

CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

The evolution of information and communication technology (ICT) has dramatically changed the innovative thinking and attitudes of individuals towards design, quality and delivery of services or products. It is a phenomenon that no reliable organization can ignore. As a matter of fact, Information and Communication Technology (ICT) has moderated the constraints of time, space, and information access in world trade and commerce as a whole. Emerging trends in socio-economic growth shows a high premium being placed on information and communication technology (ICT) by homes, organizations, and nations.

In any country, a vibrant banking industry is pivotal to the achievement of economic growth and development. Through the efficient financial services it provides, the banking industry encourages the mobilization of savings from the surplus unit of economy to the deficit unit which can be converted in to investment. Thus, a bank principally serves as an intermediary between savers or depositors and borrowers. The Nigerian banks in order to survive, just like other organizations, operate in a very dynamic marketing environment which is characterized by rapid changes in technology, consumer tastes, economic and social forces. The banks must, therefore, adapt to the changing business environment that includes changes in customer needs and wants.

The banking industry no doubt has witnessed advancement in technology just like any other sector. The adoption of e-banking service is one of these as it affects banking operations entirely. With the adoption of Self Service technology by the banks, e-banking system, for

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example, the mobile banking has continued to serve the populace. It offers convenience to customers and provides banking services well beyond the traditional service period. It therefore, encourages a cashless society. As at today, almost all sectors of the Nigerian economy whether financial or non-financial organizations are adopting computer based approaches to service delivery. E-banking is critical in the transformation drive of banks in areas such as products and services and how they are delivered to customers. Thus, it is seen as a valuable and powerful tool in the development, growth, promotion of innovation and enhancing competitiveness of banks (Gupta, 2008; Kamel, 2005). Given the significant role of e-banking in the developmental drive of banks, information technology has been found to lead to improvement in business efficiency and service quality and hence attract customers as well as retain the existing customers (Kannabiran & Narayan, 2005).

Banks have drastically converted from the traditional use of banking to branchless positions of banking. The latest adoption of using technology has helped banks to extend their customer base while electronic banking has proved to be the main advancement. Adoption of latest technology has enabled banks to extend their customer base, where electronic banking has proved to be the chief advancement (Cruz & Laukkanen, 2009). Mobile banking is considered as the provision of banking services to the customers on their mobile phones and other mobile devices. Mobile banking is used for operation of the bank account in case of current and deposit or savings account.

The consolidation exercise in Nigerian banking sector and the several banking reforms i.e. Cashless economic policy, Electronic banking payments system, etc. has drawn the attention of many banks to application of various technological devices in promoting/achieving better customer service delivery that guaranteed customer satisfaction that translates into increase

profitability and higher return on investment. The emergence of the “digital economy” has made much attention being shifted to the customers. Customers are increasingly demanding more value, with goods customized to their exact needs, at less cost, and as quickly as possible. To meet these demands, organizations need to develop innovative ways of creating value which often require different enterprise architectures, different information communication technology (ICT) infrastructures and different ways of thinking about doing business. This transformation of business from an old method of company’s operations to a new agile electronic method requires a lot of innovative thinking, planning and investment. These therefore give the motivation for this current study on the impact of mobile banking adoption on customer satisfaction in Nigerian deposit money banks

1.2 Statements of the Problem

The shortcomings and inefficiencies of traditional system of banking coupled with fraud and physical attack on cash have led to the adoption of mobile banking system in Nigeria. Many banks have adopted various technological mobile devices such as ATM, electronic payment system, P.O.S. etc., in promoting and achieving better customer’s service delivery and customer satisfaction (Shanka2012). Despite its ease of use, affordability, security, convenience and the wide-spread awareness on mobile banking services, the non-users of mobile banking services have not seen the germane need to adopt mobile banking services. The reason for the lack of interest may be due to challenges such as culture, level of education, level of poverty and infrastructural availability.

The absence of adequate customer satisfaction in the traditional banking system which facilitated the adoption of mobile banking system in Nigeria seems not to have taken the customers to their height of maximum satisfaction (Adeoye 2013). Although the attention of

some customers have been drastically drawn to the benefits of mobile banking services, which allow customers to make transfer or withdraw cash from their accounts and even communicating with banks through their mobile devices without physically going to banking halls; other transactions can be performed by customers either in their homes, streets or respective offices at their convenience. However, all of these seem not to be enough for the yearning of the ever-demanding customers because queues are still commonly seen in banking halls.

Similarly, customer service delivery could be considered as an integral part of any organization and it is pertinent to identify the key beneficial factors in terms of customer satisfaction (Oladejo & Yunus, 2013). It is observed that businesses in the 21st century are facing stiff competitions. This is due to the increasing influence of technology and banking industry is not an exception. And as a result, by implication, the various technical innovations appear not to have achieved the expected and projected customer's service delivery. For instance, there has not been effective quick service delivery or response which could provide customer satisfaction. There are however, imperatives and drivers that must be put in place to ensure that mobile banking system yields optimal services delivery. Examples of such drivers are stable network, security architecture, accessibility and operational efficiency. It is therefore imperative to examine how mobile banking system can yield quality service delivery. By understanding how mobile banking system can yield effective service delivery, banks would be better positioned to achieve sustainable distinctive and competitive advantage.

A number of gaps are evident in the current literature. Among these gaps is the tradition of inconsistencies in research findings such as mixed, inconclusive and contradictory evidence on the relationship between mobile banking and customer satisfaction. This inconsistency in findings signifies inadequacy of studies conducted on the evaluation of mobile banking adoption

and customer satisfaction. Thus, there remains no consensus on the findings about the relationship that exists between mobile banking adoption and customer satisfaction. Until a common ground is found, more studies are required to resolve the observed inconsistencies attributed to the methodological shortcomings in the previous studies

1.3 Research Questions

Arising from the statements of research problem, the following are the research questions;

- i. What are the factors influencing the adoption of mobile banking services by customers of selected Nigerian Deposit Money Banks (DMB)?
- ii. What are the effects of mobile banking services on customer satisfaction in selected Nigerian Deposit Money Banks (DMB)?
- iii. What are the effects of mobile banking system on quality of service delivery in selected Nigerian Deposit Money Banks (DMB)?

1.4 Objectives of the Study

The general objective of this study is to examine the impact of mobile banking adoption on customer satisfaction in selected Nigerian Deposit Money Banks. The specific objectives of this study are to:

- i. evaluate the factors influencing the adoption of mobile banking services by customers of selected Nigerian Deposit Money Banks (DMB);
- ii. investigate the effects of mobile banking services on customer satisfaction in selected Nigerian Deposit Money Banks (DMB) and
- iii. examine the effects of mobile banking system on quality of service delivery in selected Nigerian Deposit Money Banks (DMB)

1.5 Research Hypotheses

The following hypotheses are formulated for the study.

H0₁: There are no factors significantly influencing the adoption of mobile banking services

H0₂: Mobile banking services does not have any significant effect on customers' satisfaction.

H0₃: Mobile banking system does not have significant effect on the quality of service delivery

1.6 Justification for the Study

Globalization and financial liberalization constitute major changes that have significantly affected banks and this has resulted in competition among banks forcing individual banks to find new market to expand. The introduction of ICT into the banking industry has affected service delivery and satisfaction. Every banking industry is concerned with the introduction of the best possible ICT strategy towards improving their performances as well as to guarantee the sustainable growth and other goals. Many banks are shifting step by step from the traditional way of banking and are gradually introducing ICT into their service delivery.

A number of gaps are evident in the current literature. Among these gaps is the tradition of inconsistencies in research findings such as mixed, inconclusive and contradictory evidence on the relationship between mobile banking and customer satisfaction. This inconsistency in findings signifies inadequacy of studies conducted on the evaluation of mobile banking adoption and customer satisfaction. Thus, there remains no consensus on the findings about the relationship that exists between mobile banking adoption and customer satisfaction. Until a common ground is found, more studies are required to resolve the observed inconsistencies attributed to the methodological shortcomings in the previous studies. These methodological shortcomings involve the use of uni-dimensional frameworks which means only one issue was examined at a time in just one bank or few banks.

Second is the observed prevalent use of conceptual review of literature to examine the link between mobile banking and customer satisfaction. This study therefore tried a more rigorous empirical approach that takes an integrative and holistic perspective to include both staff and customers in selected deposit money banks in the study. Similarly, in addition to examining the factors affecting slow adoption of e-banking in Nigeria, this study examines how mobile banking has affected service delivery and customers' satisfaction since previous studies focused on only customers' satisfaction. A combination of how mobile banking affected both service delivery and customer satisfaction was done.

Furthermore, the outcome of this study will be of benefit to the bank management as it intends to help identify both encouraging and discouraging factors affecting the slow adoption nature and preferred services or products expected of mobile banking services. In addition, it will give a policy direction to regulatory authorities in the banking sector. The study will contribute to the existing literatures and serves as reference point to future studies in related area.

1.7 Scope of the Study

The study focuses on the activities of selected Deposit Money Banks (DMBs) in Ilorin Metropolis that are registered as Public Liability Companies (PLC) and listed on the Nigerian Stock Exchange (NSE). Out of the fifteen deposit money banks that were quoted on the Nigerian Stock Exchange (NSE) namely Access Bank Plc, First Bank of Nig. Plc, Guaranty Trust Bank Plc, UBA Plc, Zenith Bank Plc, Diamond Bank Plc, Ecobank Nig. Plc, Fidelity Bank Plc, First City Monument Bank Plc, Stanbic-IBTC Bank Plc, Sterling Bank Plc, Skye Bank Plc, Union Bank of Nig. Plc, Unity Bank Plc and Wema Bank Plc, only the banks categorized as Tier 1 (Zenith Bank Plc, UBA Plc, GTBankPlc, FBN Plc, and Access Bank Plc) were chosen for the study because they apart from being adequately capitalized (Akanbi, 2013) and strong enough to undertake provision of mobile banking services. They were found to have significantly provided mobile banking services.

CHAPTER TWO

LITERATURE REVIEW

This chapter focused on the literature aspect of the study which contains the conceptual review, theoretical review and empirical review.

2.1 Conceptual Review

This chapter focuses on conceptual issues and definitions that are related to the subject matter. They include mobile banking, customer's satisfaction and service delivery

2.2.1 Mobile Banking

Mobile banking (m-banking) is a term used for performing banking transactions via mobile device such as mobile phones (Asfour & Haddad, 2014). Mobile Banking is one of the very latest services of banking business. This system has brought some very important operations of banking in the pockets of people. People can now know their balance, transaction history, products of the bank, transfer fund through their mobile at anytime from anywhere. Cruz (2009) defined mobile banking as any transaction involving the transfer of ownership or rights to use goods and services, which is initiated and/or completed by using mobile access to computer-mediated networks with the help of an electronic device. They further indicate that mobile banking refers to provision of bank-related financial services with the help of mobile telecommunication devices. The scope of offered services may include facilities to conduct bank and stock market transactions, to administer accounts and to access customized information from the bank. Mobile banking is most often performed via short message services (SMS) or mobile internet, but can also be used by special programs called clients downloaded to the mobile device. Over the past few years, advancement in information technology has changed the way organizations operate and conduct their business (Arbore & Busacca, 2009).

Luo, Li, Zhang, & Shim (2010) defined mobile banking as an innovative method for accessing banking services via a channel whereby the customer interacts with a bank using a mobile device (e.g. mobile phone or personal digital assistant (PDA)). Mobile banking is a part of new banking dimension i.e. branchless banking – a form of digitalized banking. This branchless banking has a great potential in extending the distribution of financial services to poor people who are not reached by traditional bank branch network.

Mobile Banking is a financial transaction conducted by logging on to a bank's website using a cell phone such as viewing account balances, making transfers between accounts, or paying bills. It is a term used for performing balance checks, account transactions, payments, etc. via a mobile device such as a mobile phone. The Federal Reserve survey (2013,) defines mobile banking as “using a mobile phone to access your bank account, credit card account, or other financial account. Mobile banking can be done either by accessing your bank’s web page through the web browser on your mobile phone, by text messaging or by using an application downloaded on your mobile phone”. The customers are required to follow a pre-determined process and procedure to get the services offered by the bank such as: depositing, withdrawals, checking of statement, balance inquiry as well as transfers within and outside the country requires verification, authentication and finally transaction.

(Jepleting, 2013; Clark (2008) suggested that as a channel, the mobile phone can augment the number of channels available to consumers, thereby giving consumers more low-cost self-service options by which to access funds, banking information and make payments. This allows a customer to interact with a bank via a mobile device such as a mobile phone or personal digital assistant. Sheu (2016) opined that mobile banking permits that the bank makes provision for this service through a classic telephone line. The bank customers can obtain the necessary

information on dialing or calling a telephone number given to them by a bank. A customer can automatically receive information about his account balance and also SMS is sent to the customer immediately after a certain operation is performed or on request. Mobile banking is the provision of banking services with the help of mobile devices. These devices assist the customers to deposit money into their account, transfer money to other user, for instance, sellers of goods and services, relatives and friends; this brought convenience (Mbogo, 2010). Hossain (2012) defined Mobile Banking as a process of no branch banking which provides financial services to unbanked communities in both urban and rural areas at affordable cost. The aim of the service is not to destroy branch banking, but to consider those people under the umbrella of banking service that are away from banking facilities. It is an application of m-commerce which enables customers to access bank accounts through mobile devices to conduct and complete bank-related transactions such as balancing cheques, checking account statuses, transferring money and selling stocks (Kim, Shin & Lee, 2009; Tiwari & Buse, 2007).

2.1.2 Forms of Mobile Banking Services

Mobile banking can offer services such as account information, mini statements, checking of account history, alerts on account activity (passing of set thresholds) monitoring of term deposits, access to loan statements, access to card statements, mutual funds (equity statements), stop payment on cheque, ordering cheque books, balance checking in the account. Also, it can do payments, deposits, withdrawals and transfers such as domestic and international fund transfers, micro-payment handling, mobile recharging, commercial payment processing, bill payment processing, peer to Peer payments, withdrawal at banking agent, deposit at banking agent (Masamila, 2014). Similarly, Anand (2007) also opines that most banks offer basic mobile banking services for their customers, the most common services of them are account alert,

security alerts, reminder and account balances updates and history, Customer service via mobile, branch or ATM location information, bill payments, funds transfers and transaction verification. Mobile banking offers millions of people a potential solution in emerging markets that have access to a cell phone, yet remain excluded from the financial mainstream. It can make basic financial services more accessible by minimizing time and distance to the nearest retail bank branches as well as reducing the bank's own overheads and transaction-related costs. Mobile banking presents an opportunity for financial institutions to extend banking services to new customers, thereby, expanding their market (Senso & Venkatakrishnan, 2013).

2.1.3 Functions of Mobile Banking

The types of services a bank can offer under the umbrella of mobile banking can be divided into three general functions: transactions, communication/CRM and security (Peevers, 2010).

Transactions: Ordering a new cheque book or PIN number, requesting a mini statement, transferring money or making a payment, these are all types of banking transactions that could be and are offered through mobile banking service. Mobile payments are a form of payment combining elements from other methods of payments such as credit/debit cards, prepaid cards, telephone bills and premium SMS messages (SMS messages that cost a fixed, predetermined amount). The viability of mobile payments has been generally proved to be acceptable to consumers (Khodawindi, 2003).

Communication: Mobile banking can be used as a one-to-one business to customer communication channel and offers massive potential for customer relationship management (CRM). SMS can be used for marketing of a bank's services and products, confirmation of transactions made by the customer with the bank via another channel (e.g. internet or telephone

banking), confirmation of contact with the bank via another channel, confirmation of appointments, complaints, etc. Dealing with customer complaints is an important issue for businesses (Fornell & Wernerfelt 1997; Johnston & Mehra, 2002). Banks need effective channels and procedures for resolving complaints because these could lead to a customer switching to another bank.

Security: Mobile banking through SMS alerts can be used as a method of adding authentication to online transactions, and potentially to telephone transactions. SMS can be used to generate one time passcodes (OTP). An OTP is a password (usually a string of digits) that is valid only for a single online session or transaction that is made available to the customer either by a physical hardware device with a small display that the customer carries; by a Chip and PIN card reader device; or by using an “out-of-band” channel like SMS. To authenticate their transaction, a customer must type in the OTP rather than a static password. SMS OTP generation has been implemented in Asia (Yeo, 2006)

2.1.4 Merits of Mobile Banking

Mobile banking has lots of advantages for both providers. It has so many benefits with lower cost. Banks do not require much investment and they do not even have to modify their existing infrastructure. Banks can send the message to huge number of people. Mobile banking also helps banks to form good relations with their customers; banks get valuable data about the customers which help them to launch an effective customer’s relationship management practices. It facilitates quick feedback and helps in customer retention and customer loyalty (Saleem & Rashid, 2011).

When banks have customer database, they can use SMS to give information about their services to their existing customers. Customers enjoy anytime anywhere banking with the help of

their mobile phones, they don't need to stand in the queues or face the employees whom do not. Mobile banking is cost-effective for bankers and customers. Also, the information can be stored automatically in mobile phone as a proof in the form of SMS whether sent or received (Angelovay & Sankar, 2012). Adewoye (2013) opined that the merits of mobile banking lie in its ability to reasonably reduce the cost of rendering services to customers. For service providers, mobile banking offers the next surest way to achieve growth by offering suitable services to attract new customers or retain old ones. It also helps alert customers on trends happening in their accounts in order to minimize fraud. While also encouraging them and wishes customers well on special occasions like birthdays that customers value a lot. The implication of this is that mobile banking help to make full access to the details and transactions of personal bank accounts, as well as making credit installment, utility bill payments and transferring funds. Customers who use mobile banking must register for all service through bank website and download the mobile banking application to their phones, once the application are installed you can use this service free of charge the only cost you have to pay is the normal communication by the mobile operators (Al-Jabri & Sohail, 2012).

Wang (2006) posited that mobile banking provides a number of advantages for both banks and customers. Mobile banking removes geographical limitation for customers and therefore provides convenience. There is no time limitation i.e. banking maybe performed throughout the day and in any place. Mobile banking also provides efficient cash management and security of cash. Concerning the nature of its functions and services, the banking sector is relatively open to innovative technologies. This may be due to the fact that competition has increased and banks have recognized the importance to differentiate themselves from other financial institutions by offering services online via different distribution channels. Currently,

mobile banking offers financial transactions and information services such as viewing account balances, making transfers between accounts, or paying bills by using a mobile device like cell phone, PDA, or a smart phone.

2.1.5 Customer Satisfaction

A customer, sometimes known as a client, buyer, or purchaser is the recipient of goods, services, products, or ideas, obtained from sellers, vendors or suppliers for a monetary or other valuable consideration. Customer satisfaction is a term frequently uses to measure how products and services supplied by a company meet and exceeds customer expectation. Customer satisfaction can be defined as the number of customers or percentage of total customers, whose reported experience with a firm, its products or services exceeds specified satisfaction goals. Oliver (1997) defined customer's satisfaction as the customers' post purchase comparison between pre-purchase expectation and performance received. It is the value of the service offered to customers which helps to stop them from defecting to other organizations.

Generally, customer satisfaction has been used to measure how the services or products of a firm meet or go beyond customer expectations. Customer satisfaction is the sign of customer reliability and re – purchasing intentions. It is equally important because customers seen it as a key differentiator in today's competitive market place and customer satisfaction increases the lifetime value of the customers (Beard, 2014). Since the consumers are the centre of all marketing activities satisfying them continuously ensures the rise in the profit level of firms. Thus, identifying the factors for customer satisfaction is very necessary. According to East (1997), customer satisfaction is the feeling or attitude of a customer towards a product or service after it has been used. The satisfaction of the customer especially in the service business had a great importance because the satisfaction of the customer directly linked with the customer

loyalty or the repetition of using the services which the modern banking has provided (Ravichandran, Prabhakaran & Kumar, 2010).

However, Levesque & McDougall (1996) pointed out that the major gains in customer satisfaction are likely to come from improvements in service quality, service features and customer complaints handling. Therefore, in the context of this study, customer satisfaction entails meeting customers' expectations when rendering services via mobile banking. Kotler (2002) opined that a highly satisfied customer generally stays loyal and longer, buys more as the company introduces new products and upgrades existing products, talks favorably about the company and its products, pays less attention to competing brands and is less sensitive to price, offers product or services ideas to the company, and cost less to serve than new customers because transactions are routine. Satisfaction will also depend on product and service quality. In a competitive marketplace where businesses compete for customers, customer satisfaction is seen as a key differentiator and this, increasingly, has become a key element of business strategy. The need for customer retention is of two fundamental reasons which are firstly, efficiency in marketing programmes because it has been estimated that an average company spends seven times more to get a new customer than it does to hold a current one and secondly effectiveness in marketing programmes because in most cases than is assumed, marketing can succeed in building a loyal following of repeat buyers rather than constantly wooing new recruits (Kotler, 1997).

Customer satisfaction plays an important role in company's management and profitability. In relation to the purchaser's anticipations, customer satisfaction is largely contingent upon the product or service's perceived performances. The customer is dissatisfied when the product's performance is lower than expectations, satisfied if performance matches expectations and highly

satisfied or delighted when it outperforms the customer's expectations (Kotler & Armstrong, 2010). Service quality is an essential consideration for organizational growth and success and is of great strategic importance for management (Sahny, 2008). For identifying the quality of services in any sector, customer satisfaction is an important causal factor. In case of the banking sector, it is the principal factor in the success (Karim & Chowdhury, 2014)

2.1.6 Customer Service Delivery

Customer service delivery has been defined in different contexts and has divergent views. Some scholars are of the view that customer service delivery is the quality of services rendered to the customer while others were of the view that customer satisfaction should be on the quality of the goods or product (Joseph & McClure, 1999; Musiime & Biyaki, 2010; Peggy & John, 2007). Customer service is the provision of service to customers before, during and after purchase. According to Turban and Lee (2002), "customer service is a series of activities designed to enhance the level of customer satisfaction – that is, the feeling that a product or service has met the customer satisfaction. Service delivery is the process of tailoring services to meet customer needs at a price the business can afford. Service delivery fosters a corporate behaviour of responsible use of information technology (IT) services to maximize corporate profits and satisfy customer (Mustapha, 2016). Yinus and Akande (2016) opined that service delivery has been described to be one of key performance indicators of a banking organization. The extent to which customers are satisfied with the service rendered has great impacts on the overall performance and must be taken seriously in the industry. Service delivery which entails service quality has become a useful weapon for the organization since it helps them differentiate from other competitors. Overall service quality of an organization is decided by the interaction, physical and corporate quality. The output of the comparison between expected and perceived service is the

definition of service quality (Lewis & booms, 1983). Service quality is also known as the attitude which is formed on the basis of long term evaluation of the service quality and attitudes considered as parallel constructs (Bitner & Hubert, 1994). Since the attitude indicates a consistent positive or negative direction toward an object (Allport, 1935), customer service delivery relies on the ability of the organization to determine customers' requirements and then meet these requirements. The quality of services performed can only be assessed during or after consumption (Amoah-mensah, 2011; Ganguli & Roy, 2011; Zhengwei, 2012). Research has shown that the more comprehensive and personal the electronic services are, the more loyal to patronize or repeat transaction by the customers (Al-Sukkar, 2005; Floh & Treiblmaier, 2006).

Quality is a comparison between expectations and performance. Service quality is a measure of how well the service level delivered matches customer expectations. Delivering quality service means conforming to customer expectations on a consistent basis (Lewis & Booms, 1983). The comparison of expected and perceived service is not like that performed by consumers when evaluating goods, what differs with service is the nature of the characteristics upon which they are evaluated.

2.2 Theoretical Review

This section focuses on relevant theories that underpin mobile banking adoption and customer satisfaction.

2.2.1 Technological Acceptance Model (TAM)

Technological Acceptance Model (TAM) is one of the often quoted theories when carrying out research on mobile banking. Emerging information technology cannot deliver improved organizational effectiveness if it is not accepted and used by potential users. Technology Acceptance Model (TAM) is one of the most successful measurements for computer

usage effectively among practitioners and academics (Sherif, 2004). Thus, it is a theoretical foundation to explain and predict the individual's acceptance of information technology. TAM is consistent with Everett Rogers (1983) theory on diffusion of innovation where the adoption of technology is a function of a variety of factors including relative advantage and ease of use thus. TAM is based on Theory of Reasoned Action (TRA), which suggests that social behaviour is motivated by the attitude and intention to perform. TRA is a widely studied model from social psychology which is concerned with the determinants of consciously intended behavior (more general theory). According to TRA, a person's performance of a specific behaviour is determined by his/her behavioural intention (BI) to perform the behaviour and BI is jointly determined by the person's attitude (A) and subjective norm (SN) concerning the behaviour in question.

TAM is based on two main assumptions Perceived usefulness (PU) Perceived ease of use (PEOU). Perceived Usefulness (PU) refers to the degree to which a person believes that using a particular system would enhance his/her job performance while perceived ease of use (PEOU) refers to the degree to which a person believes that using a particular system would be free of effort. Technology Acceptance Model (TAM) tries to establish a relationship and it also describes the intention of users and how users are influenced by a product or service. It emphasizes the importance of perceived usefulness and ease of use in technology adoption (Karayanni, 2003). Thus, this theory is specific to information technology (IT) usage (Mathieson, Peacock & Chin, 2001) and valid in predicting the individual's acceptance of various corporate IT systems (Adams, Nelson & Todd, 1992). Davis (1989) opined that when users are presented with a new technology, a number of factors influence their decision about how and when they will use it. These factors are perceived usefulness defined as the degree to which a person

believes that using a particular system would enhance his or her job performance, and perceived ease of use defined as the degree to which a person believes that using a particular system would be free from effort. These two factors are considered to be the primary determinants for adopting and using a new technology and are influenced by other variables such as security concerns, cost, convenience, and satisfaction (Lu, Yu, Liu & Yao, 2003)

2.2.2 Innovation Diffusion Theory

This theory developed by Roger in 1983 explains individuals' intention to adopt a technology as a modality to perform a traditional activity. Diffusion is the process by which an innovation is communicated through certain channels over time among the members of a social system. Diffusion is a special type of communication concerned with the spread of messages that are perceived as new ideas. An innovation is an idea, practice, or object that is perceived as new by an individual or other unit of adoption. The characteristics of an innovation, as perceived by the members of a social system, determine its rate of adoption. The process of adopting new innovations has been studied for over 30 years and one of the most adaptation models is described by Rogers in his book "diffusion of innovation". He offered the following description of an innovation. An innovation is an idea, practice or project that is perceived as new by an individual or other unit of adaptation (Roger, 2003). Innovation Diffusion Theory (IDT) describes that the adoption of an innovation by consumers is not a straight forward process (Rogers, 2005).

The critical factors that determine the adoption of an innovation at the general level which are also what constitute important characteristics of an innovation are; relative advantage (the degree to which it is perceived to be better than what it supersedes); compatibility (consistency with existing values, past experiences and needs); complexity (difficulty of

understanding and use); trial-ability (the degree to which it can be experimented with on a limited basis); observability (the visibility of its results (Moga, 2010)). Rogers defines an adopter category as a classification of individuals within a social system on the basis of innovativeness. The categories of adopters are innovators, early adopters, early majority, late majority, and laggards. Diffusion manifests itself in different ways and is highly subject to the type of adopters and innovation-decision process. The criterion for the adopter categorization is innovativeness, defined as the degree to which an individual adopts a new idea.

2.2.3 The Expectancy Disconfirmation Theory

An approach in defining and developing consumer satisfaction which is a prerequisite for service delivery is provided by Expectancy Disconfirmation Theory (EDT), which has indeed become one of the most important and frequently cited theories in the literature. It is upon this theory that this present study hinges (Oliver, 1980). Expectancy-Disconfirmation Theory (EDT) suggests that consumers purchase goods and services because of their expectations about the anticipated performance of the product. The expectation level is used as a standard to judge the performance of the product. As perceived service quality portrays a general, overall appraisal of service that is, a global value judgment on the superiority of the overall service, it is viewed as similar to attitude. Prescriptions of service quality could occur at multiple levels in an organization, for example, with the core service, physical environment and interaction with service providers (Bitner & Hubert, 1994). On the other hand, customers' overall satisfaction with the service organization is based on a function of all the encounters or experiences of the customers with that of the organization.

Customer satisfaction is positively influenced by perceived value. The extent of satisfaction depends on extent of perceived value and higher level of perceived value lead to

higher level of customer satisfaction (Kuo, 2009; Turel & Serenko, 2006). When service performance is more than or outperform what the customer had initially expected, there is a positive disconfirmation between expectations and performance which results in satisfaction, whereas when service performance is as expected, there is a confirmation between expectations and perceptions which results in satisfaction. However, when service performance is not as good as or falls short of what the customer expected, there is a negative disconfirmation between expectations and perceptions which causes dissatisfaction. Ekinci (2004) cited Oliver's updated definition on the disconfirmation theory, which states "satisfaction is the guest's fulfillment response. It is a judgment that a product or service feature, or the product or service itself, provided (or is providing) a pleasurable level of consumption-related fulfillment, including levels of under- or over-fulfillment".

Service delivery and Customers' perceived service quality varies from one to another due to different aspects of service quality. Service quality is judged by the customers, and it depends on how the customers approach the service because the starting point of using a service is the basis of their perceptions. Quality of a service is achieved when a service provider satisfies or exceeds their consumers expected service, which consequently leads to customer satisfaction (Seth, Deshmukh & Vrat, 2005). Apart from customer satisfaction and service delivery literature, this theory has found great support from researchers in other disciplines and has been widely used to evaluate satisfaction with different products or services. The researchers that found this theory useful are: Thong, Hong and Tam (2006); Susarla, Barua, & Whinston (2003); Erevelles, & Leavitt (2003); Bhattacharjee (2001), amongst others.

2.3 Empirical Studies

2.3.1 Empirical Studies from Developed Countries

Peevers (2010) conducted a study on Usability Design of Short Message Service (SMS) Mobile Phone Banking. The main objective of the research was to investigate the usability issues surrounding Short Message Service (SMS) banking. It identifies three general functions of SMS in electronic banking: transactions, communication/CRM and security. Three empirical usability evaluations are presented that explored customers' perceptions and attitudes of using these functions of SMS banking. The research presented here provides empirical evidence for the thesis that usability is a significant factor in the low customer adoption of SMS banking. It also shows that related to usability issues are customer concerns over the security of SMS as a banking channel. Older users will find SMS banking less usable than younger users and are more ambivalent regarding SMS in general. It recommends the most usable message input format to use in SMS banking and contributes insights on how best to realise the practical application of SMS banking and services. The findings from these studies will help improve usability in mobile banking services.

Bhatt & Bhatt(2016) conducted a study on the Factors Affecting Customer's Adoption of Mobile Banking Services In India. The study aimed at describing the usage patterns of mobile banking customers and identifying the factors which influence their usage of m-banking. For this purpose, a descriptive study was undertaken with a sample size of 200 bank account holders belonging to public as well as private sector banks, using m-banking. A structured questionnaire was administered on these respondents belonging to Ahmedabad and Gandhinagar districts of Gujarat during the period of January to March 2015. Going by the sample demographics, a typical m-banking customer in India is a young and literate male, belonging to the middle-

income strata. The usage patterns of the customers suggest that as the frequency of transactions increases, people prefer the usage of ATMs. Security issues have deterred the customers from resorting to e-banking and m-banking options. Moreover, customers using m-banking find that the advantages lie in time-effectiveness, convenience, safety, operational simplicity and ease of navigation. These help in enriching their mobile-banking experience and have the potential to increase adoption of mobile banking.

Efemeini & Lech (2015) conducted a study on the product Importance and Involvement Measurement: A mobile banking Perspective. This study aimed to investigate how important the mobile banking is amongst the Swedish population. This has become an important area due to the fact that competition in the financial sector has made it mandatory for banks to adopt new technologies, the increase of mobile devices and Internet access as a way of communication and the slightly lack of theoretical and statistical knowledge in this specific field. Quantitative methods are used to gather empirical findings that will be subsequently analysed according to the adapted model of product importance and involvement theories. The Swedish mobile banking users are educated and skilled; the average usage is 2-3 times a week. Although the current app appears to be a complete tool, there is a need to include other features. More than a half the population are described as having an enduring importance towards the product. As additional finding, the research suggests that mobile banking market could be described as being in a mature stage with few new adopters. The product importance and involvement theory has never been used to investigate technological phenomenon. The methods were restricted due to time limit.

Krishna & Sequeira (2016) conducted a study on An Empirical Investigation on Mobile Banking Service Adoption in Rural Karnataka. The objective of the research was to examine the

factors that influences mobile banking adoption in India. Among banking technologies, mobile banking appeared as a possible solution for financial exclusion with wide mobile phone coverage. Inputs on rural people's intention toward technologies for effective financial inclusion were essential. Technology adoption factors, performance expectancy, effort expectancy, social influence, attitude, perceived risk, and behavioral intention (BI), were short listed after literature review. Factors were subjected to reliability, exploratory factor analysis (EFA), multiple regression, and interaction analysis. Rural provinces in Karnataka state were surveyed. The researchers used mixed sampling technique to reach 959 samples. Multiple regression–interaction analysis revealed age and gender moderated attitude's path toward BI. Findings revealed that PE was related to BI, EE was related to BI, SI had mild influence on BI. Mobile phones are the future of financial transaction. Favorable attitude was found in rural people. These factorial relationships hold crucial information for technology diffusion

Cleveland (2016) conducted a study on How Mobile Banking Has Affected the Banking Industry: Has Mobile Banking Improved Bank Performance?. This paper explores the effect of mobile banking on the banking industry in USA.. It further seeks to investigate if banks improve financial performance as well as customer conversion and retention due to mobile banking. The research sifts through early entries in mobile banking features, data transfer technology evolution along with hand-held mobile device advances. Population demographics are also reviewed to understand which segment is more inclined to use mobile banking applications, giving banks insights and analytics for focused advertising. Data security needs and bank personnel skills evaluation show a shift in personnel skill-set evolution from historical employees. Overall, the data suggests that bank performance does improve on the balance sheet and in customer

conversion/retention when the bank has leading-edge mobile banking features along with disciplined cost reduction in front-line tellers and reduction in brick-and-mortar investments

Mikko (2013) conducted a study on Mobile Banking And Mobile Payments: Changing Banking Services In Finland. The purpose of the research was to examine how mobile banking and mobile Payments services will change the banking sector in Finland, and what role non-bank companies from the IT and telecom industries will play in this process. The qualitative research was conducted as a descriptive study, focusing on the views of bank and non-bank players. The results show that banks have a significant advantage over their IT and telecom rivals in regards to their service offering, financial buffer, and status as trustworthy institutions. The banks' embrace of mobile financial services will change the Finnish banking sector into one, with a light branch network focused on sales power, and a heavy emphasis on new mobile devices providing service power regardless of time and place

2.3.2 Empirical Studies from Developing Countries

The effectiveness of mobile banking to customer's satisfaction has sparked significant debate within the literature. Thus, available literature presents divergent views on the link between mobile banking and customer's satisfaction. Mattila & Suoranta (2002) agree that using mobile phone in banking is trustworthy. Suoranta (2003) found that the average mobile banking user is married, 25 to 34 years old, has intermediate education and average income in clerical work. She found that age and education have a major influence on the use of the mobile phone in banking services. The adoption theories assume that use of internet banking precedes the adoption of the mobile phone in banking.

However, Suoranta (2003) found that some mobile banking customers omit internet banking adoption when adopting the mobile phone for banking actions. Pagani (2004) stated that

accessibility (ability to reach the required services) is one of the main advantages of mobile payment services. The micro-business operators go to the bank less often and spend more time running their businesses. Equally, many unbanked Kenyans can now receive or send money wherever they are in the country (Gaffar, 2009). Majority of the micro business operators are familiar with the use of the mobile payment services as they are easy to use and require no formal training before use. With more time in the business, more customers are served leading to increased sales and therefore growth of the business. The transaction costs of sending money through the mobile payment technology are lower than those of banks and money transfer companies. The cost of the mobile payments is affordable to most of the micro business operators and far below what the banks normally charge for their bank transactions. The reduced cost of transactions positively influences the growth of the business. Laukkanen and Lauronen, (2005) concluded in their study that mobile banking is a cost effective way to provide banking services to the unbanked because there is no need to set up physical branches to facilitate customers. Its branchless bank model includes enhanced ability to carry out limited banking transactions via mobile phone (Porteous, 2006). Therefore, mobile financial transactions provide SMEs with a means through which they can reduce their operating costs as well as increase their ability to extend their business networks thus enabling them to increase their performance.

Porteous (2006) studied the impact of mobile banking on transaction costs of microfinance institutions where he found out that mobile banking had reduced transaction costs considerably though they were not directly felt by the banks because of the then small mobile banking customer base.

Ravichandran, Prabhakaran and Kumar (2010) did a study on mobile banking and economic development where they sought to link adoption, impact, and use. The study

established that through offering a way to lower the costs of moving money from place to place and offering a way to bring more users into contact with formal financial systems, m-banking/m-payments systems could prove to be an important innovation for the developing world. Similarly, Zamil (2011) also investigated the implementation of mobile bank usage from marketing point of view in Jordan. The data collected are processed through the use of SPSS. Moreover, with the analysis of variance (ANOVA), therefore, the study population was in Hashemite Kingdom of Jordan. The study finds out that there is strong statistical evidence that difference exist between the implementation of Mobile Bank usage from marketing point of view of bank managers in Jordan due to the following factors: gender of bank managers, age of bank managers, qualification of bank managers and bank branch location. The study of Amiri,

Ishengoma (2011) carried out a research that analyzed the impact of mobile banking on financial inclusions in Tanzania using a quantitative approach. The study found out that most respondents registered with the service could find the technology saving them from bank charges (affordable charges with M-banking), time saving and the perceived ease use. M-banking was not the same to every respondents who could read and write seems to find the technology simple and understandable, and ease of use compared to those who did not go school.

Wang and Lin (2011) studied the factors affecting Malaysian mobile banking adoption from the point of an empirical analysis. This study aimed at extending the Technology Acceptance Model (TAM) to investigate mobile banking acceptance in Malaysia. More specifically, the objective of this study was to examine the relationships between constructs of perceived usefulness, perceived ease of use, social norms, perceived risks, perceived innovativeness, and perceived relative advantages towards behavioural intention in adopting mobile banking. The findings of this study revealed that perceived usefulness, perceived ease of

use, relative advantages, perceived risks and personal innovativeness were the factors affecting the behavioural intention of mobile users to adopt mobile banking services in Malaysia. Meanwhile, the social norms were the only factor found to be insignificant in this study.

Khraim, Al-Shoubaki and Kharaim(2011) investigated the factors affecting Jordanian consumer's adoption of mobile banking services. Data were collected for the study using a questionnaire containing 22 questions, out of 450 questionnaires in Hashemite Kingdom of Jordan. The chosen methodological research approach was the quantitative analyses using descriptive method with the SPSS software to find out the respondents demographics and general characteristics to provide a descriptive of the respondents. The study found out that all the six factors: self-efficacy, trial ability, compatibility, complexity, risk and relative advantage were statistically significant influencing the adoption of mobile banking.

Aghdaie and Faghani (2012) applied the SERVQUAL model to identify the relationship between customer satisfaction and mobile banking services. Their findings indicated that reliability, empathy, responsiveness, and tangibility are positively correlated with customer satisfaction while assurance has no correlation. Masrek, Omar and Khairuddin (2012) also investigated how mobile banking utilization predicts user satisfaction and how satisfaction in mobile banking predicts loyalty. The study population was in Malaysia. A survey methodology involving 312 respondents, the finding showed that mobile banking use is positively related to satisfaction not loyalty and also found that satisfaction significantly predicts loyalty.

Al-Jabri and Sohail (2012) carried out a study aimed at examining the factors affecting the mobile banking adoption in Saudi Arabia. Using diffusion of innovation as a baseline theory, data were obtained from 330 actual mobile banking. The findings indicated that relative advantage, compatibility, and observe ability have positive impact on adoption previous studies

have shown that mobile banking users perceive that it increases efficiency and convenience in bill paying, for example, as the service can be used wherever wanted enabling time savings and immediate reactions to unexpected service need. Malarvizhi & Rajeswari, (2012) carried out a study which was aimed at shedding lights on the customer's criteria for selecting mobile banking services in Coimbatore. Primary data were collected from 100 samples and were selected by adoptive purposive sampling technique during the period January 2010-feburay 2010, the quantitative technique were applied. The study discovered that mobile banking users are all educated and belong to business group and middle income group. The study concluded that customers are likely to find mobile banking more useful and their expectation would also increase. In addition, the banks must be ready to meet expectations and provide them a hassle-free mobile banking experience. Saoji & Goel (2013) sought to determine the impact of mobile banking on transactional costs of microfinance institutions. There are those who see mobile banking services as necessary for contributing to customer's satisfaction (Ngilangwa & Venkatakrishnan, 2014).

2.3.3 Empirical Studies from Nigeria

Bankole and Brown (2011) did a study on mobile banking adoption in Nigeria. The study conducted a cross-sectional survey through a judgmental sampling procedure. The respondents were mobile banking customers that consisted of students, and workers from diverse fields of employment. A total of 231 questionnaires as well as interviews were collected from the sampled population of mobile banking customers. The data were analysed through statistics and qualitative techniques. This article explored the factors that influence adoption of mobile banking in Nigeria. The results showed that culture is the most important factor influencing the adoption behaviour of users of mobile banking in Nigeria.

Adesina (2013) investigated a research into the mobile banking adoption among bank customers in Nigeria. 270 users and non-users of mobile banking services in Nigeria served as respondents. Each respondent provided answers for various eight dimensions of the questionnaire namely awareness, perceived usefulness, perceived ease of use, compatibility, social influence, perceived credibility, perceived self-efficacy, and perceived financial cost. The results of these findings reveal that each factor has some levels of significant effects on consumer intention to adopt and use mobile banking in Nigeria. These factors could influence consumer intention to adopt and use mobile banking facilities. All these factors, if well managed by the banks, could influence the adoption of mobile banking and create more opportunities for banks to gain more market shares and invariable increase customer satisfaction. In addition, the findings show that, perceived credibility and perceived financial cost have a stronger effect on consumer intention to adopt and use mobile banking service than perceived usefulness and perceived ease of use.

Agwu and Carter (2014) did a research on mobile phone banking in Nigeria: benefits, problems and prospects. The study investigated the extent of the adoption and usage of the mobile phone banking services among banking customers in Nigeria and the associated problems. Thus, the aim of their study was to understand the levels of usage and non-usage of these financial services by customers within Nigeria. In the course of the research, ten out of twenty one banks were selected in Nigeria. The stakeholders interviewed included bank staff, customers and students from higher education institutions. Study data was gathered over a two month period using an unstructured set of interview questions and data analysis was through thematic evidences arising from the data analysed. The findings of this study, however, discovered that phone banking was more established than internet banking and ATM services, but ATM services had a wider reach. In summary, the overriding factors affecting this situation

included the cost and maintenance involved, education of customers, poverty and infrastructure availability.

Edwin, Okpara, Ikpefan and Iyoha (2014) carried out a research on adoption triggers and barriers of mobile banking services in Nigeria. This research focuses on the perceived barriers to mobile banking adoption in Nigeria as a developing economy. The study adopted an exploratory qualitative method and this was conducted among banking customers spread across three regions of North, West and East of Nigeria. The basis of participants' selection was being active customers of the Nigerian banks. Findings indicated that there is the intention to adopt the mobile banking services; unfortunately, the intention cannot be translated into action mainly due to lack of trust on issues such as the delivery channels/technology, communication infrastructures, government policies, etc. Findings further revealed that majority of respondents do not use internet and mobile banking services, due to several identified barriers. There is, however, a preference for the traditional banking approaches as opposed to the mobile banking services.

Agu, Simon and Onwuka (2016) did a study on mobile banking adoption and challenges in Nigeria. The study evaluated the attitude of bank customers towards the adoption of M-banking services and challenges of mobile phone in conducting banking transactions in Nigeria with analytical focus on Enugu State. The survey research approach was adopted and data were collected from 200 respondents that include bank staff and customers of selected banks in Enugu metropolis. The analysis of data was conducted using descriptive statistical technique. The study revealed that the level of adoption of mobile banking in Enugu State is still low among the middle aged respondents compared to the aged.

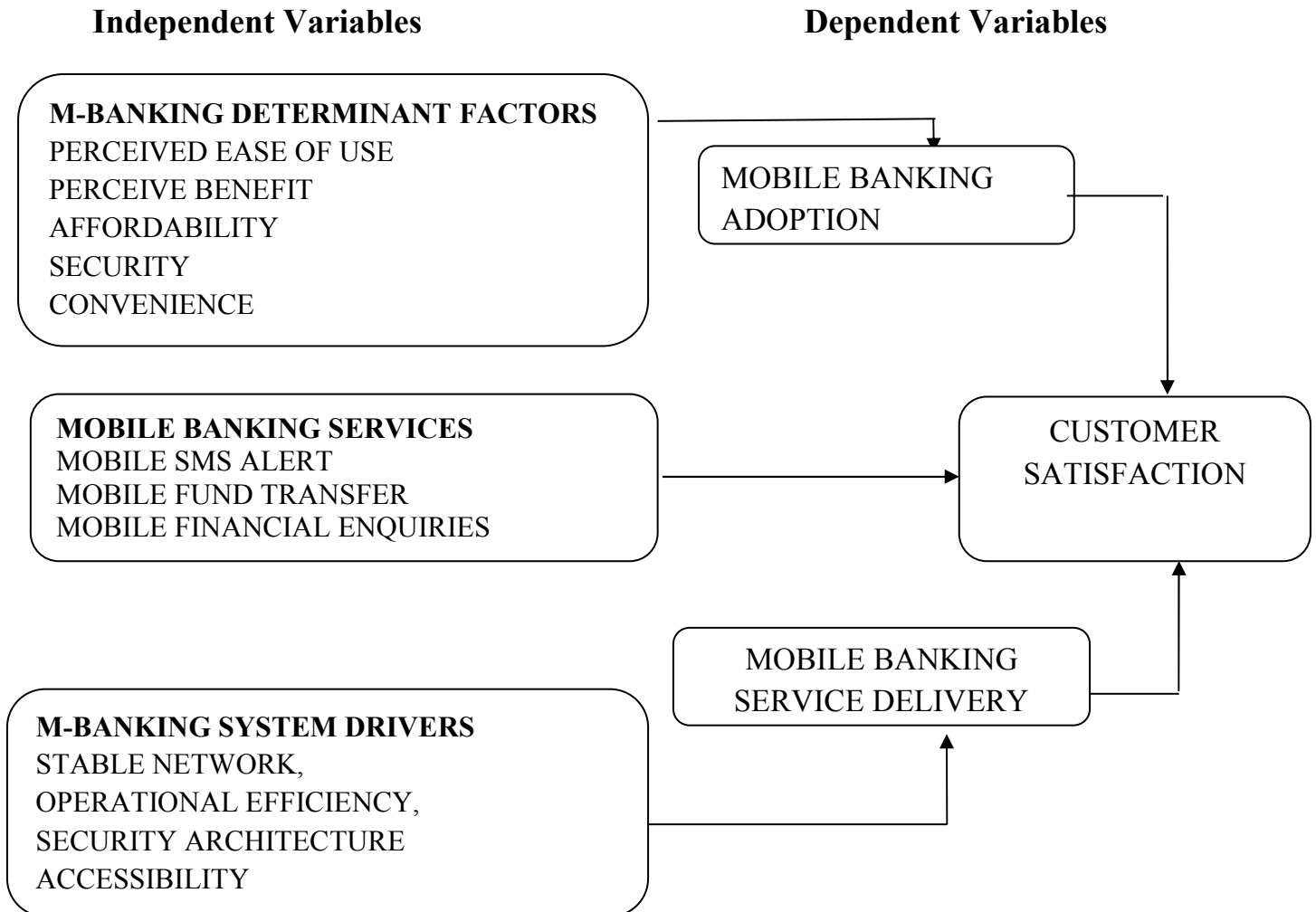
2.4 Summary and Gap Identified in the Literature

From the extant review of empirical literature above, a number of gaps are evident in the current literature. The tradition of inconsistencies in research findings include mixed, inconclusive and contradictory evidences on the relationship between mobile banking and customer satisfaction. Thus, there is no consensus on the relationship that exists between mobile banking adoption and customer satisfaction. Until a common ground is found, more studies are required to resolve the observed inconsistencies attributed mostly to methodological shortcomings in the prior studies. These methodological shortcomings involve the use of mono-dimensional frameworks which means only one issue was examined at a time in small or inadequate sample size with focus on either banks' perspective or costumers' perspective.

Furthermore, with the observed prevalent use of conceptual review of literature to examine the link between mobile banking and customer satisfaction, this study pursued a more holistic and rigorous empirical study that takes an integrative and holistic perspective of both staff and customers and covered all the fifteen deposit money banks in Nigeria. Similarly, in addition to customer satisfaction, this study examines how mobile banking facilitated service delivery in relation to customer satisfaction which was not considered by previous studies linking services delivery with costumers' satisfaction.

2.5 Theoretical and Conceptual Framework

Model theories on the Impact Mobile Banking Adoption on Customer Satisfaction



Source: Researchers Conceptualization, 2017

The conceptual and theoretical framework above shows the hypothetical relationship between the dependent and independent variables. The adoption of mobile banking services is a function of some determinant factors which the technology acceptance model theory explains as been predicated on perceived ease of use, perceived benefits derived from usage of technology, affordability, as well as convenience and security are factors that influence technology adoption. Similarly, Customer satisfaction which is the dependent variable is a function of efficient service

delivery as regards mobile banking services which ranges from the Mobile SMS alert, Mobile fund transfer and Mobile financial enquiries is hinged on expectancy disconfirmation theory which suggests that consumers purchase goods and services because of their expectations about the anticipated satisfaction of the product.

Furthermore, there are also some drivers such as stable network, operational efficiency, security architecture and accessibility that makes mobile banking system efficient and effective which can divert the attention of customers to new innovations and as well meet their anticipated satisfactions.

However, various theories relevant to the subject matter on mobile banking adoption and service delivery as well as customer's satisfaction have been reviewed, but the core concern of this research work revolves around on how mobile banking services can influence adoption, customer satisfaction and service delivery. Therefore, the study anchored on both the technology acceptance model theory and expectancy disconfirmation theory

CHAPTER THREE

METHODOLOGY

This chapter is concerned with the approaches employed by the study. These include the study area, research design, population, sampling techniques and sample size, sources of data, research instrument, models relevant to the study, and method of data analysis for the study.

3.1 Area of Study

The study area is Kwara State, Nigeria. This area is situated in the North Central geopolitical zone of Nigeria. According to the National Population Census (2006) the state has a population of 2, 371, 089 with a density of about 67 persons per square kilometers. It is located between latitude $11^{\circ}21'$ and $11^{\circ}45'N$ and between longitude $2^{\circ}45'E$ and $6^{\circ}4'E$, and lies midway between the northern and southern parts of the country. It is made up of three senatorial districts (i.e. Kwara North, South and Central and has 16 Local Government Structure). The study was carried out in Ilorin metropolis which comprises of Ilorin West, Ilorin East and Ilorin South. Ilorin has been chosen because it has not been the focus of similar studies in this area and because it is the commercial nerve centre of Kwara state.

3.2 Research Design

The study will adopt a survey research design, where data is collected from a sample of enterprises to determine the relationship between customer satisfaction (the dependent variable) and mobile banking (the independent variables). Survey is used when a large population of survey sample exists, of which information can be retrieved regarding the issue being researched. Thus, its adoption and usage is justified on the ground of its capacity for collecting large data. This allows the researcher to create information for precisely answering the how, what, who, where and when questions concerning market factors and conditions (Shaka, 2012). Besides, the

data structures created through the survey method when considering the whole population helps the researcher to make inferences about the target population as a whole.

3.3 Population of the Study

The population of this study comprises bank customers and Management staffs of the five selected banks categorized as first Tier banks in the Nigeria Stock Exchange, they are Zenith Bank Plc, UBA Plc, GTBankPlc, FBN Plc, and Access Bank Plc (Akanbi, 2013).

Table 3.1 Population of the Study

BANK	FIRST BANK PLC	ZENITH BANK	UBA PLC	GT BANK	ACCESS BANK PLC	TOTAL
Bank Customers	3,915	1,534	4,813	5,024	3,537	18,823
Management Staffs	9	6	7	12	9	49

3.4 Sampling Technique and Sample Size

Krejcie and Morgan (1970) were used to estimate the sample size of 377. In order to ensure accuracy in selecting the sample size above, ratio analysis technique was used to ensure that every members of the population has equal chance of being selected in the sample size. To enhance the representativeness of the management staffs population, the whole 49 management staffs formed the sample size for the study because of the small size of the population and in order not to violate the biometric statistic of the sample size. Similarly, the adoption of this sampling technique is not strange as Shaka(2012), Sagher& Nathan (2013), and Akhtar&Zaheer (2014) adopted these sampling technique in their different studies on assessing customer satisfaction in banks.

Table 3.2: Determination of Sample size

S/N	Selected Deposit Money Banks	Customer population	Sample size	Questionnaire returned	Total unreturned	Total unusable
1	Access Bank PLC	3,537	71	65	6	10
2	First Bank Nigeria PLC	3,915	78	73	5	13
3	Guaranty Trust Bank PLC	5,024	101	80	21	16
4	United Bank for Africa PLC	4,813	96	84	12	12
5	Zenith Bank PLC	1,534	31	25	6	4
TOTAL		18,823	377	327	50	55

The sample size for each banks was arrived at by using ratio analysis which entails dividing the total number of customers by the overall population and multiplying it by the estimated sample size.

3.5 Sources of Data

The source of data for this study is primary data which was sourced directly from the management staffs and customers of the selected quoted deposit money banks with the aid of a structured questionnaire.

3.6 Research Instrument

The instrument for data collection was a questionnaire. A questionnaire was issued to both staffs and customers of the selected banks in the study. This comprises of staffs and the customers of quoted deposit money banks in Ilorin metropolis, Kwara State, which was selected using purposive sampling technique. Each set of questionnaires was divided into two segments. The first part of each questionnaires focuses on demographic factors such as age, years of

experience, level of education which were analyzed using simple percentages, while the second part of the questionnaire focuses on questions on the core issues in relation to factors that influence mobile banking adoption and customer satisfaction. Closed ended questions was asked and rated on a five point likert scale which was used in scoring the respondents on their personal views as regards the subject matter. The respondents reacted to the statement by ticking strongly agreed (SA=5), agreed (A=4), undecided (U=3), disagreed (D=2), or strongly disagreed (SD=1). The data collection instrument were administered to all staffs and customers respondents of the selected banks personally and collected back on completion immediately by the researcher.

3.7 Validity and Reliability of Research Instrument

3.7.1 Preliminary Analysis

Table 3.3: Reliability Statistics; Using Cronbach's Alpha

S/N	Constructs/Variables	No of Items	Cronbach's Alpha
1	Mobile Banking System	8	0.811
2	Mobile Banking Adoption	10	0.813
3	Mobile Banking Services	10	0.809
			0.811

Source: Researcher's Analysis (2018)

Before the commencement of data analysis, the reliability and validity tests was carried out to establish that the instrument and its constructs had internal consistency and had actually measured what they were designed to measure. The reliability test was carried out to determine the consistency of all the responses given by respondents on all items in the questionnaire instrument. For ascertaining the reliability, the research employed the Cronbach's Alpha Test of reliability. All the three constructs had values which were higher than the threshold which is an indication that they are reliable construct for measuring mobile banking, mobile banking adoption and mobile banking system. Also, the average value of the three constructs gives a Cronbach's Alpha (α) with a coefficient value of 0.811. The 0.811Cronbach'sAlpha is higher

than the 0.70 threshold for internal consistency. The questionnaire instrument has an overall reliability

Table 3.4: Kaiser-Meyer-Olkin and Bartlett Test Result measure of sampling adequacy

Kaiser-Meyer-Olkin measure of sampling adequacy		0.858
Bartlett Test of Sphricity	Approx. Chi-Square	2663.553
	Sig	0.000

According to Brains, Willnat, Manheim and Rich (2011), validity is the extent to which a concept, conclusion or measurement is well-founded and corresponds accurately to the real world. The instrument was validated to ensure both the content and construct validity. The KMO values which range between 0 and 1, with small values meaning that overall the variables have too little in common. The result from the Kaiser–Meyer–Olkin (KMO) measure of sampling adequacy shows that the variables are adequate as displayed and meritorious (Kaiser, 1974). This is sequel to Kaiser 1974 ranking which is as follows; 0.00 to 0.49 unacceptable; 0.50 to 0.59 miserable; 0.60 to 0.69 mediocre; 0.70 to 0.79 middling; 0.80 to 0.89 meritorious and 0.90 to 1.00 marvelous

Table 3.5; Assessment of Multicollinearity Test

Variables	Tolerance	VIF
Mobile Banking System	.213	3.319
Mobile Banking Adoption	.238	4.201
Mobile Banking Services	.214	4.573

The variance inflated factor (VIF), and tolerance value were used to examine and detect multicollinearity problem. Hair, Hult, Ringle, and Sarstedt (2014) suggested that multicollinearity is a concern if VIF value is higher than 5 and tolerance value is less than .20. Table 4.4 shows the VIF values and tolerance values for the constructs. It indicates that multicollinearity did not exist among the constructs as all VIF values were less than 5 and

tolerance values exceeded .20 as suggested by Hair, Hult, Ringle, & Sarstedt (2014). Thus, multicollinearity is not an issue in the present study.

3.8 Model Specification

3.8.1 Factors Influencing the Adoption of Mobile Banking Service

The adoption of mobile banking was assumed to be a function of five (5) variables. The factors include perceived ease of use, perceived benefit, affordability, security and convenience. The Multiple regression analysis was used to evaluate the factors influencing the adoption of mobile banking which is mathematically expressed as follows;

$$MBA = f(X_1, X_2, X_3, X_4, X_5) \dots \dots \dots (3.1)$$

$$MBA_i = a_0 + a_1PEU_i + a_2PB_i + a_3AFD_i + a_4SEC_i + a_5CON_i + U_i \dots (3.2)$$

Where

MBA_i = Mobile Banking Adoption

PEU = Perceived Ease of Use

PB = Perceived Benefit

AFD = Affordability

SEC = Security

CON = Convenience

U = Error term

3.8.2 Effect of Mobile Banking Service on the Customer Satisfaction

Multinomial regression analysis was used to establish the effect of the independent variables (Mobile SMS Alert, Mobile Financial Enquiries, and Mobile Fund Transfer) on the dependent variable. The model specification was adapted from the work of Oladejo and Yinus (2013).

Thus, customer satisfaction as a result of efficient customer service delivery the dependent variable was assumed to be a function of 3 independent variables which is mathematically expressed as follows:

$$CS = f(X_1, X_2, X_3) \dots \dots \dots (3.4)$$

$$CS_i = a_0 + a_1MSA_i + a_2MFE_i + a_3MFT_i + U_i \dots (3.5)$$

Where

CS = Customer Satisfaction

MSA = Mobile SMS Alert,

MFE = Mobile Financial Enquiries

MFT = Mobile Fund Transfer

U = Error term

Customer Satisfaction as a result of customers' patronage of mobile banking services (dependent variable) was regressed against the mobile banking products and services offered such as Mobile SMS Alert Mobile Financial Enquiries and Mobile Fund Transfer (independent variables). Inferential statistics of multinomial regression analysis was employed to evaluate the extent to which adoption of mobile banking products could influence customer satisfaction and test the hypothesis at 5% level of significance

3.8.3 Effect of Mobile Banking Service on the Quality of Service Delivery

Multiple regression analysis was used to establish the effect of the independent variables(Stable Network, Operational efficiency, Security Architecture, Accessibility) on the dependent variable.

Thus, efficient service delivery which is the dependent variable was assumed to be a function of four independent variables which is mathematically expressed as follows:

$$SD = f(X_1, X_2, X_3, X_4) \dots \dots \dots (3.5)$$

$$SD_i = a_0 + a_1STB_i + a_2OPE_i + a_3SEC_i + a_4ACC_i + U_i \dots (3.6)$$

Where

SD = Service Delivery

STN = Stable Network,

OPE = Operational efficiency,

SEC = Security Architecture,

ACC = Accessibility,

U = Error term

The Service delivery as a result of customers patronage of mobile banking services (dependent variable) was regressed those things that are germane and imperative to an efficient service delivery such as Stable Network, Operational efficiency, Security Architecture, and Accessibility (independent variables). Inferential statistics of multiple regression analysis was employed to evaluate the extent to which mobile banking system could influence service delivery of selected deposit money banks and test the hypothesis at 5% level of significance. STATA 11 statistical package software was employed to perform all analysis.

3.9 Measurement of Variables

3.9.1 Factors Influencing the Adoption of Mobile Banking Service

The adoption of mobile banking was assumed to be a function of five (5) variables. The factors include perceived ease of use, perceived benefit, affordability, security and convenience. The Multiple regression analysis was used to evaluate the factors influencing the adoption of mobile banking service.

3.9.2 Effect of Mobile Banking Service on the Customer Satisfaction

Customer satisfaction as a result of efficient customer service delivery was assumed to be a function of 3 independent variables; (Mobile SMS Alert, Mobile Financial Enquiries, and Mobile Fund Transfer). Multinomial regression analysis was used to establish the effect of mobile banking service on customer satisfaction.

3.9.3 Effect of Mobile Banking Service on the Quality of Service Delivery

Multiple regression analysis was used to establish the effect of the independent variables(Stable Network, Operational efficiency, Security Architecture, Accessibility) on the dependent variable. Thus, efficient service delivery which is the dependent variable was assumed to be a function of four independent variables.

3.10 Methods of Data Analysis

The research tools employed are descriptive statistics, such as frequency, percentages, means and Pearson product moment correlation coefficient, while the hypotheses were tested using multinomial and multiple regressions. All the analyses were done with the aid of STATA 11.0 statistical software.

Table 3.3 Relationship Matrix of Research Questions, Objectives, Hypotheses and Analytical Procedure.

Research Questions	Research Objectives	Research Hypothesis	Method of Data Analysis	Aprior Expectation
1	1	There are no factors significantly influencing the adoption of mobile banking in selected Deposit Money Banks (DMB)	Multiple Regression Analysis.	Positive (+)
2	2	Mobile banking services does not have significant impact on customers' satisfaction.	Multinomial Logistic Regression Product Moment Correlation Coefficient	Positive (+)
3	3	Mobile banking system does not have significant impact on quality of service delivery.	Multiple Regression Analysis.	Positive (+)

Source: Author's compilation, 2017

CHAPTER FOUR

DATA PRESENTATION AND ANALYSIS

In this study, 377 questionnaires were administered to customers of banks. An aggregate of 327 copies were returned which represent 86.74% response rate. However, out of these 327 questionnaires that were returned, a total of 272 were usable for data analysis. The remaining 55 questionnaires were excluded due to the issue of outliers and unproductive response. For management staff, 49 questionnaires were administered to the management staff and all were returned and used for the analytical procedure. Table 4.1 shows the detail of the response rate

Table 4.1: Response Rate of the Questionnaires

Response	Frequency	Rate (%)
No. of questionnaire administered	377	100
Returned questionnaires	327	86.74
Returned and usable questionnaires	272	72.15
Returned and excluded questionnaires	55	14.59
Questionnaires not returned	50	13.26
Response rate		72.15

4.1 Presentation and Interpretation of Respondent Demographic Characteristics.

Table 4.2: Demographic Characteristics of Customer Respondents

Variables	Frequency	Percent (%)
Gender		
Male	187	68.75
Female	85	32.25
Total	272	100
Age		
20-29	89	32.72
30-39	108	39.71
40-49	43	15.81
50 and above	32	11.76
Total	272	100
Marital Status		
Married	179	65.81
Single	82	30.15
Others	11	4.04
Total	272	100

Education Qualifications		
NCE/ND	142	52.41
HND/B.Sc	95	34.93
Masters	29	10.66
Others	6	2.21
Total	272	100

Source: Author's Field Survey, 2017

Demographic Characteristics of Customer Respondents

This section presents the detail of demographic characteristics of customer respondents obtained in Table 4.1. The discussions were based on four major items. These are gender, age, marital status and highest education attained.

Gender: The gender of the customer respondents shows that 68.75% of the respondents were male representing 187 respondents and 32.25% were female representing 85 respondents. This shows that there are more male than female customers of the banks in Ilorin where this research was carried out.

Age: The age of the customer respondents shows that 32.72% of the respondents fell within the age of 20-29 years, while 39.71% fell between 30-39 years, 15.81% of ages of 40-49 years while 11.76% for the ages of 50 years and above. The highest percentage of 39.71% was in active years of age. This also shows that majority of the respondents were within the working age.

Marital Status: The marital status shows that married people have 65.81% of the respondents; single has 30.15% while others have 4.04%. This reflects the situations in the urban areas where different categories of people usually live and co-exist together in a place where there is no relation and that married people have more and recognized status than singles (Bartov, 1993).

Educational Qualifications: The educational qualification of the customer respondents shows that the banks have a pool of literate and educated customers. 52.21% of the respondents have ND/NCE, 34.93% of the respondents also have B.SC /HND, 10.66% with MBA /M.SC while 2.21% of the total respondents have other certificates. This result shows that customers whose

accounts are operated with mobile banking services are literate and educated people which seem to be of good advantage to this study.

Table 4.3: Demographic Characteristics of Staff Respondents

Variables	Frequency	Percent (%)
Gender		
Male	29	59.18
Female	20	40.81
Total	49	100
Age		
20-29	2	4.08
30-39	15	30.61
40-49	21	42.85
50 and above	11	22.45
Total	49	100
Marital Status		
Married	38	77.55
Single	11	22.45
Total	49	100
Education Qualifications		
NCE/ND	0	0
HND/B.Sc	9	18.36
Masters	31	63.26
Others	9	18.36
Total	49	100

Source: Author's Field Survey, 2017

Demographic Characteristics of Staff Respondents

This section presents the detail of demographic characteristics of staff respondents obtained in Table 4.2. The discussions were based on four major items. These are gender, age, marital status and highest education attained.

Gender: The gender of the staff respondents shows that 59.18% of the respondents were male representing 29 respondents and 40.18% were female representing 20 respondents. This shows that there are more male than female staffs of the banks in Ilorin where this research was carried out. This statistics shows that banks are still yet to give women significant appointment in the

banking sector and this shows that more males participated in the research than their female counterpart.

Age: The age of the staff respondents shows that 4.08% of the respondents fell within the age of 20-29 years, while 30.61% fell between 30-39 years, 42.85% of ages of 40-49 years while 22.45% for the ages of 50 years and above. The highest percentage of 42.85% was in active years of age. This also shows that majority of the respondents were within the working age.

Marital Status: The marital status of the staff respondents shows that married people have 77.55% of the respondents; single has 22.45%. This result shows that majority of the bank workers are married and this reflects the situations in the urban areas where different categories of people usually live and co-exist together in a place where there is no relation and that married people have more and recognized status than singles (Bartov, 1993).

Educational Qualifications: The education qualifications of the staff respondents shows that 05% of the respondents have ND/NCE, 63.26% of the respondents also have B.SC /HND, 18.36% with MBA /M.SC while 18.36% of the total respondents have other certificates. This result is a picture of banks hiring and recruitment process and methods.

4.4 Analysis and Discussion of Results

The analysis of result is based on the objectives and hypothesis formulated in chapter one.

4.2. The Factors Influencing the Adoption of Mobile Banking Service

Restatement of Hypothesis I

Objective 1

H₀₁: There are no factors significantly influencing the adoption of mobile banking services

$$MBA = f(X_1, +X_2, +X_3, +X_4, +X_5, +U_1)..... (4.1)$$

$$MBA = a_0 + a_1PEU + a_2PB + a_3AFD + a_4SEC + a_5CON + U_1 \dots (4.2)$$

Table 4.4: Multiple Regression Analysis showing the factors influencing the adoption of mobile banking

Model	R Square		Adjusted R Square			Root MSE	
1	0.6215		0.6321			0.60211	
Source	Sum of square	Df	Mean square	F		Sig	
Model	227.877874	4	50.3614781	753.71		0.0000*	
Residual	31.1809496	267	.157125266				
Total	259.058824	271	.958936118				
Variable		Coef.	Std. Error	T	p>/t/	[95% Conf. Interval]	
Perceived ease of use		.1813929	.0641840	2.826	0.000	.1230249	.1095701
Perceived benefit		.5657961	.0756899	7.475	0.001	.0172268	.2111215
Affordability		.3671213	.727631	4.850	0.000	.1268421	.6113867
Security		.2017661	.0593793	3.374	0.002	-.1196730	.0151505
Convenience		.3471617	.0278316	12.474	0.001	.2432721	.1027151
(Constant)		2.644165	.1643816	16.086	0.000	2.120466	1.167764

Source: Researcher's Analysis (2017) using STATA version 11. (Statistically significant at 5%)

The regression analysis results obtained in the evaluation of factors that influenced the adoption of mobile banking shows that the R^2 coefficient (0.6215) which is the coefficient of determination indicates that the explanatory variables account for 62% of the variation of factors that influence the adoption of mobile of banking services. Given the adjusted R^2 is 63% with 0.0000* at 5% of significant. This is an indication that the independent variables in the model jointly and significantly explain the factors that influence adoption of mobile banking. The null hypothesis is rejected and the alternate hypothesis is accepted which states that indeed there are factors that significantly influences the adoption of mobile banking. This is consistently in line with previous studies of Malarvizhi & Rajeswari, (2012), Mattila & Suoranta (2002), Laukkanen & Lauronen, (2005) who concluded in their studies that there are factors that influences the adoption of mobile banking by customers

4.3 Effect of Mobile Banking Service on Customer Satisfaction

Restatement of Hypotheses II

Objective II

H₀₂: Mobile banking services does not have significant effect on customer satisfaction

$$CS = f(X_1, +X_2, +X_3, +U_1) \dots \dots \dots (4.3)$$

$$CS = a_0 + a_1MSA + a_2MFE + a_3MFT + U_1 \dots \dots \dots (4.4)$$

Table 4.5: Multinomial Logistic Regression Analysis Showing the Impact of Mobile Banking Services on Customer Satisfaction

Model		Chi ²	Pseudo R ²		P (Value)
		172.25	0.7451		0.0000**
		Number of Obs.	136		
Log likelihood	5.0040243				
Variable	Coef.	Std. Error	Z	P> z	[95% Conf. Interval]
Mobile SMS Alert	98.87032	3.83e+08	-0.00	1.000	7.50e+08 7.50e+08
Mobile Financial Enquiries	77.7895	1.99e+	0.00	1.000	3.89e+08 3.89e+08
Mobile Funds Transfer	21.71938	2.84e+08	0.00	0.897	5.57e+08 5.57e+08
(Constant)	149.0477	1513.947	0.09	0.729	2020.123

Source: Researcher's Analysis (2017) using STATA version 11. (Statistically significant at 5%)

The multinomial logistic regression analysis results obtained in the examination of the extent to which mobile banking services have impacted on customers satisfaction shows that Mobile SMS Alert, Mobile Financial Enquiries and Mobile Funds Transfer are significant predictors of customer's service delivery and satisfaction which gives Chi-Square value of 172.25 and Pseudo R-Square of 0.7451 statistically significant at P-value(0.0000**). The table shows the summary of the analysis which indicated that collectively all the coefficient is statistically significant at 5% because its P-value is 0.0000** with the Chi-square value of 172.25. Therefore, the null hypothesis which states that mobile banking services has no impact on customer's satisfaction is rejected and the alternative

hypothesis is accepted. Thus, mobile banking services have impact on customer satisfaction. This result is consistently in line with the findings of Yinus & Oladejo, (2013) Adewoye (2013) who concluded in their studies that mobile banking significantly influences customer satisfaction.

4.4 Effect of Mobile Banking System on Quality of service delivery in Selected Nigerian Deposit Money Bank

Restatement of Hypotheses III

Objective III

H₀₃: Mobile banking system does not have significant effect on service delivery

$$SD = f(X_1, X_2, X_3, X_4, \dots) \dots \dots \dots (4.5)$$

$$SD = a_0 + a_1STB + a_2OPE + a_3SEC + a_4ACC + U_1 \dots (4.6)$$

Table 4.6: Multiple Regression Analysis Showing the Quality of Mobile Banking System on Service Delivery

Service Delivery

Model	R Square		Adjusted R Square			Root MSE	
1	0.7618		0.7582			0.40255	
Source	Sum of square	Df	Mean square	F		Sig	
Model	217.877874	4	54.4694685	353.16		0.0000*	
Residual	41.1809496	44	.154235766				
Total	259.058824	48	.955936618				
Variable		Coef.	Std. Error	T	p>/t/	[95% Conf. Interval]	
Stable Network		.2813975	.0641847	4.38	0.000	.1550249	.4077701
Operational efficiency		.0657974	.0756895	0.87	0.385	-.0832268	.2148215
Security Architecture		.4671244	.072763	6.42	0.000	.3238621	.6103867
Accessibility		.1017615	.0593797	1.71	0.088	-.2186734	.0151505
(Constant)		1.444115	.1643817	8.79	0.000	1.120466	1.767764

Source: Researcher's Analysis (2017) using STATA version 11. (Statistically significant at 5%)

The regression analysis results obtained in the evaluation of the impact of quality mobile banking system on service delivery indicates that the R² coefficient (0.7618) which is the

coefficient of determination indicates that the explanatory variables account for 76% of the variation of factors that influence the service delivery as regards mobile banking system of the banks. The adjusted R^2 is 75% with 0.0000* at 5% of significant. This is an indication that the independent variables in the model jointly and significantly explain the factors that influence service delivery. The null hypothesis is rejected and the alternate hypothesis is accepted which states that indeed the quality mobile banking system impacts the service delivery. This is consistently in line with previous studies of Malarvizhi & Rajeswari, (2012), Mattila & Suoranta (2002) and Laukkanen & Lauronen(2005).

4.5. Discussion of Findings

Based on the various empirical literature reviewed, data gathered, analyzed and hypothesis tested for this study, the following empirical findings were generated. The findings of the first hypothesis revealed that perceived ease of use, perceived benefit, affordability, security and convenience are determinant factors that motivates and stimulates consumers to adopt mobile banking services. The regression analysis results obtained in the evaluation of factors that influenced the adoption of mobile banking shows that the R^2 coefficient (0.6215) which is the coefficient of determination indicates that the explanatory variables account for 62% of the variation of factors that influence the adoption of mobile of banking services. There are significant factors that therefore influence adoption of mobile banking. This findings is consistently with the findings of Khraim, Al-Shoubaki&Karim (2011), Al-Jabril&Sohail (2012), Adesina (2013) and Agu, Simon &Onwuka (2016) who concluded in their researched that factors such as affordability, ease of use, benefits, conveniences amongst others influences consumers adoption of mobile banking services. This implies that banks must continually be abreast of factors that motivates consumers to adopt mobile banking services.

In addition, the finding of the second hypothesis revealed that mobile banking services such as Mobile SMS Alert, Mobile Financial Enquiries and Mobile Funds Transfer have impacted on customers' satisfaction. The multinomial logistic regression analysis results obtained in the examination of the extent to which mobile banking services have impacted on customers satisfaction shows that Mobile SMS Alert, Mobile Financial Enquiries and Mobile Funds Transfer are significant predictors of customer's service delivery and satisfaction which gives Chi-Square value of 172.25 and Pseudo R-Square of 0.7451 statistically significant at P-value (0.0000). This agrees with the findings of Oladejo & Yinus (2013), Agwu & Carter (2014), Masrek, Omar & Khairuddin (2012), Amiri, Aghdaie & Faghnaei (2012) who concluded in their researched that mobile banking services significant impacts customer satisfaction. This implies that banks must continually be innovative in their approach towards providing innovative and marketable mobile banking services.

Lastly, the findings of the third hypothesis revealed that mobile banking system have significant effect on service delivery. Stable Network, Operational efficiency, Security Architecture and Accessibility are germane and significant effective mobile banking system that yields effective service delivery. The regression analysis results obtained in the evaluation of the impact of quality mobile banking system on service delivery indicates that the R^2 coefficient (0.7618) which is the coefficient of determination indicates that the explanatory variables account for 76% of the variation of factors that influence the quality of service delivery as regards mobile banking system statistically significant at P-value (0.0000) which is less than 5% level of significance. This agree with the finding of Oladejo & Yinus (2013), Adesina (2013), Agwu & Carter (2014) as well as Agu, Simon & Onwuka (2016) who discovered that effective mobile banking system can influence service delivery. This implies that banks must continually invest in technologies to ensure efficient and effective mobile banking system which is a sine qua non for quality service delivery.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

In this chapter, summary of the findings based on the information obtained, appropriate recommendations, conclusion and contribution to knowledge based on the findings for the study as a whole were looked at.

5.1 Summary of Findings

This study examined the impact of mobile banking adoption on customer satisfaction in selected deposit money banks in Nigeria. The specific objectives were to evaluate the factors influencing mobile banking adoption, investigate the impact that quality mobile banking services has on service delivery and customer satisfaction. For the objectives to be realized, the research work was divided into five chapters. Chapter one gave details on the background, problem investigated, objectives and hypotheses among others that set the stage for the study.

Chapter two discussed extensively on what defining mobile banking, forms, functions benefits of mobile banking and customer service delivery, theories underpinning adoption of mobile banking such as Technological Acceptance Model (TAM), Innovation Diffusion Theory (IDT) and Expectancy Disconfirmation Theory were reviewed with previous researches on mobile banking, etc., which served as the study area of focus for the opinion surveyed and test of hypotheses.

In chapter three, research methodology emphasizing on the area of study, sources of data, method of data collection and analysis were undertaken among others. Purposive sampling technique was employed to select all the quoted deposit money banks as sample size. Five categorized banks were selected for the study. Primary data were collected with the aid of a structured questionnaire. Data analysis was performed with the aid of descriptive statistical tools such as frequency, percentages and mean scores and inferential statistical tools such as Multiple

Regression, Pearson Product Moment Correlation Coefficient and Multinomial Regression Analysis with the aid of STATA 11.0 statistical package.

The implementation of procedure in chapter three was executed in chapter four which shows the presentation and analysis of data obtained which was used to test the hypotheses.

The findings from the multiple regression analysis results also revealed that the R^2 coefficient of (0.6215) which is the coefficient of determination indicates that the explanatory variables account for 62% of the variation of factors that influence the satisfaction of the customers as regards the quality of mobile banking services of the banks. This findings is consistently with the findings of Khraim, Al-Shoubaki&Karim (2011), Al-Jabril&Sohail (2012), Adesina (2013) and Agu, Simon &Onwuka (2016) Similarly, the result of the multinomial logistic regressions showed an overall P- value of 0.000* and Pseudo R-Square of 0.7451 which implied that mobile banking services have statistically significant impact on customer satisfaction in deposit money banks in Nigeria. This agrees with the findings of Oladejo&Yinus (2013), Agwu& Carter (2014), Masrek, Omar &Khairuddin (2012), Amiri, Aghdaie&Faghnaei (2012) who concluded in their researched that mobile banking services significant impacts customer satisfaction. Also, mobile banking system have significant impact on service delivery with R^2 coefficient of (0.7618) and a p-value of 0.000* which is less than 5% level of significance. The result further established that all variables were statistically significant at 5% levels. This agree with the finding of Oladejo&Yinus (2013), Adesina (2013), Agwu& Carter (2014) as well as Agu, Simon&Onwuka (2016) who discovered that effective mobile banking system can influence service delivery.

5.2 Conclusion

Based on findings, the study therefore concluded that there are factors that significantly influence consumers in adopting mobile banking services. Also, mobile banking services significantly influences customers satisfaction. There is a significant relationship between mobile banking system and quality service delivery.

5.3 Recommendations

Arising from the findings and conclusions of this study, it is recommended that the management of banks should:

- i. continually be creative and innovative in their approach to continuously meeting customer's constantly changing requirements in order to stimulate their demand for mobile banking services;
- ii. improve on marketing strategy towards enlightening customers on benefits of mobile banking services and how it can increase their satisfaction; and
- iii. embark on training, re-training and motivation of staff towards developing new products that will attracts customer patronage on mobile banking service

5.4 Contribution to Knowledge

This study employed the use of triangulation analysis which involves use of different data collection technique within one study to examine the practice, relevance and impact of mobile banking adoption on services delivery and customer satisfaction in Nigeria. Thus, the research work has contributed to resolving the tradition of inconsistencies associated with previous researches by affirming a positive relationship between mobile banking and customer satisfaction. This is also in addition to addressing the methodological inadequacies through the adoption of all the deposit money banks and an empirical investigation of effect of mobile

banking on customer satisfaction. The research has therefore filled the “methodological shortcomings and the lack of empirical evidence on the impact of mobile banking on customer satisfaction. Also, the study has modestly bridged the theoretical and empirical gap in the literature on the perspectives of mobile banking from the staffs and customers. This study has examine how mobile banking facilitated service delivery in relation to customer satisfaction.

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APPENDIX I

Department of Accounting and Finance,
School of Business and Governance
College of Humanities, Social and Management Science,
Kwara State University,
Malete.
June, 2017.

Dear Sir/Ma,

I am a postgraduate student of the above named institution undergoing M.sc degree programme in Finance. Kindly respond to this questionnaire to enable me complete my M.sc. degree programme. This questionnaire is designed and intended to elicit information in order to carry out a study on “Impact of Mobile Banking Adoption on Customer Satisfaction in Nigerian Deposit Money Banks”

It would be appreciated if you would please assist in completing the attached questionnaire while assuring you that all information provided would be treated confidentially and would be used mainly for academic purpose.

Yours Faithfully,

Kareem, Ismaila Alamu

FOR BANK'S STAFF ONLY

A: DEMOGRAPHIC DATA OF THE RESPONDENTS

INSTRUCTION: Kindly fill the box by marking or ticking with the most appropriate alternative provided (✓)

1) Sex :

Male () Female ()

2) Age :

Less than 25 years () 26-35years ()

36-45 years () 46years and above ()

3) Marital Status:

Single () Married ()

Divorced () Separated ()

4) Academic Qualification:

First school leaving certificate ()

WAEC /GCE/NECO/SSCE ()

NCE/OND/A'LEVELS ()

B SC. AND/OR ITS EQUIVALENT ()

MASTERS ()

Other (please specify)

EVALUATION OF MOBILE BANKING SYSTEM ON SERVICE DELIVERY

S/N	ITEMS	SA 5	A 4	U 3	D 2	SD 1
1.	Stable network in my bank improves service delivery					
2.	My bank operational efficiency increases with electronic banking system.					
3.	The security architecture of the bank makes mobile banking service efficient.					
4.	Bank provides a variety mobile banking services which increases its accessibility.					
5.	Bank provides good mobile banking service which is user friendly					
6.	Bank provides good mobile account service.					
7.	FAQ of bank is comprehensive which makes it very easy to use					
8.	Mobile banking enhances the speed of service delivery					

Table 4.6: Presentation of Respondent (Bank staffs) Perception of Mobile banking and Service delivery

S/N	Items	SA	A	U	D	SD	MEAN	SD
1	Stable network in my bank improves service delivery	40.81	40.81	6.12	6.12	6.12	3.80	1.19
2	My bank operational efficiency increases with electronic banking system.	51.02	40.81	8.16	0	0	3.93	1.27
3	The security architecture of the bank makes mobile banking service efficient.	40.81	46.94	4.08	8.16	0	3.71	1.38
4	Bank provides a variety mobile banking services which increases its accessibility.	51.02	40.81	0	8.16	0	3.93	1.27
5	Bank provides good mobile banking service which is user friendly	40.81	42.90	0	2.04	2.04	3.81	1.23
6	Bank provides good mobile account service.	46.94	46.94	2.04	2.04	2.04	3.88	1.17
7	FAQ of bank is comprehensive which makes it very easy to use	51.02	40.18	4.08	2.04	2.04	3.93	1.27
8	Mobile banking enhances the speed of service delivery	46.94	42.90	2.04	4.08	2.04	3.93	1.20

Source: Author's Field Survey, 2017

Respondents' perception on Mobile Banking System and Service Delivery

Stable Network: Table 4.3 above shows that 40.81% of the respondents (bank's staff) strongly agree that stable network improves service delivery in their bank, 40.81% % agreed, 6.12% were indifferent or undecided, 6.12% disagreed while 6.12% % strongly disagreed. This shows that service delivery was facilitated by the presence of uninterrupted network.

Operational efficiency: Table 4.4 shows that 51.02% strongly agreed that their bank operational efficiency improves with electronic banking system, 40.81% % also agreed to the statement, 8.16% were indifferent. This means that the introduction of electronic banking system is a good innovation that improves bank's efficiency.

Security Architecture: Information sought to know the extent that the bank security architecture improves service delivery shows that 40.81% of the respondents strongly agreed that mobile banking improves service quality, 46.94% agreed, 4.08% were undecided while 8.16% disagreed. This implies that mobile banking service have helped bank to improve on their service to customers and this can encourage more people who are unbanked to patronize the formal conventional banking institutions for banking services.

Accessibility: Respondents view as regards the extent to which the bank provides accessibility to service delivery revealed that majority of the respondents with 51.02% agreed that their bank provides varieties of mobile banking services which promotes its accessibility, 40.81% agreed to it, 0% were undecided while 8.16% disagreed. This implies that the importance of mobile banking cannot be overemphasizes. This service enables the user to receive information, make payment and transfer to third parties based on orders sent via mobile phone.

User Friendly: Respondents' perception as regards the nature of mobile banking system revealed that 47.45% strongly agreed that the bank provide good mobile banking services that is

users friendly to their customers, 32.85% agreed to the statement, 5.11% were undecided while 8.03% disagreed and 6.57% strongly disagree. This implies mobile banking services do not pose any difficulty on the users.

Quality: Information sought on the extent that the mobile banking system is of high quality revealed that 46.94% strongly agreed that the bank provides a good mobile account service, 46.94% agreed, 2.04% were undecided, 2.04% disagreed while 2.04% disagreed. This implies that the mobile banking users can easily make account balance inquiry, make local transfer of fund, airtime recharge, pay bills, SMS alert, payment transaction and other businesses according to banks instruction that send to them through mobile phones.

FAQ: The perception of respondents as regards FAQ of mobile banking system indicated that majority of the respondents with 51.02% strongly agreed that the bank provides an up to date short message alert service on details of all financial transactions, 40.18% agreed, 4.08% were undecided while 4.08% disagreed. This implies that there is provision for up to date short message alert service on details of all financial transactions.

Speed: The perception of respondents as regards how mobile banking system enhances the speed of service delivery revealed that majority of the respondents with 46.94% strongly agreed that mobile banking enhances the speed of service delivery, 42.90% agreed, 2.04% were undecided, 4.08% disagreed while 2.04% strongly disagreed. This implies that transactions can be performed faster and conveniently with the use of mobile banking services.

APPENDIX II

Department of Accounting and Finance,
School of Business and Governance
College of Humanities, Social and Management Science,
Kwara State University, Malete.
June, 2017.

Dear Sir/Ma,

I am a postgraduate student of the above named institution undergoing M.sc degree programme in Finance. Kindly respond to this questionnaire to enable me complete my M.sc. degree programme.

This questionnaire is designed and intended to elicit information in order to carry out a study on “Impact of Mobile Banking Adoption on Customer Satisfaction in Nigerian Deposit Money Banks”

It would be appreciated if you would please assist in completing the attached questionnaire while assuring you that all information provided would be treated confidentially and would be used mainly for academic purpose.

Yours Faithfully,

Kareem, Ismaila Alamu

FOR CUSTOMERS OF THE BANKS ONLY

PART A: DEMOGRAPHIC DATA OF THE RESPONDENTS

INSTRUCTION: Kindly fill the box by marking or ticking with the most appropriate alternative provided (✓)

1) **Sex :**

Male	()	Female	()
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2) **Age :**

Less than 25 years	()	26-35years	()
36-45 years	()	46years and above	()

3) **Marital Status:**

Single	()	Married	()
Divorced	()	Separated	()

4) **Academic Qualification:**

First school leaving certificate	()
WAEC /GCE/NECO/SSCE	()
NCE/OND/A'LEVELS	()
B SC. AND/OR ITS EQUIVALENT	()
MASTERS	()

Other (please specify)

PART B: DETERMINANTS OF MOBILE BANKING ADOPTION

S/N	ITEMS	SA 5	A 4	U 3	D 2	SD 1
1.	Mobile banking services facilitates quick response.					
2.	Mobile banking services saves time and is highly convenient					
3.	There are constant update on the development of information technology in my bank					
4.	I feel safe in my transactions with the bank					
5.	Mobile banking services of my bank is not only safe but also secured					
6.	Mobile banking enhances the speed of service delivery and this is highly beneficial					
7.	Mobile banking system of my bank provides clear instruction and is easy to use and understand					
8.	Stable network in my bank improves service delivery					
9.	Sensitization of customers on mobile banking services/products will improve their satisfaction.					
10.	FAQ of bank is comprehensive which makes it very easy to use					
11.	The cost per transaction of mobile banking services is usually minimal when compared to the benefits					

EVALUATION OF MOBILE BANKING SERVICE ON CUSTOMER SATISFACTION

S/N	ITEMS	SA 5	A 4	U 3	D 2	SD 1
1.	Mobile banking system facilitates quick response even as it also convenient					
2.	There is provision for enquiries and accessibility to statement of account with ease through the use banking services					
3.	There is provision for up to date short message alert service on details all financial transactions					
4.	Bank provides a variety of mobile banking services which increases its accessibility.					
5.	Bank provides good mobile banking service which is user friendly					
6.	Bank provides good mobile account service.					
7.	Mobile banking system of my bank provides clear instruction and easy to understand					
8.	Customer make fund transfer and access their statement of account with ease through the use of mobile banking services					
9.	The variety of quality mobile g banking services reduces interaction with my bank staff and thereby saves time.					
10.	Mobile banking services enhances the speed of service delivery while also ensuring customer satisfaction					

Table 4.4: Presentation of Respondent (Customers) Perception on determinants of Mobile banking adoption

S/N	Items	SA	A	U	D	SD	MEAN	SD
1	Mobile banking services facilitates quick response.	73.72	24.82	1.46	0	0	4.40	.669
2	Mobile banking services saves time and is highly convenient	52.57	32.35	1.47	5.88	7.72	3.82	1.21
3	There are constant update on development of information technology in my bank	30.15	44.85	6.98	13.23	4.78	3.63	1.47
4	I feel safe in my transactions with the bank	47.79	38.24	2.94	4.04	6.98	3.76	1.33
5	Mobile banking services of my bank is not only safe but also secured	42.65	37.50	11.40	1.84	6.62	3.72	1.29
6	Mobile banking enhances the speed of service delivery and this is highly beneficial	45.22	41.18	4.04	8.82	0.73	3.70	1.32
7	Mobile banking system of my bank provides clear instruction and is easy to use and understand	35.29	36.40	21.69	3.68	2.94	3.69	1.39
8	Stable network in my bank improves service delivery	30.51	33.46	6.25	13.97	15.81	3.71	1.38
8	Sensitization of customers on mobile banking services/products will improve their satisfaction.	49.26	36.77	4.41	3.67	5.88	3.92	1.28
9	FAQ of bank is comprehensive which makes it very easy to use	27.94	47.79	0	9.56	14.70	3.63	1.47
10	The cost per transaction of mobile banking services is usually minimal when compared to the benefits	37.50	32.72	18.75	11.03	0	3.68	1.30

Source: Author's Field Survey, 2017

Respondent's perception on Determinants of Mobile Banking Adoption

Quick Response: Information sought to determine the extent to which mobile banking system facilitates quick response revealed that majority of the respondents with 73.72% strongly agreed that employees are usually recognized and rewarded appropriately, 2.56% undecided while 7.69% disagreed. This implies that customer's enquiry and complaints are attended to without

time wastage due to personal services provided by mobile banking which customer can access anytime, anywhere without the intervention of any bank official.

Convenience: Information sought to know if mobile banking system saves time and convenient revealed that 52.57% the respondents strongly agreed, 32.35% agreed, 1.47 were undecided, 5.88 disagreed and 7.72 strongly disagreed that mobile banking system saves time. This shows that customers are saved the time of long waiting queue in the banking hall and offer services without the need to step out of one's house as a result of convenient services provided by mobile banking.

Technology Adoption: Information sought to know if there are constant updates on ICT revealed that 30.15% of the respondents strongly agreed that there are constant updates on the development of information technology in the bank, 44.85% agreed, 6.98% were undecided, 13.23% disagreed, while 4.78% strongly disagreed. This implies that the bank constantly update the information needs of the customers to facilitate efficient transaction and security of the customer's account.

Security: Information sought to know if mobile banking system is secured revealed that many mobile banking users consent that their account and transactions are safe and secure since majority of the respondents with 47.79% strongly agreed, 38.24% agreed, 2.94% undecided, 4.04% disagree while 6.98% strongly disagreed. This implies that customers account is secured with strong security provision on mobile banking services.

Safety: Information sought to know if security and safety of transactions is what influences mobile banking adoption revealed that 42.65% strongly agreed, 37.50% agreed, 11.40% were undecided, 1.84% disagreed while 6.62% strongly disagree that their bank ensures safety of their money kept with it. This implies that customers fund is more safe and secured through mobile

banking services than the chequeing system which accommodates signature forgery and cheque kitting since security is ensured, as banking transactions are encrypted and password-protected.

Speed of service delivery and perceived benefit: Information sought to know if speed of service delivery is what influences mobile banking adoption revealed that 45.22% strongly agreed that mobile banking enhances the speed of service delivery, 41.18% agreed, 4.04% were undecided, 8.82% disagreed while 0.73% strongly disagreed. This implies that services are provided to customer at the best convenient time and at faster speed.

Adequate Instruction, Education and Ease of Use: Information sought to know if clear, adequate Instruction and informative education is what influences mobile banking adoption revealed that 71.69% agreed, 21.69% were undecided, 3.68% disagreed and 2.94% strongly disagreed to the question. This implies that customers are satisfied with instructions and guidelines on mobile banking usage which makes information available to users in a clear and unambiguous way. This forms the basis of client acceptance of the innovation.

Sensitization: Information sought to determine if sensitization of customers, awareness and information determines mobile banking adoption revealed that 49.26% strongly agreed 36.77% agreed, 4.41% were undecided, 3.67% disagreed while 5.88% strongly disagreed. This implies that awareness and sensitization given to users of mobile banking facilities does not only influence their adoption but also improved their consciousness and satisfaction.

FAQ: Table 4.22 above revealed that 14.70% of the respondents strongly agreed that the banks frequently asked questions are comprehensive and unclear, 9.56% agreed, 0% were undecided, 47.79% disagreed while 27.94% strongly disagreed. The above result implies that the questions bordering the mind of mobile banking users are dealt with without any ambiguity. Therefore, customer's fear and disturbing questions are ultimately answered with clarity.

Affordability : : Information sought to know revealed that if it's the affordable nature of mobile banking services that influences its adoption revealed that 37.50% strongly agreed that the cost per transaction of mobile banking services are usually minimal as compared to the benefit, 32.72% agreed, 18.75% were undecided, 11.03 disagreed while none strongly disagreed. This result indicates that mobile banking cost and charges are minimal and cheaper than its benefits.

Table 4.5: Presentation of Respondent (Customers) Perception on Mobile banking and Customer Satisfaction

S/N	Items	SA	A	U	D	SD	MEAN	SD
1	Mobile banking system facilitates quick response even as it also convenient	47.43	43.01	4.78	4.41	0.37	3.65	1.42
2	There is provision for enquiries and accessibility to statement of account with ease through the use banking services	39.71	20.59	7.35	27.94	4.41	3.59	1.32
3	There is provision for up to date short message alert service on details all financial transactions	33.82	27.21	16.62	25.73	6.62	3.57	1.40
4	Bank provides a variety of mobile banking services which increases its accessibility.	35.29	24.26	8.46	18.01	13.97	3.53	1.58
5	Bank provides good mobile banking service which is user friendly	38.60	26.84	16.98	17.28	10.29	3.59	1.32
6	Bank provides good mobile account service.	29.04	31.99	5.15	18.75	15.07	3.50	1.46
7	Mobile banking system of my bank provides clear instruction and easy to understand	51.10	40.44	1.47	4.04	2.94	3.80	1.19
8	Customer make fund transfer and access their statement of account with ease through the use of mobile banking services	69.49	30.51	0	0	0	3.93	1.27
9	The variety of quality mobile banking services reduces interaction with my bank staff and thereby saves time.	54.41	37.13	0.74	4.41	3.31	3.71	1.38
10	Mobile banking services enhances the speed of service delivery while also ensuring customer satisfaction	59.93	33.46	0	6.25	0.37	3.77	1.29

Source: Author's Field Survey, 2017

Convenience: Information sought to know if mobile banking system facilitates quick response and convenient revealed that majority of the respondents with 47.43% strongly agreed that mobile banking system facilitates quick response even as it also convenient, 43.01% agreed, 4.78% were undecided, 4.41% disagreed while 0.37% disagreed. This implies that mobile banking system facilitates quick response even as it also convenient.

Financial Enquiries: Information sought to know if mobile banking system provides financial enquiries revealed that majority of the respondents with 39.71% strongly agreed that mobile banking service innovation provides customers access to financial enquiries, 20.59% agreed 7.35% were undecided, 27.94% disagree while 4.41% strongly disagreed. This shows that mobile banking services provide customers access to financial enquiries. Thus, ensuring that enquiry and statement of account can be accessed without visiting banking premises.

SMS Alert: Information sought to know if mobile banking services provides financial SMS alert revealed that majority of the respondents with 33.82% strongly agreed that banks mobile banking services entails provision of mobile SMS alerts, 27.21% agreed, 6.62% were undecided, 25.73% disagreed while 6.62% strongly disagreed. This shows that mobile-banking is a good innovation in the banking sector has drastically provided a platform for customers to have 24/7 update on their account through the SMS alert.

Competitive services: Information sought to know if mobile banking services provide variety of competitive services revealed that majority of the respondents with 35.29% strongly agreed that their bank has varieties of mobile banking services, 24.26% agreed, 8.46% were undecided, 18.01% disagreed while 13.97% strongly disagreed. This implies that the variety of mobile banking services such as automated teller machine, account balance enquiry service, bill

payment, credit transfer between accounts, SMS services etc. increases the accessibility of the banks

User Friendly: Information sought to know if mobile banking services user friendly revealed that majority of the respondents with 38.60% strongly agreed that mobile banking services is user's friendly, 26.84% agreed, 6.98% were undecided, 17.28% disagreed while 10.29% strongly disagreed. This implies that mobile banking services provide safety, convenience, speedy transaction, privacy, lower charge, security and accessibility to users.

Quality: Information sought to know if mobile banking services is of high quality revealed that 29.04% of the respondents strongly agreed that their bank provide good mobile banking services, 31.99% agreed, 5.15% were undecided, 18.75% disagreed while 15.07% strongly disagreed. This shows that mobile account services can also be in form of convenience/accuracy, feedback/complaint management, efficacy queue management, and accessibility and customization etc.

Ease of Use: The table above revealed that majority of the respondents with 51.10% strongly agreed that mobile banking system of their bank provides clear instruction and easy to understand, 40.44%, agreed, 1.47% were undecided, 4.04% disagreed while 2.94% strongly disagreed. Therefore, service quality and efficiency in the banking industry has increased tremendously due to the integration of information technology that provides clear instructions into banking operation

Mobile Fund Transfer: The table above revealed that majority of the respondents with 69.49% strongly agreed that through mobile banking, customers are able to make transfer funds and access their statement of account, 30.51% agreed, 0% were undecided while 0% disagreed. This shows that balance enquiry and fund transfer can be done without visiting banking premises.

Accessibility: Information sought to know if mobile banking services reduces interaction and encourages branchless banking revealed that majority of the respondents with 54.41% strongly agreed that the variety of quality mobile banking services reduces interaction with their bank staff and thereby saves time, 37.13% agreed, 0.74% were undecided, 4.41% disagreed while 3.31% strongly disagreed. This implies that mobile banking helps the clients to do their real-time transfer and get the feedback of money transfer processes wherever they are. This saves customers time wasted on bank premises and numerous filing of documents to get transaction done.

Customer Satisfaction: Information sought to know if mobile banking services has improved customer satisfaction revealed that majority of the respondents with 59.93% strongly agreed that the quality of mobile banking service delivery has enhanced their satisfaction as customers, 33.46% agreed, 0% were undecided, 6.25% disagreed while 0.37% strongly disagreed. The result reveals that the present day customer requires efficient, fast and convenient services which are more achieved by mobile banking.