

**KWAME NKRUMAH UNIVERSITY OF SCIENCE AND TECHNOLOGY**

**INSTITUTE OF DISTANCE LEARNING (IDL)**

**DEPARTMENT OF ACCOUNTING AND FINANCE**

**CUSTOMERS USAGE BEHAVIOUR OF E-BANKING SERVICES:  
INTERPLAY OF ELECTRONIC AND TRADITIONAL BANKING**

**BY**

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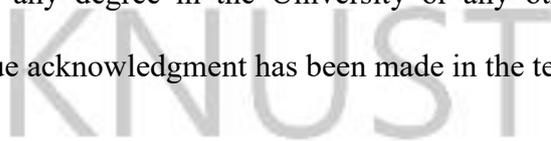
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**MASTER OF SCIENCE (ACCOUNTING AND FINANCE)**

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**DECLARATION**

I hereby declare that this submission is my work towards the award of a Master of Science degree and that, to the best of my knowledge and belief, it contains no material previously published by another person nor material to a substantial extent that has been accepted for the award of any degree in the University or any other educational institutions except where due acknowledgment has been made in the text.



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**DEDICATION**

I dedicate this research to my parent.

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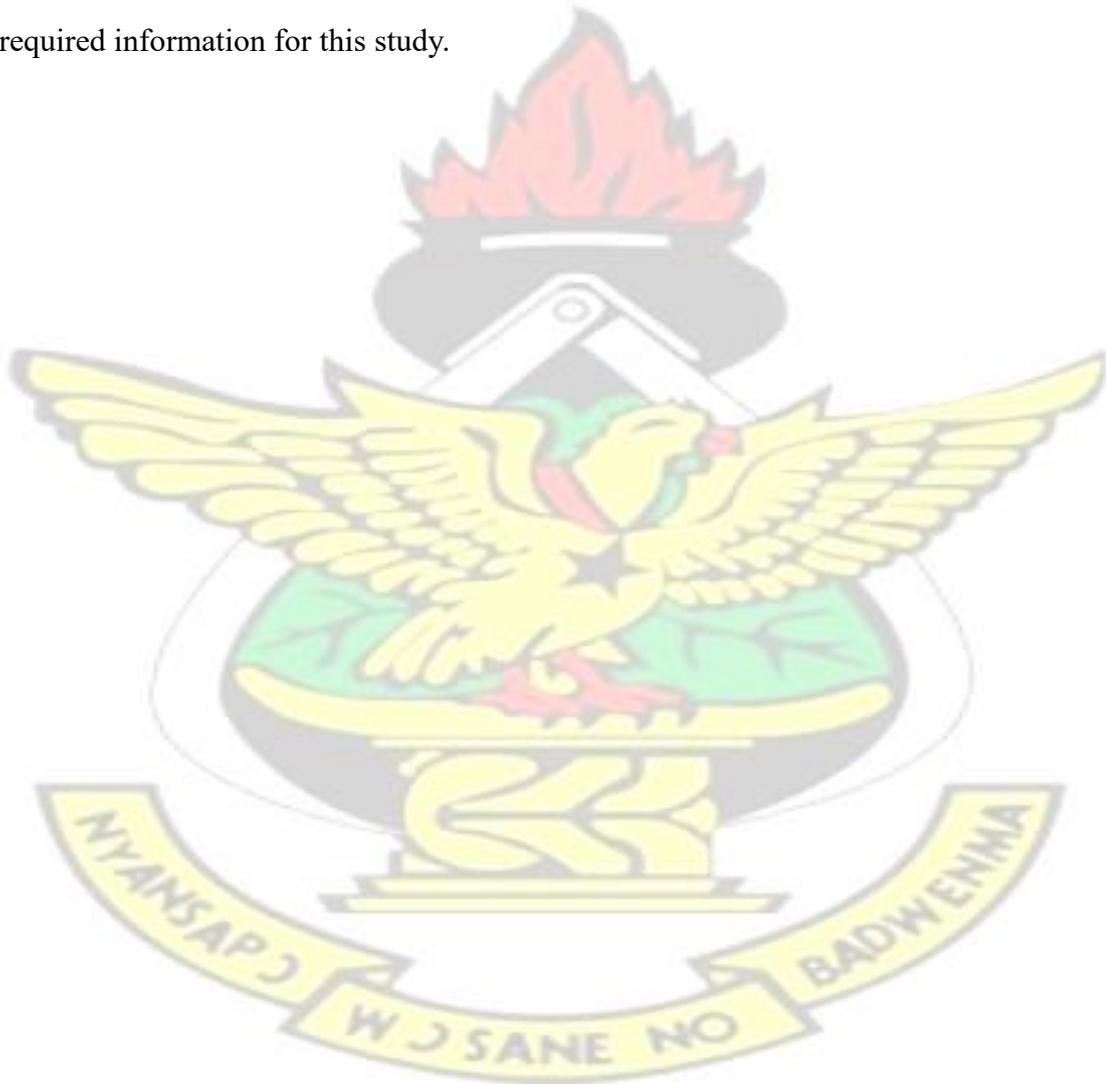


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## ABSTRACT

Banks across the world including Ghana are investing significantly into the provision of e-banking services in the hope that this will translate into higher returns and market penetration. Any strategy aimed at achieving widespread adoption and use of these e-banking services rests on solid understanding of factors that influence customers' adoption and use of the services. This study is aimed at examining the multiple ways customers of adb, GCB, and Absa Bank in Obuasi use electronic banking services as compared to traditional banking services. By the use of questionnaire, a sample of three hundred (300) customers of three banking institutions based on convenient sampling was used to examine the multiple ways the banks used electronic banking services as compared to traditional banking services. The research employed SPSS and Microsoft Excel 2016 to analyze data obtained from the questionnaires. The research revealed that in spite of the existence of e-banking tools, customers still use cash for payment of transactions, withdrawing cash from branches of their banks, visit banks to make cash deposits and build personal contact with human tellers at the banks. These behaviours of customers towards the usage of e-banking services are largely influence by the existence of fraud in cash transactions, acceptance of cash as payment and deposits in banking transactions, interests/hidden charges, lack of security, frequent connection breakdown. The study recommended that management of banking institutions should improve the security and privacy of customers using e-banking services.

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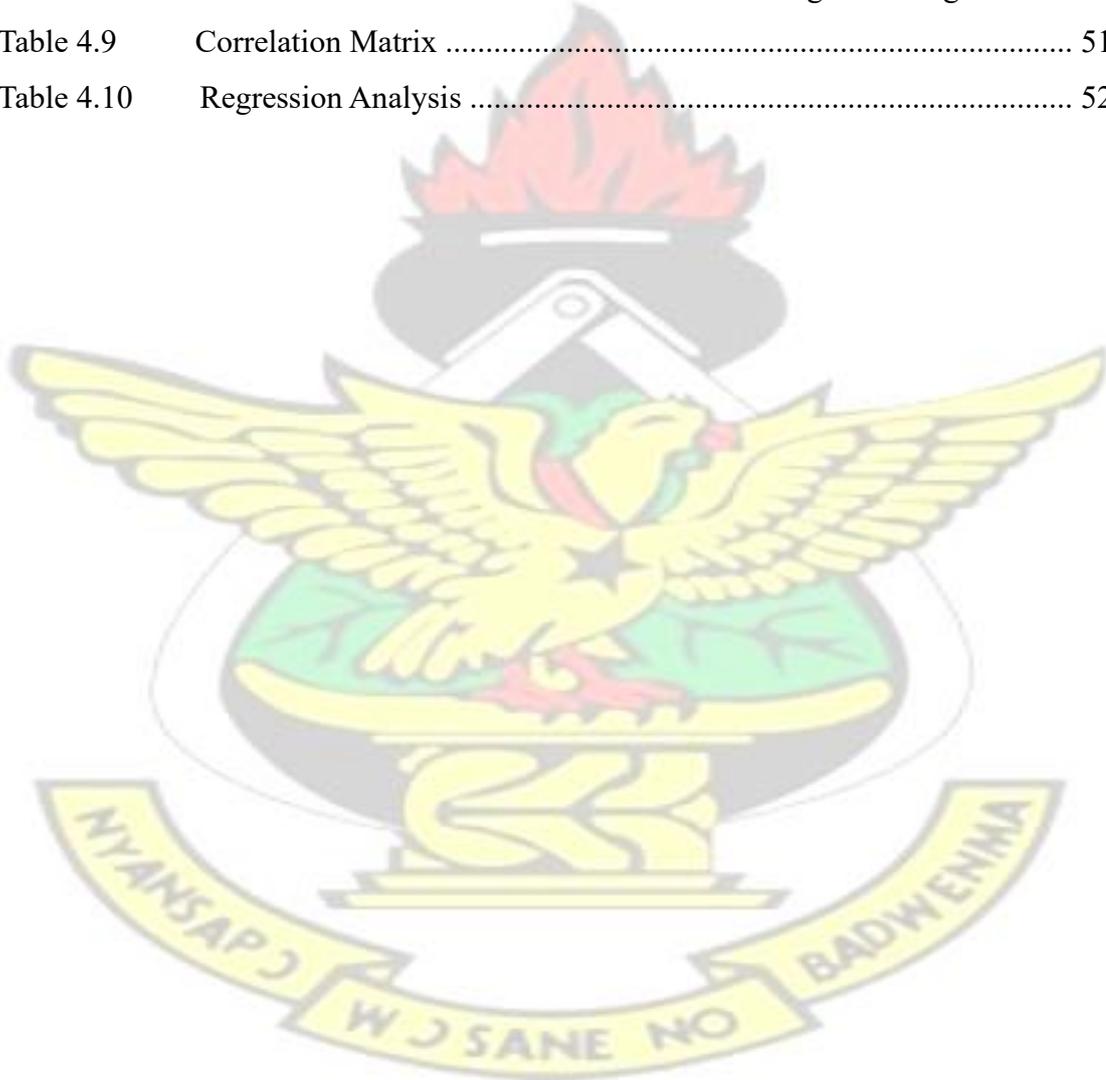
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## CHAPTER ONE

### INTRODUCTION

#### 1.1 Background to the Study

A lot of developed and emerging nations worldwide are working to advance a cashless economy. As a result, laws and policies are being implemented to make sure that people in these nations accept and value digital finance. In reality, governments all over the world are putting a lot of attention on the inherent usefulness of online banking to socioeconomic development. Again, the goal of promoting paperless economies is to reap the benefits of connectedness and transparency. Digital financial services offered via cards, the internet, or mobile phones have been at the heart of cashless economies (Sandhu & Arora, 2019). To assure compliance with their larger mission of digital financial inclusion, policy leaders are encouraging digital finance in developing nations like Ghana, Kenya, and India.

Many bank consumers are becoming less devoted to certain banks and less eager to visit traditional offices in recent years. They are also becoming savvier in their demands for popular services (Luo, Li, Zhang & Shim, 2016; Coelho & Easingwood, 2017). The success of banks in the contemporary market depends on their capacity to offer cutting-edge goods and services that aim to satisfy customers' changing needs and to further investigate ways of preserving a competitive edge that clearly sets them apart from their rivals (Coetzee, van Zyl & Tait, 2016). To do this, banks have taken advantage of recent technological advancements made possible by the confluence of the internet, wireless technology, and mobile devices to provide their customers cutting-edge delivery channels through a banking system or service referred to as electronic banking (ebanking) (Maduku & Mpinganjira, 2016; Luo et al., 2016). Electronic

banking has been regarded as one of the newest technology in contemporary financial transactions over the past 20 years.

The phrase "electronic banking" is used to refer to a wide range of banking services and products that use digital, Internet-based, and digital technology (Kim et al., 2018). Automated teller machines (ATMs), telephone banking, computer-based banking, television-based banking, online banking, and, more recently, mobile banking are all examples of services that use electronic banking technology (Parker & Parker, 2018). These technologies are used to better serve convenience-seeking and tech-savvy consumers and save operational costs for banks. They are becoming more common in the banking industry. (Nasri, 2017). Financial institutions can use information and communications technology (ICTs) and other electronic devices to support customers' transaction execution through electronic banking (Ozili, 2018). An electronic banking system uses electronic equipment to carry out transactions. Consequently, e-banking implies that financial organizations offer their clients products and services via digital networks (Nwude, Igweoji & Udeh, 2020). Electronic banking has the potential to make it easier and more convenient for customers to access and use financial services and products from financial institutions than doing so in actual banking rooms (Kariuki, Kimundi & Makambi, 2018), despite the alleged advantages of electronic banking and the encouragement for digital finance, cash still represents around 85% of all consumer transactions globally (Thomas, Jain, & Angus, 2019). Even though the emergence of electronic banking has made a significant contribution to the field of modern banking and financial inclusion, Ghana, like many other developing countries, is characterized by insufficient banking institutions, cash-based transactions, dependence on informal means for transferring funds, large unbanked populations, rural and low-income segments, and many other characteristics. According to Nwude, Igweoji, and Udeh

(2020), most developing nations have successfully implemented electronic banking services for their unbanked populations without incurring significant additional costs (Nwude, Igweoji, & Udeh, 2020). However, the spread of these services is crucial for both service providers and customers. In actuality, the views and usage habits of the intended consumers of such services have a significant impact on the success of developments in electronic services. If and when these technologies were viewed and used by their intended users in a way that contributed to the strategic and operational goals of the banks, only then could the advantages of e-banking be realized (Agarwal & Karahanna, 2016). To reduce the transaction costs customers, face while obtaining financial services and goods, economic engagement as a result of digital transactions is intended. Because financial institutions are subject to extensive regulation, their transaction costs are generally lower than those of other technical services (Kariuki, Kimundi, & Makambi, 2018). The number of customers a bank has for its electronic services and the use of cutting-edge IT are directly related since digital banking have a substantial impact on cost reduction. It is clear that understanding the nuances of digital or electronic banking depends critically on how users use the services. Because of this, the study makes an effort in this area, focusing on the customers' point of view of ebanking service adoption, the extent of e-banking implementation in terms of usage by the customers, and whether they are substituting digital channels for traditional channels (branch banking) or using digital channels in addition to traditional channels.

## **1.2 Statement of the Problem**

Banking transactions through digital means have become the leading retail channels that banks employ to serve their customers in keeping with customer preference and higher returns and market share (Moutinho & Curry, 2018). But in the digital age, there

is much more demand on banking institutions all over the world to provide services that are highly effective, efficient, and quick. When compared to developing banks, certain state-owned or established banks appear to be "behind the times" due to the rapidly expanding client demands and technological advancements (Ding et al., 2018). Customers' tastes and preferences are becoming more sophisticated and complex at the moment (Klaus & Maklan, 2019). Such requirements are typically viewed as being particularly challenging because it is possible for some banks to lose clients or revenues if answers or reactions to e-banking expectations are not met or exceeded. Previous research concurred that the key to enabling banks to reap the rewards of opening this channel was client acceptance and fully adopting internet banking services (Nor, 2015; Yousafzai, 2015). The authors also emphasized the critical need of having a thorough grasp of the variables and how they interact to affect customers' adoption of and use of internet banking. According to a review of the literature on internet banking, while many studies have attempted to identify the factors influencing either non-adopters or users (Guriting & Ndubisi, 2016; Gerrard et al., 2016; Cheng et al., 2016), there are currently very few studies that look into the usage patterns of customers who are inactive users of electronic banking services. Additionally, the majority of earlier study has concentrated on the actions of internet banking customers. It's possible that this caused certain results from research with a foreign bias to be generalized. Due to these shortcomings, the current study examines how clients use e-banking services provided by Ghanaian banks.

### **1.3 Objectives of the Study**

The principal objective of this study is examining the multiple ways clients use electronic banking services as compared to traditional banking services. Particularly, this research aims:

1. To determine the extent of usage of e-banking services.
2. To assess the multiple channels provided by the usage of e-banking services.
3. To identify the sources of influence on customers' behaviour in using e-banking services.

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## **1.4 Research Questions**

The following research questions are looked at in order to meet the stated objectives:

1. To what extent do customers use e-banking services?
2. What are the multiple channels associated with customers' usage of e-banking services?
3. What are the factors that influence customers' behaviour in the adoption of ebanking services?

## **1.5 Significance of the Study**

The study's findings will help the banking industry understand the benefits of e-banking services over traditional banking system and the drawbacks of the service that customers frequently utilize. The research's conclusions will assist banking institutions in carrying out their fundamental responsibility of acting as reliable middlemen between clients and their depositors. The results will be used as a source of information by students so they may learn more about and comprehend the actions of users of ebanking services as an alternative to traditional banking. The researcher's results will also be very important to students, instructors, and aspiring researchers who might want to develop this research on how customers use e-banking services and other relevant subjects.

## **1.6. Scope of the Study**

The study's scope includes various e-banking platforms as well as consumer usage patterns among these banking services provided by Ghanaian banking institutions.

However, the study looks at how consumers of Ghana's adb, GCB, and Absa bank Obuasi branches use e-banking services and how they use them. Once more, the study examines the breadth of replies related to clients using the bank's e-banking services. Since the researcher is physically present in the case study organization's geographic area, the area under consideration offers reasonably easy access to data.

## **1.7 Summary of Research Methodology**

The study's research problem, aim of the research, and research questions are addressed using a pass survey-based descriptive study design. This is due to the study's clear representation of the current situation and its collection of data at a specific period. Again, data is gathered using a quantitative approach. Here, quantifiable data is gathered through questionnaires. a quantitative strategy that gathers statistical data to describe, forecast, or control interesting phenomena customers of the adb, GCB, and Absa banks in Obuasi are the study's target audience. A predetermined sample size is chosen using convenience sampling procedures for the investigation. The research data are gathered via an online questionnaire. The Statistical Package for Social Sciences (SPSS) version 26 is used to quantitatively evaluate the acquired data using descriptive and inferential statistics, including correlation and multiple regression analyses.

## **1.8 Limitations of the study**

Regarding the study's limitations, the case study organization's location in Obuasi in the Ashanti Region and organizational peculiarities prevent the findings from being applied to other financial organizations across the nation. Another restriction is the potential for respondents to withhold necessary information or give insufficient answers. The researcher is adamant, nevertheless, that the study's trustworthiness is unaffected by these constraints. This is due to the use of online questionnaires, the hiring of research assistants to assist in data collection online, and the assurances given to respondents on the privacy of their answers and the concealment of their names.

## **1.9 Organization of the Study**

The research is grouped into five chapters. The first chapter serves as an introduction to the subject and discusses the context of the study, the statement of the problem, objectives of the study, the research questions, significance of the study, scope of the study, summary of research methodology and limitations of the study, as well as the organization of the study. The study's second chapter examines theories and literature in the field. Literature framework, based knowledge, and empirical review are three categories for the literature review. The numerous strategies and methods used for the investigation are described in Chapter 3 of the paper. This chapter discusses the study's design, demographic, sample size and sampling methods, data gathering tools, data processing method, and study's ethical considerations. The presenting and discussion of the results are the main topics of study's fourth chapter. The study's fifth chapter presents a summary of its findings, draws conclusions, and offers suggestions.

## **CHAPTER TWO**

### **LITERATURE REVIEW**

#### **2.0 Introduction**

This chapter analyzes a number of texts pertinent to the subject being studied. The chapter will be looking at subheadings namely; conceptual review, theoretical review, empirical review, hypothesis development, conceptual framework and summary of the chapter.

#### **2.1 Conceptual Review**

This section reviews literature materials with concepts, terminologies and relevant related information that contributes to unveil the understanding of the topic under study.

##### **2.1.1 Concept of Electronic banking**

According to Allen (2017), "electronic banking services" include any information or services that a bank offers to its clients over a mobile device, ATM, computer, or television. The concept of electronic banking has been defined in a variety of ways, according to the author. Electronic banking, as defined by Daniel (2016), is the transmission of bank information and services to consumers using a variety of platforms that may be utilized with a variety of terminal devices, including mobile banking, ATMs, online banking, and many more. Mohammed (2019) defines electronic banking as the methodical process of incorporating computers and telecommunications so that banking may be done without having to contact with people directly. Yaseen and El item (2018) claim that it offers a variety of services, including a mechanism for automatically distributing salary and paying retail purchases. Electronic banking encompasses a variety of service delivery methods, including SMS banking, electronic alerts, online banking, and mobile banking (Das 2020). With electronic banking,

timesaving customized transactions are possible, but the safety for this has also been identified for the users (Khatoun, Zhengliang, & Hussain 2020). Technology advancements have brought about modernized components to do business and more importantly altering the phase in financial transactions, according to Laukkanen, Pasanen, and Sharma (2018). As a result, in response to technology advancement, the mode to buy and sell goods and services in the banking sector together with carrying out other financial transactions have undergone fast change.

According to Martins, Oliveira, and Popovi (2019), banks formerly used technology to manage their internal business operations and to market their goods and services; however, using IT to provide customer care has gained popularity in recent years. According to Yu and Guo (2018), the retail banking supply channel is one area of the banking industry that has undergone a number of innovative developments that depend on the successful implementation of IT solutions. There is no doubt that technology has changed retail banking, as evidenced by the growing usage of electronic banking services via ATMs, telephone banking, electronic payments, the internet, and mobile banking. According to Yu and Guo (2018), "e-banking" refers to the various financial services and goods offered via technology such computers, phones, televisions, the internet, and mobile phones.

### **2.1.2 Electronic banking and its usage**

Hosein (2016) affirms that it is impossible to emphasize the advantages that come with retail banks offering electronic banking transactions. Electronic banking, for instance, gives essential opportunities to cut down expenses for banking operations. The clients of banks can engage in self-service, minimizing frequent human contacts according to Compaq (2017). Banking institutions can down size their branches together with the cost of consumables, thanks to e-banking. Additionally, according to Hosein (2016), the

availability of e-banking gives banks the chance to attract new clients. According to Compaq (2017), for instance, current clients can be persuaded to utilize services that are not being used presently by offering them incentives, such as additional credit cards, house loans, and life insurance. Littler and Malanthiou (2016) provide evidence for this, highlighting how banks may use online and mobile banking to expand their market share and encourage cross-selling of other financial services and products. According to Yang and Fang (2014), the extensive databases built by e-banking enable the direct presentation of tailored financial services and products to customers. According to Yu and Guo (2018), banks can take advantage of the instantaneous and reciprocal communication capabilities of mobile technology by utilizing mobile banking. Iyengar (2014) asserts that primary banking practices have revolutionized bank operations. Customers of banking services can transact business with any bank branch worldwide that uses some sort of electronic technology. Iyengar (2014) sees core banking operations as being carried out in a centralized setting, which indicates that all data is held on the bank's main server, which is linked to the branches via a networking system. As a significant banking solution, Electronic Clearing Service (ECS) helps large business firms pay their salaries, dividends, interests, and refunds electronically on time. Large businesses could save a lot of money by avoiding the printing of a paper document, in addition to the receiver receiving the payment on time. The Extension of Electronic Fund Transfer (EFT) facility is another form of electronic banking in which banks change the way that money is transferred (Dhar, 2018). Dhar (2018) went on to say that commercial banks have started offering same-day money transfer services to their consumers by utilizing the EFT infrastructure set up by the regulator. This unique electronic fund transfer has been created especially for banks with networked branches to make it possible for funds to be transferred on the same day in a closed group of

computerized and networked branches that are spread throughout a nation. Following the effective introduction of network banking, banks with internet infrastructure receive EFT requests from their clients and promptly carry them out. The Real Time Gross Settlement (RTGS) system, another form of online banking that is subject to government regulation, has given the EFT setup a new dimension. Businesses and other customers of banking institutions now have the ability to send money right away to certain branches. According to the rules governing RTGS, if credit facilities cannot be used, they must be returned within two hours, implying that the longest possible delay is two hours. According to Nwude et al. (2020), the invasion of technologies has also given rise to various forms of electronic banking in developing nations like Ghana and Nigeria. These modes have benefited clients by enabling anytime, anyplace banking and extending banking hours. Since transactions may now be completed at any branch on the network without the consumer being physically present, banking electronically has made it possible for certain large banks with several branches across the nation to integrate their operations on a centralized network.

### **2.1.3 Electronic banking services**

The majority of banks in developing nations employ ATMs, mobile ATMs, mobile banking, internet banking, point-of-sale, among other electronic banking technologies, according to Nwude et al. (2020). These computerized banking methods are said to significantly reduce staff expenses, increase service edges, and boost banks' production and efficiency (Nwude et al., 2020). Below is an explanation of a few electronic banking tools. According to Tiwari and Buse (2017), using mobile communications tools to deliver financial and banking services is known as mobile banking. The services being offered may include tools for managing accounts, conducting bank transactions, and getting access to specific data. Mobile banking, in a larger sense, aids in the

execution of financial services during which, as part of an electronic process, users adopt mobile communication protocols in cooperation with mobile devices (Pousttchi & Schurig, 2004 as cited in Singhe, 2017). According to Hamza et al. (2018), mobile banking can be thought of as a type of remote or virtual banking, which primarily refers to the delivery of branch financial services via telecommunications tools. Users can carry out retail banking tasks by sending a brief text message (SMS), which is connected to an automated system of financial institutions. Ching (2018) continues by noting that, aside from cash withdrawal and deposit, mobile banking services offer still another choice for practically all tasks performed by ATMs.

Mobile accounting, mobile brokerage, and mobile financial information are three interconnected conceptual ideas that make up mobile banking, according to Tiwari and Buse (2017). Mobile accounting is typically understood to be banking services based on transactions that revolve around bank accounts and are accessible via mobile devices. However, Tiwari and Buse (2017) stress that not all mobile accounting systems are always founded on transactions. Therefore, a more accurate definition of mobile accounting would be that it offers non-informational account-specific financial services. While mobile brokerage is a phrase used to describe intermediary services relating to the stock market, such as buying and selling stocks, within the context of banking services. Therefore, mobile brokerage can be referred to as non-informational transaction-based mobile financial services that are built around a securities account. In the end, transaction-based banking and informational financial services make up the bulk of mobile financial data. Mobile financial information is expected to give consumers the freedom to conduct business whenever and wherever they choose, and it incorporates elements from both banking and financial services. The information may pertain to the customer's bank and securities accounts or to market movements that are

pertinent to that specific consumer. The information may be supplied at a frequency that the customer chooses and modified based on the client's preferences (Tiwari & Buse, 2017). According to Khumbula Masinge (2017), mobile banking offers a variety of advantages to both individuals and financial institutions. Mobile banking benefits users in terms of convenience, accessibility, and crucial time savings. Similar to this, the costs related to offering mobile banking services are much cheaper than those for branch-based banking.

### *Internet Banking*

Online banking can be characterized as a portal on the internet that allows users to access various banking services, such as investing and the payment of bills. Apart from withdrawing monies from banking institutions, users are able to enjoy any kind of banking transactions via the internet with just a few mouse clicks. The use of digital purchases as a new alternative channel for the transmission of banking services has changed from only being a technique to gain a competitive advantage to becoming a competitive necessity with the introduction of deregulation, globalization, technology, and competition. As a result, the banking sector has undergone significant transformation as a result of ICT advancements over time. According to Hazlina et al. (2019), the "barter system" refers to the exchange of goods and services in traditional society in the absence of financial instruments. The barter system was replaced by using financial instruments as a medium of exchange, and currency in various denominations was introduced as the only form of purchasing power. According to Hazlina et al. (2019), these conventional financial instruments have been replaced by modern financial transactions using printed papers and metallic currencies in the form of credit cards, debit cards, and many other forms. The ultimate effect has been a rise in demand

for ATMs all across the world. ATMs appear to be a technological communication tool that gives users access to financial transactions in a public setting without the need for human clerks or bank tellers, according to Abdullah et al. (2019). Abdullallah et al. (2019) acknowledge that numerous contemporary ATMs have been used recently. Plastic ATM cards with magnetic stripes or plastic smartcards with chips that contain a specific card number and certain security are used to identify users. In many countries around the world, ATMs are now being installed in a variety of locations, including shopping centers, airports, grocery stores, gas stations, restaurants, movie theaters, nightclubs, hotels, churches, mosques, bus stops, train stations, and any other area where a large number of people congregate. According to Abdullah et al. (2019), there are two strategies to install ATMs based on the locations of ATMs. They are both on and off-site. The underlying assumption is that ATMs are often more expensive because they are regarded multi-function machines that supplement the capabilities of a real bank office. Banking firms and Independent Sales Organizations (ISOs) place offpremise ATMs in locations where there is typically just a straightforward demand for cash. Although ATMs were initially designed as simple cash dispensers, Shoewu and Edeko (2019) underline that they have expanded to encompass many additional banking-related tasks that are not directly tied to the maintenance of one's personal bank account. According to Khan (2019), banks are quite profitable from their ATM services, and they actively promote the use of ATM cards. Off-site ATMs are typically more profitable for banks since they draw more non-bank customers who have to pay service fees.

#### **2.1.4 Traditional banking services**

Theaud (2023) opined that traditional banking is the most common form of banking, characterized by physical locations where customers can visit to access financial

services and interact with staff members in person. This includes a registered head office and a strict government license to operate in the state or a country. This implies that customers' intention to enjoy traditional banking services may have to engage branches of banking institutions, interacting with individuals or groups and tailoredmade attentions, huge interest rates, periodic service and account charges, accessing physical financial files like cashier cheques books, deposit books or slips, titbits on investments, plans for retirement, credit facility services, face to face contact, internet and phone assistance from staff of banks. Choi (2023) hinted that traditional banking services can be compared to electronic banking in varied ways such as availability, awareness, security, charges and many more. Services from e-banking and traditional banks have merits and demerits. In most instances, user can access e-banking all day and night where they can appropriately and capably handle their funds at everyplace if only there is internet accessibility. Banking services are promptly carried out and users are able to do follow up on their deposits, send or withdraw cash and make payment of bills via electronic means. Alternatively, services from physical bank branches are able to provide very sophisticated banking services through in-person engagement with staff of banks. Traditional banks also have physical branches where customers can access services like lockers. But, the security and safety of services from traditional banks may not be like security related to e-banking, hence users' individual and financial data may be in danger if care is not taken and things are taken for granted. The differences concerning *accessibility* between electronic and banking traditional banking are the fact that users are able to get in contact with their financial data 24/7 if only there is internet accessibility. However, services from traditional banks demands that users must be physically present at their bank branches during productive hours to enjoy similar services from e-banking. Even though some clients enjoy the in-person

form of services from traditional banks, other clients feel it is not inconvenience or time-wasting venture. Other differences related to *safety and security* among traditional and e-banking services is the fact that for monetary reasons, it is speculated that e-banking services are seen not to be secured hence resulting to high reportage of fraud or theft cases. In order to deal with this menace, banks engaged in e-banking have adopted highly complex safety measures like Multifactor authentication (MFA) along with data encryption. However, younger generations are still demanding better e-banking banking security from their bankers. On the other hand, the older generations say they feel "safe enough." When it comes to *charges*, e-banking is usually cheaper and offer higher interests as compared to traditional banking. Even though certain users pay extra charges in order to enjoy extra services and benefits, having savings account in traditional banks is associated with protected deposits, free checking and many more. Concerning *customer service*, services from traditional banking seems to provide proper customer service than e-banking which is face-to-face contact client service. This kind of service is admitted by most customers because they believed their issues can be attended to immediately while with e-banking, the client may have to rely on a phone call or and as such may have restrained client service hours. since there is nonexistence of direct face-to-face interactions, handling complex banking-related issues can be extremely difficult.

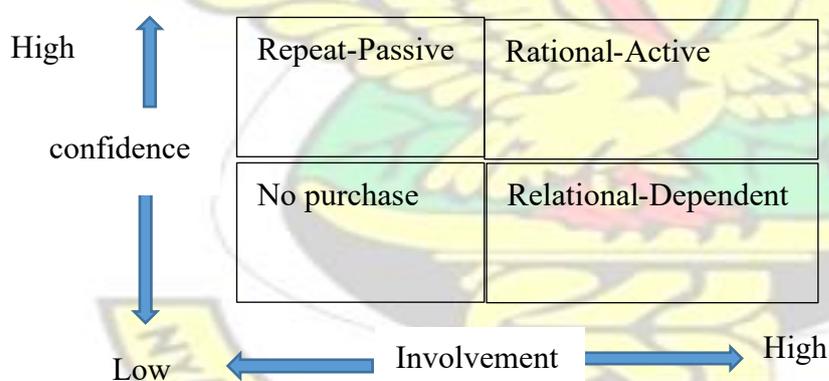
### **2.1.5 Customers usage behaviour**

Lamb et al. (2015) assert that "consumers' habits" is referred as processes that influence or result in a person's decisions regarding how, when, what, when and where to purchase services. Although there are varied meanings regarding consumer behaviour, they all often have fairly similar meanings. According to one definition, customer behaviour is the process included when persons or groups choose to buy, utilize, or discard items,

services, ideas, or experiences to meet needs and desires (Solomon et al., 2016). Similar terminology was used by Schiffman et al. (2018) when they described customer behaviour as "the behaviour that customers make the effort to search for, buy, consume, and discard services that they think would meet their needs" (p. 3). It is crucial to illuminate customer behaviour in the connection with financial services sector with regard to electronic banking. Three qualities that set financial services apart are mentioned by Beckett (2016): inadequate comparability, unpredictability of outcome, and performance transparency. The term "transparency of performance" relates to the information being accessible and the ability of customers to create judgments based on that knowledge (Laitos, 2018). Customers may struggle to understand and identify the results of some financial services due to the varying levels of performance transparency. While the accessible data and performance ratings of a service, such as investment funds, may prove challenging, some services are more transparent than others, such as information regarding credit cards and savings (Beckett, 2016). The term "uncertainty of outcome" describes how services help provide customers authority over ambiguous outward environments (Laitos, 2018).

According to Beckett et al. (2000), an established matrix using the findings of Dwyer et al. (1987) and Thibaut and Kelly (1959) in order to deepen the understanding of customer behaviour in the setting of the financial transactions. Involvement and uncertainty were shown to be the two main motivators and determinants of individual contracting choices by Beckett et al. in 2000. Zaltman and Wallendorf (1983) add that arousal that is goal-directed and motivated is described as participation from the perspective of consumer behaviour. This indicates that there is a correlation between individuals' motivation level toward a specific objective and their level of involvement (Aldlaigan & Buttle, 2001). Beckett et al. (2000) stated that there are diverse subgroups

of consumers' involvement in the buyer-seller interchange (Bateson, 1989). In a similar vein, Shostack (1977) proposed that perceptions of risk, mostly influenced by the complication of goods or services being bought and the certainty of result connected with those goods or services, have an essential role to determine uncertainty. By putting these two factors—*involvement* and *confidence*—on a straightforward continuum that runs from high to low, Beckett et al. (2000) created a two-dimensional matrix of customer behaviour. This matrix gives more information on the variety of interaction styles that might be possible. According to Beckett et al. (2000), this matrix has the advantage of being based on economics, consumer behaviour, and psychology. There are four quadrants in this matrix, and each one stands for a unique arrangement of engagement and ambiguity. As seen in the image below, these four quadrants are briefly discussed in terms of the context of financial services in the following paragraphs. This explanation is based on Beckett et al.



Source (Beckett et al., 2000)

### 2.1.6 Electronic banking and customers' usage behaviour

Beckett (2016) opined that certain financial transactions such as bank accounts or money transfers, are made to give customers more control over their lives by promising them certain things in the future. Other financial services, like investments, subject clients to risks and are challenging for them to examine. Consumers who purchase such

services are actually purchasing a collection of further assurances (Beckett, 2016). And last, certain financial transactions such as investments, have poor comparability. Comparisons of products and services are a crucial step in the decision-making process for consumers (Laitos, 2018). Some financial services are more comparable since they have more recognizable features and advantages (Beckett, 2016).

According to Morganosky (2016), most consumers have not yet switched from one retail format to another when new ones appear. Even while electronic banking has given banking institutions a modernized and improved banking channels, this does not preclude banking institutions from keeping physical offices in established geographic areas (Hernandez & Mazzon, 2017; Wong, Rexha, & Phau, 2018). Due to non-existence of dependability, security and trust connected with e-channels. Rotchanakitumnuai and Speece (2016) found that a consumer has not transferred entire services to this medium and still depend on banks' branches. Many times, problems with e-service design or delivery do not cause parallel channel use or channel switching; rather, these decisions are made voluntarily by the customers (van Dijk, Minocha, & Laing, 2016). Customer choices (demand side) instead of supply side variables dictate the choice of payment method (Wakamori & Welte, 2017). Customers still prefer to interact personally with human tellers at bank branches over those who just use electronic channels (Abor, 2015). In Canada, there is virtually little impact (an inverse connection) of retail payment innovations on cash usage (Chen, Felt, & Huynh, 2014). Because it is convenient and widely accepted, individuals continue to utilize cash for point-of-sale transactions (Arango et al., 2015). Fujiki and Tanaka (2017) and Wakamori and Welte (2017) emphasized that money is especially used for services that are low valued. However, Bagnall et al. (2016) stated that in certain nations (such as Austria and Germany), consumers still prefer to pay with cash for every service. Wang and Wolman

(2016) reiterated that the percentage of paying with monies minimized with transactions size at provided locations, but the dispersions of the payment mixes with cash and emoney across locations grew with transaction size. Bagnall et al. (2016) and Rysman (2019) concluded that using cash as well as electronic services vary across nations mostly because of diverse market policies and structural arrangement.

### **2.1.7 Improving customers' usage behaviour through electronic adoption**

The need to increase the breadth of the services is evident by evaluating the services that have been provided or planned as well as client responses. Before integrating technology for delivery, according to Hammoud, Bizri, and El Baba (2018), it must be thoroughly examined. The usage of electronic banking services will increase with regular security reviews and updates that prevent customers from discovering any security flaws (Rahi, Ghani, and Ngah 2020). According to Asiyambi and Ishola (2018), internal processing needs to be mapped out and integrated with AI or other technology solutions in order to create optimal and enjoyable services for clients. Applying ESG practices that are pertinent to banking can make services more sustainable. The ability of data analytics is now being very effectively tapped. It is crucial to comprehend and analyze data in the most effective way possible. One such approach, known as PCA (Principal Component Analysis), is highly useful for reducing the number of dimensions in the data (Roland et al., 2021) and offering a straightforward explanation for a collection of complex data. Offering the newest technologies to users is a crucial component of enhancing positive user behaviour. The "Internet of Things (IOT)" is one of these technologies. IOT can be used in a variety of contexts and ways, including banking and financial services (Sehgal et al., 2022). One of the most crucial business ethics is the obligation to treat clients with trust and fiduciary responsibility.

## **2.2 Theoretical Review**

To better understand how clients use electronic banking, the Innovation Diffusion Theory (IDT), Theory of Reasoned Action, and Theory of Planned Behaviour were taken into consideration in the research.

### **2.2.1 Innovation Diffusion Theory (IDT)**

The innovation diffusion theory (Rogers, 1983) first appeared in the 1980s. The IDT aims to give those interested in the spread of innovations from any domain a conceptual framework for comprehending the process of diffusion and societal change (Brown, 1999). Five steps are included in the decision-making process for innovations, according to Rogers (1995). Knowledge is the initial step, during which the person is exposed to an innovation and receives knowledge of how it works. The choice stage, in which the person decides whether to accept or reject the innovation, comes after the second stage of persuasion, during which favorable or unfavorable attitudes toward the innovation are developed. According to Rogers (1995), the rejection decision may be made at any time. If the individual chooses to embrace the innovation, the fourth stage takes place. By actually putting the idea to use, he or she advances to the implementation stage. The person solidifies their choice in the confirmation stage by making full use of the technology. From the analysis of several researches on innovation, Rogers (1983) found some aspects of innovations that affect its rate of dissemination. These aspects are perceived features of an innovation. These attributes are:

The extent to which innovations are viewed as loftier to the model it changes is termed as relative advantage (Rogers, 1995, p. 212).

The degree to which an invention is viewed as consistent with the adopters' existing values, prior experiences, and potential needs is referred to as compatibility (Rogers, 1995).

Being complex is defined as "the extent to which innovations are seen as somewhat tough in understanding and applying" (Rogers, 1995, p. 242).

Trialability is defined as "the extent to which an idea may be experimentally tested on a small scale" (Rogers, 1995, p. 243).

Various models have also been used with the IDT. The technology acceptance model (TAM) and IDT were used by Chen et al. (2002) to study consumer behaviour in the virtual-store environment. The authors discovered that the three main factors influencing consumers' attitudes toward using virtual stores were compatibility, perceived usefulness, and perceived ease of use. In relation to the study, the aforementioned influential factors could aid customers determine whether to opt for traditional or electronic banking services. Thus the level of compatibility, perceived usefulness and perceive ease of use of any banking service have the ability to affect customer choice of banking services and at the same affecting customers behaviour towards such innovations.

### **2.2.2 Theory of Reasoned Action (TRA)**

Fishein and Ajzen (1975) opined that TRA is a well-known social psychology research model that focuses on the elements that affect a deliberate intended behaviour. Fishein and Ajzen, (1975) continued that this model focused on deliberate, intentional, and organized activity, like actions influenced by an individual's control. Intention factors to predict conduct, social influence variables (subjective norms), and attitude variables toward behaviour make up the TRA. The TRA states that a consumer's behavioural intention (BI) to engage in a particular behaviour determines that consumer's behaviour.

The individual's attitude (A) towards the behaviour and subjective norms (SN), with relative weights regularly projected an equation by regression, determine behavioural intention:  $BI = A + SN$ .

In relation to the study, individual and social influence could be the reason an action or attitude is exhibited by a person. Hence, discovering an attitude of a customer toward a banking service coupled with individual norms or values could lead to behavioural intention. Again, the choice of a banking service is usually being backed by an intentional behaviour influenced by individual attitudes and actions driving the society.

### **2.2.3 Theory of Planned Behaviour (TPB)**

One of the most popular theories for understanding and forecasting behaviour, the TPB has been found to accurately predict a wide variety of behaviours (Sheppard et al., 1988). The third component impacting the intention-behaviour link that is added to the TRA to be responsible for circumstances where an individual does not have significant authority over the target behaviour is known as perceived behavioural control (PBC) (Ajzen, 1991). Consequently, it is suggested that the TPB be used to overwhelm the failures of TRA idea when addressing conduct over which people have imperfect volitional control.

The attitude and subjective norm constructs are the same as those that were previously mentioned for the TRA. Thus, this theory solely covers the third concept, perceived behavioural control. Ajzen (2002) expressed that perceived behavioural control is referred to as how simple or tough it is to carry out the behaviour of interest. It is linked to assumptions about the existence of things within authority that can assist or impede the performance of the behaviour. Thus, a perception of behaviour control is connected to control beliefs (resources and opportunities). There are two types of constraints that

influence control beliefs: internal and external. Internal control is related to knowledge and self-efficacy, whereas external control is connected to the environment.

In relation to the study, resources and opportunities that banking service provide could control the behaviour of customers. Moreover, such control behaviours are normally influenced by internally and externally where the knowledge of a customer about a service and its efficacy as well as the environment affect the choice customers make to opt for a particular banking service.

### **2.3 Empirical Review**

This section reviews several empirical findings that are related to the objectives of the study.

#### **2.3.1 Extent of usage of Electronic banking**

Electronic banking provides wide range of banking services continuously and ATMs is seen as one of the forms of electronic commerce that play a crucial part in reducing barriers to financial inclusion. This banking innovation is used extensively and users now have a thorough awareness of the important performance factors related to their individual ATM usage according to the 2014 ATM Benchmarking Survey. According to the poll, the value of economies of scale as a source of competitive advantage for ATM usage is still underappreciated. ATM users are improving their efforts to prevent and battle fraud, which is becoming a bigger concern for the business. Although cardholder happiness has little bearing on the usage of ATMs however, the several abilities to use ATMs for many purposes are crucial business in guaranteeing the continued use of the product in the present and future. The introduction of additional electronic banking platforms, such as the internet and mobile banking, complements the use of ATMs but does not pose a threat to them. Finally, the poll supports the idea

that one of the most important success factors in the area of financial inclusion is the number of ATMs (Burelli, 2014).

### **2.3.2 Sources influencing behaviour in using e-banking services**

Several factors that influence the behaviour when customers adopt e-banking have been discovered in earlier studies. Most of these studies place a strong emphasis on how potential users' perceptions of e-banking technologies affect their decision to embrace and keep using the services. The perceived usefulness and perceived ease of use categories from the Technology Acceptance Model (TAM) (Davis, 1989) seem to be the most common among these technological variables. The TAM constructs have been put to the test in various empirical investigations, and it has been discovered that they outperform other models in terms of behavioural intention to embrace and utilize ebanking (Pikkarainen et al., 2014). Therefore, many surveys exist in the literature that utilize Technology Acceptance Model to shed light on the recognition and usage of electronic banking transactions (Yousafzai et al., 2016; Yaghoubi, 2016). The study by Moon and Kim (2015) revealed that the TAM does not precisely capture the effects of technological and usage context elements that affect user acceptance of IT systems, despite the strong support for using it to explain technology acceptance and usage behaviour. In order to provide a deeper understanding of the subject, several studies have included other elements including subjective norms, trust, security, and privacy, perceived self-efficacy and enjoyment, demographic variables, and information available on internet banking (Maduku & Mpiganjira, 2017; Yaghoubi, 2016; Pikkarainen et al., 2014). In connection with earlier surveys, this survey extends the Technology Acceptance Model components of perceived usefulness and ease of use to include trust in the e-banking system, customer awareness of e-banking services, and perceived self-efficacy in order to better understand the predictors of e-banking services

in South Africa. According to Frangos (2019), customers' use of e-banking is mostly motivated by perceived usefulness. From a Chinese study, clients who dislike traditional over-the-counter services tend to switch to online banking (Laforet & Li, 2015). Numerous studies highlight how important perceived utility is used to determine if and how people would utilize e-banking (Jeong & Yoon, 2016; Maduku, 2016; Akturan & Tezcan, 2015; Viehland & Leong, 2014). The mental effort that clients expend or are anticipated to expend while using e-banking is referred to as perceived ease of use (Maduku & Mpinganjira, 2017).

Empirical research demonstrates that a system's perceived ease of use encourages adoption and use (Maduku, 2013; Jeong & Yoon, 2013; Venkatesh, Speier, & Morris, 2012). Electronic banking adoption and use have a positive relationship with trust, according to studies from Delafrooz et al. (2014) and Yousafzai et al. (2016). Clients' lack of confidence in the effectiveness of banking institutions and the wider electronic banking processes continue to be major barriers to uptake and usage. For instance, Hong et al. (2018) report that both existing and possible online banking clients are afraid about transactions in fraud and nonexistence of private issues surrounding their information and data. Therefore, a significant obstacle to the acceptance and use of ebanking in the future is customer trust (Yousafzai et al., 2017). The idea of "self-efficacy," which denotes a person's opinion of their own talents, has an impact on actual performance. Self-efficacy is a crucial idea that, according to Torkzadeh and Van Dyke (2015), makes technology easier to grasp and utilize. Self-efficacy, according to Chau and Ngai (2016), significantly influences how prospective users feel about e-banking services. Customers that are confident in their abilities to utilize the internet are more possible to use online banking transactions, according to Tan and Teo's (2014) research.

Electronic banking is acknowledged to have significantly enhanced banking services for customers, which represents a fundamental revolution in the banking industry (Ashby, 2015). But among the challenges that have been identified as impeding the wider adoption of electronic banking, a lack of awareness is one that is frequently mentioned. Customers do not appear to be aware of the possibilities and advantages that electronic banking provides. The dissemination of information and the raising of awareness are essential components for the adoption and use of technology. Accordingly, several surveys show that electronic banking is a relatively modern knowledge for many banking customers, and as a result, a lack of knowledge is a significant element in the consumers' reluctance to accept and use e-banking (AlSomali, Gholami & Clegg, 2019; Pikkarainen et al., 2014).

### **2.3.3 Multiple channels provided by electronic banking usage and its impact on behaviour**

Sumavally (2018) looked at how factors including income, education, and age affect multiple channels provided by e-banking such as digital payments. Primary data were used to inform the study. Convenience sampling was used to acquire a 200-person sample. Simple percentage analysis and the Chi square test were used to assess the replies. The findings showed a positive correlation between age and digital payments and a positive correlation between education and digital payments, but no significant correlation between income and digital payments. The outcome suggested raising public awareness of e-banking and showed that the banking industry's performance has improved as a result of the usage of technology. According to Nayanajith et al. (2020), subjective norms play a significant role in user acceptance of telebanking. Additionally, it looked at how the desire to use telebanking varied and remained consistent across three subjective norm groups, including family, friends, and the control group.

Questionnaires were used to gather primary information, and the sample size was 279 people. Different statistical tests, including MANOVA, ANOVA, and discriminating function analysis, were used to assess the data. The user's behaviour was explained using CRA, while sports and health-related behaviour was investigated using TPB. The rationale behind the acceptance of novel concepts and technology was discussed in terms of the diffusion of innovation (DOI) theory. Following examination, it became clear that there were notable differences in SN groups' intentions and behaviours. Additionally, it was discovered that there was a favourable relationship between the three groups and that the adoption of telebanking was significantly influenced by subjective norms.

A conceptual model for identifying the most important component influencing the intention, contentment, and recommendation for the adoption of a mobile wallet was presented by Singh et al. (2020). Two hundred and six (206) people made up the sample. The study revealed the relationship between consumers' pleasure and uptake of mobile wallets and innovation, stress, and social impact. Users' intentions and happiness with utilizing a mobile wallet were examined using the TAM (technology acceptance model) and UTAUTZ (unified theory of acceptance and use of technology) models. After research, it became clear that factors such as usefulness, perceived risk, attitude, and convenience of use were influencing a user's decision to utilize a mobile wallet. A model was put up in the study to describe the behaviour. It measured "intention to use" by factoring in perceived risk and stress.

Amutha Das (2016) identified the socioeconomic traits of e-banking users. It investigated the justifications for e-banking adoption as well as customers' impressions of various service attributes and e-banking-related issues. Both primary and secondary data were used to inform the study. There were 90 e-banking users in the sample.

Simple percentage analysis, the average, the F-statistic Chi square test, and probability analysis were used to assess the data. After research, it became clear that the primary service quality dimensions were convenience, dependability, usability, time savings, etc. Which convenience, in compared to other dimensions, had the most bearing? Customers also encountered problems as a result of ignorance, reactivity, and transaction risk. Additionally, suggestions were made to increase the rate of e-banking usage.

Koti (2016) investigated customers' awareness of e-banking and their favorable and negative opinions about it. 100 bank clients' data were gathered. When data was reviewed using the percentage technique, it became clear that the majority of users were men who learned about IB from bank staff and had been using it for one to two years. Customers utilized the e-banking service of money transfers often. Customers were extremely happy with the speedy responses offered by e-banking, but several security risks made them reluctant to use it.

In commercial and public sector banks, Santhanakrishnan et al's (2020) analysis and comparison of consumer satisfaction with e-banking. Descriptive research was used. 1000 people made up the sample. Banks in the public and private sectors each received an equal number of samples. The study's subject banks were SBI and ICICI. For analysis, various statistical methods including S.D., Z-test, standard error, etc. were applied. Three key service quality dimensions—tangibility, dependability, and responsiveness—have all been the subject of research. After research, it became clear that bank clients were happy in both the public and private sectors. Amsaveni and Kanagarathinam (2017) investigated consumer knowledge of e-banking services offered by public sector banks. Using the convenience sample method, data from 458 clients of various banks were gathered. The data were analyzed using percentage

analysis and ranking techniques. After examination, it was discovered that the majority of responses were men with doctorate degrees, and that more than 75% had accounts that had been active for more than five years. RTGS and internet banking had the highest levels of awareness. The study showed that automation and a shift away from human labor were taking place in the Indian banking industry. The influence of perceived risk and trust in the adoption of electronic banking services was examined by Sumathi (2020). It also investigated how trust and e-banking adoption are mediated by perceived risk. The research was both quantitative and descriptive. 374 people made up the sample. Students and business owners from universities made up the sample's parameter. The approach of multistage sampling was used. The CFA, or measurement model, and the structural equation model were used to analyze the data. It was decided to use confirmatory factor analysis to identify the reserves. Following the study, it was discovered that perceived risk and trust both significantly influenced participants' intentions to embrace e-banking. Additionally, there was evidence that perceived risk acted as a mediator between trust and e-banking adoption. The perception of customers toward internet banking services was examined by Akilandeswari and Malliga in 2019. It evaluated the degree of satisfaction with internet banking as well. Customers of three public sector banks provided the information. A sample of 50 respondents was drawn from each bank. A five point Likert scale was used to collect the data. According to a study, the majority of clients were happy with the services that banks provide. Harikanth (2020) researched and examined how bank clients see e-banking services. It discussed the difficulties with e-banking and the solutions to those difficulties. 50 clients' data was gathered. By using percentages, Garrett's ranking method, the weighted average ranking method, and the Chi-square test, the gathered data was examined. According to a research, ATMs are the most popular banking method, while telebanking and smart

cards are the least popular. The most prevalent issue was ignorance, and demographic factors did not significantly affect customer satisfaction.

## 2.4 Conceptual Framework

According to the aforementioned debates, using an electronic banking service effectively predicts user or customer behaviour. As a result, the study suggests the conceptual model shown in the image below. This conceptual model was created based on a number of earlier studies of electronic banking services and the factors influencing user behaviour. Customers' usage behaviour is the dependent variable, and the independent variables taken into account by the study are elements that affect the adoption of e-banking, such as awareness, knowledge, and availability.

### Independent variables

#### Electronic and tradition banking services

Awareness

Knowledge

Availability

### Dependent variables

Customers' usage behaviour

### Author's construct (2022)

#### Hypothesis development

*Awareness:* Banking awareness is available to customers when traditional and electronic banking services are utilized. However, concerning global coverage, ebanking practices involve global coverage while sitting at home/office but traditional banking provides limited coverage. For marketing tools, e-banking provides the facility of marketing of products/ schemes online easily. On the awareness of risk in carrying cash, e-banking provides banking without carrying cash as plastic money (ATMs,

Credit cards are available). In the case of traditional business, a person has to carry cash at each point of time (Choi, 2023).

*Knowledge:* Both traditional banking and electronic banking service provide some level of knowledge of banking functions. E-banking allow for many banking functions that can be performed through a website, a mobile phone or an internet interface. Traditional banking service may rely on human elements to provide required knowledge. There is a possibility that for traditional banking, knowledge may differ as a customer move from one branch of a bank to the other but e-banking could provide a consistent or sustainable required knowledge (Choi, 2023).

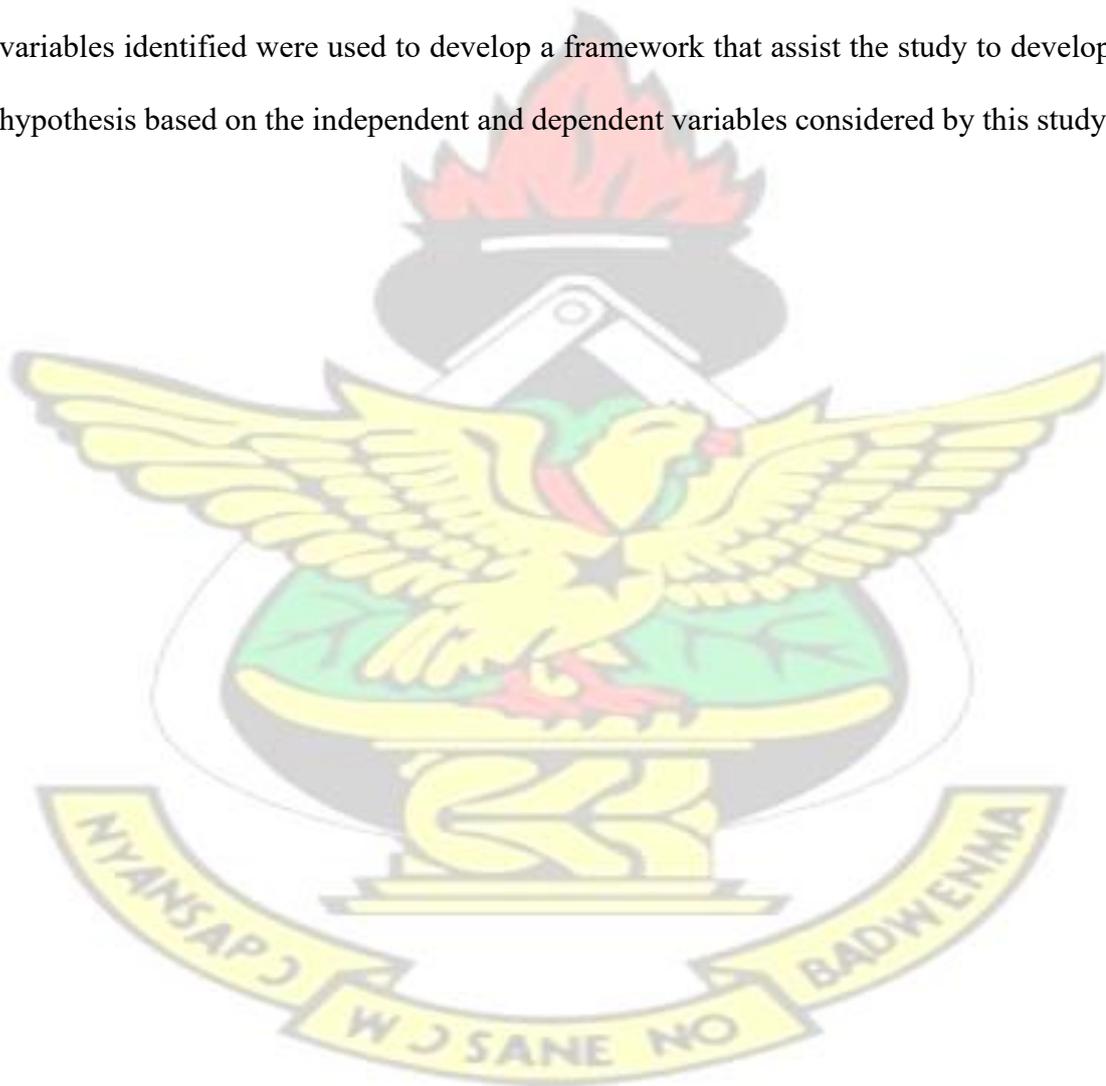
*Availability:* Traditional banks have designated office hours and days at which they operate. This means that a customer can only visit the banks during this period. Hence, if that customer has a complaint outside these hours or days, the person can only contact their online representatives or wait till the next office day/hour, depending on the services needed. But concerning e-banking, Theaud (2023) admits that it is highly available and convenient since it provides 24/7 actions which can be accessed everywhere.

The above discussion affirmed the services provided by both traditional and electronic banking. However, one banking services provide a more enhanced service which has the ability to influence usage behaviour of customers. Thus, it can be hypothesized that; H1: Awareness, knowledge and availability of e-banking services have positive and significant relationship with customers' usage behaviour.

## **2.5 Summary**

The chapter reviewed relevant literature on electronic banking and traditional banking products and services. This chapter has shown the comparison between electronic and traditional banking that are familiar to customers of banking institutions and the

associated usage behaviour of users of the electronic banking services. Thus, the study considered the Innovation Diffusion Theory (IDT), Theory of Reasoned Action, and Theory of Planned Behaviour. In fact, few empirical studies have focused on establishing the usage behaviour of electronic banking compared to the usage of traditional banking products and services. From the theories and empirical studies, the study identified awareness, knowledge and availability of electronic and traditional banking as potential factors influencing customers' usage behaviour. Therefore, these variables identified were used to develop a framework that assist the study to develop hypothesis based on the independent and dependent variables considered by this study.



## CHAPTER THREE

### RESEARCH METHODOLOGY

#### 3.0 Introduction

In order to accomplish the study's goals, this chapter describes the data collection techniques used. This chapter discusses subheading such as research design, population of the study, the sampling technique and sample size, data collection method, data analysis procedure, ethical consideration and summary of the chapter.

#### 3.1 Research design

The study's research problem, research objectives, and research questions are addressed using a cross-sectional survey-based descriptive study design. This is due to the study's clear representation of the current situation and its collection of data at a specific period. A descriptive survey research design, according to Ojo (2013), is one in which the sample subject and variables under study are just plainly observed as they are without any effort to modify or manipulate them. With regard to this study, this research design is excellent for learning more about how clients use electronic banking services. Additionally, a cross-sectional research design is advised because it is intended to capture a moment in time of how a representative group of users are reacting or behaving toward the use of electronic banking services; this design also has a higher level of accuracy and precision in social science research (Deaton, 2017). Therefore, the cross-sectional design tries to collect quantitative data from chosen population units. The study is also being conducted in order to describe responses to the questions of who, what, where, when, and how. Furthermore, data is gathered using a quantitative approach. Here, data is gathered solely through surveys. A quantitative strategy that gathers statistical data to describe, forecast, or control interesting phenomena.

Considering the size of the investigation, this approach might provide more reliable findings (Ghauri & Gronhaug, 2016). Adopting quantitative data is necessary to collect, examine, and quantify statistical data from a sample of individuals in order to determine whether there is a relationship between the many established factors. Once more, this strategy is used to make it possible to quantify the measurement of the pertinent constructs using statistical methods.

### **3.2 Population of the study**

A population is made up of all the people who share specific traits and are relevant to a certain research question. According to Polit and Hungler (2018), the population is the sum or totality of all the things, people, or entities that meet a given set of requirements. Retail banking clients of the commercial banks in Obuasi who utilize or do not use electronic banking services make up the study's population. These banks were picked because they provide customers with electronic banking services and run active marketing campaigns for their offerings. The study was conducted in Obuasi, a wellknown mining town in Ghana's Ashanti Region. One of Ghana's most multicultural cities, Obuasi is frequently referred to as Africa's mining capital. One of the most populated provinces in the nation, it contributes more than one-third of the GDP (GSS, 2020).

### **3.3 Sampling technique and sample size**

#### **3.3.1 Sampling technique**

Sampling is the component of statistical practice that involves choosing an objective or random subset of individual observations within a population of people in order to learn more about the population under consideration, especially in order to make predictions based on the sample frame (Ingham-Broomfield, 2018). Convenience sampling, a nonprobability sampling technique, is used to choose respondents from the public

because there is not an easily accessible sample frame for the target population. Because the researcher needs data from willing and accessible respondents, convenience sampling is utilized. This kind of sampling is set up by simply writing a questionnaire and giving it to the intended audience. Additionally, the researcher may easily gather the data because most convenience sampling is done with the populace already present. Finally, convenience sampling is a popular choice among researchers to collect data when speed is of the essence because it requires little forward planning and allows researchers to quickly get data and start their calculations.

### **3.3.2 Sample size determination**

The respondents are approached and asked if they would be willing to complete the questionnaire based on the sampling strategy used. Those that were willing to participate in the study did so freely. In order to administer the four hundred (400) questionnaires sent to customers of the chosen banks, the study uses both an online format and a paper-based questionnaire. However, three hundred (300) questionnaires were retrieved from the customers and this represents 75% response rate. This implies three quarters ( $3/4$ ) of the total questionnaires administered were obtained. According to Tetteh and Tzedah (2013), a study is considered to have a fair representation when it is able to sample about a quarter ( $1/4$ ) of the study's population.

### **3.4 Data Collection Methods**

According to Polit and Hungler (2018), data is information that relates to or depicts conditions, concepts, or things in their raw or disorganized form. In research, there are numerous techniques and strategies to collect data and other information pertinent to the research problem(s) under consideration. Interviews, observations, literature reviews, and data collection from databases are a few of these techniques. These

methods produce data that can be grouped into two groupings and they are primary source and secondary source.

Both primary and secondary sources of data are used in the study. Journals, articles, various publications, and other sources, including the internet, are researched to help to better understand consumers' usage habits of electronic banking services. Data for empirical analysis is gathered from primary sources. This is accomplished either by emailing a structured questionnaire to the chosen banks' clients or by making direct contact with them.

### **3.4.1 Research Instruments-Questionnaire**

Structured questionnaires are created and given to the respondents in order to collect data important to the study. Because a structured questionnaire may be conducted online or using the drop-and-pick approach, it is more objective and practical for both the researcher and the respondent. The structured questionnaire is used because it allows for a comfortable, intimidation-free setting where respondents are expected to respond honestly to the well-defined, straightforward, and purposeful questions. The researcher uses open-ended questions so that the respondents can express themselves freely. The respondents can select the response that best fits their comprehension and thought process for the subject presented from a range of options provided by the closed-ended questions that are also utilized in the questionnaire. On primary data sources, closed-ended questions are graded using a 7-point Likert scale. The survey is divided into four divisions, numbered A through E. The demographic information about the respondents is covered in Section A, while questions pertaining to the study's goals are covered in Sections B through E. The assertions in sections B through E are rated using a Likert scale, which has five possible responses: 1 for strongly disagree, 2 for disagree, 3 for neither disagree nor agree, 4 for agree, and 5 for strongly agree.

### **3.4.2 Pre-test**

Prior to conducting the real survey, pre-testing will be used to improve the questionnaire. The research supervisor first looks over the questionnaire. Once more, ten (10) adb clients in Obuasi who have first-hand knowledge of how to use electronic banking systems are invited to pre-test the questionnaire. Pretesting's goals are to contextualize the tool and guarantee the validity of the questions. Different respondents examined the questionnaire from various angles and provided input during the pretesting phase, which is anticipated to improve the content validity of the instrument. In addition to the respondents' feedback on the questionnaire's content, it will also be looked at how long it will take overall and what challenges might come up when filling it out. To find any flaws in the instrument, a follow-up interview with each participant is anticipated. After beginning the required repairs and revisions, the questionnaire is finalized based on the results of the pre-testing and the feedback provided by respondents on various topics.

### **3.4.3 Validity and Reliability**

Reliability can be defined as the degree that an instrument is free from random measurement error (Kline, 2005). The Cronbach coefficient alpha is the most commonly reported estimate. This estimate of reliability assesses the consistency of responses across items within a single subscale or scale (Anastasi & Urbina, 1997). If a reliability coefficient is 0.90, it is considered “excellent,” while coefficient of 0.80 is deemed “very good,” coefficient of 0.70 is “adequate” (Kline, 2005). In the present study reliability of the constructs was assessed through Cronbach’s alpha. Constructs are deemed reliable when Cronbach’s alpha is at least .70 (Nunnally & Bernstein, 1994). The results for reliability of the measures are presented in Table 4.2 in the next chapter.

When a research instrument is considered as valid, it is how well the research instrument measures the particular concept it supposed to measure. According to the authors a research instrument should be reliable before it can be valid. This implies that a research instrument must be consistently reproducible; and that once it is achieved, the instrument can then be scrutinized to assess whether it is what it purports to be (Murphy et al., 2019). The validity of this research are determined and improved through the use of expert judgment from the research supervisor. In this regard, after the questionnaire has been developed for the customers of the sampled banking institutions, copies of the instruments are sent to the research supervisor to review and make the necessary corrections if any. Face and content validity of the instruments were established to ensure logical links between the items in the instruments and the objectives of the study. This was done to make sure that the items in the instruments adequately and comprehensively cover all the objectives of the study. The corrections and suggestions from the experts were used to make modification in some items in the questionnaire. In a nutshell, the intent of validating the instrument is to discover possible inadequacies, ambiguities and problems associated with the instruments (Oluwatayo, 2016). This enables the researcher to make the necessary corrections before the actual data collection. The researcher reviewed other relevant literature and those literatures that support the constructs of the instrument.

### **3.5 Data Analysis Procedure**

Microsoft Excel 2016 and the Statistical Package for Social Sciences (SPSS) version 26 are used to edit, code, and process respondents' quantitative data. Descriptive statistics are used in the data analysis because they enable the researcher to make pertinent conclusions and conversations about the subject under investigation. The

outcome of the analyses is expected to produce frequencies, percentages, means and standard deviations which are presented tabular or graphical forms. Additionally, the gathered data is statistically examined utilizing correlation and multiple regression analyses, as well as descriptive statistics and inferential statistics.

### **3.6 Ethical Considerations**

Since the study is only conducted with participants' express consent, the primary ethical requirements are scrupulously upheld without any violations (informed consent). Additionally, participants are properly told that the study is primarily intended for academic reasons and that they have been not required to complete the questionnaire. In addition, the responders are asked to participate voluntarily and are given the assurance that the information they provide will remain anonymous and secret. All information sources are properly cited in order to prevent plagiarism.

### **3.7 Summary**

This chapter has carefully followed the thesis guidelines provided by KNUST, thus, the study described the research design, population, sampling technique and sampling size, data collection method, data analysis procedure and ethical consideration.

## **CHAPTER FOUR**

### **PRESENTATION OF DATA, ANALYSIS AND DISCUSSION**

#### **4.0 Introduction**

This chapter presents the results of the data obtained, analyse the results, and discusses the findings. In total, four hundred (400) questionnaires were administered to customers of selected banks in Obuasi which included adb, GCB Bank and Absa Bank and three hundred (300) questionnaires were retrieved. This represents 75% response rate.

## 4.1 Descriptive Statistics

### 4.1.1 Demographic Characteristics

The summary statistics of the demographic variables of the respondents of customers of selected banks is provided in Table 4.1. The customers responded to questionnaires administered to them which included questions on their gender, age category, qualification, occupation, years of being a customer and years of being familiar with any e-banking tools.

**Table 4.1: Summary statistics of Demographic Variables of Respondents**

Category		Frequency	Valid percent %
Gender	Male	165	55.0
	Female	135	45.0
Age	18-25 years	8	2.7
	26-35 years	208	69.3
	36-45 years	70	23.3
	46-55 years	14	4.7
Qualification	SHS	10	3.3
	Tertiary	273	91.0
	Others	17	5.7
Occupation	Public servant	100	33.3
	Private worker	125	41.7
	Entrepreneur	33	11.1
	Student	7	2.3
	Others	35	11.7
Years of transactions	1-5 years	137	45.7
	6-10 years	95	31.7
	11-15 years	53	17.7
	16 years and above	15	5.0
Years of using e-banking tool	1-3 years	167	55.7
	4-6 years	100	33.3
	7-9 years	15	5.0
	10 years and above	18	6.0

Source: Field Data 2022

It can be established from Table 4.1 that 55% of the respondents were males while 45% were females. This shows that more male customers responded to the questionnaires than female customers of the selected banks. However, since the percentage result of the female respondents is very significant, the outcome or results of the study cannot be described as gender bias. This implies that the bank has a mixture of male and female customers.

From the table, majority of the respondents representing 69.3% are between the age bracket of 26-35 years. This is followed by those who are between the age bracket of 36-45 years representing 23.3%, 46-55 years representing 4.7% and 18-25 years representing 3.3%. This implies that the greater majority representing 92.6% of the customers of selected banks are between the age bracket 26 to 45 years. It can be concluded the selected banks have a blend of youthful and matured customers who could be very familiar with traditional banking and e-banking.

Again, from the table all the respondents have obtained some level of education. This implies the respondents can read and write. Specifically, 91% of the respondents had obtained tertiary education. This is followed by those with other qualifications representing 5.7%. The other qualifications included NVTI, ACCA/ICA and SHS education representing 3.3%.

Concerning the occupation of the respondents, about 41.7% of the respondents worked with firms in the private sector. This is followed by 33.3% of the respondents who worked with firms in the public sector. Again, 11.7% worked with other institutions like the faith-based organizations while 11.1% were entrepreneurs and 2.3% were students. The banks have a blend of customers from diverse professional backgrounds. The results on the table indicates that most of the respondents representing 45.7% had been transacting business with their respective banks between 1-5 years. This is closely

followed by those who have been transacting business with their banks between 6-10 years representing 31.7%, 11-15 years representing 17.7%, 16 years and above representing 5%. The statistics provided shows that 77% have at least between a year and 10 years to compare traditional banking with electronic banking.

In assessing the years of using electronic banking tools, the table reveals that 55.7% of the respondents have used e-banking tools between 1-3years, 33.3% have used e-banking tools between 4-6years, 6% have used e-banking tools for more than 10years and 5% have used e-banking tools between 11-15years. The number of years' customers have used e-banking tools is adequate enough to compare with traditional banking tools.

#### **4.2 Reliability Analysis**

The Cronbach's alpha coefficient values are used to test the reliability of the study. To measure the reliability, the main variables considered include extent usage of e-banking tools, multiple channels provided by the usage of e-banking services and sources of influence on customers behaviour in using e-banking services. The measure starts from 0.0 to 1.0. A value of 1.0 means a perfect reliability, and according to Hair et al. (2008), the value 0.70 is accepted as a lower level of acceptability. Thus, a Cronbach's alpha of at least 0.70 was guaranteed. In agreement with the Cronbach's alpha coefficient values, the Cronbach alpha values for extent of usage was 0.992, multiple channels provided was 0.963 and sources of influence was 0.991. These results showed high internal consistency of the constructs measured as seen on Table 4.2. Hence, the research instruments used in the study is very reliable.

**Table 4.2: Reliability Analysis**

<b>Constructs</b>	<b>Number of Items</b>	<b>Cronbach alpha</b>
Extent of usage	21	0.992
Multiple channels provided	5	0.963

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**Source: Survey data, 2022**

### 4.3 Determine the extent of usage of e-banking services

The survey respondents were requested to rank their opinions on questions regarding electronic banking and its impact on financial inclusion on a 7-point Likert Scale ranging from 1 (strongly disagree (SD)), 2 (disagree (D)), 3(somewhat disagree (SMD)), 4(neutral (N)), 5 (somewhat agree (SMA)), 6 (agree (A)), 7 (strongly agree (SA)). Based on the likert scale that was used to measure the extent of agreeing or disagreeing to the statements related to the research questions, a mean value of 4.00 was used as the benchmark for comparison. The tables below display the summary of the results. From the results on Table 4.3, the percentage and mean values show that all the statements were agreed by most of the respondents. This shows that all the customers of the selected banks were familiar and even aware of the e-banking tools the banks have adopted. Specifically, it was realized that most of the respondents agreed that they were familiar with ATMs as an electronic banking tool. This was confirmed by the highest mean value of 6.07. Again, most of the respondents were familiar with other electronic banking tools like internet banking, visa cards/credit/debit cards, mobile banking and point of sale.

**Table 4.3: Electronic banking tools respondents are familiar with**

Statements	Min	Max	Mean	SD
ATMs	1	7	6.07	1.16
Mobile banking	2	7	5.62	1.22

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Internet banking	1	7	6.03	1.36
Point of sale	1	7	5.28	1.74
Visa cards/credit/debit cards	1	7	5.72	1.26

**Source: Field data, 2022**

#### 4.3.1 Extent of usage of electronic banking tools

According to the results on Table 4.4, majority of the respondents agreed they use the e-banking tools the banks have adopted. The statement agreed the most was the fact that customers of the selected banks often use mobile banking. This statement recorded the highest mean value of 5.98, therefore mobile banking, as the topmost ranked ebanking tool implies that customers very often use this e-banking tool as compared to other e-banking tools. Apart from mobile banking other e-banking tools mostly used by respondents are visa/credit/debit cards (5.78), ATMs (5.55), internet banking (5.12) and points of sale (4.49).

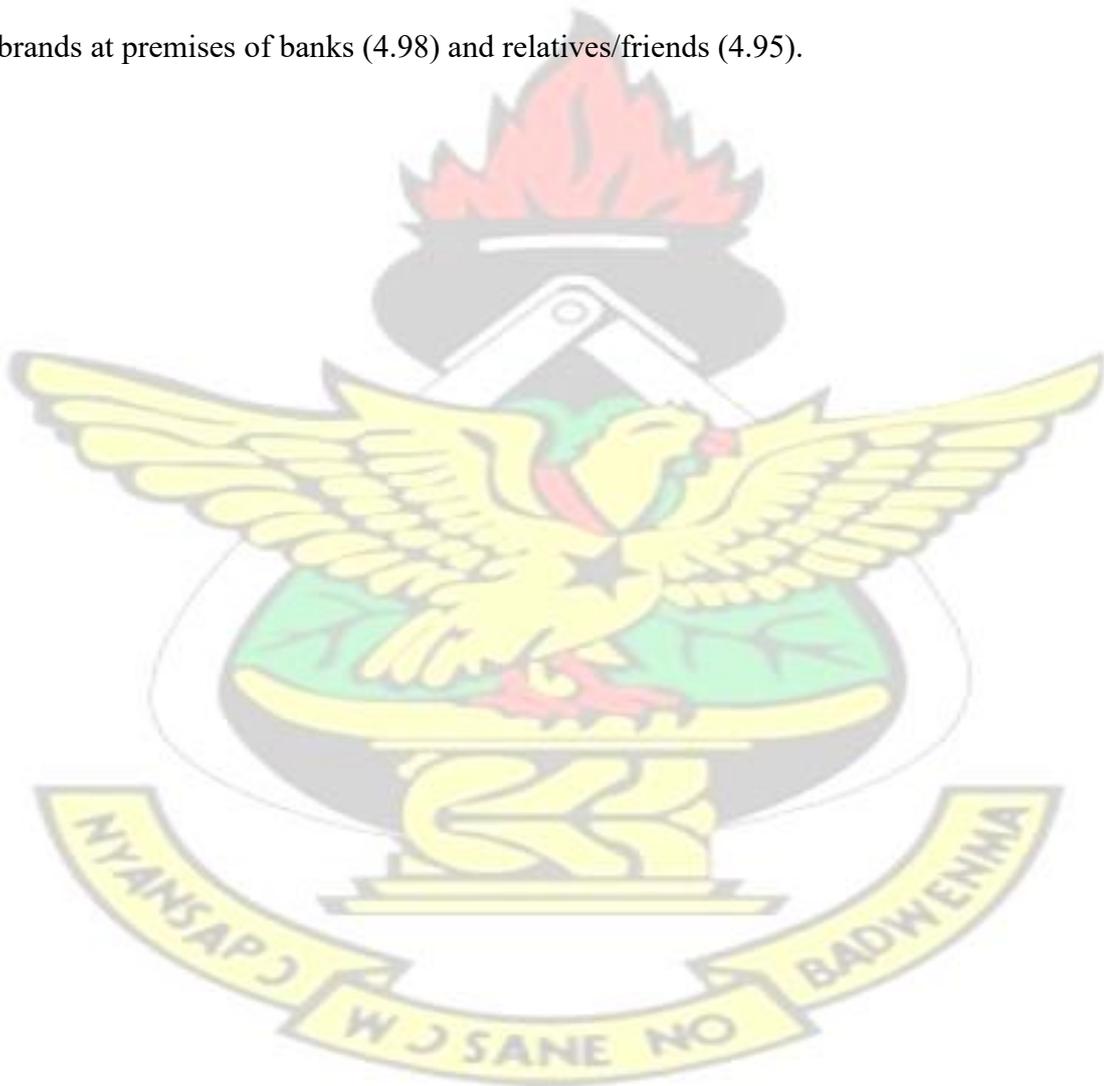
**Table 4.4: Extent of usage of Electronic banking tools**

Statements	Rank	Min	Max	Mean	Std
Often use ATMs	3 <sup>rd</sup>	1	7	5.55	1.89
Often use mobile banking	1 <sup>st</sup>	1	7	5.98	1.14
Often use internet banking	4 <sup>th</sup>	1	7	5.12	1.85
Often use point of sale	5 <sup>th</sup>	1	7	4.49	1.96
Often use visa cards/credit/debit cards	2 <sup>nd</sup>	2	7	5.78	1.23

**Source: Field data, 2022**

#### 4.3.2 Sources of information that help create awareness

In determining the sources of information that helped create the awareness among the respondents, the results on Table 4.5 shows that all the listed sources contributed immensely in creating the awareness of the existing e-banking tools. The most effective source according to the respondents is employees of the bank. This statement was agreed by 78.3% of the respondents and confirmed by the highest mean value of 5.56. This is followed by advertisement on TV/print media (5.43), posters/sign posts (5.18), brands at premises of banks (4.98) and relatives/friends (4.95).



**Table 4. :**  
**5 Sources of information that help create awareness**

Statements	Rank	Min	Max	Mean	Rank
Employees of the bank	1 <sup>st</sup>	2	7	5.56	1.39
Relatives/Friends	5 <sup>th</sup>	1	7	4.95	1.61
Brands at premises of banks	4 <sup>th</sup>	1	7	4.98	1.46
Advertisements on TV/print media	2 <sup>nd</sup>	1	7	5.43	1.46
Posters/sign posts	3 <sup>rd</sup>	1	7	5.18	1.42

**Source: Field data, 2022**

#### **4.4 Assess the multiple channels provided by the usage of e-banking services**

##### **4.4.1 Level of usage of these e-banking transactions**

Using a 5-point Likert scale, the level of usage of the listed e-banking transactions were assessed among the respondents. From the results on Table 4.6, most of the customers used the e-banking tools for several banking transactions such as transfer of funds from one bank/momo account to the other (4.19), checking account balance/statement (4.18), cash withdrawals (3.56), make purchases/payments and checking investments information/channels (3.02). It was realized that most of the respondents disagreed that they use the existing e-banking tool to make request for loans. This statement recorded the lowest mean of 2.02

#### **6 Level of usage of these e-banking transactions**

Rarely (RA), Not often (NO), sometimes (S), often (O), very often (VO)

Statements	Min	Max	Mean	SD
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**Table 4. :**

Cash withdrawals	1	5	3.56	1.14
Check account balance/statement	1	5	4.18	1.21
Make purchases/payments	1	5	3.32	1.44
Make request for loans	1	5	2.02	1.33
Transfer of funds from one bank/momo account to the other	1	5	4.19	1.14
Check my investments information/channels	1	5	3.02	1.35

**Source: Field data, 2022**

#### 4.4.2 Traditional banking transactions

The results on Table 4.7 assessed the traditional banking transactions that respondents still patronize in spite of the existence of e-banking tools. From the table, the only traditional banking transaction that is not heavily patronized by respondents is the checking of account through manual application. The statement was disagreed by 52.8% and confirmed by the lowest mean value of 3.29. However, most of the respondents still use cash for payment of transactions (5.52), still withdraw cash from banks (4.87), still visit banks to make cash deposits (4.75) and still prefer to build personal contact with human tellers at the banks.

#### 7 Traditional banking transactions

Statements	Min	Max	Mean	SD
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**Table 4. :**

Still withdraw cash from branch	1	7	4.87	1.95
Still prefer to build personal contact with human tellers	1	7	4.31	1.98
Still use cash payment of transactions	1	7	5.52	1.36
Still check my account via manual application	1	7	3.29	2.02
Still visit my bank branches to make cash deposits	1	7	4.75	1.92

**Source: Field data, 2022**

#### **4.5 Sources of influence on customers' behaviour in using e-banking services**

The results on Table 4.8 examined the reasons towards the behaviour of respondents exhibited in Table 4.7. According to table 4.8, several reasons influence the behaviour of respondents towards e-banking. The statement agreed the most was the fact that respondents still make cash savings and investment at banks due to possibility of fraud. This statement recorded the highest mean value of (4.93). This is followed by the statement that respondents still use cash for payment of transactions because of large acceptance of cash as payment (4.67), respondents still make cash payment for services due to interests/hidden charges (4.38), respondents still use cash to do payment because of lack of security (4.34), respondents still rely on services from my bank due to

frequent connection breakdown (4.27) and respondents still visit bank branches to make deposits due to large acceptance of cash by banks (4.22).

**Table 4.8: Sources of influence on customers behaviour in using e-banking services**

Statements	Min	Max	Mean	SD
Still withdraw cash branches due to lack of reliability	1	6	3.23	1.79
Still prefer to build personal contact because of lack of information from ebanking channels	1	7	3.58	2.02
Still use cash for payment of transactions because of large acceptance of cash as payment	2	7	4.67	1.65
Still use cash to do payment because of lack of security	1	7	4.34	1.89
Still check my balance via manual application due to lack of trust connected with e-banking systems	1	7	2.96	1.90
Still visit bank branches to make deposits due to large acceptance of cash by banks	1	7	4.22	2.13
Still make deposit with cash due to mode of identification needed by banks	1	7	3.97	2.04
Still make cash deposits due to lack of understanding of the process	1	7	3.33	2.04
Still withdraw cash from bank because there exist little privacy and confidentiality in e-banking systems	1	7	3.36	2.12
Still make cash payment because learning to use e-payment involves time and cost	1	7	2.76	1.83
Still rely on services with my bank due to my reluctance to change	1	7	3.29	1.89
Still make cash payment for services due to interests/hidden charges	1	7	4.38	2.14
Still rely on services from my bank due to frequent connection breakdown	1	7	4.27	1.97
Still make cash savings and investment at my bank due to possibility of fraud	1	7	4.93	1.89
Still rely on services from my bank due to difficulty to use technologies	1	7	2.71	1.68
Still withdraw cash from my banks due to lack of awareness	1	7	2.45	1.59
Still rely on services from my bank branch because I never felt the need to change to e-banking tools	1	7	3.33	2.09

Source: Field data, 2022

#### 4.6 Correlation Analysis

Correlation analysis assesses the direct relationship existing among the constructs to be measured without having any control on each other. It can be realised on Table 4.9 that the correlation between extent usage of electronic banking tools, multiple channels being provided and sources of influence were positive and significant (0.968, 0.894,  $p < 0.01$ ). This is an indication that as the awareness, knowledge and availability of electronic and traditional banking services are adopted as a priority, the corresponding usage behaviour of customers will be positive and may improve. Hence, usage behaviour of customers for electronic banking services will directly improve depending on their awareness, knowledge and availability. Similarly, usage of behaviour of customers for traditional banking services will directly improve depending on their awareness, knowledge and availability.

**Table 4.9 Correlation Matrix**

Measurement constructs	1	2	3
Extent of usage	1		
Multiple channels provided	0.968**	1	
Sources of influence	0.894**	0.940**	1

Note: \*\*significant at  $p < 0.01$

#### 4.7 Regression Analysis

Regression analysis provides the extent of influence the independent variables affect the dependent variables having control on each other. From the Table 4.10, the dependent variable is computed values of the listed statements under sources of influence and the independent variables included extent of usage and multiple channels

of electronic banking. From the table, there is a negative and insignificant relationship between the customer usage behaviour and extent usage of e-banking services and multiple channels provided by e-banking services.

In specific terms, the estimated F-value (697.148) was positive and significant indicating that the model estimated is appropriate. The R-square was 0.887 which implies that extent of usage and multiple channels of e-banking jointly determine about 88.7% of the variance in usage behaviour of customers. Comparatively, multiple channels where  $\beta=1.23$ ,  $t=11.753$ ,  $p=0.00$  is the bigger determinant of customers' usage behaviour of e-banking services. This is followed by extent of usage which has a negative but significant relationship; where;  $\beta=-0.34$ ,  $t=-2.495$ ,  $p=0.01$ .

**Table 4.10 Regression Analysis**

Variable	Coefficient	B	S.E	t	p
Constant	-0.313		0.242	-1.296	0.19
Extent of usage	-0.343	-0.251	0.137	-2.495	0.01**
Multiple channels	1.234	1.183	0.105	11.753	0.00**
<b>S.E of Estimate</b>	0.609				
<b>R-Square</b>	0.887			<b>F-statistic</b>	697.148
<b>Adj. R-Square</b>	0.886			<b>Prob.(F-</b>	0.00
				<b>stats)</b>	

Note: \*\*significant at  $p<0.01$ , \*significant at  $p<0.05$ , N=300

#### 4.8 Discussions of Findings

This section discusses the major findings of the study and relate them to previous literature.

**Objective one: Determine the extent of usage of e-banking services**

The first objective was to determine the extent of usage of e-banking services. The study clearly established that customers of the selected banks often use mobile banking, visa/credit/debit cards, ATMs, internet banking and points of sale to do several ebanking services. This finding is consistent with view of Daniel (2016) who asserted that e-banking services are the transmission of bank data and activities to customers employing varied platforms that may be used with several terminal tools which includes mobile banking, ATMs, online banking, and many more. Das (2020) also expressed that electronic banking encompasses a variety of service delivery methods, including SMS banking, electronic alerts, online banking, and mobile banking. From the study, most of the customers extensively used mobile banking services compared to services provided by ATMs, visa/credit/debit cards, internet banking and points of sale. Littler and Malanthiou (2016) provided evidence for this findings by highlighting how banks may use online and mobile banking to expand their market share and encourage crossselling of other financial services and products.

**Objective two: Assess the multiple channels provided by the usage of e-banking services**

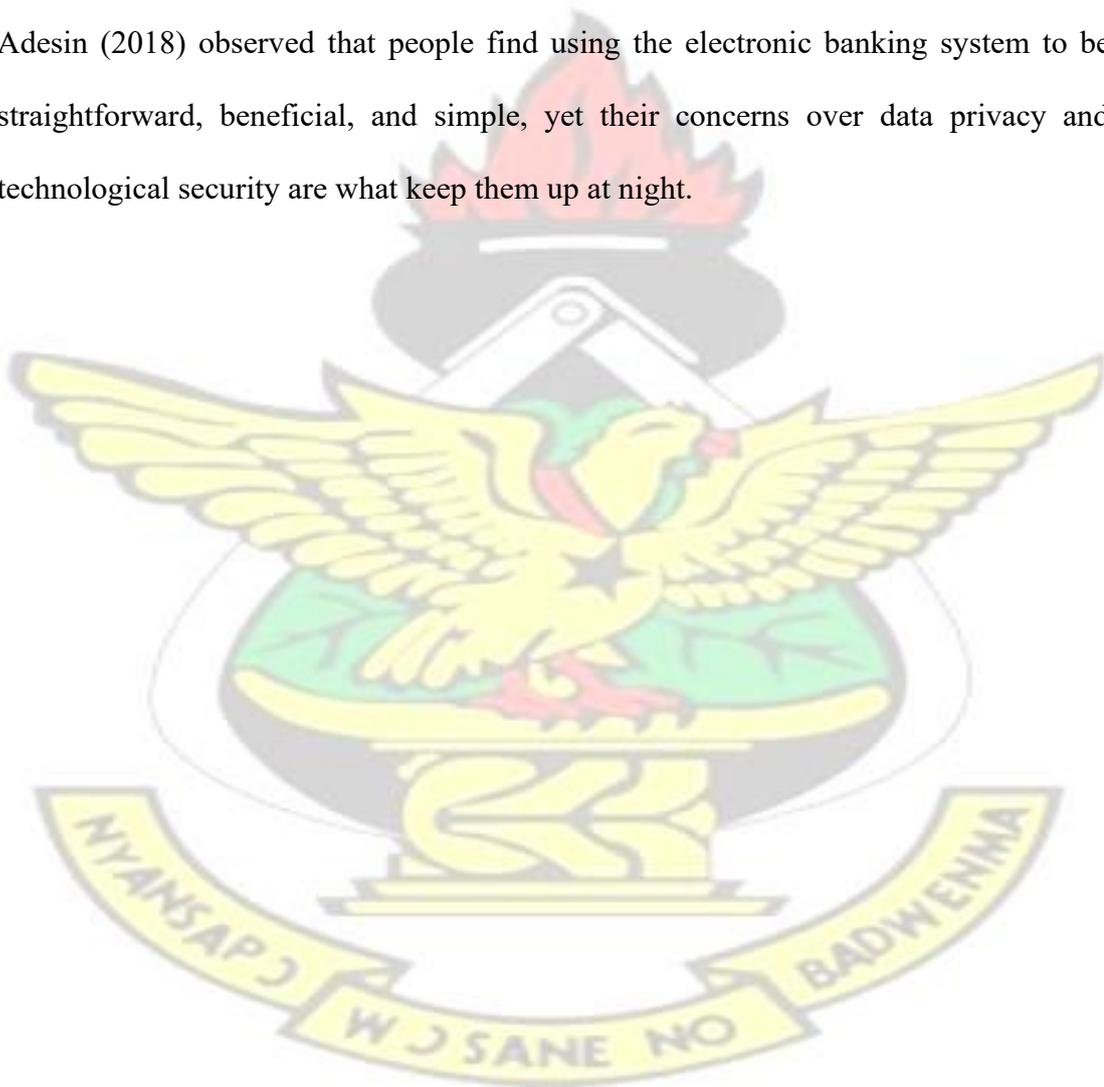
The second objective was to assess the multiple channels provided by the usage of ebanking services. The study found that e-banking tools provide several opportunities for customers to transaction businesses with their banks. This finding agree with Hosein (2016) who affirmed electronic banking gives essential opportunities to cut down expenses for banking operations. According to Compaq (2017), the clients of banks can engage in self-service, minimizing frequent human contacts. From the study, customers used the e-banking tools to transfer of funds from one bank/momo account to the other, check account balance/statement, make cash withdrawals, make purchases/payments and check investments information/channels. This finding is in line with the assertion

of Yaseen and El item (2018) who claimed that e-banking offers a variety of services, which include retail purchases and payment of salaries.

**Objective three: Identify the sources of influence on customers' behaviour in using e-banking services**

The final objective which was to identify the sources of influence on customers' behaviour in using e-banking services, the results revealed that some traditional banking transactions that respondents still patronize in spite of the existence of e-banking tools included using cash for payment of transactions, withdrawing cash from branches of their banks, visiting banks to make cash deposits and building personal contact with human tellers at the banks. Again, the study indicated that these behaviours of customers are largely influence by the existence of fraud in day to day cash transactions. For instance, Hong et al. (2018) reported that both existing and possible online banking clients are afraid about transactions in fraud and nonexistence of private issues surrounding their information and data. Therefore, a significant obstacle to the acceptance and use of e-banking in the future is customer trust (Yousafzai et al., 2017). Further, the large acceptance of cash as payment and deposits in banking transactions, interests/hidden charges, lack of security, frequent connection breakdown at banks are other factors that influence the behaviours of customers towards e-banking. To agree with the findings, Arora and Sandhu (2018) noted that due to elements like technology acceptance, trust, and efficiency in giving out electronic services, customers' opinions about the use of technologies differ between private and public banks. Ombati's (2018) study focuses on behavioural aspects that relate to ease, security, cost, prior experience, and transaction volume because they both have an impact on financial inclusion. Therefore, although users may find electronic banking transactions convenient, beneficial, and simple to use, they may be concerned about the security and privacy of

their personal information (Ahmad, 2019). Another crucial aspect that influences customers' decisions to use digital transactions is security. Security was cited by Aliyu et al. (2016b) as a crucial quality for a consumer's viewpoint on the adoption of innovation. Security is one of the key considerations for consumers today when deciding whether to utilize electronic financial services (EFS). Amin et al. (2016) claimed that security issues and a lack of awareness about the availability of such a service are to blame for the slow expansion of electronic banking services. As a result, Adesin (2018) observed that people find using the electronic banking system to be straightforward, beneficial, and simple, yet their concerns over data privacy and technological security are what keep them up at night.



## CHAPTER FIVE

### SUMMARY, CONCLUSION AND RECOMMENDATIONS

#### 5.0 Introduction

The chapter presents the findings, conclusion and recommendations for the management of the selected banks in Obuasi. The findings cover the opinions of customers of selected banks on the customers' usage behaviour of e-banking services: interplay of electronic and traditional banking. Based on the findings, the study drew some conclusions and further propose some measures on how electronic banking can help improve usage behaviour among customers.

#### 5.1 Summary of findings

The principal objective of this research was to examine the multiple ways clients use electronic banking services as compared to traditional banking services. Specifically, the sought to; determine the extent of usage of e-banking services, assess the multiple channels provided by the usage of e-banking services and identify the sources of influence on customers' behaviour in using e-banking services. The research was guided by these theories; innovation diffusion theory (IDT), theory of reasoned action (TRA) and theory of planned behaviour (TRA) as well as some empirical evidence to identify the independent and dependent variables. From the conceptual framework developed, awareness, knowledge and availability of e-banking products and services could have influence on the usage behaviour of customers. The research design used was an explanatory research design. The study considered three hundred (300) customers of selected banks in Obuasi. Convenient sampling techniques were used to choose the customers of selected banks which included adb. GCB Bank and Absa Bank. Data obtained was analysed using SPSS version 26 to generate results from descriptive

statistics, correlation and linear regression analysis. Thus, the study found the following findings that are related to the objectives of the study;

The study revealed that the customers of selected banks exhibit multiple behaviours due to the adoption of e-banking services. The study clearly established that customers of the selected banks often use mobile banking, visa/credit/debit cards, ATMs, internet banking and points of sale to do several e-banking services. From the study, most of the customers extensively used mobile banking services compared to services provided by ATMs, visa/credit/debit cards, internet banking and points of sale.

The study found that e-banking tools provide several opportunities for customers to transaction businesses with their banks. From the study, customers used the e-banking tools to transfer of funds from one bank/momo account to the other, check account balance/statement, make cash withdrawals, make purchases/payments and check investments information/channels.

Concerning identifying the sources of influence on customers' behaviour in using ebanking services, the results revealed that some traditional banking transactions that respondents still patronize in spite of the existence of e-banking tools included using cash for payment of transactions, withdrawing cash from branches of their banks, visiting banks to make cash deposits and building personal contact with human tellers at the banks. Again, the study indicated that these behaviours of customers are largely influence by the existence of fraud in day to day cash transactions. Further, the large acceptance of cash as payment and deposits in banking transactions, interests/hidden charges, lack of security, frequent connection breakdown at banks are other factors that influence the behaviours of customers towards e-banking.

From the correlation analysis, there exist positive and significant relationship between extent usage of electronic banking tools, multiple channels being provided and sources of influence, indicating that as the awareness, knowledge and availability of electronic and traditional banking services are adopted as a priority, the corresponding usage behaviour of customers will be positive and may improve.

Concerning the regression analysis, there is a negative and insignificant relationship between the customer usage behaviour and extent usage of e-banking services and multiple channels provided by e-banking services. However, extent of usage and multiple channels of e-banking jointly determine about 88.7% of the variance in usage behaviour of customers. Comparatively, multiple channels are the bigger determinant of customers' usage behaviour of e-banking services.

## **5.2 Conclusion**

Based on the aforementioned findings, the study can conclude that the management of banks are making several efforts to increase the awareness, knowledge and usage of ebanking tools and services among customers. In the same vein, customers' response to the acceptance of e-banking tools could positively or negatively influence usage behaviour. In fact, the usage behaviours of customers have serious implications for banks as they have to invest hugely on both technology and manpower in the wake of keen competition. Customers of the selected banks often use mobile banking, visa/credit/debit cards, ATMs, internet banking and points of sale to do several ebanking services even though they are very familiar with mobile banking services. Ebanking tools provide several opportunities for customers to transact businesses with their banks. Customers mainly used the e-banking tools to transfer funds from one bank/momo account to the other, check account balance/statement, make cash

withdrawals, make purchases/payments and check investments information/channels. In spite of the existence of e-banking tools, customers still use cash for payment of transactions, withdrawing cash from branches of their banks, visit banks to make cash deposits and build personal contact with human tellers at the banks. These behaviours of customers towards the usage of e-banking services are largely influence by the existence of fraud in cash transactions, acceptance of cash as payment and deposits in banking transactions, interests/hidden charges, lack of security, frequent connection breakdown. There is a direct positive and significant relationship between awareness, knowledge and availability and customers' usage behaviour. Moreover, awareness, knowledge and availability of e-banking greatly influence customers' usage behaviour.

### **5.3 Recommendations**

Based on the conclusion stated above, the study made the following recommendations to the management of selected banks on measures needed to improve usage behaviour of customers towards e-banking.

The study found that awareness, knowledge and availability of e-banking services greatly influence usage behaviour of customers. The study recommends that banking institutions should invest in ensuring that e-banking services being provided enhance the awareness, knowledge and availability of banking functions. This is important because they have great influence in improving usage behaviour of customers.

The study found that the continuous existence of fraud greatly influences usage behaviour of customers in adopting e-banking. It is therefore important for the management of selected banks to invest in the security of e-banking services. This will

help minimize these fraudulent activities and will boost morale of users and other prospective customers in the adoption of electronic banking services.

The study revealed that frequent connection breakdown is another source of influencing usage behaviour of customers towards e-banking services. The study recommends that banks, telecommunication firms and government through the NCA should collaborate strengthening the stability of internet connectivity. Again, banks should invest in innovative ways of sustaining the provision of internet to their customers, thereby minimizing frequent breakdown of internet connectivity.

The study revealed that large acceptance of cash payments and transactions also influence usage behaviour of customers toward e-banking services. The study recommends that management of selected banks should intensify efforts of using epayment, e-deposits or e-transactions. This will help discourage customers to make cash deposits and cash payments of all transactions.

Another measure to improve positive attitude towards the usage of e-banking services is to ensure processes are easy and less difficult to understand. The management of banking institutions should embark on continuous education on the relevance of ebanking services to their customers. Again, customers should be educated on the processes involve in easy usage of e-banking tool to do transactions.

The study found that hidden charges or interests also contribute to the usage behaviour of customers towards e-banking services. In order to improve usage behaviour of customers towards e-banking services, the management of banking institutions should

embark on promotional campaigns on the usage of e-banking services. The promotional campaigns can be linked to significant reduction in charges or no charges at all. This will encourage customers and prospective customers to adopt such e-banking services. Since e-banking services are introduced to make banking transactions easy and convenient for customers, it is important for the management of banking institutions to regularly engage users of the e-banking services. This regular engagement will help management address concerns raised by users of the banking services so that such services can be improved.

#### **5.4 Recommendations for further studies**

This study focused only on the perspective of customers on usage behaviour towards ebanking services. Further studies can consider the perspectives of both employees and customers on how to improve customers' usage behaviour of e-banking services. Again, assessing the role of regulating bodies in customers' usage behaviour of ebanking services can be conducted.

#### **REFERENCES**

- Abor, J. (2015). Technological innovations and banking in Ghana: An evaluation of customers' perceptions. *IFE Psychologia: An International Journal*, 13, 1–16.
- Agarwal, R., & Karahanna, E. (2016). Time flies when you're having fun: Cognitive absorption and beliefs about information technology usage. *MIS Quarterly*, 24, 665–694.
- Akturan, U. & Tezcan, N. (2015). Mobile banking adoption of the youth market: perceptions and intentions, *Marketing Intelligence & Planning*, 30 (4), 444-459
- Aladwani, A. M. (2017). Online banking: A field study of drivers, development challenges, and expectations. *International Journal of Information Management*, 21, 213–225.
- Alam, M., Soni, A. & Dangarwala, U. R. (2016). A Study on Internet Banking Adoption by Banks and Customer Response in Western India. Paper presented at the Proceedings of the AIMS International Conference on Value-based Management, August 11-13, Dev Sanskriti Vishwavidyalaya Haridwar, India, 533-539.

- Al-Hajri, S., & Tatnall, A. (2008). Technological innovation and the adoption of internet banking in Oman. *Electronic Journal Virtual Organisations and Network*, 10, 59–91.
- Aliyu, A. A., Younus, S., & Tasmin, R. (2016). An exploratory study on adoption of electronic banking: Underlying consumer behaviour and critical success factors. Case of Nigeria. *Business and Management Review*, 2(1), 01–06.
- Al-Somali, S., Gholami, A.R. & Clegg, B. (2019). An investigation into the acceptance of online banking in Saudi Arabia, *Technovation*, 29, pp. 130-141
- Amin, H., Baba, R., & Muhammad, M. Z. (2017). An analysis of mobile banking acceptance by Malaysian customers. *Sunway Academic Journal*, 4, 1–12.
- Arango, C., Huynh, K. P., & Sabetti, L. (2015). Consumer payment choice: Merchant card acceptance versus pricing incentives. *Journal of Banking & Finance*, 55, 130–141.
- Ashby, Q. (2015). *Trading Places – where now for Internet Banking?* Retrieved from: [http://www.esomar.org/web/research\\_papers/ProjectiveTechniques\\_1025\\_Trading-places.php](http://www.esomar.org/web/research_papers/ProjectiveTechniques_1025_Trading-places.php)
- Bagnall, J., Bounie, D., Huynh, K., Kosse, A., Schmidt, T., Schuh, S., & Stix, H. (2016). Consumer cash usage: A cross-country comparison with payment diary survey data. *International Journal of Central Banking*, 12(4), 1–61.
- Bandyopadhyay, K., & Bandyopadhyay, S. (2016). User acceptance of information technology across cultures. *International Journal of Intercultural Information Management*, 2, 218–231
- Barkhordari, M., Nourollah, Z., Mashayekhi, H., Mashayekhi, Y., & Ahangar, M. S. (2017). Factors influencing adoption of epayment systems: An empirical study on Iranian customers. *Information Systems and e-Business Management*, 15(1), 89–116.
- Chau, V.S. & Ngai, W.L.C. (2016). The youth market for Internet banking services: perceptions, attitude and behaviour. *Journal of Services Marketing*, 24 (1), 4260.
- Chen, H., Felt, M. H. & Huynh, K. P. (2014). *Retail payment innovations and cash usage: Accounting for attrition using refreshment samples* (Bank of Canada Working Paper No. 2014–27).
- Coelho, F. and Easingwood, C. (2017). Multiple channel structures in financial services: a framework, *Journal of Financial Services Marketing*, 8(1), 22-34.
- Coetzee, J., van Zyl, H. and Tait, M. (2016). Perceptions of service quality by clients and contact-personnel in the South African retail banking sector. *Southern African Business Review*, 17(1), 1-22.
- Compaq. (2017). *Next-generation retail banking*. Retrieved from: <http://nonstop.compaq.com/view.asp?IO=5985>.
- Corrocher, N. (2016). *Does internet banking substitute traditional banking? Empirical evidence from Italy* (Working Paper No. 134). Milan, Italy: CESPRI,

- Davis, F.D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS Quarterly*, 13(3), 319-340.
- Delafrooz, N., Paim L.H. and Khatibi, A. (2014). Understanding consumer's Internet purchase intention in Malaysia. *African Journal of Business Management*, 5(3), 2837-2846.
- Featherman, M. S., & Pavlou, P. A. (2014). Predicting e-services adoption: A perceived risk facets perspective. *International Journal of Human-Computer Studies*, 59, 451–474.
- Frangos, C.C. (2019). *Qualitative and quantitative methodologies in the economic and administrative sciences*. Technological Educational Institute of Athens, Athens.
- Fujiki, H. & Tanaka, M. (2017). Choice of Payment Instrument for Low-Value Transactions in Japan. Paper presented at the International Cash Conference - War on Cash: Is there a Future for Cash? Island of Mainau, Germany.
- Giovanis, A., Athanasopoulou, P., Assimakopoulos, C., & Sarmaniotis, C. (2019). Adoption of mobile banking services. *International Journal of Bank Marketing*, 37, 1165–1189.
- Hernandez, J. M. C., & Mazzon, J. A. (2017). Adoption of internet banking: Proposition and implementation of an integrated methodology approach. *International Journal of Bank Marketing*, 25, 72–88.
- Hong, H.Y., Teh, B.H., Vinayan, G., Soh, C.H., Khan, N. and Ong, T.S. (2018). Investigating the factors that influence the adoption of Internet banking in Malaysia: adopters' perspective. *International Journal of Business and Management*, 8(9), 24-31.
- Hosein, N.Z. (2016). Internet banking: understanding consumer adoption rates among community banks. Retrieved from: [www.aabri.com/LV2010Manuscripts/LV10038.pdf](http://www.aabri.com/LV2010Manuscripts/LV10038.pdf).
- Jayawardhena, C., & Foley, P. (2017). Changes in the banking sector – The case of internet banking in the UK. *Internet Research*, 10, 19–31.
- Jeong, B. & Yoon, T.E. (2013). An empirical investigation on consumer acceptance of mobile banking services. *Business and Management Research*, 2(1), 31-40.
- Khalfan, A. M. S., AlRefaei, Y. S., & Al-Hajery, M. (2016). Factors influencing the adoption of internet banking in Oman: A descriptive case study analysis. *International Journal of Financial Services Management*, 1, 155–172.
- Kim, T.H., Adeli, H., Fang, W.C., Villalba, J.G., Arnett, K.P. and Khan, M.K. (2018). Security technology in Kim, T.H., Villalba, J.G. & Arnett, K.P (eds.), International Conference, SecTech 2011 proceedings, Jeju Island, Korea.
- Laforet, S. & Li, X. (2015). Consumers' attitudes towards online and mobile banking in China, *International Journal of Bank Marketing*, 23(5), 362-380.
- Laukkanen, T. & Pasanen, M. (2018). Mobile banking innovators and early adopters: how they differ from other online users. *Journal of Financial Services Marketing*, 13(2), 86-94.

- Laukkanen, T., Sinkkonen, S., & Laukkanen, P. (2019). Communication strategies to overcome functional and psychological resistance to internet banking. *International Journal of Information Management*, 29, 111–118.
- Lichtenstein, S., & Williamson, K. (2006). Understanding consumer adoption of internet banking: An interpretive study in the Australian banking context. *Journal of Electronic Commerce Research*, 7, 50–66.
- Lin, F. T., Wu H. Y., & Tran T. N. N. (2015). Internet banking adoption in a developing country: An empirical study in Vietnam. *Information Systems and e-Business Management*, 13, 267–287.
- Luo, X., Li, H., Zhang, J. and Shim, J.P. (2014). Examining multi-dimensional trust and multi-faceted risk in initial acceptance of emerging technologies: An empirical study of mobile banking services. *Decision Support Systems*, 49(2), 222-234.
- Maduku, D.K. & Mpinganjira, M. (2016). Empirical investigation into customers' attitude towards usage of cellphone banking in Gauteng, South Africa. *Journal of Contemporary Management*, 9, 172-189.
- Margaret, M., & Ngoma, M. F. (2018). Socio-demographic factors influencing adoption of internet banking in Zimbabwe. *Journal of Sustainable Development in Africa*, 15, 145–154.
- Mathur, N. D. (2017). Emerging issues in banking industry. *Arth Anvesan*, 2(1), 1–6.
- Mattila, M., Karjaluoto, H., & Pentto, T. (2016). Internet banking adoption among mature customers: Early majority or laggards? *Journal of Services Marketing*, 17(5), 514–528.
- Mick, D. G., & Fournier, S. (2016). Paradoxes of technology: Consumer cognizance, emotions, and coping strategies. *Journal of Consumer Research*, 25, 123–143.
- Moon, J.M. & Kim, Y.G. (2015). Extending the TAM for a World-Wide-Web context. *Information and Management*, 28, 217-230.
- Moorthy, K., Chun T'ing, L., Chea Yee, K., Wen Huey, A., Joe In, L., Chyi Feng, P., & Jia Yi, T. (2020). What drives the adoption of mobile payment? A Malaysian perspective. *International Journal of Finance and Economics*, 25(3), 349–364.
- Morganosky, M. A. (2016). Retail market structure change: Implications for retailers and consumers. *International Journal of Retail & Distribution Management*, 25, 269–274.
- Moutinho, L. and Curry, B. (2018). Consumer perception of ATMs: an application of neutral networks. *Journal of Marketing Management*, 10 (1/3), 191-206
- Nasri, W. (2017). Factors influencing the adoption of Internet banking in Tunisia. *International Journal of Business and Management*, 6, 14-20.
- Nor, K.M. (2015). An empirical study of Internet banking acceptance in Malaysia: An extended decomposed theory of planned behaviour.
- Parker, T. and Parker, M. (2018). Electronic banking in Finland and the effect on money velocity. *Journal of Money, Investment and Banking*, 4, 20-25.

- Pikkarainen, T., Pikkarainen, K., Karjaluoto, H. and Pahnla, S. (2014). Consumer acceptance of online banking: An extension of the Technology Acceptance Model. *Internet Research*, 14(3), 224-235.
- Rotchanakitumnuai, S., & Speece, M. (2016). Barriers to internet banking adoption: A qualitative study among corporate customers in Thailand. *International Journal of Bank Marketing*, 21, 312–323.
- Rysman, M. (2019). The economics of two-sided markets. *Journal of Economic Perspectives*, 23(3), 25–43.
- Salehi, M., & Alipour, M. (2016). E-banking in emerging economy: Empirical evidence of Iran. *International Journal of Economics and Finance*, 2, 201–209.
- Tan, M. & Teo, T.S. (2014). Factors influencing the adoption of Internet banking, *Journal of the Association of Information Systems*, 1, 1-42.
- Thomas, H., Jain, A., & Angus, M. (2019). *Measuring progress toward a cashless society*. MasterCard Advisors. Retrieved from: <https://newsroom.mastercard.com/wp-content/uploads/2014/08/MasterCardAdvisors-CashlessSociety-July-20146.pdf>
- Torkzadeh, G. & Van Dyke, T.P. (2015). Effects of training on Internet self-efficacy and computer attitudes, *Information and Management*, 18, 479-494.
- van Dijk, G., Minocha, S. & Laing, A. (2016). Channels, consumers and communication: online and offline communication in service consumption. Paper presented at the Academy of Marketing Conference, 3–6 July, Middlesex University Business School, London, UK.
- Venkatesh, V., Speier, C. & Morris, M.G. (2012). User acceptance enablers in individual decision making about technology: Toward an integrated model. *Decision Sciences*, 33, 297-316.
- Viehland, D. & Leong, R.S.Y. (2014). Acceptance and use of mobile payments, 18th Australasian Conference on Information Systems, VISUAL 2010 proceedings, Toowoomba, Australia.
- Wakamori, N., & Welte, A. (2017). Why do shoppers use cash? Evidence from shopping diary data. *Journal of Money, Credit and Banking*, 49(1), 115–169.
- Wang, Z., & Wolman, A. L. (2016). Payment choice and currency use: Insights from two billion retail transactions. *Journal of Monetary Economics*, 84, 94–115.
- Wong, D. H., Rexha, N., & Phau, I. (2018). Re-examining traditional service quality in an e-banking era. *International Journal of Bank Marketing*, 26, 526–545.
- Yaghoubi, N.M. (2016). Factors affecting the adoption of online banking-an integration of Technology Acceptance Model and Theory of Planned Behaviour. *International Journal of Business and Management*, 5 (9), 159-165
- Yang, Z. & Fang, X. (2014). Online service quality dimensions and their relationships with satisfaction: a content analysis of customer reviews of securities brokerage services. *International Journal of Service Industry Management*, 15 (3), 302326.

- Yousafzai, S.Y., Pallister, J.G. & Foxall, G.R. (2017). A proposed model of e-trust for electronic banking. *Technovation*, 23, 847-860.
- Yu, J. & Guo, C. (2018). An exploratory study of ubiquitous technology in retail banking. *Academy of Commercial Banking and Finance*, 8(1), 11-31.
- Yuan, Y., Lai, F., & Chu, Z. (2019). Continuous usage intention of internet banking: A commitment-trust model. *Information Systems and e-Business Management*, 17(1), 1–25.

# KNUST

## APPENDIX

**KWAME NKRUMAH UNIVERSITY OF SCIENCE AND TECHNOLOGY  
COLLEGE OF HUMANITIES AND SOCIAL SCIENCES  
SCHOOL OF BUSINESS  
DEPARTMENT OF ACCOUNTING AND FINANCE  
QUESTIONNAIRES**

**Topic:** Customers Usage Behaviour of E-Banking Services: Interplay of Electronic and Traditional Banking

This study is being undertaken for academic purposes and any information given will be treated with the highest degree of confidentiality. The questionnaire is divided into four sections A, B, C and D. Questions may be answered by ticking [] against the response(s) that best suit your opinion or filling the space where appropriate. Thank you for your participation.

### **SECTION A: RESPONDENTS PROFILE**

1. Gender
  - Males
  - Females
  
2. Age
  - 18-25 years
  - 26-35 years
  - 36-45 years
  - 46-55 years
  - Above 55 years
  
3. Qualification:
  - No formal education
  - Primary
  - JHS
  - SHS
  - Tertiary
  - Others (please specify).....

4. What is your occupation:  Public servant  Private worker  
 Entrepreneur  
 Student  
 \_\_\_\_\_ ] Others (please specify).....

5. Years of being a customer of your bank:  
 1-5years  
 6-10years  
 11-15years  
 16 years and above

6. How long have you been using the e-banking tools you are familiar with?  
 1-3years  
 4-6 years  
 7-9 years  
 10 years and above

**SECTION B: EXTENT OF USAGE OF E-BANKING SERVICES**

Please indicate your level of agreement or disagreement with the following statements by ticking [√]

7. Automatic Teller Machines (ATMs) is an existing e-banking tool customers are very familiar with.  
 Strongly Disagree  
 Disagree  
 Somehow Disagree  
 Neutral  
 Somehow Agree  
 Agree  
 Strongly Agree
8. Customers are familiar with mobile banking as an existing e-banking tool.  
 Strongly Disagree  
 Disagree  
 Somehow Disagree  
 Neutral  
 Somehow Agree  
 Agree  
 Strongly Agree
9. As a customer, I am aware my bank has adopted internet banking as an e-banking tool.  
 Strongly Disagree  
 Disagree  
 Somehow Disagree  
 Neutral  
 Somehow Agree  
 Agree  
 Strongly Agree

10. I am aware as a customer that Points of Sale is part of the e-banking tools used in my bank.
- Strongly Disagree
  - Disagree
  - Somehow Disagree
  - Neutral
  - Somehow Agree
  - Agree
  - Strongly Agree
11. Visa/Debit credit cards are existing e-banking tool customers are very familiar with.
- Strongly Disagree
  - Disagree
  - Somehow Disagree
  - Neutral
  - Somehow Agree
  - Agree
  - Strongly Agree
12. ATM is one of the electronic banking tools I often use as a customer.
- Strongly Disagree
  - Disagree
  - Somehow Disagree
  - Neutral
  - Somehow Agree
  - Agree
  - Strongly Agree
13. As a customer, I often use mobile banking as one of the electronic banking tools for transactions.
- Strongly Disagree
  - Disagree
  - Somehow Disagree
  - Neutral
  - Somehow Agree
  - Agree
  - Strongly Agree
14. Internet banking is one of the e-banking tools I often used as a customer for banking transactions.
- Strongly Disagree
  - Disagree
  - Somehow Disagree
  - Neutral
  - Somehow Agree
  - Agree
  - Strongly Agree
15. Point of Sale is an e-banking tools I often used as a customer for banking transactions.
- Strongly Disagree
  - Disagree

- Somehow Disagree [  Neutral  
 Somehow Agree  
 Agree  
 Strongly Agree
16. Visa/Credit/Debit cards are existing e-banking tools that I often used as a customer for banking transactions.  
 Strongly Disagree  
 Disagree  
 Somehow Disagree  
 Neutral  
 Somehow Agree  
 Agree  
 Strongly Agree
17. The employees of my bank is one of the sources of information that helped in creating awareness about e-banking services.  
 Strongly Disagree  
 Disagree  
 Somehow Disagree  
 Neutral  
 Somehow Agree  
 Agree  
 Strongly Agree
18. Relatives/Friends are part of the sources of information that helped in creating awareness about e-banking services.  
 Strongly Disagree  
 Disagree  
 Somehow Disagree  
 Neutral  
 Somehow Agree  
 Agree  
 Strongly Agree
19. Brands at the premises of my bank also helped in creating awareness about ebanking services used by my bank.  
 Strongly Disagree  
 Disagree  
 Somehow Disagree  
 Neutral  
 Somehow Agree  
 Agree  
 Strongly Agree
20. Advertisements on TV/print media contributed in creating awareness about ebanking services adopted by my bank.  
 Strongly Disagree  
 Disagree  
 Somehow Disagree  
 Neutral

- Somehow Agree
- Agree
- Strongly Agree

21. Posters/Sign Posts are another source of information that helped to create awareness about e-banking services adopted by my bank.

- Strongly Disagree
- Disagree
- Somehow Disagree
- Neutral
- Somehow Agree
- Agree
- Strongly Agree

Please indicate your level of usage with the following statements by ticking [√] 22. Cash withdrawals are one of the e-banking services I used.

- Rarely
- Not often
- Sometimes
- Often
- Very often

23. I used electronic means to check my account balance/statement.

- Rarely
- Not often
- Sometimes
- Often
- Very often

24. I make purchases/payments using e-banking tools of my bank.

- Rarely
- Not often
- Sometimes
- Often
- Very often

25. I make request for loans with existing e-banking tools.

- Rarely
- Not often
- Sometimes
- Often
- Very often

26. I used e-banking tool to transfer funds from one bank/momo account to the other.

- Rarely
- Not often
- Sometimes
- Often
- Very often

27. I often check investment information/channels using one of the e-banking tools.

- Rarely
- Not often
- Sometimes

- Often
- Very often

### **SECTION C: MULTIPLE CHANNELS PROVIDED BY THE USAGE OF EBANKING SERVICES**

Please indicate your level of agreement or disagreement with the following statements by ticking []

28. In spite of the usage of e-banking services, I still withdraw cash from the branch of my bank

- Strongly Disagree
- Disagree
- Somehow Disagree
- Neutral
- Somehow Agree
- Agree
- Strongly Agree

29. I still prefer to build personal contact with human tellers at the bank though ebanking services exist.

- Strongly Disagree
- Disagree
- Somehow Disagree
- Neutral
- Somehow Agree
- Agree
- Strongly Agree

30. I still use cash for my payment of transactions even though e-banking services are available.

- Strongly Disagree
- Disagree
- Somehow Disagree
- Neutral
- Somehow Agree
- Agree
- Strongly Agree

31. I still check my balance/account via manual application even though I can do that electronically.

- Strongly Disagree
- Disagree
- Somehow Disagree
- Neutral
- Somehow Agree
- Agree
- Strongly Agree

32. I still visit my bank branches to make cash deposits even though I can do that electronically.

- Strongly Disagree
- Disagree

- Somehow Disagree
- Neutral
- Somehow Agree
- Agree
- Strongly Agree

**SECTION D: SOURCES OF INFLUENCE ON CUSTOMERS' BEHAVIOUR IN USING E-BANKING SERVICES.**

Please indicate your level of agreement or disagreement with the following statements by ticking [√]

33. I still withdraw cash from branches of my bank due lack of reliability associated with e-banking channels like ATMs
- Strongly Disagree
  - Disagree
  - Somehow Disagree
  - Neutral
  - Somehow Agree
  - Agree
  - Strongly Agree
34. I still prefer to build personal contact with human tellers at the bank because of lack of information from e-banking channels
- Strongly Disagree
  - Disagree
  - Somehow Disagree
  - Neutral
  - Somehow Agree
  - Agree
  - Strongly Agree
35. I still use cash for my payment of transactions because of large acceptance of cash as payment in business to business transactions/business to customer transactions
- Strongly Disagree
  - Disagree
  - Somehow Disagree
  - Neutral
  - Somehow Agree
  - Agree
  - Strongly Agree
36. I still use cash to do payment because of lack security associated with e-banking tools
- Strongly Disagree
  - Disagree
  - Somehow Disagree
  - Neutral
  - Somehow Agree
  - Agree
  - Strongly Agree
37. I still check my balance/account via manual application due to lack of trust connected with e-banking systems

- Strongly Disagree  
 Disagree  
 Somehow Disagree  
 Neutral  
 Somehow Agree  
 Agree  
 Strongly Agree
38. I still visit my bank branches to make cash deposits due to large acceptance of cash by banks
- Strongly Disagree  
 Disagree  
 Somehow Disagree  
 Neutral  
 Somehow Agree  
 Agree  
 Strongly Agree
39. I still make deposit with cash due to the mode of identification needed by banks
- Strongly Disagree  
 Disagree  
 Somehow Disagree  
 Neutral  
 Somehow Agree  
 Agree  
 Strongly Agree
40. I still make cash deposits due to lack of understanding of the process
- Strongly Disagree  
 Disagree  
 Somehow Disagree  
 Neutral  
 Somehow Agree  
 Agree  
 Strongly Agree
41. I still withdraw cash from bank because there exist little privacy and confidentiality in e-banking systems
- Strongly Disagree  
 Disagree  
 Somehow Disagree  
 Neutral  
 Somehow Agree  
 Agree  
 Strongly Agree
42. I still make cash payment because learning to use e-payment involves time and cost
- Strongly Disagree  
 Disagree  
 Somehow Disagree  
 Neutral

- Somehow Agree  
 Agree  
 Strongly Agree
43. I still rely on services with my bank due to my reluctance to change
- Strongly Disagree  
 Disagree  
 Somehow Disagree  
 Neutral  
 Somehow Agree  
 Agree  
 Strongly Agree
44. I still make cash payment for services due to interests/charges/hidden charges
- Strongly Disagree  
 Disagree  
 Somehow Disagree [
   
 Neutral  
 Somehow Agree  
 Agree  
 Strongly Agree
45. I still rely on services from my bank due to frequent connection breakdown
- Strongly Disagree  
 Disagree  
 Somehow Disagree  
 Neutral  
 Somehow Agree  
 Agree  
 Strongly Agree
46. I still make cash savings and investment at my bank due to possibility of fraud
- Strongly Disagree  
 Disagree  
 Somehow Disagree  
 Neutral  
 Somehow Agree  
 Agree  
 Strongly Agree
47. I still rely on services from my bank due to difficulty to use technologies
- Strongly Disagree  
 Disagree  
 Somehow Disagree  
 Neutral  
 Somehow Agree  
 Agree  
 Strongly Agree
48. I still withdraw cash from my banks due to lack of awareness
- Strongly Disagree

- Disagree
- Somehow Disagree
- Neutral
- Somehow Agree
- Agree
- Strongly Agree

49. I still rely on services from my bank branch because I have never felt the need to change to e-banking tools

- Strongly Disagree
- Disagree
- Somehow Disagree
- Neutral
- Somehow Agree
- Agree
- Strongly Agree

THANK YOU

