

# **Chapter One**

## **Introduction**

### **1.1 Background to the Study**

The ultimate goal for business organizations is to strive to understand their customers so that they could build long-term profitable relationship with them which form the bedrock of customer satisfaction. From observation, Customer-centric management philosophy has become the center of all business decision right from the conception of a product to the delivery of the product. Business organizations seem to have embraced this philosophy and some of them are seen practicing it today. The antecedents of the recent status of the customer in business operations are the intense global competition, emergence of service driven economies, increasing customer awareness and sophistication and advancement in information technology. It is now a common knowledge that the success of every business organization hinges on how their customers are served and how the customers evaluate and perceive such services<sup>1</sup>.

The nature of the service may not matter but the value customers place on such service is of significant importance in customer's acquisition and retention. It is therefore noteworthy to state that most organizations are founded with the sole aim of achieving customer retention, customer perceived service quality and better customer satisfaction in different settings. Customer Satisfaction is perception of customer about a company and in relation to whether his or her expectation is met or not.

Customer satisfaction, a term frequently used in marketing, is a measure of how products and services supplied by a company meet or surpass customer expectation. Customer satisfaction is defined as the number of customers, or percentage of total customers, whose reported experience with a firm, its products, or its services (ratings) exceeds specified satisfaction goals<sup>1</sup>. Customer satisfaction is seen as a key differentiator and increasingly has become a key element of business strategy within organizations, and its customer satisfaction ratings can have powerful effects. They focus employees on the importance of fulfilling customers 'expectations. Furthermore, when these ratings dip, they warn of problems that can affect sales and profitability <sup>2</sup>. When a brand has loyal customers, it gains positive word-of-mouth marketing, which is both free and highly effective. Therefore, it is essential for businesses to effectively manage customer satisfaction. To be able to do this, firms need reliable and representative measures of satisfaction. "In researching satisfaction, firms generally ask customers whether their product or service has met or exceeded expectations.

Reliability in service is a method for measuring the probability that a service will maintain performance standards which can drastically reduce and increase up selling opportunities, thus increasing revenues for the organization. Thus, customer's responses indicate how fast and efficiently the organisations that is the banks responds to its customers. It is the time taken by the banks to respond to its customers in the same vein, accessible customer service is when service that

empower or enable individuals with disabilities to engage with the banks and those without disabilities.

The creation of customer satisfaction and customer value is considered undoubtedly a competitive advantage in today's competitive banking industry. In order to maintain and keep their customers satisfied with their level of service, banks need to ensure that the right product, service and support are available at the right time for their customers. The banking industry in Nigeria is heavily regulated by the Central Bank making it necessary for banks to continue innovating and bringing new products and services to the market to continue capturing the interest of the customers by creating the value that only superior customer service can deliver. While the service delivery units are non-client facing departments, their service is of vital importance to measure the service quality, perceived value and ultimately customer satisfaction. Effort is being made to maintain a balance between customer satisfaction, increase profitability and lower costs. The banking industry is centralizing services such as local and international wire transfers, credit card payments, debit services, trade, collection, standing order processing, funds disbursement, collateral and contract services, reconciliation, call center service and technology support to cross-border units with lower wages are also revisited<sup>3</sup>.

The domestic banking system is largely homogenous, standardized with similar products. Therefore, service is the only differentiator between the banks, hence, the reason for service being of utmost priority in this industry. Delivering optimal

customer service is a determinant factor of customer satisfaction which can also lead to improved market share. Once the bank's customers are satisfied with the received service, they are less likely to switch to another financial institution. Subsequently, if a bank can retain their existing customers while attracting new ones, they are likely to increase their market share. However, reliability is significant for customer satisfaction, but responsiveness and accessibility are more significant. Reliability explains how consistent the mobile transaction of selected banks in Osun State is. The selected banks may not be reliable due to the fact that customers mostly complain of network, unnecessary debit of accounts, incessant charges and the bank applications vulnerability.

Responsiveness is the quality and timeliness at which the bank is programmed to react to customers' request and complaints especially a quick and positive reaction to customers' request. These banks act like they take customers for granted due to the rate at which their banking applications react sluggishly to customers' requests and the incessant situation where transactions are reversed.

Accessibility dictates the rate at which these banks' mobile applications are programmed for customer to have easy accessibility to their applications during transaction and how secured the mobile applications are for hackers not to have access into their account information and how stable is their financial security.

This innovative approach is seen as an attempt by the banks to determine the most effective approaches for satisfying customers' needs. For instance, the introduction of computer technology to enhance the quality of banking services to

their customers is acceptable, but the rate of effective utilization of computers still remain very low<sup>4</sup>.The operations of Banking Industry in this 21<sup>st</sup> century have been quite complex and competitive due to changing conditions and a highly unpredictable economic climate. This to a large extent is as a result of technological improvement, increased awareness and demands that banks serve their customers electronically. The increased technological innovations in the banking industry have changed the ways in which customers are now carrying out transaction<sup>5</sup>.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 has continued to service the populace, in which mobile banking application is one of them. They offer convenience to customers and provide banking services well beyond the traditional service period. It therefore encourages a cashless society<sup>6</sup>.

In the context of mobile banking application, users want transactions to be rapid, secure, and stress-free. As a result, their satisfaction depends on the ability of the application to meet these expectations. For instance, in a study of acceptance and use of electronic tax filing applications carried out by some researchers, it was discovered that the intention to utilize the e-filing system is directly related to the system's usefulness. Taxpayers who viewed the e-filing system as useful and secure were reported to be willing to continue using it, indicating that they are satisfied with it. On the other hand, individuals who did not perceive the system to

be secured were dissatisfied with it and considered it ineffective. Similarly, researchers observed that when organisations and institutions fail to promote a new technology's latent benefits, it might result in a poor assessment of its usefulness<sup>7</sup>.

The rapid growth of mobile banking application has created opportunities for financial services providers across the world. Scholars are of the opinion that long term successful and sustainability of Information System (IS) or technologies such as mobile banking application systems is a function of how much satisfaction the targeted users can obtain from it use. It is believed that a system that can demonstrate its usefulness has ensured its continued use after being introduced to the consumers through various marketing activities. Financial institutions that provide mobile banking application services value the continuous patronage of their existing customers because this is one of their means of achieving competitive advantage<sup>8</sup>.

Mobile banking application is becoming more popular in modern banking and as such has been a subject of interest among researchers. Mobile banking application is a service provided by a bank that allows customers to access their bank information, conduct financial transactions, make transfers and pay bills without physically visiting the branch of the bank where account is domiciled. Mobile banking application has completely changed the way that customers do banking transaction when electronic banking systems start providing efficient automated banking services through wireless networks. It is a term used for performing

balance checks, account transactions, payments etc. via a mobile device such as a mobile phone<sup>9</sup>. The emergence of Global System for Mobile Communication (GSM) has led to improvements in efficiency and productivity, reductions in transaction costs, increased service innovation and better quality of life for the rural dwellers.

Mobile banking application services are designed to offer convenience to customers. This means that customers can have control over their bank accounts without visiting the branch of the bank physically. However, it is clear that most banks offering mobile banking services have simply transferred the same services they offer in physical branches to a mobile platform that can be accessed any time. Although the number of features or different types of transactions that a mobile platform can accommodate contributes greatly to customer's satisfactions, it mainly contributes towards utility. The fact that a service is available does not necessarily mean that a customer will be satisfied with the service<sup>10</sup>. also points out that customer's experience greatly affects satisfaction. This is mainly because of poor user interface of the mobile devices used in mobile banking application. This includes small screens, uncooperative keypads, communication bandwidth and other constraints<sup>11</sup>. Customer complaints are part of the business life of any corporate entity and this may be more for banks because they are service organizations. As a service organization, customer service and satisfaction should be the prime concern of any bank. The bank believes that providing prompt and efficient service is essential not only to attract new customers, but also to retain

existing ones. Presently, banks in Nigeria are adding value to their services for customer's satisfaction.

The customers have more choices in choosing their banks because the new age IT (Information Technology) is bringing about sweeping changes in the banking industry, forcing them to re-engineer many of their basic processes and systems<sup>12</sup>. Ease of use and technology proficiency are important for the success of mobile banking platforms. Accordingly, users who are able to accomplish transactions on such platforms with ease and great technological proficiency gain feelings of mastery and pride. This in term directly affects their level of satisfaction with the product<sup>13</sup>. An automated mobile-service quality is an important measure when it comes to consumer satisfaction. This is mainly because the quality of service directly affects how consumers perceive a specific product or service. Positive experiences lead to positive consumer attitude and higher satisfaction. On the other hand, negative experiences lead to negative consumer attitude and lower satisfaction. For banks to make their customer satisfied through the use of mobile banking application, also depend on how innovative and creative the bank management corporate risk and cost of mobile transactions before innovation among banks make it easy for banks to improve through the use of up to date technology which could result in security of customers' account and satisfaction of customers.

Innovation in the banking industry is not only about showing people what to do and expecting them to do it but it is about leading people and empowering them to

be involved and participate in the organizational as well as personal development. Suffice to state that every stakeholder in the banking industry is responsible for innovation in order to have a competitive advantage for survival in the industry<sup>14</sup>. Technology has influenced innovation significantly. The advent of cell phone technology has given rise to novel products due to the nature of its operations. For instance, clients can make savings using their cell phones, buy goods and even access their bank accounts directly from their cell phones<sup>15</sup>. The telecommunication industry has strived to connect computers and mobile devices such that information can be exchanged without difficulty<sup>16</sup>. Innovation is not an event but a continuous process which requires the involvement of all interested parties. There are critical elements that should be utilized by bank managements to ensure that innovation projects are successful when executed regardless of the many obstacles that may arise especially within large scale businesses<sup>17</sup>. The first ingredient is rewarding risk and not punishing mistakes. Innovating are not failures but a source of improvement and information and corporate management should reward innovators and accommodate failure as it is the path towards effectively transforming innovative projects into novel business ideas that are long-lasting. Secondly, corporate support and protection of the innovators within and without the organization and innovators should be able to access needed wherewithal tools/machineries to carry out the innovation programs. Lastly, leaders who are keen in innovation should work harder to attract clients whose

criticism of the product and the business practices and revenue is crucial for the business.

In the banking sector, the most common measures of corporate innovation are increased revenue and increased customers base. Other top measures include greater customer satisfaction, faster time to market for new products or improvements, more products moving along the pipeline, more focused culture of innovation, improved operational efficiencies and learning about the innovation ecosystem. Innovation is a very important part of the banking sector. The most specific measure is the Innovation Sales Rate which is the most robust measure of corporate improvements<sup>18</sup>. Due to the prevalent issues among banks in Osun State, increased customer base, culture of innovation and operational efficiencies will be used to measure corporate innovation of selected banks in Osun State.

The independent variable is corporate innovation which is measured with increased customer base, culture of innovation and operational efficiency<sup>111,112</sup>.

The other independent variable of the study is mobile banking application with the measuring indicators as; ease of use, risk (security) and cost of transaction are being adopted to test its significance on customer satisfaction<sup>123</sup>. Customer base is the group of customers who repeatedly patronize the services of their banks. They are the main source of revenue for their banks, and are also referred to as the targeted market for the banks' product and services. Increasing these customers depends on how satisfied and innovative the existing customers are which is what Customers of banks in Osun State are perceived to be complaining and grumbling

about. Culture of innovation is a banking environment that supports creative thinking and advances efforts to extract economic and social value from knowledge and in doing so generates new and better services for their customers.

Use of mobile applications measured with ease of use of Mobile banking applications measured with ease of use, risk of mobile transactions vis a vis customer's satisfaction through reliability and responsiveness. Corporate innovation in terms of increased customer base, culture of innovation and operational efficiency through customer's accessibility. Creating an innovative environment for technology to strive in other to increase customer patronage and satisfaction has been the bane among banks in Osun State which this study intends to investigate and find solution to. Operational efficiencies are the ability of banks in Osun to attend to their customers' service and request without waste of time. Banks in Osun state is perceived to always attend to customers' request and complaint with delay. It is worthy of note that none of the existing researchers have studied the relationship between mobile banking and customer satisfaction of selected banks specifically. Consequently, the study examined the impact of mobile banking application, corporate innovation on customer satisfaction of selected banks in Osun state, Nigeria.

## **1.2 Statement of the Problem**

Customer satisfaction is an important issue affecting organizational survival. It has the most important effect on customer retention and in order to narrow it down, focus on customer service quality as one of the customer satisfaction

factors. However preliminary investigation, literature on financial institutions and other journals revealed that banks have no clue what their customers really think about their products and services and operate in a state of ignorance believing that when their customers are dissatisfied they would know about it, but are usually shocked when there is a decline in their customer base and competitive edge is threatened.

This is evidenced by the long, stagnant queues inside the bank branches and at ATM machines that are often 'out of service' and the seemingly unexplained banking charges, amongst others. All these have a negative ripple effect on the levels of the customer and financial performance of banks at large. In developed economies, the use of mobile banking applications for transactions have recorded significant success and positive customer experience and customer satisfaction but the same cannot be said about some banks in Nigeria given the huge crowd still found in their premises, owing to the number of failed transactions using mobile banking applications leading customer dissatisfaction as a result of increased customer complaint.

Using such online platform by customers of selected banks specifically banks in Osun State, Nigeria has become a burden for customers in this era of innovation. This may be due to the inability to deploy appropriate and responsive mobile banking capabilities which can clearly be responsible for the frustrating customer experience and the corresponding decline in the number of satisfied customers of these banks. The issue of unreliability, safety factors, and the cumbersomeness of

using this online platform is another concern as it often leads to customer frustrations, poor service delivery, and customer dissatisfaction. This study argues that the potential influence of mobile banking application, corporate innovation on customer satisfaction of the banks may likely be enhanced when they deploy reliable, safe, easy to use mobile banking platform (meaning more customers will engage in mobile banking).

Furthermore, empirical evidence shows that studies have been carried out in the area of electronic banking and customer satisfaction in other parts of the world, but not specifically on mobile banking application, corporate innovation and customer satisfaction in any part of Nigeria. Thus, the study investigated mobile banking applications, corporate innovation and customer satisfaction of selected banks in Osun State, Nigeria.

### **1.3 Aim and Objectives of the Study**

The main objective of this study is to investigate the use of mobile banking application, corporate innovation and customer satisfaction of selected banks in Osun State, Nigeria. The objectives were to:

1. identify the level of customer's satisfaction of selected banks in Osun State, Nigeria;
2. examine the level of use of mobile banking applications of customers of selected banks in Osun State, Nigeria;
3. identify the corporate innovative capabilities of selected banks in Osun State, Nigeria;

4. determine the influence of mobile banking applications on customer satisfaction of selected banks in Osun state, Nigeria;
5. examine the influence of corporate innovation on customer satisfaction of selected banks in Osun State, Nigeria and;
6. identify the combined influence of use mobile banking applications and corporate innovation on customer satisfaction of selected banks in Osun State, Nigeria.

#### **1.4 Research Questions**

The following research questions guided the study

- i. What is the level of customer satisfaction of selected banks in Osun State, Nigeria?
- ii. What is the level of use of mobile banking applications among customers of selected banks in Osun State, Nigeria?
- iii. What is level of corporate innovative capabilities of selected banks in Osun State, Nigeria?

#### **1.5 Hypotheses**

The following hypotheses was formulated and tested at 0.05 level of significance.

- H1** - There is no significant influence of use of mobile banking applications on customer satisfaction of selected banks in Osun state, Nigeria.

**H2** There is no significant influence of corporate innovation on customer satisfaction of selected banks in Osun State, Nigeria.

**H3** There is no combined influence of use of mobile banking applications and corporate innovation on customer satisfaction of selected banks in Osun State, Nigeria.

### **1.6 Significance of the Study**

This study is relevant to the management of the selected banks in Osun State, Nigeria. staff, customers, future researchers and general public. For management of the selected banks, it will help them appreciate the real effect of their mobile banking service on customers' satisfaction. Subsequently, they can modify and add new features to improve customers' satisfaction. Other organizations will be informed on how to identify and address the challenges of implementing good mobile banking experience and services.

Staff will also appreciate the challenges of improving effective customer satisfaction through mobile banking service in order to ease pressure on management. The study will also enlighten both existing and new customers on the effect of mobile banking services.

In the educational line, future researchers will find this study essential when it comes to matters relating to this subject and banking industry. Finally, the study will contribute to literature on the subject matter and serve as reference material for other researchers engaged in similar studies and for teaching purposes.

### **1.7 Scope of the Study**

This study focused on investigating the influence of mobile banking applications and corporate innovation on customer satisfaction of selected banks in Osun State, Nigeria. The measures of customer satisfaction are reliability, responsiveness and accessibility. The measures of mobile banking application are ease of use of mobile applications, risk in the use of mobile applications and cost of use of mobile banking applications, while the measures for corporate innovation are increased customer base, culture of innovation and operational efficiency. The geographical scope will cover eight selected banks in Osun State; these banks are chosen because the perceived problem of customer dissatisfaction is prevalent among their customers<sup>10</sup>. The selected banks are First Bank Nigeria Plc., Wema Bank Plc., Zenith Bank Plc., Fidelity Bank Plc., Guaranteed Trust Bank Plc., Sterling Bank Plc., United Bank for Africa Plc., and Polaris Bank Plc.

### **1.8 Limitation to the Study**

The major issues that limited this study were retrieving information from respondents, who in this regard are staff of the eight banks. The nature of their work makes them less receptive towards advancing research. Also, the ingenuity of respondents who filled the questionnaire for accurate data analysis, time factor for retrieval of information, and the financial implications of carrying out this

study limited the study, Nevertheless, these has not in any way affected the quality of this study.

### **1.9 Operational Definition of Terms**

**Customer Satisfaction:** This is a measure of how products of mobile banking and services supplied meet or surpass customer expectation of selected banks in Osun state, Nigeria.

*Reliability:* This is the quality of trustworthiness of selected banks in Osun State, Nigeria.

*Responsive:* This is the situation whereby the selected banks in Osun State react quickly and positively to customer's complaints.

*Accessibility:* This is the quality of how customers' of selected banks in Osun State are able to log into their applications.

**Use of Mobile Banking Applications:** Mobile banking application is a service provided by the selected banks in Osun State that allows their customers to conduct financial transactions remotely using mobile device such as smart phone or tablet.

*Ease of Use:* This is the capacity of the system of the selected banks in Osun State to provide a condition for its users to perform the tasks safely, effectively, and efficiently while enjoying the experience.

*Risk in Mobile Transaction:* This is a situation that involves exposing customers of the selected banks in Osun State to danger such as malware, phishing and so on.

*Cost of Mobile Transaction:* This is an amount that has to be paid or spent to buy or obtain the services of the selected banks in Osun State, Nigeria.

**Corporate Innovation:** This is the intentional fostering of out-of-the-box thinking within the environment of the selected banks in Osun State, Nigeria.

*Increased Customer Base:* This is the ability of selected banks in Osun State to be able to pull more customers to their bank through satisfactory mobile banking services of existing customers.

*Culture of Innovation:* It is creative thinking ability of information technology managers of selected banks in Osun State, Nigeria.

*Operational Efficiency:* It is the state of being able to serve bank customers without waste of time through mobile banking applications.

## Endnotes

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## **Chapter Two**

### **Literature Review**

This chapter reviewed the literature relevant to this study. The theories relevant to the study area will also be reviewed. The chapter dwelled on the concept and empirical studies that discuss the link between mobile banking and customer satisfaction with specific emphasis on First Bank of Nigeria Plc. This chapter is organized as follows;

#### **2.1 Conceptual Review**

2.1.1 Concept of Customer Satisfaction

2.1.2 Overview of use of Mobile Banking Application

2.1.3 Concept of Corporate Innovation

#### **2.2 Theoretical Review and Framework**

2.2.1 SERVQUAL Theory

2.2.2 Technology Acceptance Model

2.2.3 Diffusion of Innovation Theory

#### **2.3 Review of Empirical Studies**

2.3.1 Use of Mobile Banking Applications and Customer Satisfaction

2.3.2 Corporate Innovation and Customer Satisfaction

## **2.4 Conceptual Framework**

## **2.5 Summary of Literature Reviewed**

### **Endnotes**

## **2.1 Conceptual Review**

Considering the variable to be discussed in this study, the review will be discussed in line with the existing literatures in order to widen the understanding of these variables. To this end, each variable will be reviewed with their definitions, types and significance and implications. The variables described includes: mobile banking (ease of use, security (risk) of mobile transaction and cost of mobile transaction), corporate innovation (increased customer based, culture of innovation and operational efficiency) and customers satisfaction (reliability, responsive and accessibility perspectives).

### **2.1.1 Concepts of Customer Satisfaction**

Customers perceive service in terms of quality, but how satisfied they are with the overall experience, is what defines their satisfaction. Whether the customer is satisfied after purchase depends on the offer's performance or the customer service in this case, in relation to the customer expectations. However, although service quality and customer satisfaction are used interchangeably, there is indeed a distinction<sup>1</sup>. Studies has indicated that satisfaction is the extent to which the requirements of the customers have been met where requirements means stated needs or expectations whether implied or obligatory. Accordingly, satisfaction is a

process where the service provider meets the expectations and norms of customers. Some researchers postulate that satisfaction is when a consumer cognitively compares actual performance with expected performance<sup>2</sup>. Furthermore, they opine that satisfaction is the post purchase evaluation of products or services taking into consideration the expectations. Summarizing the definition of satisfaction, it is indicated as the feeling which emanates from the process of evaluating what was obtained against what was expected, the purchase decision itself and or the fulfillment of needs or wants. It can therefore be accentuated that the level of customer satisfaction may be influenced by various internal and external factors. This suggests that the determination of satisfaction is very difficult. It can therefore be attested that overall customer satisfaction is not a static process but keeps on changing when the customer get an experience with the service provider<sup>3</sup>.

Although customer satisfaction is anew thing, researchers defined customer's satisfaction under different angles and different time. While the literate contains significant differences in the definition of customer satisfaction, all the definitions share some common elements. When examined as a whole, three general components can be identified: (1) consumer satisfaction is a response (emotional or cognitive); (2) the response pertains to a particular focus (expectations, product, consumer experience) and (3) the response occurs at a particular time (after consumption, after choice, based on accumulated experience).

According to English Business Dictionary, customer satisfaction is the degree of satisfaction provided by the goods or services of a company as measured by the number of repeat customers. Customer satisfaction is also defined as a judgment that a product or service feature, or the product or service itself, provide (or is providing) a pleasurable level of consumption related fulfillment, including levels of under or over fulfillment. Moreover, customer satisfaction is considered to be one of the most important competitive factors and will be the best indicator of a company's profit ability in addition, customer's satisfaction will drive company to improve their reputation and image, to reduce customer's turnover, and to increase attention to customers' needs, Such actions will help company create barriers to switching and improve business relationships with their customers, customers' satisfaction is a measure of how products and services supplied by a company meets or surpass customer's expectation.<sup>5</sup>

Customer satisfaction is also defined as the number of customers, or percentage of total customers, whose reported experience with a firm, its products or its services (ratings) exceeds specified satisfaction goals<sup>6</sup>. And yet another definition of customer satisfaction is; it refers to the extent to which customers are happy with the products and/or services provided by a business<sup>7</sup>. Further definition of customers' satisfaction is; it is a term generally used to measure a customer's perception of a company's products and/or services. It's not a straight forward science however, as customers' satisfaction will vary from person to person,

depending on a whole host of variables which may be both psychological and physical<sup>8</sup>.

It is also noted that customer satisfaction can be described as measures that tells how well a product or a service supplied by a firm meets customer expectation. Customer's satisfaction is the customers overall feelings of contentment in a business interaction. Customer's satisfaction is defined as a measure of how products and services supplied by an organization meet or surpass customer's expectation<sup>9</sup>. Customer Satisfaction is when the outcome of the service matches the expectations of the service even though they differ one is a component of the other. Therefore, it is defined as the customer's evaluation of a product or service in terms of whether the product or service has met his needs or expectations. Failure to meet needs results in dissatisfaction, or a poor perception of the service quality<sup>10</sup>. Satisfaction can be acknowledged in various senses depending on what needs the customer had before the service; it ranges from feelings of fulfillment, contentment, pleasure, delight, relief, and ambivalence. Although it tends to be measured as a static quantity, it is dynamic and evolves over time being influenced by a variety of factors. Service quality is one of those factors that contribute to customer satisfaction, in other words a component of customer satisfaction measure. As it can therefore be pointed out that the distinction between the two is a very important one. The level of customer satisfaction is the result of the customers comparison of the service quality expected in a given service encounter, with the perceived service quality. In addition, the distinction is

that in measuring customer satisfaction, the actual experience of the customer is the basis of assessments while in service quality measurement the customer experience is not required. Accordingly, satisfaction or dissatisfaction is a measure or evaluation of a product or service's ability to meet a customer's need or expectations.

If the customers of an organization are satisfied by quality services the result is that, they will be loyal to them and consequently be retained by the organization, which is positive for the organization because it could also mean higher profits, higher market share, and increasing customer base. Researchers have argued that customers value satisfaction and quality in many different ways. Therefore, the expression "no customer dissatisfaction", does not necessarily go hand-in-hand with "customer satisfaction"<sup>11, 12</sup>. They further argued that changes in satisfaction are consequences from past decisions. He continues to explain that quality is judged by the consumer and that the most important measurement of quality is how it affects customer satisfaction. This is further strengthened by some other researcher, who argued that whether or not a customer considers their purchase to live up to their expectations, i.e. whether the customer is satisfied or not, is dependent on the perceived quality<sup>13</sup>.

In order for satisfaction to be fully implemented, there is need for the involvement of the customers. The interaction between customers and service providers is an important determinant of perceptions of service quality. Sometimes the interaction will be largely transactional in nature but most common interactions will be

within the context of an ongoing service relationship. Building effective and significant relationships can contribute significantly to customer satisfaction, loyalty. Retention and improvement of performance<sup>14</sup>. If transaction is without customer involvement, the provision of many services cannot occur, and the way in which customers participate in the delivery process can have an important implication for both customer and the service provider<sup>15</sup>. Customers who willingly participate in service delivery process expect better quality of service for various reasons. First of all, customer participation means that the provider has a clear understanding of their needs and circumstances. Secondly, customers who participate may be aware of some of the constraints on the service providers in terms of what they can deliver and what they cannot. For that matter, such customers are more likely to form more realistic expectations about service quality and as a consequence the gaps between expectations and performance may be smaller. Finally, it is possible that, willingness of customers to participate actively in the provision of a service can provide the organization with an opportunity to enhance service productivity if they consider the contribution of customers<sup>16</sup>. It is further suggested that customers will and can only be expected to participate in a relationship if they anticipate benefits from that relationship. Generally, the quality of service or interaction between the supplier and buyer and the degree of customer participation in the relationship has been identified as possible antecedents of customer satisfaction. A cursory glance at the relationship between these concepts will be desirable.

Customer Satisfaction and Quality have enumerated the differences between service quality and satisfaction. They indicated that the dimensions of service quality are specifically or directly connected with the rendering of the service whilst satisfaction is based on many factors, both directly and indirectly relating to the delivery of the service. Customers do not base their perceptions of the quality of service on experiences/encounters with both the service provider and the service environment. On the other hand, past experiences form the basis for evaluation of satisfaction. In addition, quality is supposed to be ascertained by external cues such as price and reputation whilst satisfaction is prompted by conceptual cues like equity and regret. Also ideals and excellence in connection with the service delivery are the clues to service quality. In the same vein, satisfaction perceptions are based on predictions or norms for the service delivery. However, it has been indicated that it is very difficult to draw a line between satisfaction and quality of service.

Some researchers have postulated that satisfaction can be experienced and happened during or at the transactional level whilst quality is seen to be taking place at the global level<sup>17</sup>. It is further believed that quality judgments are more specific and that of satisfaction are holistic. Quality judgments have a connection with cognitive judgments whilst that of satisfaction relates to affective judgments. Researchers are divided over the antecedents of service quality and satisfaction. Whilst some believe service quality leads to satisfaction, others think otherwise<sup>18</sup>. Some authors are of the view that satisfaction leads to quality whilst

others have a contrary view<sup>19, 20</sup>. Studies suggest that satisfaction leads to quality and also submits that there is a correlation between the quality of service and customer satisfaction. Enhanced service quality leads to customer satisfaction with its ripple effects such as; customer loyalty and improvement in the existing relationship between the organization and customers. Others are that customers will bear with the service provider when the organization is not able to deliver as well as customers canvassing for the organization to get more customers<sup>21, 22</sup>. It can be gathered from the above that the two concepts are the same and are being used interchangeably. Some other authors are of the opinion that quality and satisfaction are closely connected and are synonymous and interchangeable<sup>23, 24, 25</sup>. Thus, both concepts are referring to meeting the requirements of customers. Therefore, making a clear distinction between them will be a difficult task. Accordingly, there are four main factors that constitute customers perceptions of service quality, satisfaction and value. These are service encounters, the evidence of service, image and price. Service encounter refers to both verbal and non-verbal attitudes which form the basis for intangible service quality such as the environment where the service is provided like equipment and layout of the room or building<sup>23, 24</sup>.

Evidence of service is whereby customers based their search of the level of service provided on certain proof like employees, process and physical evidence. This is because services are intangible and they are produced and consumed at the same time. Studies have furnished three proofs; employees, process and physical

evidence<sup>26, 27</sup>. Studies are of the view that a high service price is associated with an equal high quality consumer expectation. A low price will prompt customers to be apprehensive about the quality of the service and the capability of the organization to render quality service. This point is not wholly true. Normally a low price of things in general does not connote inferior or superior quality. The value is more practicable or is a feasible thing than satisfaction since it includes not only the benefits accrued but the price. This value is dynamic that must be managed.

On the other hand, satisfaction is derived from the value proposition offered in specific products/markets which precedes satisfaction. It can further be accentuated by the fact that quality affects value<sup>28, 29</sup>. Subsequently, there is correlation between service satisfaction and quality and value. It is clear from the literature that value is the worth or the importance attached to or gains and loss derived from purchases or consumption of services. Satisfaction and quality are also seen as the meeting of the requirements of customers. It could therefore be inferred that the requirements are the same as the importance attached to the services. Therefore, the three concepts; quality, satisfaction and value are the same and are being used interchangeably. The SERVQUAL and the SERVPERF Models The most widely used models in measuring quality in the service industry in general and in the banking sector in particular are the SERVQUAL and the SERVPERF models. Since the SERVPERF was curved out of the SERVQUAL.

SERVQUAL is one of the tools used in measuring the quality of services. This model is also being used to measure the quality of services from the customer's point of view. The originators of the model are Parasuraman, Zeithaml and Berry. The main aim of SERVQUAL is to have a standard and a reliable tool that can be used to measure the quality of services in different service sectors. Originally, those who developed SERVQUAL introduced ten service quality dimensions or attributes. These are: tangibles, reliability, responsiveness, competency, courtesy, communication, credibility, security, access and understanding the customer. However, in the 1988 article, these were pruned to five which are; tangibles, reliability, responsiveness, assurance and empathy.

Tangibility refers to the physical environment in which the service provider operates. It comprises the physical facilities available, workers, and equipment and communication materials. Reliability concerns the ability with which the service organization can deliver the service dependably and accurately. Empathy on the other hand, is about the special care and attention given to individual customers when being served. Responsiveness is also the preparedness of the service provider to assist customers and render as quick or prompt service as possible. Assurance too is in connection with the knowledge and the courteous attitude of staff and their ability to instill trust and confidence in customers. Based on this service quality dimensions, two sets of statements are developed, one set is about customers' expectations (expectation of service quality before using the service) and the other set measures customer perceptions (perceptions of quality

after using the service). The difference between the two; perceptions (P) and expectations (E) constitute the service quality gap<sup>30</sup>.The quality gaps are five.

These are:

Gap 1: The difference between what customers really (actually) expect and what management think (perceptions) of customers' expectations. This gap occurs because management did not undertake in-depth studies about customers' needs.

Also there are poor internal communication and insufficient management structures. This gap is referred to as the understanding or knowledge gap. Gap 2:

This is called the standard gap. It is the difference between management perceptions of customer service quality expectations and service quality specifications.

Gap 3: This gap is also known as the delivery gap. The difference between service quality specifications and the actual service quality delivered.

This means the failure to ensure that service performance conforms to specifications. The failure emanates from absence of commitment and motivation,

insufficient quality control systems and insufficient staff training. Gap 4: This gap

too is termed as the communication gap. It is the difference between the delivery of service and the external information (communication) regarding promises

made to customers or implied .Examples of medium used for the external communication are media and customer contracts. Gap 5: this is described as the

difference between customers' expectation of service quality and the actual service received.

One of the major shortcomings of the model is that the five service quality dimensions are not universal and cannot be applied in all service industries. Researchers have contended that it depends on the context in which the dimensions are applied since the definitions and the number differ<sup>31</sup>. This has been confirmed by another study where only two dimensions were found. In the same vein, studies has propounded that there was no evidence of the five dimensions. In spite of the numerous criticisms, SERVQUAL has been adopted for conducting many studies. It is therefore held in high esteem. The model in general lays bare the strengths and weaknesses of the quality of service provided by organizations. In this way, areas of weaknesses can be prioritized by the organization<sup>32</sup>. Another important merit of the model is that it serves as the standard for organizations to measure the quality of service in the same industry. Apart from this, it serves as a signal to management to take into consideration the perceptions of both management and customers. It also helps management to know customers' impressions about the service purchased. The analysis of the quality gaps assist management immensely to draw their strategies to meet customers' expectations. Having discussed the SERVQUAL model, the next section dwells on the studies conducted into the banking industry using the SERVQUAL model.

Another model that discusses characteristics of a product or service and how they relate to customer satisfaction is attributed to Dr. Noriaki Kano (undated). He has categorized these characteristics into three groups: dissatisfiers satisfiers and

delighters. Dissatisfies are characteristics customers expect to see in a good or service. Customers assume or expect the presence of such characteristics even though they may not mention them when asked about what they are looking for in a product or service. Satisfiers are characteristics that customers expressly say they want in a product or service and their presence leads to satisfaction. Delighters are new and innovative characteristics of a product or a service not expected by the customer. Its presence delights the customer.

Satisfaction has been considered as one of the most important theoretical as well as practical issues for most organizations and customer researchers<sup>33</sup>. Satisfaction reflects a post-purchase evaluation of product quality given pre-purchase expectations<sup>34</sup>. On one hand, within literature on services marketing, satisfaction has traditionally been defined as a cognitive-based phenomenon. Cognition has been studied mainly in terms of the expectations/ disconfirmation paradigm; also known as the confirmation/ disconfirmation paradigm, which states that expectations originate from the customer's beliefs about the level of performance that a product/service would provide.

Many marketing scholars indicate that customer satisfaction is related to the size and direction of disconfirmation, which is defined as the difference between the post purchase and post-usage evaluation of the performance of the product/service and the expectations held prior to the purchase<sup>35, 36</sup>. On the other hand, other studies have recognized that the affect experienced during the acquisition and consumption of the product or service can also have a significant influence on

satisfaction judgments<sup>37</sup>. Customer satisfaction is an ambiguous and abstract concept and the actual manifestation of the state of satisfaction will vary from person to person and product/service to product/service. The state of satisfaction depends on a number of both psychological and physical variables which correlate with satisfaction behaviors such as return and recommend rate. The level of satisfaction can also vary depending on other options the customer may have and other products against which the customer can compare the organization's products. Organizations of all types and sizes have come to realize that their main focus must be to satisfy their customers. This applies to industrial firms, retail and wholesale businesses, government bodies, service companies, nonprofit organizations and every subgroup within an organization. There is a substantial body of empirical literature that establishes the benefits of customer satisfaction for firms. Organizations are increasingly interested in retaining existing customers while targeting noncustomers; measuring customer satisfaction provides an indication of how successful the organization is at providing products and/or services to the marketplace.

Organizations that strive for high customer satisfaction are more likely to receive larger economic returns. It has also been recognized that these economic returns are not immediately realized. Findings from other studies argued that customer satisfaction act as an indicator of future business opportunities, where a satisfied customer is loyal to the company, which implies a stable future cash-flow<sup>38</sup>. This

is strengthened by the fact that there is a positive relationship between customer satisfaction and profitability

Consequently, it is noteworthy to state that a customer that is satisfied with a product or service will raise their repurchase frequency and future expectations. Due to the customers higher expectations it will become more difficult for the firm to satisfy the customers in the next purchase cycle which might damage the organization's fame in the long run<sup>39</sup>. An organization that raises customer's expectation too high will get problem with retaining the same customer satisfaction in the future. It would be better for the organization to reduce the expectations and then deliver more than expected<sup>40</sup>. Furthermore, satisfactions are a suitable goal that organizations do not gain advantage by seeking a high level of customer satisfaction when it just raises expectations that are hard to reach and, in turn, increases cost for trying to reach these higher expectations. In a related study, it was further argued that, productivity within the company will be damaged because of the cost and the search after customer satisfaction. Furthermore, in addition to higher cost, the company must add more effort in improving product attributes or overall product design to keep satisfaction at desired level<sup>41</sup>.

Just satisfying customers is not enough, there has to be extremely satisfied customers. The reason is that customer satisfaction must lead to customer loyalty. Ensuring customer satisfaction is not a choice any longer with organizations: it's the only way of building sustainable competitive advantage. Satisfaction is necessary; In other words, satisfaction is of a great benefit for any organizations.

Therefore, researchers have highlighted the following key benefits of customer satisfaction: Customer loyalty: When customers are satisfied, they believe in the organization's brand and become loyal. These loyal customers give brands repeat patronage and form a major part of the revenue<sup>41, 42</sup>. Losing customers takes a huge toll on any organizations' revenue and customer churn numbers. Furthermore, the positive word of mouth to friends and family from loyal customers starts to add up. Satisfied existing customers feel they can promote the brand to their loved ones for the great experiences they had when patronizing an organizations products or services. Sales revenue: Brands focusing on customer satisfaction actively have healthy sales revenue. They do not lose old customers and have a steady revenue stream from repeat business. Customer satisfaction and increased revenue are directly correlated. Satisfied customers stay loyal to your brand, interact with it, buy offer, and make recommendations to their colleagues, friends, and family. Run online customer surveys to note which areas are impacting customer satisfaction negatively and need improvement. This will help improve customer satisfaction and reduce customer churn. Boost brand reputation and popularity: Customer satisfaction impacts brand reputation and popularity. See customer feedback and figure out which areas could be improved and improve satisfaction. Is it accounts or customer service? Don't be afraid to ask your customers; honest feedback will help manage expectations and act accordingly. Famous brands have dedicated teams and initiatives for improving customer satisfaction, which helps them achieve high sales figures. Reduce

marketing expenses: Satisfied customers are your biggest advocates. Their positive word-of-mouth lends your brand credibility, popularity, and helps acquire new customers. This saves brands a lot of money that they would spend on marketing and promotional campaigns to acquire new customers.

Most companies and banks for that matter have realized the need to offer customer service to other customers. But most often, this is just on paper. The actual service or the quality of the service is most at times not present as promised. This often leads to customer dissatisfaction. Meanwhile, customer service interactions can often be frustrating, and client requests can frequently appear demanding, there may be barriers in your organization that might make reasonable consumer requests seem excessive. Companies therefore need to understand the barriers to customer satisfaction and take that into consideration in order to satisfy their customers. The barriers may range from management, environment, self, processes or systems, and communication. Some of the specific barriers to customer satisfaction could result if the systems used in working with clients perform poorly, are slow, contain insufficient data or doesn't track client data appropriately, there will always be problem. Customers will get frustrated very quickly if the turnaround time is long. Therefore, they may start looking for other services that are efficient enough for their needs.

Furthermore, if there is no proper documentation of data, it is easy to make the claim that an organization is customer-centric. Proper documentation of Information leads to the realization that there is a gap between what an

organization is doing and what the customers are experiencing. Once this gap is surfaced, management is faced with a lot of uncomfortable decisions about what to change. Reliable information can lead to meaningful innovation that will find greater customer acceptance and market success. Consequently, customer satisfaction is the responsibility of the organization; from the management to the service staff on the field. The organization must always consider how valuable customers are, so as to treat clients in the appropriate and valued manner.

Overworked staff can be the result of understaffing, layoffs, rapid growth or assigning too many tasks to too few people. The result is that staff will quickly lose their energy. Those that don't will be stretched too thin and no single client will appear as a priority to them. Since the representatives of the organizations will have many clients to service, steps will be skipped, staff and customers will become frustrated and clients will receive insufficient attention to their issues. Furthermore, the exact opposite can have a similar effect on customer service. If the staff of the organization is under worked, they will feel less challenged, under-appreciated and unimportant. Work has a habit of expanding to fit whatever timeframe is allotted. So if the staff is under worked, case handling turnaround time can drag on longer than reasonably expected, and customers will get frustrated. Similarly, workplace culture can have a substantial effect on how customer service cases are handled. If the workplace climate is one where customers are not cared for, where staff doesn't care about their work, or if the environment is not empowering, your staff will under-deliver whenever presented

with a customer service case. This culture prevents your staff from caring enough about your customers to make them happy. Customers are not a priority, and the repercussions of an unhappy client are not apparent to them. Conclusively, if the staff is not held accountable for customer service, there is no reason for the staff to try harder to make sure customers are happy. Staff can always place the blame elsewhere and know they can never get in trouble for letting a customer leave unhappy.

Presently, banks in Nigeria are adding value to their services for customer's satisfaction. The customers have more choices in choosing their banks because the new age is bringing about sweeping changes in the banking industry, forcing them to re-engineer many of their basic processes and systems. This in turn directly affects their level of satisfaction with the product<sup>43</sup>.

Therefore, the banking industry will need to understand the factors that contribute to customer's satisfaction in its industry. Many things that affect customer's satisfaction are not directly related to the product itself. Some researchers are of the view that customers' satisfaction is based on the utility a customer draws from a product or service. It plays a major role in the business. If customers are not satisfied with the offerings of the business, they can choose not to bring their business there and impact will be felt by the business<sup>44</sup>. Problems with customers' satisfaction are therefore very significant to the business.

This is mainly because the quality of service directly affects how consumers perceive a specific product or service. Positive experiences lead to positive

consumer attitudes and higher satisfaction. On the other hand, negative experiences lead to negative consumer attitudes and lower satisfaction. Similarly, user experience greatly affects customers' satisfaction. This is mainly because prior user experience creates consumer perceptions, which have an effect on satisfaction. Some researchers suggested that the aim of any organization should be to deliver value to its customers in order to increase satisfaction<sup>45</sup>. However, in the global market place, there are many companies offering similar products and therefore targeting the same market or customers. The company therefore has to come up with a general product that caters for all the customers. This means that the general product will cater for the specific needs of each individual. This lack of specialized products for each customer leads to less customer's satisfaction<sup>46</sup>.

The increased technological innovations in the banking industry have changed the ways in which customers are now carrying out transaction<sup>47</sup>. The important question now is has mobile banking enhanced customer satisfaction in the banking industry. Mobile banking is considered to be one of the most value-added services in banking. Facilities provided by mobile banking services have helped financial institution to reduce the crowd experienced in the face to face banking transaction through automated services where ever possible. The ease of use and technology proficiency is important for the success of mobile banking platforms. According to the author, users who are able to accomplish transactions on such platforms with ease and great technological proficiency gain feelings of mastery

and pride. Therefore, it can be noted that mobile-service quality is an important measure when it comes to consumer satisfaction<sup>48</sup>.

### **2.1.2 Concept of Mobile Banking Applications**

Currently, the advancement of mobile technologies has provided an opportunity for financial providers in introducing new financial innovations. One of the emerging financial innovations introduced by financial providers in an effort to increase customer satisfaction and efficiency is mobile banking. More recent developments in Information Communication Technology (ICT) have provided the opportunity for customers to access banking services without necessarily going to the bank branches. This technological development has intensified in recent years and has led to the reduction of financial institutions' costs<sup>49</sup>. Customers will be able to obtain immediate and interactive banking services anytime and anywhere which, in turn, initiate great value for them. Mobile banking service can also increase the amount of data processing and improve operational performance. Moreover, adoption of mobile banking has significant impact on reducing costs and facilitating change in retail banking<sup>50</sup>. Mobile banking has great potential to provide reliable services to people living in the remote areas where internet facility is limited<sup>51,52</sup>.

Mobile banking application has been defined as an application of mobile 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<sup>53</sup>.

Another study defined mobile banking as an innovative method for accessing banking services via a channel whereby the customer interacts with a bank using a mobile phone<sup>54</sup>. Mobile banking also means performing banking activities which primarily consist of opening and maintaining mobile/regular accounts and accepting deposits; furthermore, it includes performing fund transfer or cash-in and cash-out services using mobile devices. In the broader sense mobile banking enables the execution of financial services in the course of which - within an electronic procedure - the customer uses mobile communication techniques in conjunction with mobile devices<sup>55</sup>. Mobile Banking can perform various functions like mini statement, checking of account history, SMS alerts, access to card statement, balance check, mobile recharge etc. via mobile phones<sup>56</sup>. Banks are constantly updating their technology and want to increase their customer base by reaching to each and every customer. There are many advantages of using mobile banking, such as people in the rural or remote areas can also get an easy access to mobile banking whenever required. Mobile banking is a developing mobile technique that has combined information technology and commerce applications together. Since mobile banking was introduced, consumers have been able to use it to obtain special services 24 hours a day without having to visit the traditional bank branch for personal transactions.

Mobile banking helps banks to increase speed, shorten processing periods, improve the flexibility of business transactions and reduce costs associated with having personnel serve customers physically<sup>57</sup>. The use of mobile phones has

facilitated the expansion of markets, social business, and public services in both developing and developed countries<sup>58</sup>. Other researchers claim that rapid advances in mobile technologies have made mobile banking increasingly important in financial services<sup>59</sup>. The use of mobile banking offers a way of lowering the cost of moving money from place to place<sup>60</sup>. A related study classified mobile banking into two; firstly, transformational mobile banking, which is the provision of banking services using a mobile phone to reach the unbanked population<sup>61, 62</sup>. Secondly, additive mobile banking, in which the mobile phone is simply an additional channel that is used to provide banking services to those already banked. This opens a whole new world of opportunities for businesses and retailers to market their goods and services for customer. Customers today are 'on-the-go' they appreciate things that are readily available to them and banking is one example. Gone are the days when customers would line up in banks to do their banking needs. Today by a touch of a button using electronic banking they can transfer funds to and from their accounts. However, even though mobile technology is widely available amongst customers, there are proportionately few adopters for mobile banking.

It has been argued that for any service or technology to succeed it must be adopted by the users and accepted. Therefore, in the following paragraphs discussed the factors leading to the adoption of mobile banking. Accessibility is defined as the ability of users to access information and services from the web, this dependent on many factors. They include: the content format; the user's hardware, software

and settings; internet connections; the environmental conditions and the user's abilities and disabilities. The term "web accessibility" generally relates to the implementation of website content in such a way as to maximize the ability of users with disabilities to access it. For example, providing a text equivalent for image content of a web page, allows users with some visual disabilities access to the information via a screen reader. The techniques and approaches that create more accessible web pages for people with disabilities also address many other access issues such as download speed and discoverability<sup>63</sup>.

Furthermore, reliable/prompt responses, attentiveness, and ease of use had considerable impacts on both customers perceived overall service quality and satisfaction. It also indicated that there is a significant positive relationship between overall service quality and satisfaction. In a related study, the traditional service quality dimensions in the context of online services, was redefined as an instrument consisting of seven online service dimensions (reliability, access, ease of use, personalization, security, credibility, and responsiveness). Therefore, considering the banking service quality with respect to technology use, such as ATMs, telephone, and the internet and identified six dimensions<sup>64</sup>. They were convenience/accuracy; feedback/complaint management; efficiency; queue management; accessibility; and customization. Therefore, accessibility has positive effect on customer satisfaction. Mobile banking provides higher degree of convenience that enables customers to access internet bank at all times and places. Apart from that, the ease of access of computers is perceived as a measure

of relative advantage<sup>65</sup>. Furthermore, it has been revealed that there are some service quality determinants that are predominantly satisfiers and others that are predominantly dissatisfies with the main sources of satisfaction being attentiveness, responsiveness, care and friendliness. The main sources of dissatisfaction are integrity, reliability, responsiveness, availability and functionality<sup>66</sup>.

Accordingly, the provision of customer interactivity is an important criterion that attracts users in the delivery of mobile banking. Also other factors of paramount importance in ensuring the success of mobile banking, has been identified such as; the ability of an innovation to meet users' needs using different feature availability on the web site. For instance, the provision of interactive loan calculators, exchange rate converters, and mortgage calculators on the web sites draw the attention of both users and non-users into the bank's web site. Customers have doubts about the trust ability of the mobile bank's privacy policies. Trust has striking influence on user's willingness to engage in online exchanges of money and personal sensitive information. Privacy is an important dimension that may affect users' intention to adopt mobile based transaction systems. Encryption technology is the most common feature at all bank sites to secure information privacy, supplemented by a combination of different unique identifiers, for instance, a password and warrant. Thus, a combination of smart card and biometric recognition using fingerprints offers a more secure and easier access control for computers than the password method.

Assurance about security relates to the extent to which the web site guarantees the safety of customers' financial and personal information, an area which has witnessed a proliferation of research interest. Security can be assured by providing a privacy statement and information about the security of the shopping mechanisms and by displaying the logos of trusted third parties. For example, displaying trusted third party logo guarantees a certain level of security protection and has been shown to significantly influence how consumers regard the trustworthiness of e vendors. Customers can use mobile banking technologies for various banking services ranging from planning to pay their bills via their cell phones. Mobile technologies used in the mobile banking include the messaging-based applications, browser-based applications, and client-based applications.<sup>67</sup> On the messaging-based applications, the communication between the bank and the customer is carried out via text messages. For example, by using a registered mobile number, the customer sends a predefined command to the bank, and then uses text messages to conduct transactions with the bank. An example of messaging-based applications is the Unstructured Supplementary

Service Data (USSD), which has compatibility with most mobile phones. The term "SMS Banking" refers to the provision of banking and financial services via means of text messaging service, known as SMS. SMS allows the financial institutions to communicate with their customers. Almost all mobile phones have the ability to use SMS; SMS is so suitable for sending messages from banks for a number of banking operations. In order to create a query, the customer sends an

SMS containing the service request to a special number which is considered for this purpose. The customer sends a customized SMS (a command based instructed with Arabic number) to the bank with the predefined commands for each offered service. The server of the bank receives the SMS, interprets the commands and executes commands and instructions, if the request is found to be authorized. The authentication is carried out with the help of a special Mobile Banking, Personal Identification Number (MPIN). Furthermore, the requests are only accepted from a mobile phone number that has been registered as the authorized number of operating that particular bank account. With the integration made with the mobile banking server one can get all the financial and non-financial information. After completion of the whole process, the information will be gathered in the oracle database for future reference.

The browser-based application is essentially a Wireless Access Protocol (WAP)-based internet access. This requires a compatible mobile phone which is WAP-enabled. The mobile phone is used to access banking portals through the Internet. Browser-based customer needs to be connected to the internet to use this service. The interface is generated from the server which is transported to mobile device, and this allows the content to be displayed through the browser. This method is extremely fast depending on the server that the customer is connected to but one its disadvantages is that, it requires the subscriber (customer) to stay online all through the transaction process and could lead to higher cost for the customers. The client based method requires the customers to use software installation, and

this will serve as a user interface that can allow customers to use the mobile device while offline to access some basic transactions before going online. Typing details before connecting to the internet could reduce cost. This client based application is particularly useful because it allows customers to stay offline and while preparing transaction such as entry of account details and afterwards the transmission is made by sending out the data, this banking process conducted offline reduces online connection time and cost. These are mobile banking applications that the users should download on their phone. Using the properties of these applications, transactions can be encrypted completely in both source and destination. Since this software has been designed for special purposes, mobile banking application designers can optimize the applied interface for the financial transactions.

The independence of application is one of the advantages of these applications for financial institutions. Once customers have downloaded the software on their phone, they can use the Mobile Banking application. In other words, the application should be compatible with the various needs and functions for a large number of mobile phones and this is expensive. The phone should also support one of the environments such as the Microsoft Windows Mobile. Another problem of mobile banking applications is that the customers should download the software, install it on their devices, and update its new versions, and maybe this is a new problem for some of the customers<sup>68</sup>. Mobile Banking, includes a

wide range of services. Accordingly these services may be categorized into mobile accounting and mobile financial information services:

The Mobile accountings are transaction-based banking services that revolve around a standard bank account and are conducted and/or availed by mobile devices. Not all mobile accounting services are however necessarily transaction based. Mobile accounting services may be divided into two categories to differentiate between services that are essential to operate an account and services that are essential to administer an account. Moreover, additional services are required that inform a customer about his/her transactions and other activities involving their account. It is for this reason that Mobile Accounting is offered almost regularly in combination with services from the field of Mobile Financial Information<sup>69, 70</sup>. Account Operation: which refers to an activity that involves monetary transactions. Such transactions may involve an external account and/or internal account. Mobile services that are used to operate an account are: (a) Money remittances which may be used to instruct the bank to remit money in order to conduct one-time transactions, such as paying bills or transferring funds. This service can also include the facility to cancel an ordered remittance. (b) Issue standing orders which refer to a situation where the bank may be entrusted with standing orders for payment of regularly recurring payments such as payment of standing payments, monthly rent or telephone bill. (c) Transfer funds to and from sub-accounts as and when needed, for instance from a savings account to checking or other types of account and vice versa. (d) Subscribing for insurance

policies like travel insurance policy may be purchased via mobile devices. This service could be particularly attractive in time-critical situations, for instance, if a bank customer has to set out on an urgent, unplanned journey, he may still be able to subscribe to a travel insurance policy offered by his house bank.

Account Administration: The term Account Administration refers to tactical situations, for instance, if a bank customer has to set out on an urgent, unplanned journey, he may still be able to subscribe to a travel insurance policy offered by his house bank. This may involve activities like access administration and cheque book request. Mobile Accounting services that are used to administer the account are: (i) Access administration in which Mobile devices may be used to administer the access to an account, for example to change the individual PIN or to request new transaction numbers. (ii) Change operative accounts through which a customer can change his default operative account and do transactions using a different account. This option is attractive for customers holding several sub-accounts. Funds of sub-accounts may be hereby utilized in a targeted manner without first transferring the amount to the default account. (iii) Blocking lost cards using Mobile non-voice telecommunication systems such as Wireless Application Protocol, Short Message Service (WAP, SMS) can be used round the clock to speedily block lost credit and debit cards irrespective of the current geographic location. (iv) Cheque book request which are used Instead of going personally to the bank, the customer can request for a cheque book to be mailed to his or her address as per the records of the bank. This saves his/ her valuable time.

(v) Bill Payment for those companies which register with the bank for this service, the payment is made on request on mobile phone banking and (vi) Change of Primary Account in which the customer has the option to change the primary account to another new account number for carrying out transactions.

The Mobile Financial information refers to non-transaction based banking- and financial services of informational nature<sup>70, 71</sup>. These sub-applications are services rendered through Account Information which refer to information that is specific to a customer and his bank, even though it does not necessarily involve a monetary transaction. Mobile services that belong to this category are (a) Balance inquiries which are employed to check the current financial status of own bank or securities accounts. (b) List of latest transactions which may be used to request a list of the latest transactions performed on an account. This service works with a standard, pre-specified number of latest transactions that are reported, as and when demanded. Most of the banks provide a list of transactions. (c) Statement request which generates a list of all transactions in a given period, for instance in a week or in a month. Statements may be requested either manually, as and when needed electronically. With Mobile Banking the account statements can be requested via and/or delivered on mobile devices. (d) Transaction and balances where the bank may be instructed to automatically alert the customer via SMS whenever transactions (credits as well as debits) exceeding a certain amount are performed on the account. In addition, a similar threshold alert may be activated for the balance status of the account. The customer may be informed via SMS

whenever the balance falls below a certain predefined level. This service may be useful to help the customer avoid unpleasant situations by not being able to honor his commitments. (e) Threshold alerts for stock prices where bank may be instructed to send an alert on mobile devices, via SMS, when prices of some particular stocks fall or jump to a predefined threshold value and ask for further instructions. (f) Returned cheques or cheque status that keeps the customer informed without time delay if one of her or his deposited cheques has not been honored and corrective steps are required. (g) Credit card information: This allows the customer to check anytime and anywhere the current status of his credit cards and the amount that he may utilize at that given point of time. (h) Helpline and emergency contact which provides the content that is required in emergency situations, for instance to block a lost credit card and cheque book. The information may be either embedded in the telephone menu, for example in cooperation with a network carrier or the information may be provided on a WAP page analogue to a web page and Information on the completion statuses of an order which banks may use as a “push” services to inform the customer via his mobile device regarding whether or not his orders could be carried out. This ensures that urgent information can be provided to the customer while on the move.

A lot of literature has highlighted the importance of Mobile banking which allows anytime, anywhere (within the network coverage) banking with all the inherent advantages<sup>72</sup>. The high penetration of mobile phones across the strata of society

makes it a natural tool for taking electronic banking to its next level. Convenience is one of the benefits of mobile banking as banking transactions and other related activities can be performed in the comfort of customer's home or offices. The usefulness of conducting banking transactions at home or from the office eliminates the difficulties that are associated with driving to the bank, the cost of petrol, and parking. Mobile banking also allows customers to perform banking transactions 24 hours a day, 7 days a week, and 365 days a year<sup>73</sup>.

Banks can utilize the time saved by the channel migration of customers to mobile banking for expansion of business through better marketing and sales activities. Mobile banking enables banks to reduce cost of courier, communication, paper works, etc. and also it reduces costs in setting up a branch and the resources to process transactions<sup>74</sup>. Also banks providing mobile banking services can have competitive advantage over those banks, which are not providing this service. It has also been found to increase customer loyalty that is using mobile banking customers need not to go in banks braches for fund transfer or for information, which creates a good relationship between banks and customers which helps in increasing loyalty towards the banks. Lastly, mobile banking services will enable banks to not only increase fee-based income but also enable significant cost savings, improve service quality and provide cross-selling opportunities.

Similarly, one of the major benefits of mobile banking to customers is experienced when they don't need to stand at the bank counter for various enquiries about their account. Customers can save their valuable time and

travelling cost in reaching the bank for their financial transactions. Customers can pay their utility bills on time and save themselves from paying penalties, since alerts are received from the bank. Ubiquitous access, convenience and mobility are the main benefits that mobile banking confers to customer. Nevertheless, despite the widespread proliferation of mobile phones and the numerous advantages that mobile banking offers, mobile banking is still not widely adopted<sup>75</sup>. Some researchers have contended that currently the relevant factors determining the adoption of mobile banking in Nigeria include the level of awareness or attention, the accessibility to computers and the Internet, convenience, privacy, costs, and the availability of knowledge and support concerning internet banking<sup>76</sup>. The introduction of internet banking services is facilitated by the bank's reputation in terms of size, awareness and trust awareness of Service and its benefits in form of the amount of information a customer has about mobile banking and its benefit may have a critical impact on the adoption of mobile banking. On the other hand, low awareness of mobile banking is a critical factor in causing customers not to adopt this type of banking platform and the most important factors discouraging the use of mobile banking are lack of Internet access and not having a chance to try out mobile banking in a safe environment, thus not being in a position to access account. Accordingly, previous studies have identified that user input factors are a function of control, enjoyment and intention to use. Control could be described as the amount of effort and involvement required by consumers in mobile banking. Enjoyment is the

perceived playfulness and intrinsic value that consumers experience from the utilization of mobile banking and this would also influence the level of satisfaction<sup>77</sup>; there is every indication that when consumers are aware of the availability of electronic banking, they will use adopt, though some may not.

In the same vain, another researcher noted that numerous potential influences on consumer adoption of mobile banking including theories of consumer behavior in mass media choice and use, gratification theories, innovation diffusion, technology acceptance, online consumer behavior, online service adoption, service switching costs and the adoption of internet banking. They proposed that customers' intentions to use mobile banking can be affected by customers' attitudes toward using internet banking. When customers have positive attitudes, they are more likely to adopt mobile banking and vice versa<sup>78</sup>.

In another related study, researchers found that customers' attitude are significant factor affecting customer behaviors in accepting or rejecting technology. It was found that the relationship between attitude towards using and usage was significant. Customers' attitudes are a significant factor affecting customer behaviors in accepting or rejecting technology. Customer satisfaction in the view of mobile banking is as a result of cognitive and affective evaluation where some comparison standard is compared to the actually perceived performance. If the performance perceived is less than expected, customers will be dissatisfied<sup>79</sup>. On the other hand, if the perceived performance exceeds expectations, customer will be satisfied. The operational constraints related to customer location, the need to

maintain customer satisfaction and the capabilities of the Bank's main software are influential factors in motivating the decision to enter electronic banking services and consequently influencing the usage experience and thus affecting the level of satisfaction.

Furthermore, service as an intangible good appeal differently to each customer and certain extent of service should be achieved in order to satisfy the customer and that the resulting commitment, loyalty and retention are critical indicators of customer satisfaction. Customer commitment; on average, highly committed customers use more products or services, give more referrals and are much less likely to switch to another bank, compared with customers who have lower commitment levels<sup>80</sup>. Indeed, this view is supported by another researcher who contends that higher levels of website usability might lead to higher levels of consumer's affective commitment to the website as well a direct, positive and significant relationship<sup>81</sup>.

### **2.1.3 Concept of Corporate Innovation**

Innovation is not about showing people what to do and expecting them to do it but it is about leading people and empowering them to participate in the development of the organization and their own personal development<sup>82</sup>. From the statement everyone within a corporate organization is responsible for innovation. Established organizations have to continuously innovate so that they can continue to have a competitive advantage and survive in the market. For an organization to survive, it must come up with new and better ways of doing things. Technology

has influenced innovation significantly, the advent of cell phone technology has given rise to novel products due to the nature of its operations for instance clients can make savings using their cell phones, buy goods and even access their bank accounts directly from their cell phones<sup>83</sup>. The telecommunication industry has strived to connect computers and mobile devices such that information can be exchanged without difficulty. Innovation is not an event but a continuous process which requires the involvement of all interested parties<sup>84</sup>.

There are critical elements that should be utilized by senior leadership to ensure that innovation projects are successful when executed regardless of the many obstacles that may arise especially within large scale businesses<sup>85</sup>. The first ingredient is rewarding risk and not punishing mistakes, he states that mistakes while innovating are not failures but a source of improvement and information and corporate management should reward innovators and accommodate failure as it is the path towards effectively transforming innovative projects into novel business ideas that are long-lasting. Secondly, he advocated for corporate support and protection of the innovators from inside the organization, he also advocated for innovators to be able to access enterprise assets they may need to carry out innovation programs and lastly, leaders who are keen in innovation should work harder to attract clients whose criticism of the product and the business practices and revenue is crucial for the business.

Mobile banking is a platform through which customers can access banking services with the use of their mobile phones<sup>86</sup>. The adoption of mobile banking

has been beneficial to banks because it aids in the satisfaction of customers by significantly reducing transaction costs<sup>87</sup>. A study examine customer satisfaction in the Kenyan Banking Industry revealed that the most important factor to satisfaction in Kenyan banks is the availability of bank branches followed by E-banking presences while the least important factor is the quality of products and services<sup>88</sup>. Innovation is not about showing people what to do and expecting them to do it but it is about leading people and empowering them to participate in the development of the organization and their own personal development. From the statement everyone within a corporate organization is responsible for innovation. Established organizations have to continuously innovate so that they can continue to have a competitive advantage and survive in the market<sup>89</sup>.

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harder to attract clients whose criticism of the product and the business practices and revenue is crucial for the business<sup>91</sup>.

The use of Innovation is well pronounced in all the activities of a whole organization, from the conception of an idea to the introduction of a product or service to the market. Five stages have been found to exist by some researchers as a constant innovation process, this includes: idea creation, study and expansion, application, commercialization, and internalization<sup>92</sup>. Innovation is said to be seen as a process through which important ideas are translated into new methods of added worth for the organization, customers, employees and investors. With reference to organizational innovation, it is not sufficient that every worker as such wants to be creative. Creativity should be seen as a collective effort to raise the level of innovation as part of an asset of the organization. This “refinement” between individual and the stakeholders is important for organizational innovation<sup>93</sup>.

Innovation has been described as a product or process which are new to the company, not necessarily to the world or other sectors<sup>94</sup>. Furthermore, innovation can be described as the collation of ideas that are new to the adopting company or the process of successfully creating something new with monumental value to the relevant unit of adoption<sup>95</sup>. As suggested in a study that an idea may be seen as innovative if it is original for the individual who formed it, without essentially being novel to the entire society<sup>96</sup>.

Corporate innovation can be seen as a key indicator for creating confidence and growth in an organization<sup>97</sup>. The organisation's capability to innovate is the most crucial factor for competitive advantage in high turbulent market. Innovations is not limited but also involve products, procedures and machineries used to manufacture products or render services directly related to the basic work activity of an organization. Process innovation is the application of a new or improved creation or delivery technique. This includes significant changes in methods, equipment or software while process Innovation can be labeled as improving or changing current procedures and techniques used in the production of products. Process innovation includes bringing significant improvement in the equipment, technology and software of the production or delivery method. Firms bring novelties in the production and delivery method to bring efficiency in the business. The new method must be at least new to the organization and organization had never been implemented before. The firm can develop new process either by itself or with the help of another firm<sup>98</sup>. Firms bring process innovation to produce innovative products and amendments are also brought in the processes to produce the new products. To decrease the production cost, firms go for process innovation. The process innovation is reflected in the cost of the product<sup>99</sup>. Firms adopt new process to compete with other firms; they have to bring the process innovation to satisfy their customers.

Another type of innovation is product innovation. This is the introduction of a good or service that is relatively new or improved such with respect to its features

or intended usefulness. This includes significant progress in technical brand, components and materials, incorporated software, user friendliness or other functional characteristics. However, product innovation forms the core of innovative organization and offers incredible competitive advantage in new as well as established markets. Although related to process innovation, product innovation is much more of a process than a single implementation or improvement. For product innovation, the product must either be a new product or significantly improved with respect to its features, intended use, software, user-friendly or components and material. The first digital camera and microprocessors are the examples of the product innovation<sup>100</sup>.

The main aim of product innovation is to entice new customers. Organizations present new products or modify the existing products according to demands of the customers. Shorter product life cycle of the products forces the firms to bring innovation in the products. In the competitive environment, product innovation is being introduced to compete in the market. In highly competitive industry such as the banks, innovation face the low competition at the time of implementation and that is why it is tailored towards high profit<sup>100</sup>. In another study, it was stated that firms bring product innovation to compete with other firms in the markets. Product innovation is mirrored by the practical performance. Product innovation is one of the key factors that contribute to success of an organization. New product progress is an important strategy for increasing the market share and performance of the business in general.

Furthermore, marketing innovation may be considered as a part of a marketing concept along with strategy that is significantly different from the original marketing procedures. It is based on the principles that adhering to existing marketing rules alone is not enough to ensure success and attractiveness in the modern markets. Marketing innovation is based on the principle of playfulness, boundlessness, and provocativeness. These areas of marketing innovation have a progressive development, including personal marketing, ambient marketing, environmental marketing, guerilla marketing, ambush marketing, buzz marketing, viral marketing, product placement, mobile marketing, word of mouth marketing, geo-marketing, behavioural marketing and more. These new areas are rapidly emerging, and their definitions and breakdowns are often uneven<sup>101</sup>. In the final summary, marketing innovation can be described as doing something fundamentally new with ideas, products, services, or technologies based on market-based ideas that originates from different arrays of customer desires. Innovative marketing subject of other research, claim that innovative marketing is based on six functions, which are: product design or packaging, product placement or channel of communication, product promotion or pricing, approach to market, product delivery, service delivery. The examples they give of these functions are the use of applications, the use of social media and opening up processes to customers<sup>102</sup>.

In addition, Organizational innovation can be described as the adoption of an idea or behavior that is new to the organization<sup>103</sup>. Organizational innovation refers to

new ways work can be organized and accomplished within an organization to encourage and promote competitive advantage; it can either be a new product, a new service, a new technology, or a new administrative practice<sup>104</sup>. Further, organizational innovation can be understood as a process by which the firm creates and defines problems and then actively develops new knowledge to solve them. Organizational innovation encompasses product innovation, process innovation, and marketing innovation. Further, each form of organizational innovation has a unique and shared variance when viewed among the other forms of innovation. In another notion “organizational innovation” refers to the creation or adoption of an idea or behaviour that is new to the organization<sup>105</sup>. Furthermore, organizational innovation consists in the implementation of new organizational methods that can be changes in business practices, in workplace organization or in the firm’s external relations.

Innovation more often, occurs in response to a problem or opportunity that arises either inside or outside of an organization. Management researchers identified four internal and three external impetuses for innovation<sup>106</sup>. Internal prompts include unexpected occurrences, incongruities, process needs, and industry or market changes. Internal Impetuses: unexpected occurrences include mishaps, such as a failed product introduction. It is often through such unexpected failures (or successes) that new ideas are born from new information brought to light. For instance, a failed product can give an organization new information about marketing that allowed it to achieve stellar gains with succeeding products. This

type of incongruity might cause some innovators to develop the product in a less expensive method that will be more conducive to changing market demands<sup>107</sup>.

Process needs: Innovations inspired by process needs are those created to support some other product or process. For example, advertising was introduced to make mass-produced newspapers possible. Newspaper publishers devised ads to cover the expense of printing the newspapers on the new equipment that made such printing possible. Industry and market changes, the fourth internal impetus to innovate, often result in the rise (and decline) of successful innovators. External Impetuses: External impetuses to innovate include demographic changes, shifts in perception, and new knowledge are: Demographic changes affect all aspects of business. For instance, an influx of immigrants into a particular geographic area will create new market niches for organizations or companies. Likewise, an increase in the level of education of indigent of that geographic area will result in a dearth of qualified workers for some low-paying jobs, causing many organizations or companies to develop new (innovative) automation techniques. When a new technology emerges, innovative companies can profit by exploiting it in new applications and markets<sup>108</sup>.

Also, innovativeness and newness of the innovation may be related to differences in innovation capabilities. For example, highly innovative products in the financial sector have a lower prospect of earning back investments, as the response time (the time before imitations appear) is rather short due to the competition by other service providers like microfinance institutions that often

imitate under “own-label. Research findings reveal that only 4.7 percent of sales come from radical innovations in the banking industry, while this ranges between 6.4 and 11.6 percent in technology-based industries. The banking sector has a relative difficulty to earn back the investments from product innovations, due to the dominant position of the banks in making an innovation successful, while engaging relatively little in co-innovation (when compared to other industries). The share of turnover from new products to the market is lower in the banking industry, with 6 percent in the latter and 9 percent in total industry, and 8 percent of turnover is from products new to the company in the bank compared to 12 percent in the total industry.

Due to the lack of co-investment in the innovation, the advantages from this kind of innovation do not always end up with the actor who has made the investment. This is exacerbated by the difficulty to protect the intellectual property rights in the banking industry. Accordingly, there is more focus on process innovation in the banking industry, with sixty-nine (69) percent of innovators in the banking industry focus on process innovation, compared to fifty-seven (57) percent in chemical end and machine industries, and 61 percent in the electro-technical industry<sup>109</sup>. In addition, innovative companies indicate that uncertainty about the demand is one of the most important impeding factors for innovation<sup>110</sup>. These aspects make the innovation process in the banking sector complex, time-consuming and risky. The capabilities of firms to deal with the challenges of innovation, assuring adequate resources and fast adaptation to the conditions in

the business environment, are considered to be critical for successful innovation<sup>111</sup>. Furthermore, the lack of an effective technological innovation development process as a barrier to innovation management. A recent study concluded that the single biggest growth inhibitor for banks was mismanagement of the innovation process. According to some researchers, the personality of the individuals involved in the initial phases of the technological innovation process is as important as the innovation process itself.

Innovation when applied in today's banking environment falls into three specific categories: customer independent (a technology that involves a customer conducting and completing a transaction with a bank entirely independent of any human contact with the institution ATMs, phone banking and Internet banking); customer assisted (a bank employee will use customer-assisted technology as a resource to complete a transaction, call Centre's customer service officers will use a Customer Relationship Management (CRM) System to understand a customer's profile and provide instant responses to customers' queries on the banking transactions and up-to-date billings and customer transparent Customer technology which represents the real core of bank operations and customers never see it but expect it<sup>112</sup>.

Electronic Funds Transfer at Point of Sale (EFTPOS): An Electronic Funds Transfer at the Point of Sale is an on-line system that allows customers to transfer funds instantaneously from their bank accounts to merchant accounts when

making purchases (at purchase points). A POS uses a debit card to activate an Electronic Fund Transfer Process. Increased banking productivity results from the use of EFT POS to service customers shopping payment requirements instead of clerical duties in handling cheques and cash withdrawals for shopping. Furthermore, the system continues after banking hours, hence continual productivity for the bank even after banking hours. It also saves customers time and energy in getting to bank branches or ATMs for cash withdrawals which can be harnessed into other productive activities. As the importance of innovation in developing countries increases, so does the need for research on the subject.

Key inhibitors that negatively affect a bank's innovation capability are identified as follows; Service process design, path dependency and successful concepts: Many winners often become losers, losing their innovative edge. Many banks also limit themselves for too long to incremental innovation, such as improvements of existing designs and technologies, the so-called dominant design. They run the risk of being overtaken by innovative companies that introduce a timely innovation that totally disrupts the market<sup>113</sup>. Organizational dualism: Interestingly, the patterns of success may cause a conflict between functioning efficiently to sustain the current successful business model and incorporating innovations that will enable a company to be competitive in the future<sup>114</sup>. Another researcher terms this one of the trickiest issues banks face in achieving the right balance between centralization and decentralization. The hierarchical structure, although an effective structure for routine-based processes, activities

and continuous improvements (doing what we do best), is less appropriate and flexible for radical innovation development. Large corporations often lack a clear two-fold structure, combining consistency for incremental innovation, and flexibility and experimenting capabilities for radical innovation<sup>115</sup>.

Excessive bureaucracy is often synonymous with large organizations that demand allegiance to rules and procedures that ultimately frustrate creativity, and as a result are slower to react and less willing to take risks<sup>116</sup>. Existing successful products, a dominant design and a risk-averse attitude create a status quo preference that limits the willingness to stimulate innovation and to accept cannibalization of its own investments. Consequently, the generic conservatism and learning deficiency are the main reasons why large companies find it so hard to successfully embrace radical innovation and then commercialize on it<sup>51</sup>. Some researchers argue that most large banks are genetically programmed to preserve the status quo; they have invested too much in it to embrace radical innovation. When banks grow (e.g. through merger) they often lose the capability to penetrate smaller, emergent markets as it usually does not serve their growth needs<sup>117</sup>. Product sales margins can be perceived as adequate by smaller companies, whereas large banks may consider them inadequate, often due to the higher cost structure.

Stifling of the status quo: Deviations from the standard are often not appreciated, as variety is perceived as negative in many financial institutions. Yet standards,

such as dominant design, are often barriers to innovation. Because many banks prefer the stable, efficient environment to fulfill market requirements, the status quo is reinforced; and the familiar, stable and close-to-home situation is maintained at the expense of new opportunities, “That’s the way we’ve always done things around here. This invocation of a dominant and familiar paradigm to address problems reduces the probability of experimentation and of radically different approaches, hence falling into the familiarity trap. The “Mindset Barrier”:

A major barrier for banks is their inability to unlearn. Unlearning is defined as the process by which people and firms eliminate old logic (test the validity of their beliefs and discard the present way of doing something) and substitute it with something fundamentally new<sup>118</sup>. The ability to unlearn is one of the most critical competencies people require to overcome pre-judgment and obsolete mental models, key barriers to innovation. Unlearning is central to higher order learning: the capability and application of generative and meta-learning and challenging assumptions. It must take place both at the individual and at the organizational level. Most (organizational) unlearning is problem-driven, and is set in motion by some external shock to the organization. The ability to sense when unlearning efforts should be initiated seems critical. Inability to unlearn, to break through the barriers of conventional thinking, and to discard outdated beliefs hinders the shedding of obsolete mental models<sup>119</sup>.

Lack of distinctive competencies: Core competencies, although very useful in the past, can become “core rigidities” or “capability-rigidity paradoxes” for future

effective radical innovation. Knowledge about, and use of, old competencies inhibit efforts to change capabilities. In general, most large corporations lack the management ability to adapt the necessary skills to engage in and profit from new technology and to manage the challenges that will reap the business opportunities that lie in innovative processes. Exploiting innovation is feasible through initiating new business development (NBD) processes and through corporate “venturing”, joint ventures, alliances, acquisitions and the like. However, many of these collaborations fail to generate breakthrough innovations because they focus on acquiring new products rather than new capabilities. They lack the ability to absorb knowledge<sup>118</sup>.

## **2.2 Theoretical Review and Framework**

### **2.2.1 SERVQUAL Theory**

Customer satisfaction is the measurement that determines how happy bank customers are with the banks products and services especially with banks’ mobile application. It can also be defined as the difference between customer expectations and service rendered (performance). If expectations are greater than performance, then perceived quality is less than satisfactory and the result is customer dissatisfaction<sup>119</sup>.

Most of the researchers have recognized and used the service quality measuring model in a variety of industries such as measuring bank customer satisfaction. The service quality model suggested a five dimensional structure of perceived service accessibility, reliability, responsiveness, empathy and security. Three of

the five measures that are suitable for measuring customer satisfaction will be used to guide this study which are reliability, responsiveness and accessibility. Reliability: it depends on handling customer service issues, performs the services right the first time; offers services on time, and maintain a record of error-free on the bank mobile applications. Moreover, they define reliability as the most significant factor in conventional service. Reliability also consists of the right order fulfillment; accurate records; accurate quote; right in the bill; Results are more accurate than commissions; keep the promise of service. It was also mentioned that reliability is the most significant factor in banking services. More specifically, in a study by a scholar, SERVQUAL was applied to gather data in four different companies, including banks, credit card companies, the company's maintenance services, and Long Distance Phone Company. It was observed that high reliability in all four of these companies, with the possible exception of some of the values associated with significant dimensions. Reliability is defined as the "ability to perform the promised service dependably and accurately"<sup>120</sup>.

In this research, reliability is the ability of banking service providers at some selected banks in Osun State to execute the promised service banking customers in Osun State. Responsiveness: it is defined as "the willingness to help customers and provide prompt service". Furthermore, it can also be defined as speed and timeliness of bank applications. This consists of processing speed and service capabilities to respond promptly to customer service requests, and wait a short and queuing time. More specifically, responsiveness is defined as the willingness

or readiness of bank applications to provide services. It contains the timeliness of service. It also contains understanding the needs and requirements of the customer, easy operation time, individual attention provided by the bank application, attention to the problem and customers' safety in their dealings. Finally, in this research, responsiveness is the readiness of bank application to provide a specific service to banking customers in Osun State. Accessibility is the process whereby bank customers are able to access the bank account through bank applications anytime without delay.

Companies and organizations strive hard to achieve high customer satisfaction, especially those companies that consider a long term relationship with customers as an asset. However, understanding the customer satisfaction components remain to be a subject of discussions and arguments. For instance, among banks in Osun State, customer satisfaction has become a key consideration for successful business operations although identification of customer satisfaction characteristics may not be fully understood. So, the model introduced by Parasuraman et al. has been accepted by many scholars to be a predictor variable of customer satisfaction, which has been utilized by scholars in their studies, where they established the relationship between service quality dimension and customer satisfaction was regarded as a positive relationship. As a result, perceived service quality has been widely considered as an antecedent of customer satisfaction and previous studies has ascertained its relationship<sup>121</sup>.

### **2.2.2 Technology Acceptance Model**

Technology Acceptance Model (TAM) First introduced by Davis, Bagozzi and Warshaw, the technology acceptance model (TAM) was soon after tested by Davis<sup>122</sup>. The purpose was to explain the effect of how users' perceptions of system characteristics influence acceptance of information systems (IS) applications. TAM has roots and was adapted from the Theory of Reasoned Action (TRA) to the field of information system application. TAM suggests, 'Intention to use information system' is determined by 'Cost or implication of using the system which influences 'perceived usefulness.' 'Perceived usefulness' is suggested to be directly impacted by 'perceived ease of use.' In discussing TAM, the scholar clarified that an individual's attitude is a kind of perceived behavioral control, where a high degree of perceived control will influence behavior intention, resulting actual behavior<sup>122</sup>. 'Perceived ease of use' (PEOU): In constructing one's attitude toward a certain type of information system(s) both perceptions are deemed relevant. A positive 'attitude' directly affects an individual's intention to use the information system(s) (IS), adoption. Thus, 'Attitude' towards using information system is the fundamental predictor of the user's acceptance behaviour – intention to use defined perceived usefulness as "the degree to which a person believes that using a particular system would enhance his/her job performance".

Accordingly, perceived usefulness is a major factor that affects attitude toward acceptance of information system. For example, researchers found a positive relationship between customers' usage of bank applications and their perceived

usefulness of the system<sup>123,124</sup>. When applied to similar information systems, this finding could suggest that when customers feel that a particular information system (IS) is perceived as useful, their resulting level of usage will be higher. In addition, a scholar examined the relationships between perceived usefulness (PU) and customers' attitudes toward and intentions to use 3G mobile services in Nigeria. These researchers found perceived usefulness to have a positive effect on intention to use toward and behavior intention to use 3G mobile services.

Perceived ease of use," states "the degree to which a person believes that using a particular system would be free of effort". Thus, IS an application that is perceived to be easier to use than another is more likely to be accepted by customers, as it will positively influence 'attitude' and subsequently 'intention to use.' Many studies have demonstrated the validity of the TAM across a wide range of IS settings<sup>125</sup>. The factors contributing to the acceptance and adoption (intent to use) IS are likely to vary across levels of technology, target users, and type of IS context. TAM, with the discussed factors are considered to be fundamental to determining the acceptance (attitude toward) and adoption (intent to use) of bank application. Bank applications enable customers from widely different backgrounds to perform banking transactions and financial activities in virtual space (real-time).

Another factors that TAM considered is the risk/security of using bank application; with many applications where customers are required to divulge personal information such as social security numbers, bank account numbers,

account information like balances, and identifying transactions people of all walks of life tend to be concerned for their privacy and security. Researchers investigating mobile banking application services have consciously noted the importance perceived privacy and security<sup>126</sup>. Individuals fear providing sensitive information such as financial details on the Internet, as a result of security and privacy defects and distrust of dealing less scrupulous service providers. With respect to the attitude toward and adoption of banking applications many experts have acknowledged customers' concerns regarding security, privacy, and risk<sup>126</sup>. However, in some instances users who have become experienced in the safeguards employed by many banks and commercial intuitions often cite feelings of security in conducting transactions on the bank applications as a major factor that reduces their concerns about the effective use of the bank applications for making online purchases and other transactions.

Given the paramount importance of ease of use, risk of use and cost of use of mobile bank applications and because of paramount importance these factors may vary from person to person, this study will use these factors to determine how variation in these perceptions may influence individuals' satisfaction toward mobile banking applications.

### **2.2.3 Diffusion of Innovation Theory**

The theory was proposed by Rogers in 1962 and explains the levels through which innovations are absorbed by a population. According to Rodgers, the

theory outlines three key stages in social change; it divides the society into segments and understanding the needs per segment; appreciation of peer to peer conversations and peer networks; and the qualities that enable the spreading of an innovation<sup>127</sup>. According to the theory, people's rate of adoption to innovation varies. The adoption categories include the innovators who are usually the first to develop the ideas and take risks, they are the early adopters and opinion leaders, they are comfortable adopting to the new idea. The second are the early majority who need evidence of the innovation and are the average person. The late majority are very skeptical and will only adopt to new innovation after it has been attempted by the majority. The last category is the laggards who are very traditional and conservative. They don't like change and are the hardest to convince, the theory thus explains that this adoption is not simultaneous<sup>127</sup>. It is worthy to understand the characteristics of the target population to fully comprehend how that impacts on the adoption of any innovation, the end results of diffusion are that people, as part of a social system, adopt a new idea, behavior, or product<sup>128</sup>.

New innovation is usually faced with stiff oppositions from within and externally. This can explain inefficiencies that are experienced over the different process, service and organizational and product innovations carried out by banks<sup>129</sup>. The diffusion of innovation theory is often simplified so as to solely focus on a product without considering complex cultural, societal, economic and other factors that determine how the products is adopted into the society. The focus of

this theory on few selected and perceived innovations often fails to advance and give conclusive and significant recommendations on large theory. The diffusion innovation theory is relevant because it explains the reason why banks adopt technical innovations. One of the reasons why banks adopt technical innovations is relevant advantage. This means that banks that adopt technical innovations have a comparative financial advantage over those who do not and these banks tends to consider their customer satisfaction during the introduction of new ideas to fend off competitors.

## **2.3 Empirical Review**

### **2.3.1 Mobile Banking Applications and Customer Satisfaction**

The review of empirical literature gives an evidence-based and factual analysis of related works done in the country or outside and in the same area of study or related. This study identified past researchers that has investigated the moderating effect of using mobile banking on customer satisfaction as well as analyzed the various results which emanate from other studies. Customer satisfaction is a measure on how the services provided or supplied by an organization meets or exceeds the expectations of a consumer. Customer satisfaction is obtained through meeting the expectations that consumers have about the mobile banking service, if the expectations of the reliability, safety, ease of use, etc. is met by the service,

customer satisfaction will be high (meaning more consumers will engage into mobile banking) and if not, it will be low (meaning more consumers will not engage in using mobile banking services).

A study conducted on technological innovations and banking, evaluating customer's perceptions in the industry with a sample size of 6 banks and 360 customers. The study revealed that all the banks were engaged in internet banking and had business websites. Results further shows that customers of the banks were found to be generally enthused and satisfied with the banks internet banking. However, the study finds out that most the customers do not visit the websites of the banks and do not patronize the SMS banking though all the banks had this product. Customers are also found not to be patronizing the internet banking platform of the banks. Though most of the customers do not use the internet products and services, they are satisfied with banks with state of the art technology<sup>130</sup>. Furthermore, another research paper conducted to examine how internet banking can improve the relationship between clients (firms) and banks using a sample of 180 firms. The results indicates that, as at then only 68% of the respondent firms have heard of internet banking while about 33% have never heard of it. 55% of the firms indicate they do not patronize internet banking because of the fear of security. Majority of them indicates that even with the adoption of mobile/internet banking; they would still love to bank manually<sup>131</sup>.

In a similar research using data from five banks and 60 of their customers to analyze mobile banking uses and challenges. Findings revealed that though

majority of the sampled customers of the banks use mobile banking generally and have some knowledge about mobile banking, they had not developed completely the attitude to make use of this type of banking facility. The findings in this study therefore points out that the under-utilization of the mobile banking in the country is as a result of inadequate awareness and the fear of security. Bad mobile banking infrastructural development in the country was cited as the major challenge of internet banking in the country<sup>132</sup>.

In using the four major commercial banks and 100 customers from these banks, an empirical evidence to study electronic banking practices and customer satisfaction which focuses on the use of automated teller machines, internet and telebanking from a cross section of the industry. The study presents 98% of the respondents are satisfied and saw the use of the automated teller machine to be good. Though 88% of them do not use telebanking, 62% of the respondents do not see telebanking as important. 78% see internet banking to be important. On a whole, 72% of the respondents prefer electronic banking to the manual type of banking. The study also finds out that electronic banking is more patronized by younger folks and business persons<sup>133</sup>.

A related study researched provided and important empirical evidence to support mobile banking and customer satisfaction and to study the adoption of electronic banking in Jordan and the impact it has customer satisfaction, loyalty and positive word of mouth. In using purposive sampling, the researcher used 179 customers from 24 commercial banks. The study revealed a positive effect of internet

banking on customer satisfaction and loyalty. The study also revealed that there is a positive relationship between internet banking satisfaction and the rate at which customers are responded to. However it finds a negative relationship with privacy. In the same vain, a study examined the impact of mobile banking on customer satisfaction in commercial banks of Namibia. In this study, accuracy of transaction, security and trust, convenience, system availability, responsiveness, usefulness, transaction speed, reliability of service and cost were employed as the explanatory variable while customer satisfaction was employed as the dependent variable. Descriptive statistics was employed in analyzing the data. The results revealed that the most frequently used service is airtime purchases and the least frequently used service is the allocation of funds and that mobile banking services in the Keetmanshoop banking sector has an overall satisfaction rate of 75% is reliable, convenient, cost effective, available on different mobile networks, advertisements are encouraging, service is compatible with mobile devices, income (social aspect of transacting) of respondents influences the usability of mobile banking and mobile banking services are more secure than branch based services<sup>134</sup>.

A study investigated the effect of electronic banking on customer satisfaction in the banking sector in Tehran. Using descriptive survey to select a total of 384 customers. A positive correlation between customers' income and satisfaction of electronic banking services is found. Customers' positive experience with electronic banking is positively related to electronic banking customer satisfaction.

The study however finds a negative relationship between customers' education and their satisfaction of electronic banking services. Also customers' satisfaction with services of electronic banking is negatively related to their acquaintance with the services provided by banks. Finds a positive relationship between electronic banking services provided by the surveyed banks and customer satisfaction<sup>135</sup>.

Another study highlights the impact of E-banking on customer satisfaction using some banks in Nigeria (First Bank Nigeria Plc., Zenith Bank Plc. and Guaranty Trust Bank Plc.) and 155 customers that maintain current account with these banks, finds the impact of electronic banking on customer satisfaction. The study finds out though most of the respondent customers patronize electronic banking, they still patronize the going of the bank branches to have encounter with the officials. It also finds out that users of electronic banking of the banks are not satisfied with the quality and efficiency of services<sup>136</sup>. Another study examined the effects of mobile banking strategies on customer satisfaction in the Kenyan banking industry. Descriptive and inferential statistics was employed in analyzing the data. The study found that mobile banking application user interface is clear and easy to understand. The study revealed that effect of mobile banking service quality on customer or rather revealed that most of the mobile banking users don't have high technology proficiency hence they are more willing to learn how to use mobile technologies. The study concludes that mobile banking application user interface that is clear and easy to understand enhances customers' satisfaction<sup>137</sup>.

A research conducted to examine mobile banking services and customers' satisfaction in commercial banks. The study used the customer satisfaction as the dependent variable and the five dimensions of service quality namely; tangibles, reliability, responsiveness, assurance and empathy, as the independent variables. One hundred and twenty respondents were sampled for the study. The data generated were analyzed using correlation and regression analysis. Results showed that the four variables (tangibles, reliability, responsiveness), and empathy correlate with satisfaction significantly. However, the assurance factor would have no relationship with customer satisfaction<sup>138</sup>. Furthermore, in a related study that investigated the impact of mobile banking services on customer satisfaction in Sri Lankan state commercial bank. The independent variables used in this study include usefulness, ease of use, relative advantages, perception of risk and user's life style, and current needs while customer satisfaction was employed as the dependent variable. Descriptive statistics and correlation analysis were employed in analyzing the data. The study found that usefulness, ease of use, relative advantage, perception on risk and user lifestyle and current needs of customers influence customer satisfaction in the sampled commercial bank<sup>139</sup>.

### **2.3.2 Corporate Innovation and Customer Satisfaction**

The relationship between banks and the market is informed by the level of customer satisfaction<sup>140</sup>. This satisfaction is determined by the way bank employees approach client needs<sup>141</sup>. Satisfied customers also positively communicate the services they get from an institution to potential clients<sup>142</sup>.

Examination of the effects of corporate innovation and customer satisfaction is not a new phenomenon. A study that examines the relationship between innovation, customer satisfaction and brand loyalty, among Pakistani mobile phones users<sup>143</sup>. The study revealed a weak positive correlation between innovation and customer satisfaction. A researcher examined the effect of service innovation on Customer satisfaction, with a focus on the telecommunication sector in Vietnam, from the data analyzed there was significant and positive impact of service innovation on customer satisfaction<sup>144</sup>. A related study was done on examining the relationship between mobile banking service quality and customer satisfaction. The study revealed that there is a strong correlation between mobile banking and customer satisfaction<sup>145</sup>.

A study was conducted to find out the effect of mobile banking on customer satisfaction with specific interest on Equity bank, Eldoret branch, data was collected using questionnaires and analyzed using SPSS, the study concluded that mobile banking was reliable and efficient and also some of the respondents doubted mobile banking citing security measures and reliability<sup>146</sup>. In a study that examined the factors influencing customer satisfaction of Mobile Banking services: a study on second-generation banks, the study was conducted in Bangladesh, the study established that there is strong associative relationships between the customer satisfaction with selected factors (cost, convenience, responsiveness, system, accuracy, ineffective advertisement, ease of use, security and speed), the study concluded that security and trust factor is the most

influential factor where ineffective advertisement has negative influence on customer satisfaction of mobile banking<sup>147</sup>. A researcher tried to analyze the relationship between mobile banking and customer satisfaction, in Dhaka city, Bangladesh. The findings advocated that the determinants of customer satisfaction are reliability and responsiveness<sup>148</sup>.

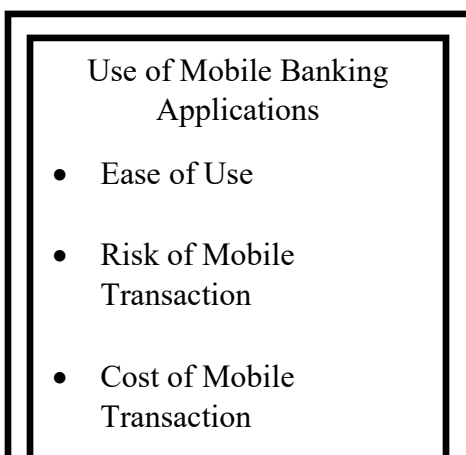
A scholar also conducted a study on the contribution of electronic banking to customer satisfaction: a case of GCB Bank Limited-Koforidua Ghana, the main objective of the study was to access the contribution of electronic banking to customer satisfaction<sup>149</sup>. The study found that internet banking was very effective in its operations and transactions are made at a client's convenience. In a research conducted on the effects of service quality, innovation and corporate image on customer's satisfaction and loyalty of air cargo terminal<sup>150</sup>. This study aimed at outlining the effects of quality of service, corporate image as well as innovation capability on customer's satisfaction levels and loyalty. They found out that service quality, innovation capability and corporate image have a positive impact on customer satisfaction. It is evident that there is little empirical research done in Kenya with regards to effect of corporate innovation on customer satisfaction.

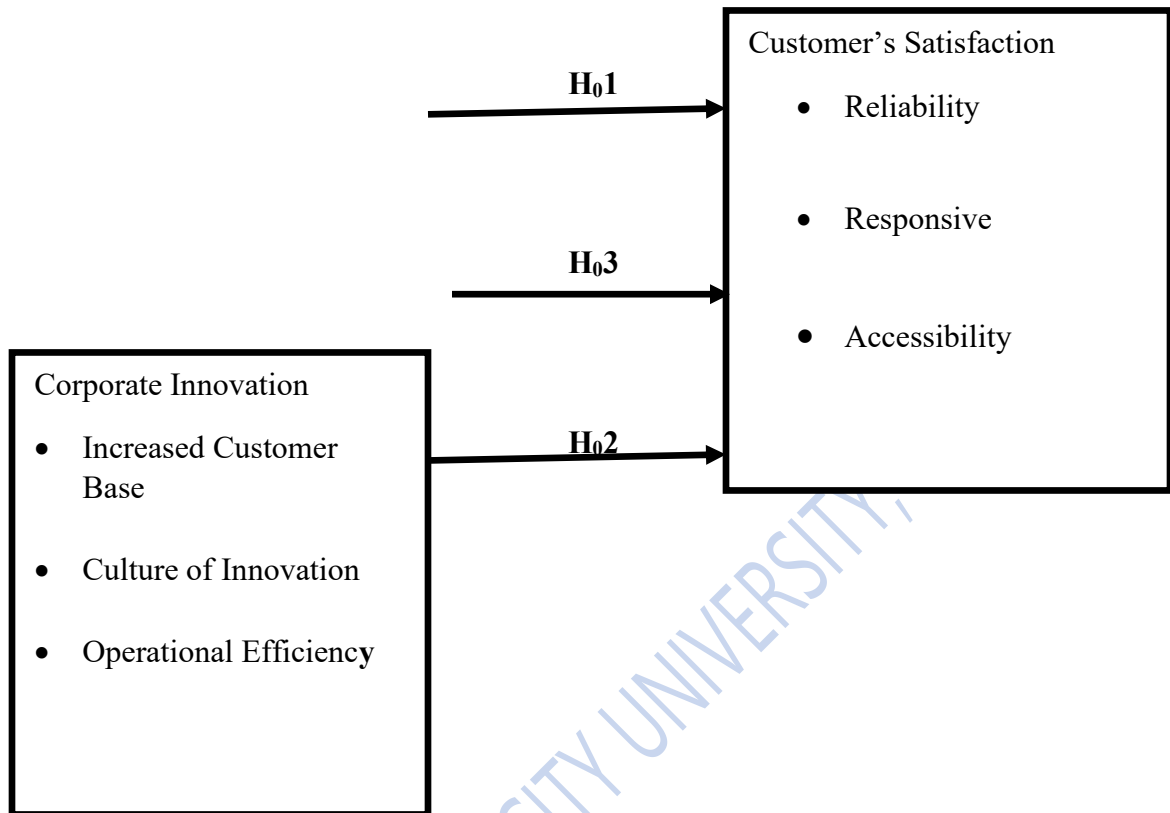
This leads to a gap that the study proposes to fill.

## 2.4 Conceptual Framework

### Independent Variables

### Dependent Variable





**Figure 2.1: Conceptual Framework for Use of Mobile Banking Applications, Corporate Innovation and Customer's Satisfaction**

**Source: Researcher's Conceptual Model, 2022**

The conceptual framework under this study relates customer satisfaction which is the dependent variable and mobile banking application and corporate innovation as the independent variables. The relationship between the abovementioned factors (independent variables) and customer satisfaction (dependent variable) are discussed below. Reliability: Reliability entails consistency of performance and dependability. This means that the services offered by the service provider should always be of same quality and form. Reliability involves offering services; on timely basis, responding to customer request and complaints without delay and

the services having the same quality aspects. Responsiveness concerns the readiness or promptness of employees to make available a service or good. Responsiveness is attributed to the period that an employee is able to offer a service requested by a customer. there are several diverse mobile banking services such as account balance retrieval, transaction history retrieval, transfer of funds between to a third party account, stock trading, portfolio management, and bill settlements. Accessibility is the ability and easiness of a consumer to be able to approach or use a service<sup>120</sup>. Mobile banking can be easily accessed by customers no matter the location where the customers are. Also the time of accessing and using mobile banking service is not limited to working hours but a customer can access the service 24 hours in a day the first area is the identification of the product or service the customer seeks to buy or access from the organization or business. The atmosphere and location of the service is also important to the customer as far as service delivery is concerned. The last area relates to the confidence and reassurance felt by customers whenever they access services. The independent variable is corporate innovation which is measured with increased customer base, culture of innovation and operational efficiency<sup>111,112</sup>. The other independent variable of the study is mobile banking application with the measuring indicators as; ease of use, risk (security) and cost of transaction are being adopted to test its significance on customer satisfaction<sup>123</sup>.

## **2.5 Summary of Literature Reviewed**

Considering the variable discussed in this study, the review discussed in line with the existing literatures in order to widen the understanding of the variables. To this end, each variable was reviewed with their definitions, types and significance and implications. The variables described includes: mobile banking (ease of use, security (risk) of mobile transaction and cost of mobile transaction), corporate innovation (increased customer based, culture of innovation and operational efficiency) and customer satisfaction (reliability, responsive and accessibility perspectives).

The conceptual framework under this study relates customer satisfaction which is the dependent variable and mobile banking application and corporate innovation as the independent variables. The relationship between the abovementioned factors (independent variables) and customer satisfaction (dependent variable) are discussed below. Reliability: Reliability entails consistency of performance and dependability. This means that the services offered by the service provider should always be of same quality and form. Reliability involves offering services; on timely basis, responding to customer request and complaints without delay and the services having the same quality aspects.

Service quality is key for customers' satisfaction and the banking sector is not left out of this. Several studies have been conducted on internet banking and customer satisfaction. However, studies that are specifically focused on mobile banking applications, corporate innovation and customer satisfaction remain

scanty; hence creates a gap worthy of investigation. Following this, other related studies done in this regard are being identified in the summary of table below.

In their 2015 study on customer satisfaction at work place, Kannaiah, D and Shanthi, R elucidated certain determinant they found in the course of their study which included reliability factor, accessibility factor, responsiveness factor, tangibility factor, among others whereas the finding of the study reinforces the basic component of customer satisfaction and gave an understanding of the reasons for being satisfied. “The measurement of customer satisfaction: A critical review of the literature and recommendation for researchers and Practitioners. The authors distilled the five widely used measures of customer satisfaction. Apparently, the authors only reviewed available ‘Literature but were unable to give an in depth understanding of the key studies underlying the various measures they presented.

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## **Chapter Three**

### **Methodology**

This chapter presents the research methodology used in this study. It discussed the research design strategies employed, population used for the study, sample size and sampling techniques, data collection, analysis techniques and description of the research instruments used.

#### **3.1 Research Design**

This study adopted a cross-sectional survey design as it attempts to study a subset of the population to investigate the influence of use of mobile banking application and corporate innovation on customer satisfaction of selected banks in Osun State, Nigeria. Cross-sectional survey design is capable of allowing the researcher to obtain information from large samples of the population. The advantage of this method is that it has economic advantage over the longitudinal survey design and less cumbersome. It is important to note, however, that surveys only provide estimates for the true population, not exact measurements. Furthermore, the adoption of the survey research design in this study is premised on prior related studies.

#### **3.2 Population of the Study**

The population of this study comprised of Nineteen thousand one hundred and thirty (19,130) customers of eight banks in Osun State, Nigeria. The selected banks are First Bank Nigeria Plc., Wema Bank Plc., Zenith Bank Plc., Fidelity Bank Plc., Guaranteed Trust Bank, Sterling Bank Plc., United Bank for Africa, and Polaris Bank Plc. These customers will be contacted through the assistance of the bank cahiers.

**Table 3.1: Population of the Study**

<b>S/N</b>	<b>Name of Banks</b>	<b>Number of Customers.</b>
1.	First Bank of Nigeria Plc.	1810
2.	Wema Bank Plc.	1982
3.	Zenith Bank Plc.	1975
4.	Fidelity Bank Plc.	2832
5.	Guaranteed Trust Bank Plc.	3196
6.	Sterling Bank Plc.	2533
7.	United Bank for Africa Plc.	2302
8.	Polaris Bank Plc.	2700
	<b>Total</b>	<b>19130</b>

**Source:** Banks Staff from Branch Headquarters, 2022.

### **3.3 Sample size and Sampling Technique**

Ile Ife was chosen by the researcher through purposive sampling methods. The eight banks were selected because they are the only banks operating in Osun state that has the spread across all the local government in Osun State as at the period of study.

The sample size of this study is three hundred and seventy-seven (377) which is made up of the customers of the eight banks sampled in Osun State. This sample size was gotten using Krejcie and Morgan (1970)<sup>1</sup> sample size table as shown in Table 3.2.

**Table 3.2: Table for determining sample size of a known population**

N	S	N	S	N	S	N	S	N	S
10	10	100	80	280	162	800	260	2800	338
15	14	110	86	290	165	850	265	3000	341
20	19	120	92	300	169	900	269	3500	346
25	24	130	97	320	175	950	274	4000	351
30	28	140	103	340	181	1000	278	4500	354
35	32	150	108	360	186	1100	285	5000	357
40	36	160	113	380	191	1200	291	6000	302
45	40	170	118	400	196	1300	297	7000	364
50	44	180	123	420	201	1400	302	8000	367
55	48	190	127	440	205	1500	306	9000	368
60	52	200	132	460	210	1600	310	10000	370
65	56	210	136	480	214	1700	313	15000	375
70	59	220	140	500	217	1800	317	<b>20000</b>	<b>377</b>
75	63	230	144	550	226	1900	320	30000	379
80	66	240	148	600	234	2000	322	40000	380
85	70	250	152	650	242	2200	327	50000	381
90	73	260	155	700	248	2400	331	75000	382
95	76	270	159	750	254	2600	335	100000	384

**Source: Krejcie and Morgan (1970) Sample Size Determination Table**

As seen on Table 3.2, the sample size will be three hundred and seventy-seven (377) customers of the selected banks in Osun State, Nigeria.

**Table 3.3 Stratified Sampling Calculation for the Sample used**

S/N	Name Institutions	% of total population	Calculated no for each sample
1.	First Bank Nigeria Plc.	$\frac{1810}{19130} \times 100 = 9.5\%$	$\frac{9.5 \times 377}{100} = 36$
2.	Wema Bank Plc.	$\frac{1982}{19130} \times 100 = 10.4\%$	$\frac{10.4 \times 377}{100} = 39$
3.	Zenith Bank Plc.	$\frac{1975}{19130} \times 100 = 10.3\%$	$\frac{10.3 \times 377}{100} = 39$
4.	Fidelity Bank Plc.	$\frac{2632}{19130} \times 100 = 13.8\%$	$\frac{13.8 \times 377}{100} = 52$
5.	Guaranteed Trust Bank Plc.	$\frac{3196}{19130} \times 100 = 16.7\%$	$\frac{16.7 \times 377}{100} = 63$
6.	Sterling Bank Plc.	$\frac{2533}{19130} \times 100 = 13.2\%$	$\frac{13.2 \times 377}{100} = 50$
7.	United Bank for Africa Plc.	$\frac{2302}{19130} \times 100 = 12\%$	$\frac{12 \times 377}{100} = 45$
8.	Polaris Bank Plc.	$\frac{2700}{19130} \times 100 = 14\%$	$\frac{14 \times 377}{100} = 53$
<b>Total</b>			<b>377</b>

### 3.4 Description of Research Instrument

Data was collected using a structured questionnaire titled: Use of Mobile Banking Applications, Corporate Innovation and Customer Satisfaction (MBACICS). The instrument is a questionnaire adapted from previous empirical studies. This study also adopted the Likert scale design which allowed the researcher provide their opinion about the issue under study. The instrument surveyed opinion and perception of customers of eight selected banks in Osun State, Nigeria.

**Section A:** This section is designed to collect demographic information of respondents and these contains Bio – data of Respondents measured through five factors; Gender, Age, Educational Qualification.

**Section B:** This section is designed to collect data on Customer Satisfaction with 15 items. The Satisfaction scale covers measure such reliability, responsiveness and accessibility which were adapted from scholar in different context<sup>2</sup>. Each of the adapted questionnaires were considered reliable given the reliability tested result reported by scholars. The Cronbach's alpha coefficient for the variables are 0.7, 0.8, 0.6, and 0.76 respectively. The response options available to respondents following the Likert-type scale include Strongly Agree = 4, Agree = 3, Disagree = 2, Strongly Disagree = 1. Examples of questions are my banking application is very easy to navigate through, mobile banking application is very easy to use than conventional banking.

**Section C:** This section is designed to collect data on Mobile Banking Application with 15 items. The Mobile banking application use scale which indicates measures such as ease of use, risk and cost of use of application were adapted from s in different context<sup>3</sup>. Each of the adapted questionnaires were considered reliable given the reliability tested result reported by scholars.

The Cronbach's alpha coefficient for the variables are 0.7, 0.8, 0.6, and 0.76 respectively. The response options available to respondents following the Likert-type scale include Strongly Agree = 4, Agree = 3, Disagree = 2, Strongly Disagree = 1. Example of question is mobile banking application is cost effective compared to conventional banking.

**Section D:** This section is designed to collect data on corporate innovation with 11 items. The corporate innovation scale which indicates the level at which each bank imbibe the culture of innovation covers measure such as increased customer base, culture of innovation and operational efficiency which were adapted from scholar in different context<sup>4</sup>. Each of the adapted questionnaire is considered reliable given the reliability tested result reported by scholars. The Cronbach's alpha coefficient for the variables are 0.7, 0.8, 0.6, and 0.76 respectively. The response options available to respondents following the Likert-type scale include Strongly Agree = 4, Agree = 3, Disagree = 2, Strongly Disagree = 1. Examples of questions are Deliver new products that are technologically driven, Transactions are uninterrupted on my mobile banking application

### **3.5 Validation of the Research Instrument**

To validate this, instrument was gathered through reviewed related literature and adapted from questionnaires used by other researchers, thereby content and construct validity were done. Content validity was used to assess the internal validity of the research instruments which was ascertained through the supervisor and other experts in information management field.

Corrections made were incorporated in constructing the final questionnaire which was given out to the respondents of the study.

### **3.6 Reliability of the Research Instrument**

The researcher subjected the questionnaire to a reliability test to check the internal consistency of all items measuring each variable in the study. The reliability of the instrument was done through a pilot study using thirty (30) copies of the questionnaire that was administered to the customers of First City Monument Bank which is not part of the study. Data obtained was subjected to Cronbach's alpha reliability test to establish internal consistency of the items. The Cronbach's alpha reliability test has the following result: Use of mobile banking applications – 0.75, Corporate Innovation – 0.85 and Customer satisfaction – 0.85.

### **3.7 Distribution of the Research Instrument**

The researcher personally administered the questionnaire to the respondents face to face and also with the help of bank cashiers to ease the collection of data across the eight banks in Osun State, Nigeria. A letter of introduction was obtained from the Department of Information Management, Lead City University which was used to gain permission to conduct the survey from the management of the selected banks in Osun State, Nigeria. Due to number of respondents, a three (3) day training was conducted for four (4) research assistants to ease the administration, retrieval and initial sorting of copies of the questionnaires. In all, 377 copies of questionnaire was administered to customers of eight banks in Osun State, Nigeria.

### **3.8 Method of Data Analysis**

The researcher analyzed the data collected using descriptive and inferential statistics for the items in all the sections in the questionnaire. The use of the descriptive statistics is appropriate

because it helps to describe and summarize data in terms of frequency distribution, mean, standard deviation, and percentage of response about variables under study, thereby answering the research questions. To test the hypotheses formulated, the inferential statistics through linear regression analyses was used mainly to test the hypotheses, while multiple regression was used to analyze hypothesis three. The data collected for the study was analyzed using Statistical Package for Social Sciences (SPSS), version 24. All hypotheses in the study were tested at level of 0.05 significance.

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## Endnotes

1. R.V. Krejcie, & D. W. Morgan, *Determining Sample Size for Research Activities. Educational and Psychological Measurement*, 1970. Accessed 30<sup>th</sup> November 30, 2020. <https://www.kenpro.org/sample-size-determination-using-krejcie-and-morgan-table.2020>.
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## Chapter Four

### Results and Discussions of Findings

This chapter establishes the result of the analysis of data collected from the participants in the study and thoughts of outcomes arising from the study.

#### 4.1 Data Presentation and Analysis

<b>Response Rate:</b>	<b>Frequency</b>	<b>Percent</b>
Sample Size:	377	100%
Total Questionnaire Distributed	<b>377</b>	<b>100%</b>
Total Questionnaire Retrieved	<b>292</b>	77.45%
Valid Questionnaire	292	77.45%

#### Demographic Characteristics of Respondents

The demographic data of the participants were collected and surveyed using descriptive statistics such as frequencies and percentages and presented in tables.

##### 4.1.1 Distribution of Respondents by Gender

**Table 4.1: Gender of Respondents**

<b>Gender of Respondents</b>				
	Frequency	Percent	Valid Percent	Cumulative Percent

Female	138	47.3	47.3	47.3	<b>Source: Field Survey,</b>
Male	154	52.7	52.7	100	
Total	292	100.0	100		

### 2022

The table above shows the gender distribution of mobile banking application users in Osun state.

With a total number of 292 respondents, the data has it are 154 (52.7%) male and 138 (47.3%) female mobile application users in Osun.

**Table 4.2: Age of Respondents**

<b>Age of Respondents</b>				
	Frequency	Percent	Valid Percent	Cumulative Percent
20 to 25 years	46	15.8	15.8	15.8
26 to 30 years	90	30.8	30.8	46.6
31 to 35 years	86	29.5	29.5	76.0
36 to 40 years	36	12.3	12.3	88.4
41 to 45 years	22	7.5	7.5	95.9
46 years and above	12	4.1	4.1	100
Total	292	100	100	

**Source: Field Survey, 2022**

The age distribution of respondents for this study is shown in the table 90 (30.8%) respondents indicated that they are within the age range of 26 to 30 years of age. 86 of the respondents indicated that they are ages 31 to 35 years of age. 46 respondents are of age 20 to 25 years of age. 36 expressed the fact that they are within the age range of 36 to 40 years of age while 22 respondents in the study said that they are within the age arrange of 41 to 45 years of age. The last age range is that of those who are 46 years of age and above. Going by this age distribution

according to the data above, we can comfortably say that users of mobile application users are still in their prime of life, therefore, it is expected that they will know much about what is in vogue as regards the use of mobile application use.

**Table 4.3: Educational Qualifications of Respondents**

<b>Educational Level of Respondents</b>				
	Frequency	Percent	Valid Percent	Cumulative Percent
SSCE	55	18.8	18.8	18.8
ND	46	15.8	15.8	34.6
HND	78	26.7	26.7	61.3
Bachelor's degree	43	14.7	14.7	76.0
Master's	45	15.4	15.4	91.4
PhD	25	8.6	8.6	100
Total	292	100	100	

**Source: Field Survey, 2022**

The educational level of mobile application users in Osun state is depicted in the table. 78 of the respondents indicated that they have the HND, while 55 of the respondents indicated that they have the SSCE certificate while 46 said that they have the ND certificate, 45 said they have a master's degree while 43 said that they have a bachelor's degree. However, 25 of the total respondents are of the view that they possess the doctorate degree. All in all, with these level of educational qualification, these respondents are well enlightened enough to know how to operate a mobile banking application

## 4.2 Research Questions

**4.2.1 Research Question 1:** What is the level of customer satisfaction of selected banks in Osun State, Nigeria?

**Table 4.1.1 Level of customer satisfaction of selected banks in Osun State, Nigeria**

<b>Customer Satisfaction</b>	<b>SA (%)</b>	<b>A (%)</b>	<b>D (%)</b>	<b>SDA (%)</b>	<b>Std.</b>	<b>Mean</b>
<b>Perceived Value</b>						
My mobile banking app is of much benefit to me	71 (24.3)	80 (27.4)	78 (26.7)	63 (21.6)	1.082	2.54
My mobile banking is cost saving than conventional banking	87 (29.8)	92 (31.5)	69 (23.6)	44 (15.1)	1.041	2.76
My mobile banking app is flexible than conventional banking	80 (27.4)	89 (30.5)	93 (31.8)	30 (10.3)	.972	2.75
My mobile banking app is easy to use than conventional banking	74 (25.3)	58 (19.5)	112 (38.4)	49 (16.8)	1.046	2.53
My mobile banking app is more secure than conventional banking	77 (26.4)	56 (19.2)	109 (37.3)	50 (17.1)	1.059	2.55
<b>Average Mean</b>						<b>2.63</b>
<b>Affective Response</b>						
The system, network for my mobile banking is more efficient than conventional banking	123 (42.1)	145 (49.7)	24 (8.2)	0 (0)	.624	3.34
My mobile banking application has better problem handling capacity than conventional banking	96 (32.9)	196 (67.1)	0 (0)	0 (0)	.471	3.33
My mobile banking app	120	145	27	0	.635	3.32

has fulfilled my expectation than conventional banking	(41.1)	(49.7)	(9.2)	(0)		
I am pretty more satisfied with the mobile banking application	117	148	27	0	.632	3.31
	(40.1)	(50.7)	(9.2)	(0)		
<b>Average Mean</b>						<b>3.33</b>
<b>Fulfilling Important Needs</b>						
My mobile banking application menu is very easy to navigate	144	111	37	0	.698	3.37
	(49.3)	(38)	(12.7)	(0)		
My mobile banking application menu is very easy to understand	144	111	37	0	.698	3.37
	(49.3)	(38)	(12.7)	(0)		
My mobile banking application do meet my query needs when carrying out online transactions	155	110	27	0	.658	3.44
	(53.1)	(46.9)	(9.2)	(0)		
I find it easy to transfer money on my mobile banking application	203	62	27	0	.653	3.60
	(69.5)	(21.2)	(9.2)	(0)		
<b>Average Mean:</b>						<b>3.45</b>
<b>Grand Mean:</b>						<b>3.14</b>

**Source: Field Survey, 2022**

**Key: Strongly Agree(SA) =4, Agree (A) = 3, Disagree (D) = 2, Strongly Disagree (SDA) = 1**  
**Decision Rule: 1.00 – 1.49 (Very low), 1.50 – 2.4 (Low), 2.50 – 3.49 (High), 3.50 – 4.00 (Very High)**

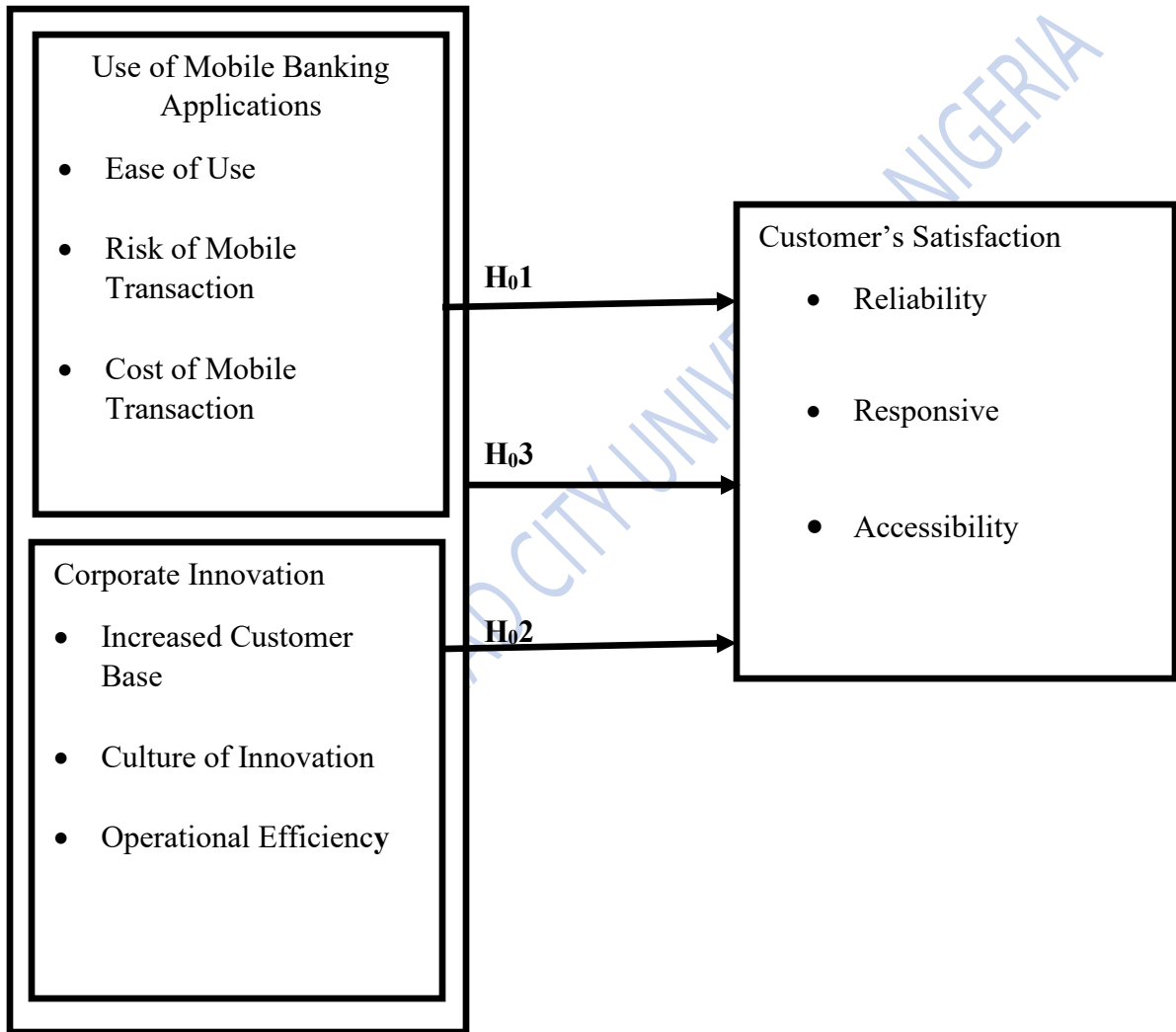
Table 4.2.1 served as the table indicating answers to the first research question of this study.

With a grand mean score of 3.14 on scale of 1 to 4, Customer satisfaction of selected banks in

Osun state are very much satisfied with how they are treated by banks in the state.

## Independent Variables

## Dependent Variable



Three indicators are being used customer satisfaction in this study, they are: Affective mean, perceived value and fulfilling important needs. Perceived value as one of the indicators attracted a mean score of 2.63 on a scale of 1 to 4. This implies that the level of value derived from customers as in terms of how customers are being treated is just a little bit above average.

The second indicator which is affective response attracted a mean score of 3.33. This means that customers of selected banks in Osun state are very much affected by the way and manner bankers respond to their queries. Because on a scale of 1 to 4, with a mean score of 3.33 it is quite above average. Fulfilling important needs is the last indicator used to measure customer satisfaction in this study. A mean score of 3.45 served as the average mean scored used to find out how needs of customers of selected in Osun state are in this study. With this mean score, it was really encouraging to find out that the important needs of customers in the state as regards banking operation is really met. Simply because, on a scale of 1 to 4, an average mean score of 3.45 is very much average. These are the indicators and their respective average mean scores that actually contributed to the level of customer satisfaction derived from the services of certain banks in Osun state. As earlier mentioned with a mean score of 3.14, it is absolutely correct to say that the level of satisfaction derived from users of certain banks in Osun state is not bad at all. Even some of the items in each of the indicator in the study actually attracted a high mean score. This again serves as an important factor that contributed to an overall mean score of 3.14 that claimed a high level satisfaction of customers in the state.

**4.2.1 Research Question 2:** What level of use of mobile banking applications among customers of selected banks in Osun State, Nigeria?

**Table 4.1.2: Use of mobile banking applications among customers of selected banks in Osun State, Nigeria**

Use of Mobile Applications	SA (%)	A (%)	D (%)	SDA (%)	Std.	Mean
<b>Ease of Use</b>						
I like to use mobile banking, because 3.51 it offers independence	203 (69.5)	34 (11.6)	55 (18.8)	0 (0)		.793

Mobile banking enables me to be fully involved in my banking transactions	203 (69.5)	62 (21.2)	27 (9.2)	0 (0)	.653	3.60
Mobile banking enables me to undertake banking transactions at my own discretion	255 (87.3)	10 (3.4)	27 (9.2)	0 (0)	.598	3.78
Mobile banking is user friendly	241 (82.5)	51 (17.5)	0 (0)	0 (0)	.380	3.83
Mobile banking application provides easy access for banking transaction	241 (82.5)	51 (17.5)	0 (0)	0 (0)	.380	3.83
<b>Average Mean:</b>						<b>3.71</b>
<b>Risk of Mobile Transaction</b>						
My mobile banking application offers high security for me	83 (28.4)	79 (27.1)	77 (26.4)	53 (18.2)	1.077	2.66
In-branch banking is less satisfying than mobile banking	77 (26.4)	65 (22.3)	96 (32.9)	54 (18.5)	1.071	2.57
I am familiar with mobile banking application security features	78 (26.7)	61 (20.7)	99 (33.9)	54 (18.5)	1.075	2.56
I have had satisfactory experiences with mobile banking application	76 (26)	80 (27.4)	77 (26.4)	59 (20.2)	1.082	2.59
Personally, I felt secured transferring huge amount of money on my application	86 (29.5)	78 (26.7)	82 (28.1)	46 (15.8)	1.058	2.70
<b>Average Mean:</b>						<b>2.62</b>
<b>Cost of Mobile Transaction</b>						
Mobile phone payment service is very much easy to afford	105 (36)	72 (24.7)	79 (27.1)	36 (12.3)	1.050	2.84
Going to a bank branch is not always convenient for me	46 (15.8)	26 (8.9)	119 (40.8)	101 (34.6)	1.032	2.06

Mobile banking services are faster than in-branch banking	53 (18.2)	89 (30.5)	76 (26)	74 (25.3)	1.057	2.41
Mobile banking is cost effective compared to in branch banking	41 (14)	30 (10)	138 (47.3)	83 (28.4)	.971	2.10
Mobile banking charges is very much affordable for me.	86 (29.5)	77 (26.4)	75 (25.7)	54 (18.5)	1.088	2.67
<b>Average Mean:</b>						<b>2.52</b>
<b>Grand Mean:</b>						<b>3.00</b>

**Source: Field Survey, 2022**

**Key: Strongly Agree(SA) =4, Agree (A) = 3, Disagree (D) = 2, Strongly Disagree (SDA) = 1  
Decision Rule: 1.00 – 1.49 (Very low), 1.50 – 2.4 (Low), 2.50 – 3.49 (High), 3.50 – 4.00 (Very High)**

The second research question for this study is about determining the level of use of mobile banking applications among customers of selected banks in Osun state. The overall mean score to determine the level of use of mobile applications was 3.00 on a scale of 1 to 4. This means that the usage is very encouraging. One need not be surprised that much at this level of usage, more so because in the demographic analysis of this study, it was found that quite a good number of participants of this study are very much educated which means they are well enlightened enough to make effective use of a bank's mobile application.

Three indicators of use of mobile banking applications were used in this study to measure use of mobile banking applications. They are: Ease of use, risk of mobile transaction and cost of mobile transaction. Each of this indicator recorded an average mean score of 3.71, 2.62 and 3.00 respectively. Ease of use as the first indicator attracted an average mean score of 3.71 which of course is also the highest average mean score among the three indicators. So, on a scale of 1 to 4, the ease of use mobile banking applications was a good one. This also implies that bank

customers in Osun State found the use of mobile banking apps to be easy to use. The second indicator attracted an average mean score of 2.62 on a scale of 1 to 4. This is fair because the average mean score is just a little above average of 2.5 which is determining average score used to determine how well the research questions in this study has been answered. The implication of this mean score is also that many of the customers took big risks in absolute reliance on the use of mobile banking applications to carry out various forms of transactions. Perhaps concerns were raised by the respondents of this study that risk taking on use of mobile banking applications to carry various forms of transactions was something that they are not too comfortable with, maybe that is why there is an average mean score being recorded as regards this particular indicator. The last indicator used to measure level of use of mobile banking applications is cost of mobile transaction. This indicator attracted an average mean score of 2.52 on a scale of 1 to 4. This is also a little bit above average. What this implies is that many of the customers are not too comfortable with charges attached to the use of mobile banking applications in the state. This must have affected the average mean score recorded for this particular indicator. However, with a grand mean score as earlier discussed above which stands as the overall mean score to determine the level of use of mobile banking applications which was 3.00 on a scale of 1 to 4, the level of use is encouraging.

#### 4.2.1 Research Question 3:

What is level of corporate innovation of selected banks in Osun State, Nigeria?

<b>Level of Corporate Innovation</b>	<b>SA (%)</b>	<b>A (%)</b>	<b>D (%)</b>	<b>SDA (%)</b>	<b>Std.</b>	<b>Mean</b>
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**le 4.1.3: Level of corporate innovation of selected banks in Osun State, Nigeria**

**Increased Customer Base**

My bank is recognized as an organization that values her customers	87 (29.8)	59 (20.2)	95 (32.5)	51 (17.5)	1.088	2.62
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I'm always aware of new products and services of my bank through their mobile application	73 (25)	58 (19.9)	101 (34.6)	60 (20.5)	1.079	2.49
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The mobile application of my bank offers fast and efficient services	73 (25)	68 (23.3)	95 (32.5)	56 (19.2)	1.066	2.54
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**Average Mean: 2.55**

**Culture of Innovation**

Use technology to derive organizational process	54 (18.5)	104 (35.6)	81 (27.7)	53 (18.2)	.992	2.54
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Provide clients with services that offer unique benefits superior to those of competitor	80 (27.4)	74 (25.3)	97 (33.2)	41 (14)	1.028	2.66
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Actively carries out its work on developing existing new products	66 (22.6)	71 (24.3)	78 (26.7)	77 (26.4)	1.028	2.43
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Deliver new products that are technologically driven	73 (25)	78 (26.7)	86 (29.5)	55 (18.8)	1.109	2.58
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See new product development as a critical success factor	108 (37)	61 (20.9)	94 (32.2)	29 (9.9)	1.060	2.85
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**Average Mean: 2.61**

**Operational Efficiency**

My bank mobile application is consistent and stable during transaction	57 (19.5)	90 (30.8)	126 (43.2)	19 (6.5)	.869	2.63
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My mobile banking application shows high level of reliability	54 (18.5)	63 (21.6)	115 (39.4)	60 (20.5)	1.010	2.38
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Transactions are uninterrupted on my mobile banking application	84 (28.8)	53 (18.2)	87 (29.8)	68 (23.8)	1.138	2.52
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<b>Average Mean:</b>	<b>2.51</b>
<b>Grand Mean:</b>	<b>2.55</b>

**Source: Field Survey, 2022**

**Key: Strongly Agree(SA) =4, Agree (A) = 3, Disagree (D) = 2, Strongly Disagree (SDA) = 1  
Decision Rule: 1.00 – 1.49 (Very low), 1.50 – 2.4 (Low), 2.50 – 3.49 (High), 3.50 – 4.00 (Very High)**

The last variable of this study is about level of corporate innovation of banks being used this study. A grand mean score at 2.55 on a scale of 1 to 4 served as the determining mean to know the level of corporate innovation existing among selected banks in Osun state. The implication of this mean score is that innovation wise in this sector, their level of innovation is just at the average level. Three indicators were being used to measure corporate innovation in this study. The indicators are: Increased customer base, culture of innovation and operational efficiency. The first indicator which is increased corporate base attracted a mean score of 2.55 on a scale of 1 to 4. What this portends is that despite the level of innovation banks in Osun state have incorporated to their work, it has not in any way brought about many customers. The second indicator is about culture of innovation which attracted an average mean score of 2.61 on a scale of 1 to 4. This is a little bit above the average of 1 to 4. The meaning of this average mean score is that the culture of innovation existing among banks in Osun state is just around an average level of operation. The last indicator is about operational efficiency. This indicator attracted an average mean score of 2.51 on a scale of 1 to 4. This is also at an average level which means that the banks in Osun State operate on an average level of efficiency.

### 4.3 Presentation of Test of Hypotheses

**H<sub>01</sub>** - There is no significant influence of use of mobile banking applications on customer satisfaction of selected banks in Osun state, Nigeria.

### Influence of Use of Mobile Banking Application and Customer Satisfaction

**Table 4.1.4 Influence of Use of Mobile Banking Application and Customer Satisfaction**

#### Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.225 <sup>a</sup>	.051	.048	.44215

a. Predictors: (Constant), use of mobile banking applications

#### ANOVA

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	3.033	1	3.033	15.515	.000 <sup>b</sup>
	Residual	56.693	290	.195		
	Total	59.726	291			

a. Dependent Variable: level of satisfaction

b. Predictors: (Constant), use of mobile banking applications

#### Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.364	.187		12.648	.000

Use of mobile banking applications	.250	.064	.225	3.939	.000
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a. Dependent Variable: level of satisfaction

**Source: Field Survey, 2022**

The first null hypothesis in this study is to find out if use of mobile banking applications will in any way influence customer satisfaction. The result of the hypothesis reveals that the use of mobile banking applications will influence customer satisfaction. This conclusion is based on the  $p$  value which has a value of .000, lesser to the level of significance (0.05) which serves as the bench mark to determine if an independent variable will significantly influence the dependent variable or not. But in this case, the  $p$  value was low to the level of significance, thereby drawing on the conclusion that use of mobile banking applications will influence customer satisfaction. This hypothetical result also prompted the researcher to reject the null hypothesis. The  $r$  value in the model summary. Table is being used to determine the multiple correlation coefficient. This can be considered to be one measure of the quality of the prediction of the dependent variable. The  $r$  value is .225 in the table above. This means that the level of prediction between use of mobile banking applications and customer satisfaction is 22.5%. This means that the prediction is a positive weak one. The “R Square” column represents the  $R^2$  value which is the proportion of the variance in the dependent variables that can be explained by the independent variables. From the model summary table, .051 serves as the value of  $R^2$ . This implies that the independent variable – use of mobile applications explained 51% of the variability of the dependent variable – customer satisfaction. The remaining 49% is caused by factors other than use of mobile applications as included in this study. The adjusted  $r^2$  in the model summary table is another

important factor in the model summary table. A value of .048 in this context indicates true 48% variation in the outcome variable is explained by the predictor variable, use of mobile banking applications in this study. In conclusion from the test of the first null hypothesis, it can be deduced that use of mobile banking applications will definitely determine customer satisfaction but at an average level as there are other factors that can determine customer satisfaction. The results of the first null hypothesis test indicate that the adoption of mobile banking applications will undoubtedly affect customer happiness, but only to a moderate extent because other factors can also affect consumer satisfaction.

**H<sub>0</sub>2:** There will be no significant influence of corporate innovation on customer satisfaction of selected banks in Osun State, Nigeria.

### Influence of Corporate Innovation on Customer Satisfaction

**Table 4.1.5 Influence of Corporate Innovation on Customer Satisfaction**

#### Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.014 <sup>a</sup>	.000	-.003	.45377

a. Predictors: (Constant), level of innovation

#### ANOVA

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	.012	1	.012	.057	.811 <sup>b</sup>
	Residual	59.714	290	.206		
	Total	59.726	291			

a. Dependent Variable: level of satisfaction

b. Predictors: (Constant), level of innovation

#### Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	3.055	.159		19.191	.000
	Level of innovation	.015	.061	.014	.239	.811

a. Dependent Variable: level \_of satisfaction

**Source: Field Survey, 2022**

The second null hypothesis of this study says “There will be no significant influence of corporate innovation on customer satisfaction of selected banks in Osun State, Nigeria”. The result of the hypothesis has shown that the level of innovation will not influence customer satisfaction. This conclusion emanated from the *p* value which has a value of .811, greater than the level of significance (0.05) This hypothetical result also prompted the researcher to reject the null hypothesis. The multiple correlation coefficient is calculated using the *r* value from the preceding table's model summary. This can be viewed as one metric for the accuracy of the dependent variable's prediction. In table 4.1.5, the *r* value is.014. Accordingly, there is a 14% chance that level of innovation will increase customer satisfaction. This indicates that the prediction is a weak yet positive one. The  $R^2$  value, which is the percentage of the variance in the dependent variables that can be explained by the independent variables, is shown in the "R Square" column.  $R^2$  is calculated using the model summary table, where it has a value of.000. This suggests that 0% of the variability of the dependent variable, customer satisfaction, was explained by the independent variable, use of mobile applications. Other variables outside the adoption of mobile applications as described in this study are responsible for the remaining 100%. Another significant component of the model summary table is the adjusted  $r^2$ . A value of -.003 in this context suggests that the predictor variable, level of innovation in this study, accurately explains

-97% of the variation in the outcome variable. The results of the second null hypothesis test indicate that the adoption of innovation will undoubtedly affect customer satisfaction, but only to a moderate extent because other factors can also affect consumer satisfaction.

**H<sub>03</sub>:** There will be no combined influence of use of mobile banking applications and corporate innovation on customer satisfaction of selected banks in Osun State, Nigeria.

### Use of Mobile Banking Application and Corporate Innovation

**Table 4.1.6: Use of Mobile Banking Application and Corporate Innovation**

#### Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.225 <sup>a</sup>	.051	.044	.44290

a. Predictors: (Constant), level of innovation, use of mobile banking applications

#### ANOVA

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	3.035	2	1.518	7.736	.001 <sup>b</sup>
	Residual	56.691	289	.196		
	Total	59.726	291			

a. Dependent Variable: level of satisfaction

b. Predictors: (Constant), level of innovation, use of mobile banking applications

#### Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.378	.232		10.239	.000
	Use of mobile banking applications	.251	.064	.226	3.926	.000

Level of innovation	-0.006	.060	-0.006	-.101	.919
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a. Dependent Variable: level of satisfaction

**Source: Field Survey, 2022**

The third null hypothesis of this study is from a joint perspective. The null hypothesis says “there will be no combined influence of use mobile banking applications and corporate innovation on customer satisfaction of selected banks in Osun State, Nigeria”. Given that the *t-value* and the corresponding *p-value* are in the “t” and “sig” columns in Table 4.1.6. In the result of the Table, this tests tell us that use of mobile banking applications  $p(.000) < 0.05$  is significant, but level of innovation is not significant. This means that the explanatory variable *level of innovation* is no more useful in this model, when the other variable are already is already in the model. In other words, only *use of mobile banking applications* in the model will add substantial contribution to explaining customer’s satisfaction of certain banks in Osun state.

**4.4 Discussion of Findings**

The discussion of findings in this study centers on discussions around each of the research question in this study as well as each of the null hypothesis being tested in this study as well. The first research question in this study says “What is the level of customer satisfaction of selected banks in Osun State, Nigeria”? The level of customer satisfaction was at 3.14 on a scale of 1 to 4. Indicators of customer satisfaction in this study were the following: Perceived value, Affective response and fulfilling important needs. Each of this indicator had an average mean score. Some studies have actually reported findings as regards how each of this indicator can bring about customer satisfaction.

In a study, it was reported that perceived value, effectiveness and fulfilling important needs can actually bring about customer satisfaction. The same with affective response and fulfilling important needs <sup>1</sup>. In some other studies, it was also revealed that these indicators to a large extent can bring about customer satisfaction <sup>2,3</sup>.

The second research question is about “use of mobile banking applications among customers of selected banks in Osun State, Nigeria”. The use of mobile banking applications was found to be pretty much above average on a scale of 1 to 4. The grand mean score of this variable was 3.00. Also, three indicators were used to determine this variable. They are: Ease of use, risk of mobile transaction and cost of mobile transaction. Each of these indicators attracted an average mean score of 3.71, 2.62 and 2.52 respectively. Risk of mobile transaction and cost of mobile transaction were the two indicators that had a low average mean score level. Studies have pointed to the fact that these two indicators were strong determinants of customer satisfaction <sup>4,5</sup>. The indicator that had the highest mean score was also which is ease of use has also been found in different studies to be a strong component of use of mobile banking applications <sup>6</sup>.

The last research question in this study says “What is level of corporate innovation of selected banks in Osun State, Nigeria?”. Again, three indicators were used to measure level of corporate innovation in this study. These indicators are: Increased customer base, culture of innovation and operational efficiency. Each of these indicators had an average mean score. Studies have also reported how each of these indicators do serve as a determinant of level of corporate innovation <sup>6,7,8</sup>.

Hypotheses tested in this study were three and they were formulated in the null form at 0.05 level of significance. The first null hypothesis says “There will be no significant influence of use of

mobile banking applications on customer satisfaction of selected banks in Osun state, Nigeria”. This null hypothesis was rejected because use of mobile banking applications was found to significantly influence customer satisfaction. Some research works have actually corroborated this finding. About three different studies actually revealed that use of mobile banking applications can actually bring about customer satisfaction <sup>9, 10, 11, 12</sup>.

The second null hypothesis says “There will be no significant influence of corporate innovation on customer satisfaction of selected banks in Osun State, Nigeria”. This null hypothesis was accepted because it was actually found that corporate innovation will in no way bring about customer satisfaction. Report from certain studies did not affirm this finding. Instead these studies revealed that corporate innovation do bring about customer satisfaction. The third hypothesis of this study was a joint one. That is, a combination of the two independent variables was tested against the dependent variable. It was however found that only use of mobile banking applications could bring about customer satisfaction.

## Endnotes

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## Chapter Five

### Conclusion

#### 5.1 Summary of Findings

This study examined the influence of use of mobile banking application, corporate innovation and customer satisfaction of Banks in Osun State, Nigeria. About 292 customers of various banks in Osun state participated in this study. The following were findings in this study:

1. Customer satisfaction on selected banks in Osun state are very much satisfied with the use of mobile banking applications in Osun state.
2. Use of mobile banking applications by customers in Osun state was also on the high side. They do make good use of mobile banking applications.
3. Corporate innovation of banks operating in Osun state was just at an average level.
4. It was found that use of mobile banking applications will to a large extent influence about customer satisfaction.
5. Corporate innovation was found not to influence about customer satisfaction.
6. Combination of use of mobile banking applications and corporate innovation will not influence about customer satisfaction, rather, only use of mobile banking applications will do.

## 5.2 Conclusion

The study has been able to investigate the effectiveness of use of mobile banking applications in Osun state as regards how it will bring about customer satisfaction. It concluded that the use of mobile banking applications by customers in Osun state have contributed to a large extent on satisfaction level especially in terms of how banking applications function in the country. The research work also concluded that there is a high level of usage of mobile banking applications among bank customers as well. The conceptual model has been able to link ease of use and mobile banking applications among users of mobile applications in Osun state. The usage of the TAM theory was able to help navigate usage, ease of use and the various application in the research work for the researcher to come out with the various findings.

The issue of unreliability, safety factors, and the cumbersomeness of using this online platform that often leads to customer frustrations, poor service delivery, and customer dissatisfaction has not distracted customers from using the applications. This study argued that the potential influence of mobile banking application, corporate innovation on customer satisfaction of the banks may likely be enhanced when they deploy reliable, safe, easy to use mobile banking platform (meaning more customers will engage in mobile banking).

The study concluded that the components of customer satisfaction such as perceived value, affective response have fulfilled important needs which had contributed to a large extent on customer satisfaction. Financial institutions have got to be really innovative to also bring about customer satisfaction. Financial institutions like banks operating at the branch level have got to be given some form of autonomy so as to be innovative. Hypothetically, only use of mobile banking applications can actually bring about customer satisfaction.

### **5.3 Recommendations**

Considering the findings of this study, the following recommendations are made:

1. Banks in Osun state have got to increase their customer base by introducing different innovative tendencies to how banking operations in the state is being carried out.
2. Mobile banking innovations to be more realistic for customer service.
3. Interface features of banking applications should be improved upon. When this is done, corporate innovation has taken place, thereby customer satisfaction will greatly be achieved.
4. Charges vested on the use of mobile banking applications by banks in the country which is presently affordable should be maintained.
5. Further innovation which will result to customer satisfaction should be invented.

### **5.4. Contribution to Knowledge**

This study has been able to establish the fact that innovation is a key cultural practice that should be encouraged in financial institutions.

Theoretically, the combination of responsiveness, reliability and accessibility are the factors that makes mobile banking an inevitable and a widely accessible means of banking transaction. Professionally, the study has been able to establish the fact that the use of mobile banking applications can actually bring about customer satisfaction. However, it must possess all the factors that makes mobile banking widely accessible which are reliability, accessibility and responsiveness. Therefore, developers of a banking applications should take into consideration. Banks as a service oriented organization must ensure that customer satisfaction factors is the

central of any technological or corporate innovation they want to embrace so as to command higher patronage and derive competitive advantages.

Generally, the use of mobile banking applications and corporate innovation as stated, being variables in this study cannot on their own bring about customer satisfaction without the Perceived value, affective responses and their abilities in fulfilling important needs as components of customer satisfaction were found in this study to have a strong correlational factor. The study further found that technological innovation is an inevitable concept especially in the banking sector which need to be studied properly because of the role financial institutions plays in the society.

### **5.5 Suggestions for Further Studies**

This study can be examined more from different perspectives. These are identified below.

1. Gender differences and the use of mobile banking applications in Nigeria. A qualitative approach.
2. Dissecting existing innovativeness factors on the organizational performance of financial institutions in Nigeria. A case study first generation banks in Nigeria.
3. Investigating interface security breaches of mobile banking applications in Nigeria.

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**Lead City University**  
**Faculty of Communication and Information Sciences (FCIS)**  
**Department of Information Management**

Dear Respondent,

I am a Master's student of the above named Institution gathering data for the purpose of academic research on the topic "Mobile Banking Applications, Corporate Innovation and Customers Satisfaction of selected banks in Osun State, Nigeria. To achieve this, your optimum cooperation is needed; there is no right or wrong answer. All your responses will be kept confidential and used for research purpose alone.

Thank you.

### Section A: Demographic Information

Gender: Male ( ), Female ( )

Age: 20-25 ( ), 26-30 ( ), 31-35 ( ), 36-40 ( ) 41-45 ( ), 46 and above ( )

Educational level: S. S. C. E. ( ) N. D. ( ) H.N.D. ( ) Bachelor's degree ( ) Master's degree ( )

Ph. D ( ).

How many years have you been operating this bank account? 1 – 4 ( ) 5 – 10 ( ), 11 – 15 ( ),

16-20 ( ), 21-25 ( ), 26-30 ( )

### Section B: Level of satisfaction of bank customers.

The statement in this section concerns customer satisfaction as observed by the selected banks. Using the four-point likert scale provided below. Please tick the appropriate choice that indicates how satisfy you are with mobile banking services. Strongly Agree=4, Agree=3, Disagree=2, Strongly Disagree=1.

S/N	Items	SA 4	A 3	DA 2	SDA 1
	<b>Perceived Value</b>				
1	My mobile banking app is of much benefit to me				
2	My mobile banking is cost saving than conventional banking				
3	My mobile banking app is flexible than conventional banking				

4	My mobile banking app is easy to use than conventional banking				
5	My mobile banking app is more secure than conventional banking				
<b>Affective Response</b>					
6	The system, network for my mobile banking is more efficient than conventional banking				
7	My mobile banking application has better problem handling capacity than conventional banking				
8	My mobile banking app has fulfilled my expectation than conventional banking				
9	I am pretty more satisfied with the mobile banking application				
<b>Fulfilling Important Needs</b>					
10	My mobile banking application menu is very easy to navigate				
11	My mobile banking application menu is very easy to understand				
12	My mobile banking application do meet my query needs when carrying out online transactions				
13	I find it easy to transfer money on my mobile banking application				

**Section C: The use of mobile banking application**

The statement in this section concerns electronic banking service quality as observed in the selected money deposit banks. Using the four-point likert scale provided below. Please tick the appropriate choice that indicates your opinion on the quality of service experienced through your mobile banking application. Strongly Agree=4, Agree=3, Disagree=2, Strongly disagree=1

S/N	Items	SA 4	A 3	D 2	SDA 1
	<b>Ease of Use</b>				
1	I like to use mobile banking, because it offers independence				
2	Mobile banking enables me to be fully involved in my banking transactions				
3	Mobile banking enables me to undertake banking transactions at my own discretion				
4	Mobile banking is user friendly				
5	Mobile banking application provides easy access for banking transaction				
	<b>Risk of Mobile Transaction</b>				
6	My mobile banking application offers high security for me				
7	In-branch banking is less satisfying than mobile banking				
8	I am familiar with mobile banking application security features				
9	I have had satisfactory experiences with mobile banking application				
10	Personally, I felt secured transferring huge amount of money on my application				
	<b>Cost of Mobile Transaction</b>				
11	Mobile phone payment service is very much easy to afford				
12	Going to a bank branch is not always convenient for me				
13	Mobile banking services are faster than in-branch banking				
14	Mobile banking is cost effective compared to in branch banking				

15	Mobile banking charges is very much affordable for me				
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**Section D: Level of innovation of your bank**

The statement in this section concerns how innovative your bank is as observed. Using the four-point likert scale provided below. Please tick the appropriate choice that indicates your opinion. Strongly Agree=4, Agree=3, Disagree=2, Strongly disagree=1

S/N	Items	SA 4	A 3	D 2	SD 1
<b>Increased Customer Base</b>					
1	My bank is recognized as an organization that values her customers				
2	I'm always aware of new products and services of my bank through their mobile application				
3	The mobile application of my bank offers fast and efficient services				
<b>Culture of Innovation</b>					
4	Use technology to derive organizational process				
5	Provide clients with services that offer unique benefits superior to those of competitor				
6	Actively carries out its work on developing existing new products				
7	Deliver new products that are technologically driven				
8	See new product development as a critical success factor				
<b>Operational Efficiency</b>					
9	My bank mobile application is consistent and stable during transaction				
10	My mobile banking application shows high level of reliability				

11	Transactions are uninterrupted on my mobile banking application				
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**Biodata**

**A. Personal Data**

Name:

**Omofoyeke Omolabake, ADEYERA**

Address: No 53, Hezekiah Oluwasanmi Road 7 Ile-Ife  
E-mail: [adefoyeke2010@gmail.com](mailto:adefoyeke2010@gmail.com)  
Phone No: 08069065756  
Date and Place of birth: February 28, 1987/Ile-Ife, Osun State  
Nationality: Nigeria  
Local Government: Ife Central  
Sex: Female  
Marital Status: Single  
Address: No 53, Hezekiah Oluwasanmi Road 7 Ile-Ife

#### **Schools Attended with Dates**

- (a) Oduduwa University, Ipetumodu, 2016 -2017
- (b) Osun State Polytechnics, Iree, Osun. 2012 - 2013
- (c) Osun State Polytechnics, Iree, Osun. 2009 -2010
- (d) Moremi High School, Ile-Ife, Osun State 1999 – 2005
- (e) St. Peters Anglican Primary School Sabo, Ile-Ife 1992/93 – 1997/98

#### **Academic Qualification with Dates**

- (a) Bachelor of Science 2017
- (b) NYSC 2015
- (c) Higher National Diploma 2013
- (d) National Diploma 2010
- (e) WAEC 2006
- (f) NECO 2005

#### **Working Experience with Dates**

##### **Confidential Secretary**

Registrar's Office, Oduduwa University, Ipetumode, Ile-Ife. June, 2015 - June, 2019.

## **Administrative Responsibilities**

### **Secretary**

Typing, preparing and collating reports, filing, organizing and servicing meeting, taking minutes, managing data basis, answering calls, taking messages and handling correspondence, maintaining diaries and arranging appointment.

Dr. Mrs. Sophia V. Adeyeye  
Head of Department  
Information Management  
Lead City University  
Ibadan  
08061127708

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Signature

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Date

**University Compliance Certificate**

This is to certify that this Thesis written **Omofoyeke Omolabake ADEYERA** with Matriculation No. **LCU/PG/001316** in the department of Information Management of the Faculty of Communication and Information Sciences, Lead City University, Ibadan is in full compliance with the approved University Format and style.

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**Signature**

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**Date**

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