banks are essential dimensions of ATM service quality
9	Dilijonas, Krikšciunien, Sakalauskas & Simutis (2019)	Estonia	The essential aspects of ATM service quality	Questionnaire and F-statistic/Anova analysis	They identified essential resources (adequate number of ATMs, convenient and secure location and user-friendly system); important dimensions of operation of ATM (maximum speed, minimum errors, high uptime, cash backup); and value-based aspects (quality service at reasonable cost, and maximum offering to cover maximum needs

					of customers) as vital facets
10	Rugimbana and Iversen (2014)	Latvia	The perceived attributes of ATM service quality and their marketing implication	Questionnaire and Statistical Package for Social Sciences (SPSS) analysis	They found that privacy and security and ease of use are important aspects, whereas complexity and unreliability (risk) were causes of dissatisfaction
11	Moutinho (2012)	Australia	The relationship of the dimensions of usage rate and performance expectation with customers' prolonged satisfaction with ATM services	Questionnaire and regression analysis	The results indicated that usage rate had a negative association with customer perceived prolonged satisfaction whereas performance expectations found to have positive and significant predictor of customers' prolonged satisfaction
12	Moutinho and Brownlie (2018)	Australia	ATM location and customer satisfaction	Questionnaire and regression analysis	The study found that accessibility and location of ATM significantly affect users' satisfaction
13	Chong, Ooi, Lin and Tan (2010)	Vietnam	Impact of ATM security and privacy on customer's satisfaction	Questionnaire and SPSS statistical analysis	Their study found that ATM security and privacy influences customers' satisfaction.

2.5 Review of Related Theories

This study looked at resource based theory, market based theory and knowledge based theory to explain the relationship between automated teller machine and customers' satisfaction.

2.5.1 Resource-Based Theory

This view is mostly focused on a firm's resources, its consequence for the firm's performance, and its relationship with environmental opportunities and threats (Wernerfelt, 1984; Mahoney & Pandian, 1992).

The resource-based theory assumed that understanding of a firm's resources is broad and the competitive advantage of a firm should be built upon it. The resource-based view can be defined as all tangible and intangible activities that are associated to a firm. Moreover, if a firm's resources are not sufficient and hoped to base its competitive advantage on them, eight conditions must be met:

- i. Value of resources: according to Barney (1997), for the resources of a firm to be converted to its strengths, they must be able to take advantage of the environmental opportunities and learn to neutralize the threats in the environment. However, internal analyses of strengths and weaknesses has a link with the external analyses of threats and opportunities.
- ii. Heterogeneity of resources: Peteraf (1993), it has been assumed that the resource-based view have resource bundles are heterogeneous; they have intrinsically differential levels of efficiency across firms.
- iii. Rareness of resources: Barney (1997), the scarcity of resources tells us how firms that compete in a market- place possess unique valuable resources. In general, as long as the number of firms that possess a particular resource is less than the number of firms needed

to generate perfect competition dynamics within an industry, then that resource can be considered rare and a potential source of competitive advantage.

- iv. Durability of resources: Hunger and Wheelen (1996), stated that a firm's resources can become old or worn out if it isn't strong enough to be valuable in the competitive market.
- v. Imperfect resource mobility: resources that are immobile serve as better source of competitive advantage for the firm (Peteraf, 1993).
- vi. Un-substitutability of resources: there is un-substitutability of resources when there is no affordable resource to compare with.
- vii. Imperfect imitability of resources: Barney (1997), if a firm needs to ensure competitive advantage, it must have resources that cannot be copied by other competitors.
- viii. Ex ante limits to competition: according to Peteraf (1993), before a firm can establish a superior position of resources, there must be limitation of competition for that superior position.

The sources of competitive advantage classifies a firm's resource in four groups according to Barney 1997, discussed the classification of a firm resources

- i. Physical resources: here, these resources are access to raw materials, equipments, plant and machinery.
- ii. Financial resources: These resources are defined in monetary terms. Bergent (1992), stated financial resources are got if a firm offers customers a better sale of its goods and services much better than other competitors.

- iii. Human resources: These are the people that are employed in the organization because of their skill, experience and technicality in the job. Drucker (1992), stated that man is the greatest asset in an organization and without manpower, the organization becomes stagnated.
- iv. Organizational resources: These consist of structure and processes, culture as well as relationships among other firms within and outside the organization (Barney, 1997).

2.5.2 The Market-Based View (MBV)

This theory argued that factors of a firm (Bain, 1968) and an outside market orientation (Caves & Porter, 1977) are both main determinants of customer satisfaction (Porter 1980, 1985, 1996; Peteraf & Bergen, 2003). Bain's (1968), Structure-Conduct-Performance (SCP) framework and Porter's (1980) (5) five forces model are two (2) of the best known theories in this category. An industry's value sources are deeply rooted in situation of competition that helps in characterizing its finished product's strategic position.

The strategic positions are set of activities that are uniquely distinct from their competitors. In an alternative way, a business strategic position defines its performance of activities relative to other businesses. Schendel (1994), claims the performance of a business or firm mostly influences the dynamics and structure of an industry internally and how the organization meet its customers' satisfaction.

This theory deals with strategies and theories of Hoskisson's account, which are developed in the economics phase of the "development of strategic thinking" (Porter, 1980; Mintzberg, Ahlstrand & Lampel, 1998; Hoskisson, Hitt, Wan & Yiu. 1999). This phase focused on the business environment. Academics claimed that the performance of a firm is influenced by the quality of services rendered to its customers. This was proposed by According to Bain (1968), the paradigm of industrial organisation which is synonymous to the Structure-Conduct-Performance (SCP) paradigm explained how the customers' satisfaction can be affected by the relationship of the firm's behaviour (conduct) and its firm's performance. Monopolistic structures of a firm was studied by Bain (1968), and several outcomes such as barriers to entry, competitor's size, product differentiation and different levels of demand were found to affect the behaviour of a firm.

Grant (1991), stated three (3) sources of market power: barriers to entry, monopoly and bargaining power. Peteraf (1993), stated that a firm with monopoly and a powerful market position usually performs better. When a competitor who is new enters an industry, it would cause a high barrier to entry, accompanied by lower competition and an improved performance (Grant, 1991). A higher bargaining power of customers and suppliers within an industry customers can also be accompanied by an improved performance (Grant, 1991).

The five-force Porter model can enable a firm in a structured way to resolve the current situation of their industry. However, the model has developed some drawbacks, Porter's model has assumed a perfect market that is classic and also an un-dynamic market structure that is not

likely to be found in current day dynamic markets. Additionally, some industries with multiple relationships are complex, which makes the analyses of the five forces model difficult to comprehend (Wang, 2004).

Furrer et al. (2008), studied in the late 70s, claimed that strategic management has transcended from the market based view which is the structure of the industry (MBV) to the firm's internal structure with resources and capabilities.

2.5.3 The Knowledge-Based View

Murray (2000), while most researchers subscribing to the RBV regard knowledge as a comprehensive resource. Some researchers assumed that knowledge has unique features that makes it a valuable resource (Teece, Pisano & Shuen, 1997) and the most important (Tiwana, 2002). Hamel and Prahalad (1994), argued that knowledge, competencies in terms of skills, intellectual assets are the main drivers of high quality performance in the computer era. Tiwana, (2002) and Evans, (2003) also suggested that knowledge is the most relevant and crucial resource of a firm. Evans (2003), pointed out that knowledge assets dominates every other resources of the firm be it material, financial. Tiwana (2002), argued that product sources, technology, market share and capital are easier to imitate by other firms while knowledge is the only resource that is hard to copy. Grant (1996) claimed two types of knowledge exist: know-how and information. Beckmann (1999), proposed a five-level knowledge hierarchy comprises: data, capabilities, expertise, knowledge and information. Zack (1999), divided organisational knowledge into three categories: core knowledge, advanced knowledge, and innovative

knowledge. Core knowledge is knowledge that is basic and helps a firm to survive in the market-place on a short-term basis. Advanced knowledge also competes on a short term basis and provides the firm with knowledge that is similar to that of other competitors. Innovative knowledge is knowledge that is created on a long term basis for firm's survival because it gives a firm a competitive edge over their competitors. An organisation with innovative knowledge can introduce materials or practice that are innovative which can potentially help them become a market leader in their industry (Zack, 1999).

2.6 Research Gap

Empirical studies on automated teller machine (ATM) and customers' satisfaction are on the increased. Many studies have empirically linked automated teller machine (ATM) to customers' satisfaction in different countries and territories. However, having carefully reviewed these extant empirical studies, we observed the following gaps in extant empirical studies, which motivate this present study to cover the gaps and made suggestions for future study.

One of the gaps we observed in the extant studies was that most of studies on the subject matter were conducted outside Nigeria, mostly in developed nations like United States, Europe, and Asia. The only study that made attempt to examine the automated teller machine on customers' satisfaction in Nigeria was Adeleke and Aminu (2012). This extant study however focused on only ATM service in terms of network strength, availability of funds in ATM machines, instalment of modern ATM machines and low withdrawal charges rate, thereby neglecting the ATM proximity, security and privacy.

Moreover, most extant other studies done in Western countries on impact of dimensions of usage rate, performance expectation with customer's prolonged satisfaction with ATM services, customer privacy in automated teller machine usage, ATM innovations, automated teller machine and marketing implication and essential aspects of ATM service quality (Moutinho, 2012; Chong, Ooi, Lin & Tan, 2010; Yoo & Park, 2007; Maenpaa, Kale, Kuusela & Mesiranta, 2018; Rugimbana & Iversen, 2014, and Dilijonas, Kriksciunien, Sakalauskas & Simutis, 2019). These studies however neglected the impact of ATM service quality, ATM proximity, ATM security and privacy, thus creating research gaps that this study intended to fill. This study filled these gaps.

CHAPTER THREE

METHODOLOGY

3.1 Introduction

This chapter provided an overview of the problems related to the method used in the investigational study. The following sub-headings were used to discuss it: research design, study population, sample size and sampling methodology, research instrument, instrument validity and reliability, sources of data and method of data analysis

3.2 Research Design

This study is a cross-sectional type of survey research design, given that the data needed on variables were collected from the sample respondents at only a specific point in time.

3.3 Population of the study

The population of study is that group about which we want to be able to draw conclusion (Agbonifoh & Yomere, 2002). It is the totality of objects been studied and to which the generalization of our result will apply. Therefore, the targeted population of this study consists of all bank-customers in Ovia North-East LGA of Edo state. The justification for focusing on this study area is hinged on easy accesses to respondents because of the close proximity to the University of Benin, and also for time factor due to the short timeframe for the research and other academic work.

3.4 Sampling and Sampling Technique

A sample is a subset of a population selected to meet specific objectives (Esan & Okafor, 1995). A simple random and purposive sampling technique will be used in selecting the sampled respondents. According to Saunders, Lewis & Thornhill (2003), sampling is a part of the entire population carefully selected to represent that population. The justification for using random sampling technique is that it eliminates the possibility that the sample is biased by the preference of the individual selecting the sample (Bordens & Abbott, 2002). Therefore, the sample size of this study was restricted to one-hundred (100) ATM users in Ovia North-East LGA, Benin City based on simple random sampling techniques.

3.5 Operationalization and Measurement of Variables

The study is centered on automated teller machine (ATM) and customers' satisfaction. The study adopted the mostly used Likert type questions. In addition, table 3.1 shows how these variables were operationalized.

Operationalisation and measurement suggested that the measurement of automated teller machine (ATM) and customers' satisfaction were reliably achieved through the adoption of measures adapted from extant literature. The items for operationalisation and measurement of variables were sub-sectionalised along the identified objectives of this study and was measured accordingly with the use of Likert-type 5-point scale and the personal information of the respondents was subjected to Likert-type 5-point scale. The responses was evaluated and use to

compute descriptive statistics (frequency and percentage). On the area of the section B, the respondents were asked the extent they agree or disagree to the questions using the scales. The operationalisation and measurement is presented in table 3.1 below;

Table 3.1 Operationalization and Measurement of variable

S/N	VARIABLE	OPERATIONALIZATION	MEASURING SCALE
1	Gender	Sex of the Respondents	Two point categorical scale
2	Age	Age of the Respondents	Four point categorical scale
3	Education Obtained	Highest level of education obtained	Four point categorical scale
4	How does ATM enhance customers' satisfaction	The level to which ATM enhance customers' satisfaction.	Five point Likert scale: 1= strongly disagree 2=disagree 3=undecided 4=agree 5=strongly agree
5	ATM service quality and customer satisfaction	The effects of ATM service quality on customer's satisfaction.	Five point Likert scale: 1= strongly disagree 2=disagree 3=undecided 4=agree 5=strongly agree
6	ATM proximity and customer satisfaction	The effect of ATM proximity (location) on customer's satisfaction.	Five point Likert scale: 1= strongly agree 2=disagree 3=undecided 4=agree 5=strongly agree
7	ATM security/privacy and customer's satisfaction	If ATM security and privacy have any impact on customer's satisfaction.	Five point Likert scale: 1= strongly agree 2=disagree 3=undecided 4=agree 5=strongly agree

Source: Researcher's Construction (2023)

3.6 Research Instrument

The research instrument that was used is structured questionnaire automated teller machine (ATM) and customers' satisfaction. The questionnaire will be divided into two sections. Section A involved the demographics of the respondents such as the age, sex, marital status and educational qualification and most used ATM machine. Section B consist of variables that are being studied in the research and these are questions on automated teller machine (ATM) and customers' satisfaction. It was designed on a four-point likert scale; strongly agree (4), Agree (3), Disagree (2), and Strongly Disagree (1).

3.7 Reliability and Validity of the Instrument

3.7.1 Reliability

Reliability involves measuring the stability or consistency of a test score. Reliability can also be defined as the ability of a test of findings of a research to be determined. Joppe (2000), defined reliability as the degree at which results are produced with consistency and also gives a true representation of a whole population under study. Joppe suggested that if the test result that are being studied can be reproduced or repeated under the same methodology, the result instrument will be referred to as being reliable. The reliability of the instrument was estimated using Cronbach's Alpha Coefficient which is a measure of internal coefficient. Five (5) copies of the questionnaire was administered to respondents and thereafter, the scores were subjected to the

Cronbach Alpha Coefficient to compute its reliability. A reliability of at least 0.70 at 0.05 significance level of confidence is acceptable (Gable & Wolf, 1993).

Table 3.2: Reliability Test

S/N	Variables	Number of items	Cronbach Alpha Value
1	ATM Usage	5	0.976
2	ATM Service Quality	5	0.980
3	ATM Proximity	5	0.968
4	ATM Security/Privacy	5	0.977
Automated Teller Machine Customer Satisfaction		20	0.994

Source: Researcher’s Field Work (2023)

The Cronbach’s Alpha value for each construct as shown in the table above were above 0.7. This means that the instruments are reliable enough to elicit the necessary information from the respondents (Nunnally & Bernstein, 1994).

3.7.2 Validity of the Instrument

According to Joppe (2000), defined validity as measuring what it intends to measure or determining the truthfulness of the research result.

The research instrument and questionnaire was given to the supervisors and some experts in the field to confirm the correctness and suitability for the study as relate to knowledge management and its impact on organizational performance.

3.8 Sources of Data

The study made use of primary data which were obtained from respondents through the use of a structured questionnaire.

3.9 Method of Data Analysis

In analyzing the data collected, the descriptive statistical techniques was employed to analyze the demographic variables and provides answers to the research questions with the aid of Statistical Package for Social Sciences (SPSS).

CHAPTER FOUR

DATA PRESENTATION, ANALYSES AND INTERPRETATION

4.1 Introduction

This chapter presented the data analysis, interpretation and the discussion of findings. It was discussed under the following headings; Socio-demographic characteristics, answering research question, testing of hypotheses and discussion of findings.

4.2 Descriptive Analysis of Respondents Bio-Data

Table 4.1: Gender of Respondents

Gender	Frequency	Percent (%)
Male	53	53.0
Female	47	47.0
Total	100	100.0

Source: Field Survey, 2023

From the table 4.1, most of the respondents; 53 which accounted for 53.0% were male; while others, 47 respondents which accounted for 47.0% were female. This implied that both gender; male and females were represented in the study.

Table 4.2: Age of Respondents

Age	Frequency	Percent (%)
Under 20 years	15	15.0
21 – 30 years	33	33.0
31 – 40 years	31	31.0
41 – 50 years	13	13.0
50 years and above	8	8.0
Total	100	100.0

Source: Field Survey, 2023

From the table 4.2, more of the respondents, 33 which accounted for 33.0% each were in the age bracket of 21 – 30 years. 31 respondents which accounted for 31.0% were of the age bracket of 31 – 40 years. 15 respondents, which accounted for 15.0% were under 20 years of age. 13 respondents which accounted for 13.0% were of the age bracket of 41 – 50 years; while 8 respondents, which accounted for 8.0% were of the age bracket of 50 years and above respectively. This implied that different age groups of the respondents were represented in the study. This added value to this study.

Table 4.3: Educational Qualification of the Respondents

Education Qualification	Frequency	Percent (%)
Primary	5	5.0
SSCE/WAEC or equivalent	8	8.0
OND/HND or equivalent	28	28.0
B.Sc. or equivalent	42	42.0
Postgraduate Degree	17	17.0
Total	100	100.0

Source: Field Survey, 2023

From the table 4.3 above, most of the respondents, 42 which accounted for 42.0% had B.Sc. Degree and equivalent. 17 respondents, which accounted for 17.0% had a postgraduate degree. 28 respondents, which accounted for 28.0% had OND/HND degree. And 8 respondents, which accounted for 8.0% had SSCE/WAEC certificate and equivalent; while only 5 respondents, which accounted for 5.0% had primary school leaving certificate. This implied that respondents with different levels of educational qualifications were represented in the study. This also added value to the study.

Table 4.4: Occupation of Respondents

Occupation	Frequency	Percent (%)
Student	33	33.0
Self-employed	21	21.0
Civil servant	28	28.0
Employee in private sector	13	13.0
Others	5	5.0
Total	100	100.0

Source: Field Survey, 2023

From the table 4.4 above, most of the respondents; 33 which accounted for 33.0% were students. While others, 21 respondents which accounted for 21.0% were self-employed. However, 28 respondents which accounted for 28.0% were civil servant. And 13 respondents, which accounted for 13.0% were employed in the private sector; while 5 respondents, which accounted for 5.0% were engaged in other forms of occupation.

4.3 Descriptive Analysis

In this section, the responses to the questions were analyzed using Likert-Scale point (agree, strongly agree, neutral, disagree and strongly disagree).

Table 4.5: ATM usage and customers' satisfaction

ATM Usage		SA	A	NU	D	SD	Total
I am satisfied with the usage of ATM services	N	31	23	13	11	20	100
	(%)	(31.0)	(23.0)	(13.0)	(11.0)	(20.0)	(100)
ATM usage saves time and reduce stress in making withdrawal when compared to bank-hall services	N	48	27	7	10	8	100
	(%)	(48.0)	(27.0)	(7.0)	(10.0)	(8.0)	(100)
Funds are always available in my bank ATM anytime I'm making a transaction.	N	17	19	10	33	21	100
	(%)	(17.0)	(19.0)	(10.0)	(33.0)	(21.0)	(100)
Waiting in queue to use the ATM is a major cause of my dissatisfaction.	N	39	44	5	7	5	100
	(%)	(39.0)	(44.0)	(5.0)	(7.0)	(5.0)	(100)
I prefer using bank-hall services against ATM services due to the high charges attached	N	18	23	3	33	23	100
	(%)	(18.0)	(23.0)	(3.0)	(33.0)	(23.0)	(100)

Source: Field Survey, 2023

Results in table 4.5 revealed that majority of the respondents, which accounted for 31(31.0%) and 23(23.0%) were of the view that they are satisfied with the usage of ATM services. Then, 13 respondents, which accounted for 13.0% were neutral. While 11(11.0%) and 20(20.0%) of the respondents disagreed and said that they are not satisfied with usage of ATM services. However, in line with the responses, it can be concluded that majority of bank customers are satisfied with the use of ATM services.

Also, statement in item 2 showed that a higher proportion of the respondents 48, which accounted for 48.0% strongly agreed that ATM usage saves time and reduces stress in making withdrawal when compared to bank-hall services. In the same vein, 27 respondents, which accounted for 27.0% shared the same view. Then, 7 respondents, which accounted for 7.0% were

indifferent. While 10 respondents, which accounted for 10.0% and 8 respondents, which accounted for 8.0% disagreed and said that, ATM usage do not save time and reduce stress in making withdrawals when compared to bank-hall services. Therefore, in line with the responses, it can be concluded that, ATM usage saves time and reduces stress in making withdrawal when compared with bank-hall services.

Responses to statement 3 revealed that 17 respondents, which accounted for 17.0% and 19 respondents, which accounted for 19.0% were of the view that funds are always available in their bank ATM anytime they are making a transaction. Then 10 respondents, which accounted for 10.0% were neutral. While majority of the respondents, which accounted for 33(33.0%) and 21(21.0%) disagreed and said that, funds are not always available in their bank ATM anytime they intend making transactions. However, in line with the responses, it can be concluded that, funds are not always available in ATMs, and this results in customer's dissatisfaction in ATM usage.

Responses to statement 4 showed that a higher proportion of the respondents 39, which accounted for 39.0% and 44 which accounted for 44.0% were of the view that waiting in queue to use the ATM is a major cause of their dissatisfaction. Then, 5 respondents, which accounted for 5.0% were neutral. While 7 respondents, which accounted for 7.0% and 5 respondents, which accounted for 5.0% disagreed with the issue raised. Hence, it can be concluded that one of the major factors that causes customer's dissatisfaction in ATMs usage, is waiting in queue.

In item 5, respondents were asked whether they prefer using bank-hall services against ATM services due to the high charges attached. In response, 18 respondents, which accounted for 18.0% and 23 respondents, which accounted for 23.0% agreed. Then, 3 respondents, which accounted for 3.0% were neutral. While 33 respondents, which accounted for 33.0% and 23 respondents, which accounted for 23.0% disagreed. However, in line with the responses, it can be taken that majority of bank customers prefer using ATM services against bank-hall services, even with the charges attached to ATM transaction.

Table 4.6: ATM service quality and customers' satisfaction

ATM Service Quality		SA	A	NU	D	SD	Total
I always use my Bank ATM because I am satisfied with their service quality	n	40	22	6	18	14	100
	(%)	(40.0)	(22.0)	(6.0)	(18.0)	(14.0)	(100)
I am satisfied and always use my Bank ATM service because of their good customer support system.	n	32	19	17	9	23	100
	(%)	(32.0)	(19.0)	(17.0)	(9.0)	(23.0)	(100)
The issue of network unavailability is dissatisfying when using an ATM service.	n	43	34	3	16	4	100
	(%)	(43.0)	(34.0)	(3.0)	(16.0)	(4.0)	(100)
I consider prompt and quality customer service as one of the most important considerations in the evaluation of bank ATM services	n	58	35	7	0	0	100
	(%)	(58.0)	(35.0)	(7.0)	(0.0)	(0.0)	(100)
My bank ATM service reputation is not cheering, and has been a source of concern to me	n	14	23	15	29	19	100
	(%)	(14.0)	(23.0)	(15.0)	(29.0)	(19.0)	(100)

Source: Field Survey, 2023

Responses in statement 1 in table 4.6 revealed that a higher proportion of respondents, which accounted for 40(40.0%), and 22(22.0%) were of the view that they always make use of their bank ATM because they are satisfied with the service quality. Then 6 respondents, which accounted for 6.0% were neutral. While 18 respondents, which accounted for 18.0%, and 14 respondents, with 14.0% disagreed with the statement. However, in line with the responses, it can be concluded that majority of bank customers prefer using their bank ATM because of the service quality.

More so, in item 2, a higher number of respondents, which accounted for 32(32.0%), and 19(19.0%) agreed that they are satisfied and always use their bank ATM services because of their good customer support system. Then, 17 respondents, represented with 17.0% were indifferent. While 9(9.0%), and 23(23.0%) of the respondents thinks otherwise. Hence, in line with the responses, it can be concluded that most of the respondents are satisfied and always use their bank ATM services because of the good customer support system.

Responses in statement 3 showed that 43 respondents, which accounted for 43.0% and 34, which accounted for 34.0% were of the view that the issue of network unavailability is dissatisfying when using an ATM service. Then 3 respondents, which accounted for 3.0% were neutral. While 16(16.0%), and 4(4.0%) of the respondents disagreed with the statement.

Also, in statement 4, a higher proportion of the respondents, which accounted for 58(58.0%), and 35(35.0%) were of the view that they considered prompt and quality customer service as one of the most important considerations in the evaluation of bank ATM services. Then, 7 respondents,

which accounted for 7.0% were indifferent. While none of the respondents disagreed with the statement. However, in line with the responses, it can be concluded that prompt and quality customer service is one of the most important considerations in the evaluation of bank ATM services, and this enhances customer's satisfaction in ATM usage.

Responses in statement 5 above showed that 14 respondents, which accounted for 14.0% and 23 respondents, represented with 23.0% were of the agreed that their bank ATM service reputation is not cheering and this has been a source of concern to them. Then, 15 respondents, which accounted for 15.0% were neutral. While 29 respondents, represented with 29.0% and 19 respondents, which accounted for 19.0% disagreed and said that their bank ATM service reputation is cheering and satisfactory.

Table 4.7: ATM proximity (location) and customers' satisfaction

ATM Proximity (Location)		SA	A	NU	D	SD	Total
The location of ATMs has an influence on customers' attitude towards their utilization.	n	44	41	15	0	0	100
	(%)	(44.0)	(41.0)	(15.0)	(0.0)	(0.0)	(100)
ATMs should be located in places that are visible and inviting.	n	68	29	3	0	0	100
	(%)	(68.0)	(29.0)	(3.0)	(0.0)	(0.0)	(100)
ATMs should be located in places that are convenient for the customers.	n	66	33	1	0	0	100
	(%)	(66.0)	(33.0)	(1.0)	(0.0)	(0.0)	(100)
I always like conducted ATM transactions at a close location	n	53	40	7	0	0	100
	(%)	(53.0)	(40.0)	(7.0)	(0.0)	(0.0)	(100)
Banks can also benefits from positioning	n	48	50	2	0	0	100

ATMs at customers' desired places.	(%)	(48.0)	(50.0)	(2.0)	(0.0)	(0.0)	(100)
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Source: Field Survey, 2023

Responses to statement 1 in table 4.7 revealed that majority of the respondents, which accounted for 44(44.0%), and 41(41.0%) were of the view that the location of ATMs has an influence on customer's attitude towards their utilization. Then 15 respondents, which accounted for 15.0% were neutral. While none of the respondents disagreed with the statement. However, in line with the responses, it can be concluded that the location of ATMs has an influence of customer's attitude towards it utilization.

Responses in statement 2 above, showed that a higher proportion of the respondents 68, which accounted for 68.0% and 29 respondents, which accounted for 29.0% agreed that ATM should be located in places that are visible and inviting. Then 3 of the respondents, which accounted for 3.0% were indifferent. While none of the respondents disagreed with the issue raised. Therefore, in line with the responses, it can be suggested that ATMs should be located in places that are visible and inviting.

In item 3 above, 66 respondents, which accounted for 66.0% strongly agreed that ATMs should be located in places that are convenient for the customers. In the same vein, 33 respondents, which accounted for 33.0% agreed with the statement likewise. Then only 1 of the respondents were indifferent. While none of the respondents disagreed with the statement. Hence, in line with

responses, it can be concluded that ATMs should be located in places that are convenient for the customer.

In statement 4 above, a higher proportion of the respondents 53, which accounted for 53.0% strongly agreed that they always like conducted ATMs transaction at a close location. Also, 40 respondents, which accounted for 40.0% were of the same view that they like conducted ATM transactions at a close location. Then, 7 respondents, which accounted for 7.0% were neutral. While none of the respondents disagreed with the statement. Therefore, in line with the responses, most ATM users prefer carrying out their transactions at a close location.

Furthermore, in statement 5 above in table 4.7, a higher number of the respondents, which accounted for 48(48.0%), ad 50(50.0%) were of the view that banks can also benefits from positioning ATMs at customers’ desired locations. Then only 2 respondents, which accounted for 2.0% were indifferent. While none of the respondents disagreed with the statement. However, it can be concluded that banks can also benefits from positioning ATMs as customers’ desired location.

Table 4.8: ATM security/privacy and customers’ satisfaction

ATM Security and Privacy		SA	A	NU	D	SD	Total
The presence of e-fraudsters always scares me away from using the ATM	n	33	46	9	7	5	100
	(%)	(33.0)	(46.0)	(9.0)	(7.0)	(5.0)	(100)
I perform my ATM transactions confidentially and safely without fear	n	43	32	5	9	11	100
	(%)	(43.0)	(32.0)	(5.0)	(9.0)	(11.0)	(100)

I prefer conducting ATMs transactions in a secured and convenient location	n	74	21	5	0	0	100
	(%)	(74.0)	(21.0)	(5.0)	(0.0)	(0.0)	(100)
I do not carry out any ATM transactions at night for security reasons	n	29	37	17	10	7	100
	(%)	(29.0)	(37.0)	(17.0)	(10.0)	(7.0)	(100)
I prefer bank-hall transactions against ATMs transactions for convince and security	n	15	26	12	17	30	100
	(%)	(15.0)	(26.0)	(12.0)	(17.0)	(30.0)	(100)

Source: Field Survey, 2023

Item 1 in the table 4.8 above showed 33 respondents, which accounted for 33.0% strongly agreed that the presence of e-fraudsters always scares them away from using the ATM. In the same vein, 46 respondents, which accounted for 46.0% shared the view that the presence of e-fraudsters always scares them from using the ATM. Then, 9 respondents, which accounted for 9.0% were neutral. While 7(7.0%) and 5(5.0%) of the respondents disagreed and stated that the presence of e-fraudsters does not scare them from using the ATM.

Responses in statement 2 revealed that a higher proportion of the respondents, which accounted for 43(43.0%), and 32(32.0%) were the view that they perform their ATM transactions confidentially ad safely without fear. Then 5 respondents, which accounted for 5.0% were indifferent. While 9(9.0%), and 11(11.0%) of the respondents disagreed with the statement. Hence, in line with the responses, it can be concluded that most of the customers (ATM users) perform their transactions confidentially and safely without fear.

Furthermore, results in item 3 above showed that majority of the respondents 74, which accounted for 74.0% strongly agreed that they prefer conducting ATMs transactions in a secured and convenient location. Also, 21 respondents, which accounted for 21.0% shared the same view that the prefer conducting ATMs transactions in a secured and convenient location. Then, 5 of the respondents, which accounted for 5.0% were neutral. While none of the respondents disagreed with the statement. However, in line with the responses, it can be taken that most ATM users prefer conducting ATMs transactions in a secured and convenient location.

Responses in statement 4 in table 4.8 showed that 29 respondents, which accounted for 29.0% strongly agree that they do not carry out any ATM transactions at night for security reasons. Also, 37 respondents, which accounted for 37.0% shared the view that they do not carry out any ATM transactions at night for security reasons. Then, 17 respondents, which accounted for 17.0% were indifferent. While 10(10.0%), and 7(7.0%) of the respondents disagreed and stated that they do carry out ATM transactions at night without fear of insecurity. Hence, in line with the responses, it can be concluded that most ATM users do not carry out transactions at night for security reasons.

Finally, responses in statement 5 in table 4.8 showed that 15 respondents, which accounted for 15.0% strongly agreed that they prefer bank-hall transactions against ATMs transactions for convenience and security. Also, 26 respondents, which accounted for 26.0% shared the same view that they prefer bank-hall transactions against ATMs transactions for convenience and security. Then, 12 respondents, which accounted for 12.0% were neutral. While 17(17.0%), and

30(30.0%) of the respondents disagreed and stated that they prefer ATMs transactions against bank-hall transactions for continece and security. However, in line with the responses, it can be concluded that most bank customers prefer ATMs transactions against the bank-hall for convenience.

4.4 Testing of Hypotheses

4.4.1 Hypothesis one:

Ho₁: *There is no significant relationship between ATM usage and customer’s satisfaction in Ovia North-East LGA, Benin City.*

Ha₁: *There is a significant relationship between ATM usage and customer’s satisfaction in Ovia North-East LGA, Benin City.*

To answer the hypothesis one above, linear regression test was carried out and result are presented in tables 4.9, 4.10 and 4.11.

Table 4.9: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.673 ^a	.452	.451	9.801	1.563

a. Predictors: (Constant), ATM Usage

b. Dependent Variable: Customers’ Satisfaction

The coefficient of determination R^2 stood at a value of 0.452, which revealed that 45% of all the systematic variations in the dependent variable are accounted by the independence variables. The adjusted coefficient of determinant R^2 stood at 0.451 with the dependent variable, indicating that over 45% of the systematic variations in dependent variable are explained while the rest are capture by error term. The standard error of the estimate was 9.801 which is the standard deviation of the error term.

The value of the Durbin–Watson (d) statistic (1.563) and it was less than 2, hence, there is evidence of positive serial correlation”. This indicated successive error terms are positively correlated. Hence, the result was impressive and good for prediction.

Table 4.10: ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	24921.433	1	24921.433	259.413	0.000 ^a
	Residual	30165.554	314	96.069		
	Total	55086.987	315			

a. Predictors: (Constant), ATM usage

b. Dependent Variable: Customers' Satisfaction

The F-Stat was at a value of 259.413 with P-value less than 0.05. This showed significant variable.

Table 4.11: Coefficients

Model	Unstandardized Coefficients	Standardized Coefficients	T	Sig.	95% Confidence Interval for B
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	B	Std. Error	Beta			Lower Bound	Upper Bound
1 (Constant)	54.501	2.302		23.678	.000	49.972	59.030
ATM usage	2.128	.132	.673	16.106	.000	1.868	2.387

a. Dependent Variable: Customers' Satisfaction

From the above result, it was observed that ATM usage had (significant), t-value of 16.106, $p < 0.05$. "This implied that there is significant relationship between ATM usage and customer's satisfaction in Ovia North-East LGA, Benin City.

Hence, reject null hypothesis which stated that there is no significant relationship between ATM usage and customer's satisfaction in Ovia North-East LGA, Benin City, and accept the alternate, hypothesis, that there is significant relationship between ATM usage and customer's satisfaction in Ovia North-East LGA, Benin City.

4.4.2 Hypothesis two:

H₀₂: *There is no significant relationship between ATM service quality and customer's satisfaction in Ovia North-East LGA, Benin City.*

H_{a2}: *There is a significant relationship between ATM service quality and customer's satisfaction in Ovia North-East LGA, Benin City.*

To answer the hypothesis two above, linear regression test was carried out and result are presented in tables 4.12, 4.13 and 4.14.

Table 4.12: Model Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.610 ^a	.373	.371	10.491	1.336

a. Predictors: (Constant), ATM service quality

b. Dependent Variable: Customers' Satisfaction

The coefficient of determination R^2 stood at a value of 0.373, which revealed that 37% of all the systematic variations in the dependent variable are accounted by the independence variables. The adjusted coefficient of determinant R^2 stood at 0.371 with the dependent variable, indicating that over 37% of the systematic variations in dependent variable are explained while the rest are capture by error term. The standard error of the estimate was 10.491 which is the standard deviation of the error term.

The value of the Durbin–Watson (d) statistic (1.336) and it was less than 2, hence, there is evidence of positive serial correlation. This indicated successive error terms are positively correlated. Hence, the result was impressive and good for prediction.

Table 4.13: ANOVA^b

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	20527.395	1	20527.395	186.507	.000 ^a
	Residual	34559.593	314	110.062		
	Total	55086.987	315			

a. Predictors: (Constant), ATM service quality

Table 4.13: ANOVA^b

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	20527.395	1	20527.395	186.507	.000 ^a
	Residual	34559.593	314	110.062		
	Total	55086.987	315			

b. Dependent Variable: Customers' Satisfaction

The F-Stat was at a value of 186.507 with P-value less than 0.05. This showed significant variable.

Table 4.14: Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95% Confidence Interval for B	
		B	Std. Error	Beta			Lower Bound	Upper Bound
1	(Constant)	54.474	2.703		20.155	.000	49.157	59.792
	ATM service quality	1.825	.134	.610	13.657	.000	1.562	2.088

a. Dependent Variable: Customers' Satisfaction

From the above result, it was observed that ATM service quality had (significant), t-value of 13.657, $p < 0.05$. This implies that there is significant relationship between ATM service quality and customer's satisfaction in Ovia North-East LGA, Benin City.

Hence, reject null hypothesis which stated that there is no significant relationship between ATM service quality and customer's satisfaction in Ovia North-East LGA, Benin City, and accept the alternate hypothesis, that there is significant relationship between ATM service quality and customer's satisfaction in Ovia North-East LGA, Benin City.

4.4.3 Hypothesis three:

H₀₃: *There is no significant relationship between ATM proximity and customer's satisfaction in Ovia North-East LGA, Benin City.*

H_{a3}: *There is a significant relationship between ATM proximity and customer's satisfaction in Ovia North-East LGA, Benin City.*

To answer the hypothesis three above, linear regression test was carried out and result are presented in tables 4.15, 16 and 17.

Tables 4.15: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.650 ^a	.423	.421	10.060	1.688

a. Predictors: (Constant), ATM proximity

b. Dependent Variable: Customers' Satisfaction

The coefficient of determination R^2 stood at a value of 0.423, which revealed that 42% of all the systematic variations in the dependent variable are accounted by the independence variables. The adjusted coefficient of determinant R^2 stood at 0.421 with the dependent variable, indicating that over 42% of the systematic variations in dependent variable are explained while the rest are

capture by error term. The standard error of the estimate was 10.060 which is the standard deviation of the error term.

The value of the Durbin–Watson (d) statistic (1.688) and it was less than 2, hence, there is evidence of positive serial correlation. This indicated successive error terms are positively correlated. Hence, the result was impressive and good for prediction.

Tables 4.16: ANOVA^b

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	23308.583	1	23308.583	230.310	.000 ^a
	Residual	31778.404	314	101.205		
	Total	55086.987	315			

a. Predictors: (Constant), ATM proximity

b. Dependent Variable: Customers' Satisfaction

The F-Stat was at a value of 230.310 with P-value less than 0.05. This showed significant variable.

Table 4.17: Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95% Confidence Interval for B	
		B	Std. Error	Beta			Lower Bound	Upper Bound
1	(Constant)	58.074	2.210		26.279	.000	53.726	62.422
	ATM proximity	1.936	.128	.650	15.176	.000	1.685	2.187

a. Dependent Variable: Customers' Satisfaction

From the above result, it was observed that ATM proximity had (significant), t-value of 15.176, $p < 0.05$ ". This implied that there is significant relationship between ATM proximity and customer's satisfaction in Ovia North-East LGA, Benin City.

Hence, reject null hypothesis which stated that, there is no significant relationship between ATM proximity and customer's satisfaction in Ovia North-East LGA, Benin City, and accept the alternate hypothesis, that there is significant relationship between ATM proximity and customer's satisfaction in Ovia North-East LGA, Benin City.

4.4.4 Hypothesis four:

Ho₄: *There is no significant relationship between ATM security/privacy and customer's satisfaction in Ovia North-East LGA, Benin City.*

Ha₄: *There is a significant relationship between ATM security/privacy and customer's satisfaction in Ovia North-East LGA, Benin City.*

To answer the hypothesis three above, linear regression test was carried out and result are presented in tables 4.18, 19 and 20.

Table 4.18: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.564 ^a	.318	.316	10.936	1.419

a. Predictors: (Constant), ATM security/privacy

Table 4.18: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.564 ^a	.318	.316	10.936	1.419

b. Dependent Variable: Customers' Satisfaction

The coefficient of determination R^2 stood at a value of 0.318, which revealed that 31% of all the systematic variations in the dependent variable are accounted by the independence variables. The adjusted coefficient of determinant R^2 stood at 0.316 with the dependent variable, indicating that over 31% of the systematic variations in dependent variable are explained while the rest are capture by error term. The standard error of the estimate was 10.936 which is the standard deviation of the error term.

The value of the Durbin–Watson (d) statistic (1.419) and it was less than 2, hence, there is evidence of positive serial correlation. This indicated successive error terms are positively correlated. Hence, the result was impressive and good for prediction.

Table 4.19: ANOVA^b

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	17537.222	1	17537.222	146.650	.000 ^a
	Residual	37549.765	314	119.585		
	Total	55086.987	315			

a. Predictors: (Constant), ATM security/privacy

Table 4.19: ANOVA^b

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	17537.222	1	17537.222	146.650	.000 ^a
	Residual	37549.765	314	119.585		
	Total	55086.987	315			

b. Dependent Variable: Customers' Satisfaction

The F-Stat was at a value of 146.650 with P-value less than 0.05. This showed significant variable.

Table 4.20: Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95% Confidence Interval for B	
		B	Std. Error	Beta			Lower Bound	Upper Bound
1	(Constant)	44.317	3.862		11.474	.000	36.717	51.916
	ATM security/privacy	2.330	.192	.564	12.110	.000	1.951	2.708

a. Dependent Variable: Customers' Satisfaction

From the above result, it was observed that ATM security/privacy had (significant), t-value of 12.110, $p < 0.05$. This implied that there is significant relationship between ATM security/privacy and customer's satisfaction in Ovia North-East LGA, Benin City.

Hence, reject null hypothesis which stated that, there is no significant relationship between ATM security/privacy and customer's satisfaction in Ovia North-East LGA, Benin City, and accept the alternate hypothesis, that there is significant relationship between ATM security/privacy and customer's satisfaction in Ovia North-East LGA, Benin City.

4.5 Discussion of Findings

This study has examined the influence of automated teller machine (ATM) on customers' satisfaction in Ovia North-East local government area, Benin City. The findings of this study revealed that majority of bank customers are satisfied with the use of ATM services; ATM usage saves time and reduces stress in making withdrawal when compared with bank-hall services; funds are not always available in ATMs, and this results in customer's dissatisfaction in ATM usage; one of the major factors that causes customer's dissatisfaction in ATMs usage, is waiting in queue; majority of bank customers prefer using ATM services against bank-hall services, even with the charges attached to ATM transaction; majority of bank customers prefer using their bank ATM because of the service quality; most of the respondents are satisfied and always use their bank ATM services because of the good customer support system, and that, prompt and quality customer service is one of the most important considerations in the evaluation of bank ATM services, and this enhances customer's satisfaction in ATM usage. These findings collaborated with the study of Stemper (2017) who stressed that effective service delivery in ATM system guarantees quality excellence and performance which provides autonomy to the customers. Also the study of Davies, Moutinho and Curry (2016) confirmed that the factors that

influences customers' satisfaction about ATM service quality are cost involved in the use of ATM and efficient functioning of the ATM. Furthermore, the study of Joseph and Stone (2013) confirmed that easy access to user-friendly ATM and security are important factors that influences majority of bank customers' perception of ATMs service quality.

Furthermore, the findings from the study revealed that, the location of ATMs has an influence of customer's attitude towards it utilization; ATMs should be located in places that are visible and inviting; ATMs should be located in places that are convenient for the customer; most ATM users prefer carrying out their transactions at a close location; banks can also benefits from positioning ATMs as customers' desired location; most of the customers (ATM users) perform their transactions confidentially and safely without fear; most ATM users prefer conducting ATMs transactions in a secured and convenient location; most ATM users do not carry out transactions at night for security reasons, and most bank customers prefer ATMs transactions against the bank-hall for convenience and fast transaction. These findings collaborated with the studies of Awaghade, Dandekar and Ranade (2014), and Genevois, Celik and Ulukan, (2015) who stated that in order to banks to meet its customers' satisfaction and retain them, their ATMs must be located in a visible, safe and attractive location. They also stated that ATMs positioning also needs to focus on security. Although ATMs should be located in places that can reach as many customers as possible, they also need to ensure customers' safety. The authors further concluded that ATMs should be located in large urban areas with high intellectual standards and state of the art security architecture.

CHAPTER FIVE

SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter examined the summary of findings, conclusion, recommendations and suggestion for further studies.

5.2 Summary of Findings

This study examined the influence of automated teller machine (ATM) on customers' satisfaction in Ovia North-East local government area, Benin City. The study employed the descriptive analytical technique with the aid of the Statistical Package for Social Science (SPSS 22.0) in analyzing the data gathered for the study. However, the findings from the study revealed that the location of ATMs has an influence of customer's attitude towards it utilization; ATMs should be located in places that are visible and inviting; ATMs should be located in places that are convenient for the customer; most ATM users prefer carrying out their transactions at a close location; banks can also benefits from positioning ATMs as customers' desired location; most of the customers (ATM users) perform their transactions confidentially and safely without fear; most ATM users prefer conducting ATMs transactions in a secured and convenient location; most ATM users do not carry out transactions at night for security reasons, and most bank customers prefer ATMs transactions against the bank-hall for convenience and fast transaction. The major findings from the showed that;

- i. there is a significant relationship between ATM usage and customers' satisfaction in Ovia North-East LGA, Benin City.
- ii. there is a significant relationship between ATM service quality and customers' satisfaction in Ovia North-East LGA, Benin City.
- iii. there is a significant relationship between ATM proximity and customers' satisfaction in Ovia North-East LGA, Benin City; and
- iv. there is a significant relationship between ATM security/privacy and customers' satisfaction in Ovia North-East LGA, Benin City.

5.3 Conclusion

The poor use and low effectiveness of ATM services can result to issues like congestion inside the banks, spending much time in the queues before accessing the ATM services by the users and can also discourages bank customers from using ATMs due to such problems as machine breakdown that manifests into poor services offered. However, in order to improve the effectiveness of ATM services, all potential barriers to its effectiveness must be considered, and an expanded view that takes into account factors that can result in low/poor effectiveness of the ATMs must be considered. This study however considered that a high number of respondents were satisfied with type of ATMs they used both in terms of their mode of operation and access. The ease of use and accessibility influences the satisfaction of ATM users in the study area; while ATM security challenges was linked to the decline or reduced used of ATM services by bank customers.

Finally, a number of factors contribute to the satisfaction of customers accessing ATM services, such factors include: reliability, safety, accuracy and convenience of ATM services and quick access to money and ease of operation.

5.4 Recommendations

Based on the findings of this study, the following recommendations are provided:

- i. In order to increase the convenience for users, banks need to strengthen the card payment system together, further expanding card acceptance points such as ATMs.
- ii. It is important for banks to check ATMs periodically, taking into account the high demand for cash withdrawal of customers; monitor closely and regularly the amount of cash remaining in each ATM including weekends and holidays.
- iii. Banks should also meticulously monitor the operating status of ATMs, prompt repair and remedy abnormal incidents occurring to ATMs.
- iv. The ATMs should be located in so many places especially busy places for proximity purposes and reducing the amount of time spent in the queue before accessing the ATM services.
- v. The banks should make sure that the cost of using the ATM is kept as minimum as possible, as this will encourage more people to use these services, which in turn will help reduce congestion in the banks.

- vi. Banks should deploy ATMs that are friendly oriented, meaning those that are made easier to use.
- vii. Banks should also consider placing ATMs in the public places as an important strategy to customer satisfaction, which will stimulate ease of access to both ATMs and finances.
- viii. Banks should create more awareness on how to ensure self-security to customers, such as to stop responding to unnecessary email and text message except otherwise, sharing pin with others and so on.

5.5 Suggestion for Further Studies

This research suggested that future studies by researchers on automated teller machine (ATM) usage and customer satisfaction can focus on the relationship between ATM service quality and customers' retention. Future research can also evaluate how age and education can influence the use of ATM services. And finally, similar research can be undertaken in rural area to find the differences in customer satisfaction level between urban and rural customers.

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APPENDIX I
DEPARTMENT OF BUSINESS ADMINISTRATION
FACULTY OF MANAGEMENT SCIENCES
UNIVERSITY OF BENIN
BENIN CITY

QUESTIONNAIRE

AUTOMATED TELLER MACHINE (ATM) AND CUSTOMERS' SATISFACTION

Dear Respondent,

I am a final year student in the above department and institution. As part of the requirement for my B.Sc. Degree programme, I am conducting a research on **“automated teller machine (ATM) and customers’ satisfaction.”**

Please kindly respond to the items by ticking your response in the spaces provided below. Your responses will be treated in strict confidence and used for this research purpose only.

Thanks for your anticipated cooperation.

Yours faithfully,

Joy Bose JAMES

Researcher

This questionnaire is divided into two (2) sections; A and B. Section A focuses on demographic information of respondent, while section B contains study related questions.

SECTION A: DEMOGRAPHIC INFORMATION OF RESPONDENT

Please tick (✓) where appropriate or comment.

1. Gender: Male [], Female [].
2. Age: Under 20rs [], 21-30yrs [], 31-40yrs [], 41-50yrs [], 50 years and above []
3. Educational Qualification: Primary [], SSCE/WAEC or equivalent [], OND/HND or equivalent [], B.Sc., or equivalent [], Postgraduate Degree [].
4. Occupation: Student [], Self-employed [], Civil Servant [], Employee in Private Sector [], Others []

SECTION B: FIELD QUESTIONS

Please indicate by ticking [✓] in the appropriate box where available and provide concise answers where appropriate in the available box.

Keys:

- Strongly Agree** = **SA**
Agree = **A**
Natural = **N**
Strongly Disagree = **D**
Disagree = **SD**

S/N	Item	SA	A	NU	D	SD
	ATM usage and customer’s Satisfaction					
5.	I am satisfied with the usage of ATM services					
6.	ATM usage saves time and reduce stress in making withdrawal when compared to bank-hall services					
7.	Funds are always available in my bank ATM anytime I’m making a transaction.					
8.	Waiting in queue to use the ATM is a major cause of my					

	dissatisfaction.					
9.	I prefer using bank-hall services against ATM services due to the high charges attached					
	ATM service quality and customers' satisfaction					
10.	I always use my Bank ATM because I am satisfied with their service quality					
11.	I am satisfied and always use my Bank ATM service because of their good customer support system.					
12.	The issue of network unavailability is dissatisfying when using an ATM service.					
13.	I consider prompt and quality customer service as one of the most important considerations in the evaluation of bank ATM services					
14.	My bank ATM service reputation is not cheering, and has been a source of concern to me					
	ATM Proximity (Location) and customers' satisfaction					
15.	The location of ATMs has an influence on customers' attitude towards their utilization.					
16.	ATMs should be located in places that are visible and inviting.					
17.	ATMs should be located in places that are convenient for the customers.					
18.	I always like conducted ATM financial transaction at a close location					
19.	Banks can also benefits from positioning ATMs at customers' desired places.					
	ATM security/privacy and customers' satisfaction					
20.	The presence of e-fraudsters always scares me away from using the ATM					
21.	I perform my ATM transactions confidentially and safely without fear					
22.	I prefer conducting ATMs transactions in a secured and convenient location					
23.	I do not carry out any ATM transactions at night for security reasons					
24.	I prefer bank-hall transactions against ATMs transactions for convince and security					

APPENDIX II

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.673 ^a	.452	.451	9.801	1.563

ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	24921.433	1	24921.433	259.413	0.000 ^a
	Residual	30165.554	314	96.069		
	Total	55086.987	315			

Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.	95% Confidence Interval for B	
		B	Std. Error	Beta			Lower Bound	Upper Bound
1	(Constant)	54.501	2.302		23.678	.000	49.972	59.030
	ATM usage	2.128	.132	.673	16.106	.000	1.868	2.387

Model Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.610 ^a	.373	.371	10.491	1.336

ANOVA^b

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	20527.395	1	20527.395	186.507	.000 ^a
	Residual	34559.593	314	110.062		
	Total	55086.987	315			

Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95% Confidence Interval for B	
	B	Std. Error	Beta			Lower Bound	Upper Bound
1 (Constant)	54.474	2.703		20.155	.000	49.157	59.792
ATM service quality	1.825	.134	.610	13.657	.000	1.562	2.088

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.650 ^a	.423	.421	10.060	1.688

ANOVA^b

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	23308.583	1	23308.583	230.310	.000 ^a
	Residual	31778.404	314	101.205		
	Total	55086.987	315			

Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95% Confidence Interval for B	
	B	Std. Error	Beta			Lower Bound	Upper Bound
1 (Constant)	58.074	2.210		26.279	.000	53.726	62.422
ATM proximity	1.936	.128	.650	15.176	.000	1.685	2.187

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.650 ^a	.423	.421	10.060	1.688

1	.564 ^a	.318	.316	10.936	1.419
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ANOVA^b

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	17537.222	1	17537.222	146.650	.000 ^a
	Residual	37549.765	314	119.585		
	Total	55086.987	315			

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95% Confidence Interval for B	
		B	Std. Error	Beta			Lower Bound	Upper Bound
1	(Constant)	44.317	3.862		11.474	.000	36.717	51.916
	ATM security/privacy	2.330	.192	.564	12.110	.000	1.951	2.708