

UNIVERSITY OF CAPE COAST

KNOWLEDGE AND UTILISATION OF E-BANKING FACILITIES IN  
THE NATIONAL INVESTMENT BANK IN CENTRAL REGION OF  
GHANA

BY

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## DECLARATION

### Candidate's Declaration

I hereby declare that this dissertation is the result of my own original research work and that no part of it has been presented for another degree in this university or elsewhere.

Candidate's Signature:..... Date:.....

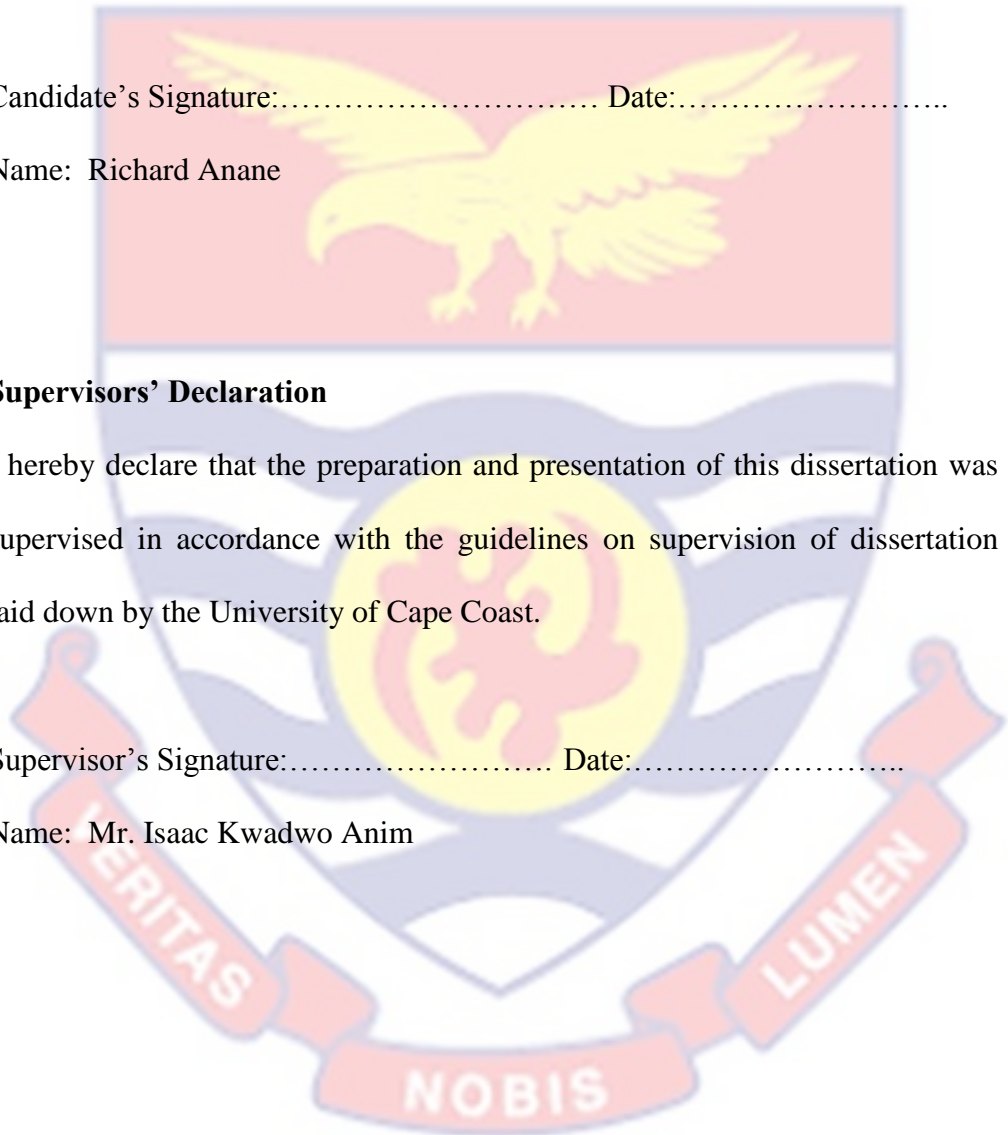
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### Supervisors' Declaration

I hereby declare that the preparation and presentation of this dissertation was supervised in accordance with the guidelines on supervision of dissertation laid down by the University of Cape Coast.

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Name: Mr. Isaac Kwadwo Anim

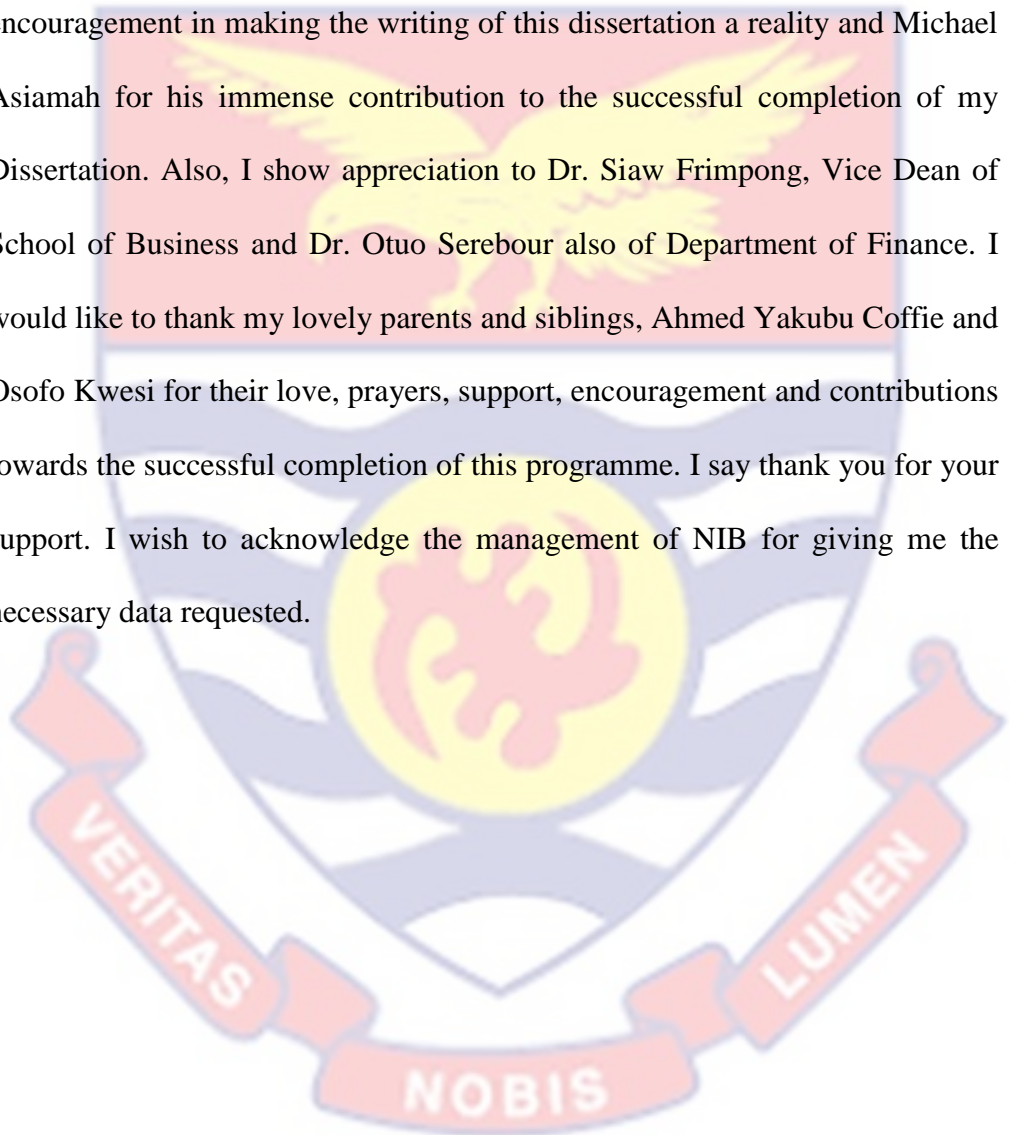


## ABSTRACT

Knowledge and utilisation of e-banking facilities by customers of financial institutions have attracted increasing attention in both the developed and developing world due to importance of e-banking in influencing faster business activities. This study examined the knowledge and utilisation of e-banking facilities in 3 branches of the National Investment Bank, Central Region of Ghana. The branches are Cape Coast, Dunkwa and Swedru. The study used a cross-section data set within a descriptive research design. The study employed quantitative approach in the study and data collection was done using questionnaire. A total of 370 respondents including customers and 3 managers of the bank were selected using simple random sampling technique and interview respectively. Analyses of the data were done by using descriptive analysis. The study revealed that majority of the respondents use electronic cards at NIB and they are aware of e-banking facilities available at NIB. In addition, the study showed that majority of the customers have full knowledge of e-banking facilities. Finally, the results revealed that greater part of the respondents effectively use the e-banking facilities. The study therefore recommends that management of NIB and the banking industry in general must improve on the electronic banking services to increase availability and accessibility of these facilities. Also, management of the NIB Bank should intensify the awareness creation on the availability of e-banking facilities in the country.

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## DEDICATION

To my wife, Dr. Mrs. Agnes Achiamaa Anane, children, Nana Kwaku Anane,  
Maame Efua Kwalama Anane and Ewuraba Achiamaa Anane.



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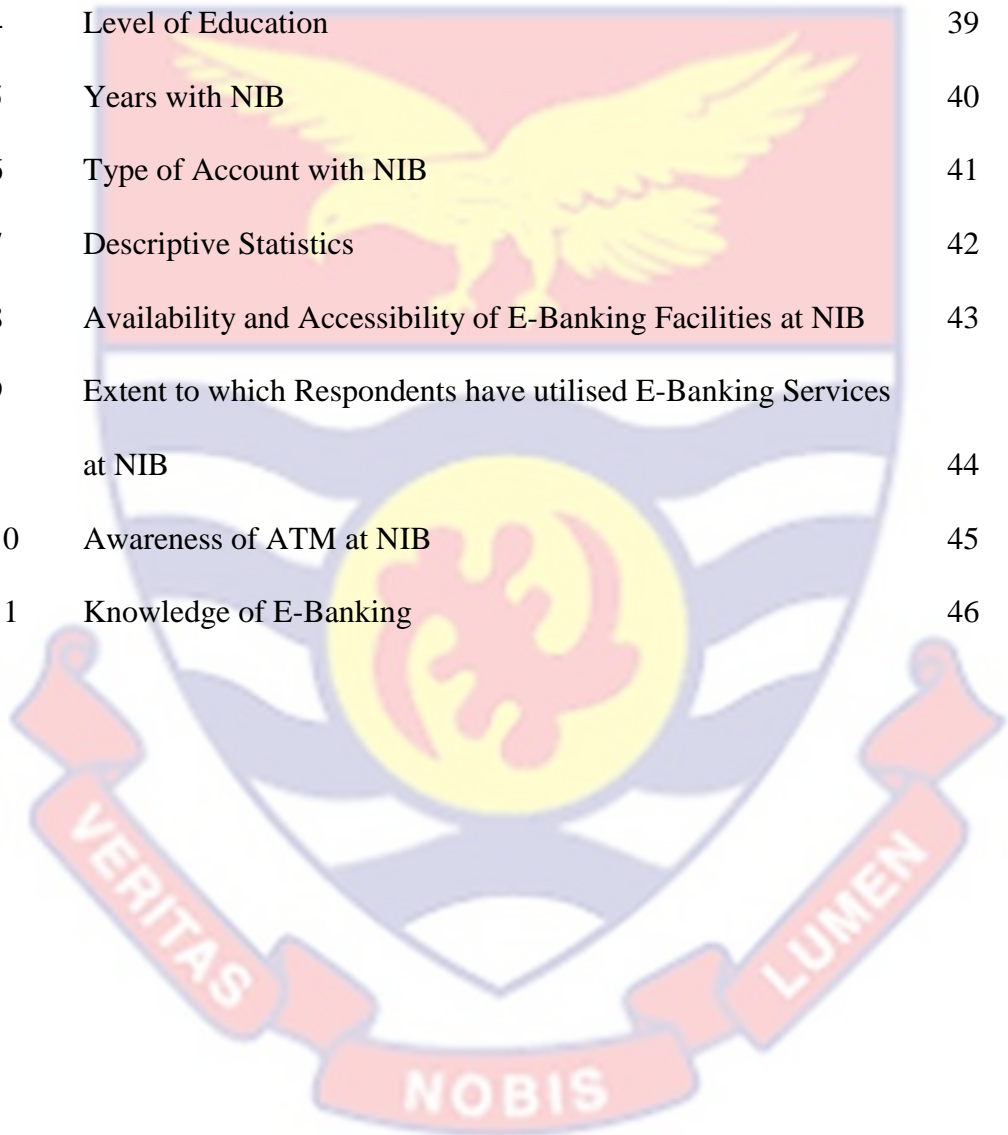
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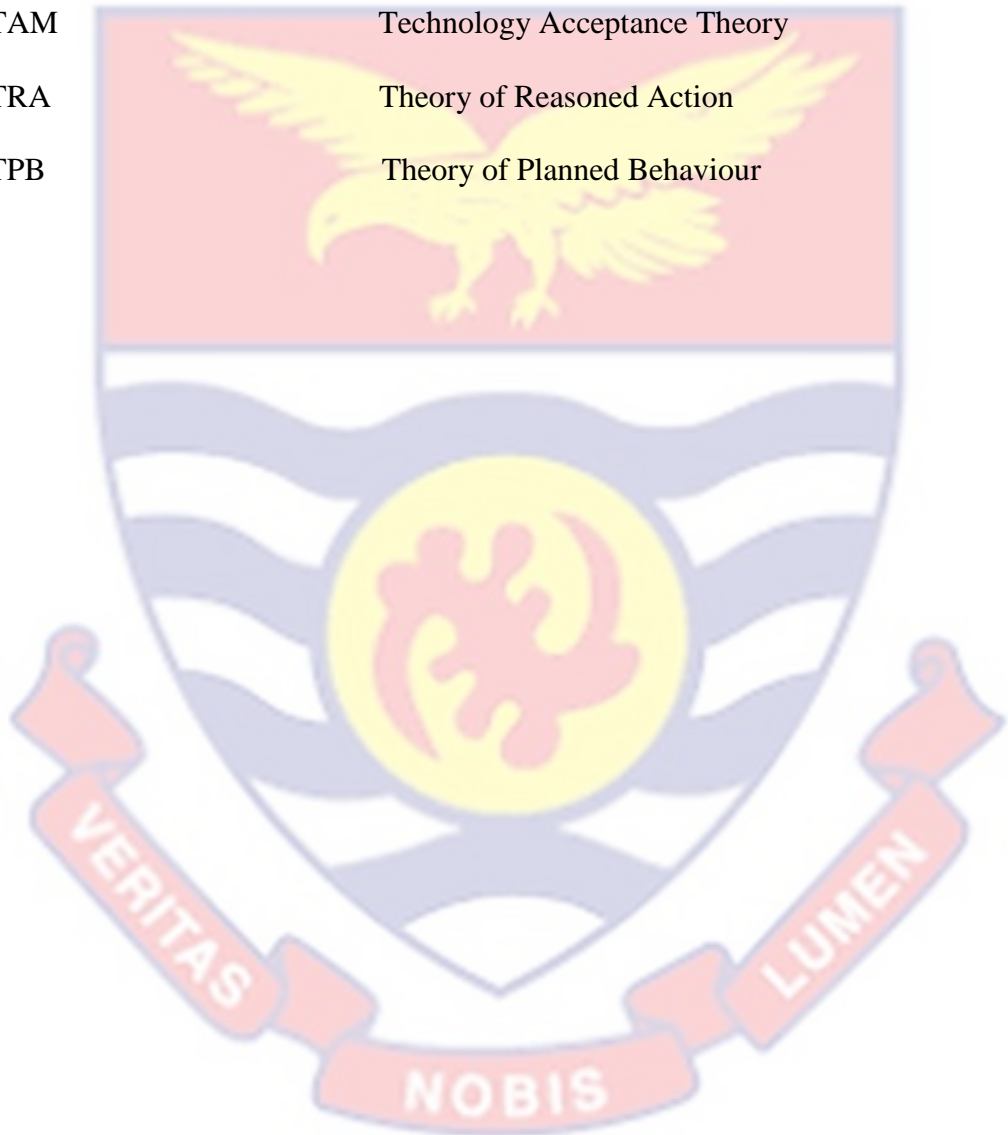
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## LIST OF ACRONYMS

ATMs	Automated Teller Machines
IDT	Innovative Diffusion Theory
ICTs	Information Communication Technologies
NIB	National Investment Bank
TAM	Technology Acceptance Theory
TRA	Theory of Reasoned Action
TPB	Theory of Planned Behaviour



## CHAPTER ONE

### INTRODUCTION

This section presents the overview of the study which includes the background to the study, statement of the problem, purpose of the study, objectives of the study, research questions, significance of the study, limitations of the study, delimitations of the study, and organisation of the study.

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

Today's business environment is very dynamic and undergoes rapid changes as a result of technological innovation, increased awareness and demands from customers. Business organizations, especially the banking industry of the 21st century operates in a complex and competitive environment characterized by these changing conditions and highly unpredictable economic climate. Information and Communication Technology (ICT) is at the centre of this global change curve (Ankra, 2014).

Banking industry is considered as a backbone of economy as every other industry needs banks to invest or move financially. E-banking trend is spreading fast in developing countries. Banks are advised to provide internet banking services to its national and international customers. It is proved as a cost effective way for banks. It has enriched relationship with customers by providing them easy to operate mechanism for banking functions. Many innovative banking products are customized to cater individual customer's needs. It provides a greater choice in terms of channel they can use to conduct their business and convenience in terms of when and where they can use e-banking (Singhal, 2017). Thus, financial services industry over time has

opened to historic transformation that can be termed as e-developments which is advancing rapidly in all areas of financial intermediation and financial markets such as e-finance, e-money, electronic banking (e-banking), e-brokering, e-insurance, e-exchanges, and even e-supervision (Okibo, 2014).

The adoption of e-banking began to occur quite extensively as a channel of distribution for financial services due to rapid advances in IT and intensive competitive banking markets (Mahdi & Mehrdad, 2010). The driving forces behind the rapid transformation of banks are influential changes in the economic environment include among others innovations in information technology, innovations in financial products, liberalization and consolidation of financial markets, deregulation of financial inter-mediation. The e-banking is transforming the banking and financial industry in terms of the nature of core products or services and the way these are packaged, proposed, delivered and consumed. It is an invaluable and powerful tool driving development, supporting growth, promoting innovation and enhancing (Okibo, 2014).

Additionally, increasing financial competitive environment, whether globally or locally has resulted in small and large banks engaged in search of new delivery channels through which they can differentiate their products and services and subsequently achieve competitive advantage (Jenkins, 2007). In that, the technological environment has drastically changed the orientations of traditional business and moved banks' activities towards digital banking. For instance, the internet has allowed banks to practice new generations of banking services without being compelled to invest in physical branches (Furst, Lang & Nolle, 2002; Gilmore, Gallagher & Henry, 2007; Jenkins, 2007).

Laudon and Laudon (2007) contend that managers cannot ignore information systems because they play a critical role in contemporary organization. Their study points out that the entire cash flow of most Fortune 500 companies is linked to information systems. The application of information and communication technology concepts, techniques, policies and implementation strategies to banking services has become a subject of fundamental importance and concerns to all banks and indeed a prerequisite for local and global competitiveness. The banking sector has seen considerable transformation in the 1980s starting from the United States, then Europe and now the global village. The main forces behind these significant transformations in the banking industry, according to Reixach (2001) are deregulation and innovation in IT. These forces have brought about increased competition, not only among banks, but also in other financial and non-financial industries.

Banking is an information intensive activity that relies much on information and communication Technology (ICT). Banking needs information technology to acquire process and deliver relevant information to clients. This has led to the adoption of e-banking by various banks throughout the world. E-banking therefore refers to the provision of banking products and services through electronic delivery channels. It started with the introduction of automated teller machines (ATMS) and telephone transactions (Pupa, 2003). In recent times the banking business has evolved through the introduction of the internet in 1969 (Nehmzow, 1997). E-banking has facilitated banking transactions for customers and bankers alike. Whereas it is faster, easily accessible, more convenient and readily available for customers,

it is cost saving to bankers. Owing to this, e-banking has been gaining popularity as a potential medium for electronic commerce (Crede, 1995). Literature has it that, banks all over the world are re-orienting their banking strategies as e-banking enables them scale borders, change strategic behaviour and bring about new possibilities. Many scholars argued that e-banking enables customers compare the services of the various banks by many scholars.

Moreover, e-banking has experienced explosive growth and has transformed traditional practices in banking (Gonzalez, 2008). As per prediction of Maholtra and Singh (2007), the e- banking is leading to a paradigm shift in marketing practices resulting in high performance in the banking industry. Delivery of service in banking can be provided efficiently only when the background operations are efficient. Maholtra and Singh (2007) further indicated that, an efficient background operation can be conducted only when it is integrated by an electronic system. The components like data, hardware, software, network and people are the essential elements of the system. Banking customers get satisfied with the system when it provides them maximum convenience and comfort while transacting with the bank. Internet enabled electronic system facilitate the operation to fetch these result.

According to Christopher, Mike, Visit and Amy (2006), e-banking has become an important channel to sell the products and services and is perceived to be necessity in order to stay profitable in successful. There is a growing interest in understanding the users' experience (Pyun, 2002), as e-banking is observed to be a larger concept than user satisfaction. From this perspective, assessing the user experience is essential for many technology products and

services (Salehi, Ali & Zhila, 2008). Customers have started perceiving the services of bank through internet as a prime attractive feature than any other prime product features of the bank. Customers have started evaluating the banks based on the convenience and comforts it provides to them. An online Banking user is expected to perform transactions online such as checking account balance, transaction history, paying bills, transferring funds between accounts, requesting credit card or cheque books, managing investments and stock trading. These facilities have improved daily banking operations and reduced footfalls in banks. Thus, these facilities are economic, hassle free and demand of smaller infrastructure. They are available 24/7 and however, there are certain challenges like high set up cost, knowledge about working technology, lack of security etc.

National Investment Bank Limited is one of the public banks in the country and particularly in the Central Region. The Bank has gone on digital with many financial innovations looking the high competition in the banking industry and demands of its many customers. Even though customers of the Bank in the Central Region have embraced its financial products, there are still challenges in terms of knowledge and utilisation of these products. Therefore, this study was carried out to analyse the level of knowledge and customers' utilisation of the e-banking products offered by NIB Ltd in the central Region of Ghana.

### **Statement of the Problem**

In recent past, banks are challenged by technological up scale that led to innovative products which stifled up competition for market share. There is a shift from paper-based to electronic payments and reliance on ATMs rather

than costly branch offices to deliver cash and other depositor related services. Both banks and customers are increasingly migrating from traditional banking channels to the e-banking channel (Mols, 2000; Okibo, 2014) but despite the benefits and advantages of e-banking for both sides, it entails some critical issues both for customers and the banks.

The National Investment Bank (NIB), as part of its strategic management policies has introduced and incorporated e-banking facilities to make the organization provide optimum services to its clients. With e-banking (internet banking), users with personal computer and browser can get connected to the bank's website and perform any of the virtual banking functions. With the rapid diffusion of the internet in banking coupled with the quest to expand and capture a larger share of the banking market, most banks all over the world including NIB have adopted the use of the internet and other electronic channels such as the ATM, Mobile banking and the Cards. Thus, with the introduction of e-banking system in Ghana, most banks in the country which have adopted this breakthrough in banking have reduced their staff numbers through redundancy and exit packages. This action has resulted in the banks having few staff to meet the growing work load schedule.

Despite the introduction of these e-banking facilities in NIB, clients still opt for the traditional ways of banking. They have not taken full advantage of such facilities. This low knowledge or non utilization coupled with the reduction in staff numbers has resulted in overcrowding in the banking halls, bringing in its wake, unnecessary pressure on the few staff even as it wastes clients' time. It is against these background problems that a study



into the knowledge and patronage or adoption of e-banking facilities in National Investment Bank has become necessary.

### **Purpose of the Study**

The main purpose of the study is to examine the knowledge and utilisation of e-banking in the National Investment Bank in the Central Region Ghana.

### **Research Objectives**

The study specifically seeks to:

1. Assess the availability and accessibility of the various e-banking facilities.
2. Assess the awareness of customers of the e-banking facilities available at National Investment Bank.
3. Determine the knowledge of customers in the utilization of e-banking services.
4. Examine how effective the usage of e-banking facilities benefits customers.

### **Research Questions**

The pertinent research questions to help achieve the purpose of this study are:

1. What are the various e-banking facilities available and accessible at the NIB?
2. What is the level of customer awareness of the availability of e-banking facilities at NIB?
3. What is the level of knowledge and utilization of e-banking facilities among the customers?

4. How effective are these facilities being put to use to benefit customers?

### **Significance of the Study**

The significance of this study is to help create awareness to bank managers as to whether customers are taking full advantage of the availability of these electronic facilities and to know how beneficial it has been to them. It will also help bank managers' plan how to make these facilities customer friendly. Again, the study will also help the managers of the bank to the effectiveness of their e-banking services and products. In addition, the study will help educate customers on how to take full advantage of the e-banking services in order to reduce the amount of time spent at the banking hall. Finally, this study will serve as a future reference for researchers.

### **Delimitations**

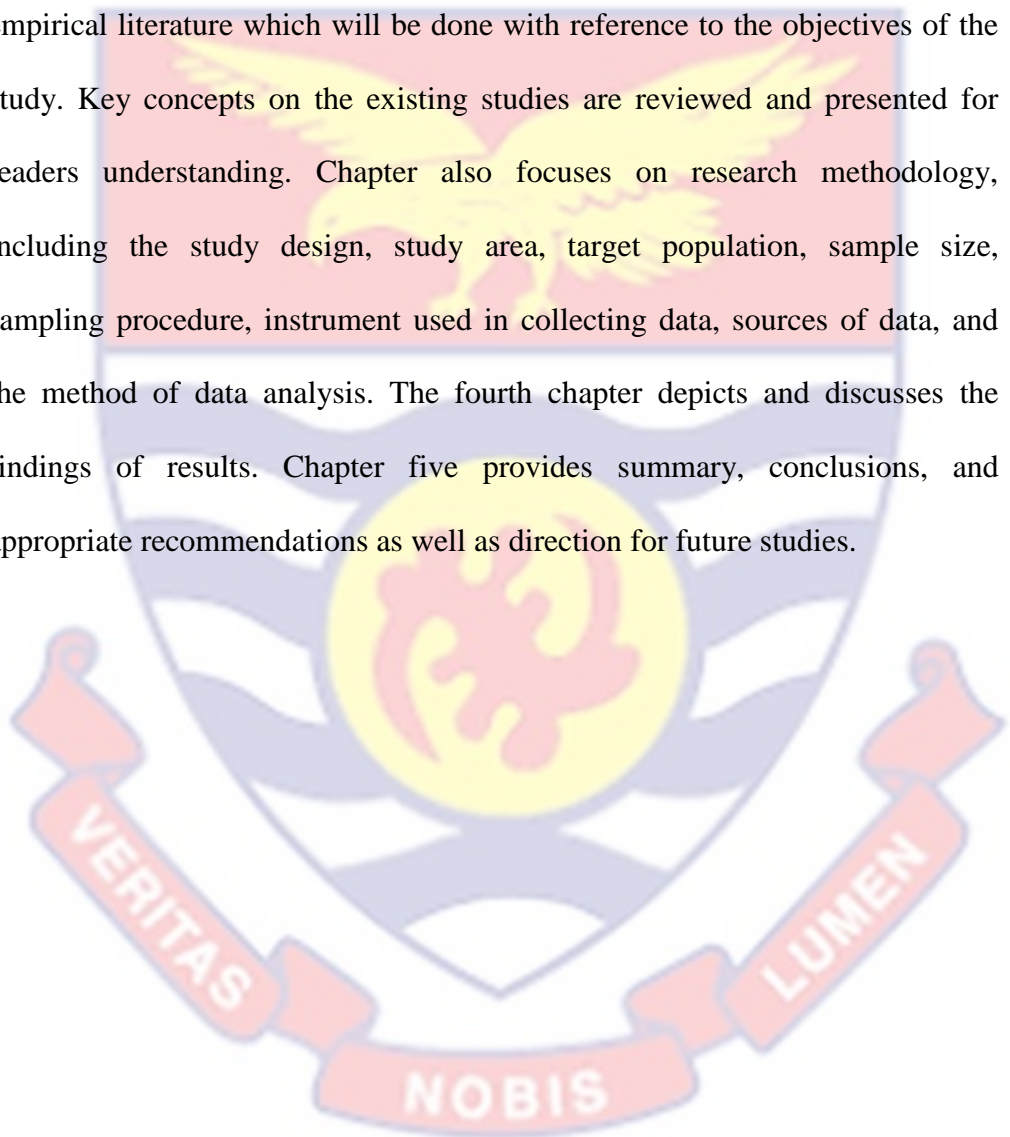
The study examines the knowledge and utilisation of e-banking in the National Investment Bank in the Central Region of Ghana. The study shall focus on the components of internal control systems and profitability. The study shall specifically focus on the National Investment Bank in the Cape Coast Metropolis. This bank has been selected because of its proximity or geographic location and its usage of e-banking facilities.

### **Limitations**

Resource, access to information and time were the main limitations to this study. The financial resource needed to conduct this study was quite substantial and combining studies with this research was a challenge. Access to the customers posed another challenge for this study. Their busy schedules posed a daunting challenge in accessing reliable and in-depth knowledge from them.

## Organisation of the Study

This study is organised into five chapters. Chapter one of the study consists of background of the study, statement of the problem, purpose of the study, research objectives, research questions, delimitations, limitations of study, and organisation of the study. Chapter two reviewed theoretical and empirical literature which will be done with reference to the objectives of the study. Key concepts on the existing studies are reviewed and presented for readers understanding. Chapter also focuses on research methodology, including the study design, study area, target population, sample size, sampling procedure, instrument used in collecting data, sources of data, and the method of data analysis. The fourth chapter depicts and discusses the findings of results. Chapter five provides summary, conclusions, and appropriate recommendations as well as direction for future studies.



## CHAPTER TWO

### LITERATURE REVIEW

#### Introduction

This study reviewed literature which informed the problem statement. The theoretical review discussed are Technology acceptance theory (TAM), Theory of planned behaviour (TPB) and Innovative diffusion theory (IDT). In order to provide a rationale and context for the study's objectives identified in the previous section, empirical review of the relevant literature on e-banking explanation, evolution of e-banking, adoption of e-banking, Level of awareness of e-banking and the role of ICT in banking. The last section deals with conceptual framework and conclusions from both the theoretical and empirical literature.

#### Theoretical Review

The theories that underpinned the study are the theory of planned behaviour (TPB), the innovative diffusion theory (IDT), and the technology acceptance theory (TAM).

#### Technology Acceptance Theory (TAM)

Davis (1989) developed the TAM, according to which users' adoption of a computer system depends on their behavioural intention to use, which in turn depends on their attitude and two beliefs, namely perceived ease of use and perceived usefulness. The TAM has become a widely used model for predicting the acceptance and use of information systems, and has recently also been applied in order to predict Internet adoption. It is an adaptation of the Theory of Reasoned Action (TRA) developed by Fishbein and Ajzen (1975) in the field of information systems.

In essence, the TAM posits that perceived usefulness and perceived ease of use determine an individual's intention to use a system. In particular, the decomposed TPB model, first introduced by Taylor and Todd (1973), will be used in this study, since it is found to have better predictive power than the technology acceptance model (TAM) and traditional TPB models.

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

The TPB posits that individual behaviour is driven by behavioural intentions, where behavioural intentions are a function of an individual's attitude towards the behaviour, the subjective norms surrounding the performance of the behaviour, and the individual's perception of the ease with which the behaviour can be performed (behavioural control). Attitude towards the behaviour is defined as the individual's positive or negative feelings about performing the behaviour.

### **Innovative Diffusion Theory (IDT)**

In the innovative diffusion theory developed by Rogers (1983), three main characteristics of innovations were identified: relative advantage, compatibility, and complexity. Adopters were invariably found to have different perceptions about these characteristics in comparison with non-adopters. Some products catch on immediately, while others take a long time to gain acceptance. If the innovation is perceived to be better than the existing system (a measure of its relative advantage), is consistent with the needs of the potential adopter (a measure of its compatibility), and is easy to understand and use (a measure of its complexity), it is more likely that a favourable attitude towards the innovation will be formed (Ching & Ellis, 2004). On the

empirical side, the study will dwell on other studies in order to guide the focus of the study.

The above theories help to explain how customers of the banking industry try to use their financial knowledge to relate to the e-banking adoption. Thus, they help to predict the knowledge and utilization level of customers in terms of the usage of e-banking facilities. According to the theories, users' adoption of a computer system depends on their behavioural intention to use, which in turn depends on their attitude and two beliefs, namely perceived ease of use and perceived usefulness.

Further, the theories emphasised that beliefs, attitudes and intention in predicting actual behaviour largely depends on the degree of measurement specificity attained. In order to apply these notions to the technology acceptance context, it is necessary to measure beliefs regarding the use of technology, rather than the technology itself. Empirically, the TAM model has been used widely to examine individuals' acceptance and use of different technologies including e-banking. However, there are no studies in the Ghanaian context based on the TAM model, this limits generalisability of prior research conclusions. This actually shapes the focus of the current study.

### **E-Banking**

Electronic banking (e-banking) is the specific case of e-business in the banking sector (Hamidianpour, Esmaeilpour & Anavard, 2016). It is a set of services including automatic teller machines (ATM), point of sales, internet banking, telephone-banking and mobile banking (Hamidianpour et al., 2016). E-banking can be defined as a set of activities conducted from home instead of a physical bank location (Kaur, Pathak & Kaur, 2015). It is an “umbrella term

for the process by which a customer may perform banking transactions electronically without visiting a bricks-and-mortar institution” (Haque, Ismail & Daraz, 2009). E-banking can be also referred to as online banking, cyber banking, virtual banking and net banking (Kaur et al., 2015). Moreover, Angelakopoulos and Mihiotis (2011) state that there are three types of e-banking: internet banking, phone banking and mobile banking, that differ in terms of distribution channel, internet, phone and mobile phone, respectively. According to Chavan (2013), e-banking is not something totally new. It started some time ago in the form of ATMs and telephone transactions. This first generation of solutions typically only allowed customers to view their statements online, conduct transfers between accounts and pay bills (Kaur et al., 2015). Nowadays, the amount of operations that can be carried out using e-banking services is far greater. Customers can use e-banking to: pay utility bills and insurance premiums; fund transferences; consult current account and savings balances; carryout mortgage payments; options subscriptions; book orders online; book flights and railway tickets; and, purchase products online (Mudholkar, Shanker & Maitra, 2013).

Electronic banking is a high-order construct, which consists of several distribution channels. It should be noted that electronic banking is a bigger platform than just banking via the Internet. E-banking is now a global phenomenon. It is an invaluable and powerful tool driving development, supporting growth, promoting innovation and enhancing competitiveness (Kamel, 2005; Nath, Shrick & Parzinger, 2001). Technological innovations have been identified to contribute to the distribution channels of banks and these electronic delivery channels are collectively referred to as electronic

banking (Goi, 2005). Thus, any banking transactions conducted through computerized systems, such as electronic funds transfer by automated teller machines, intended to speed operations, reduce costs, etc. is referred to as electronic banking.

However, the most general type of electronic banking in our times is banking via the Internet, in other words Internet banking. The term electronic banking as described by Daniel (1999) is the provision of information or services by a bank to its customers, via a computer, television, telephone, or mobile phone. Burr (1996) also describes it as an electronic connection between bank and customer in order to prepare, manage and control financial transactions. Internet banking allows consumers to access their bank and accounts to undertake banking transactions. Sathye (1999) in another appellation confirms that, an advanced level internet banking is called transactional online banking, because it involves the provision of facilities such as accessing accounts, transfer of funds, and buying financial products or services online.

Accordingly, the terms internet banking and online banking are often used to refer to the same things or are used interchangeably. E-banking is a form of banking, where funds are transferred through an exchange of electronic signals between financial institutions, rather than the exchange of cash, checks, or other negotiable instruments. The ownership of funds and transfers of funds between financial institutions are recorded on computer systems connected by telephone lines. Customer's identification is by access code, such as a password or personal identification number (PIN), instead of a signature on a check or other physical document. E-banking involves



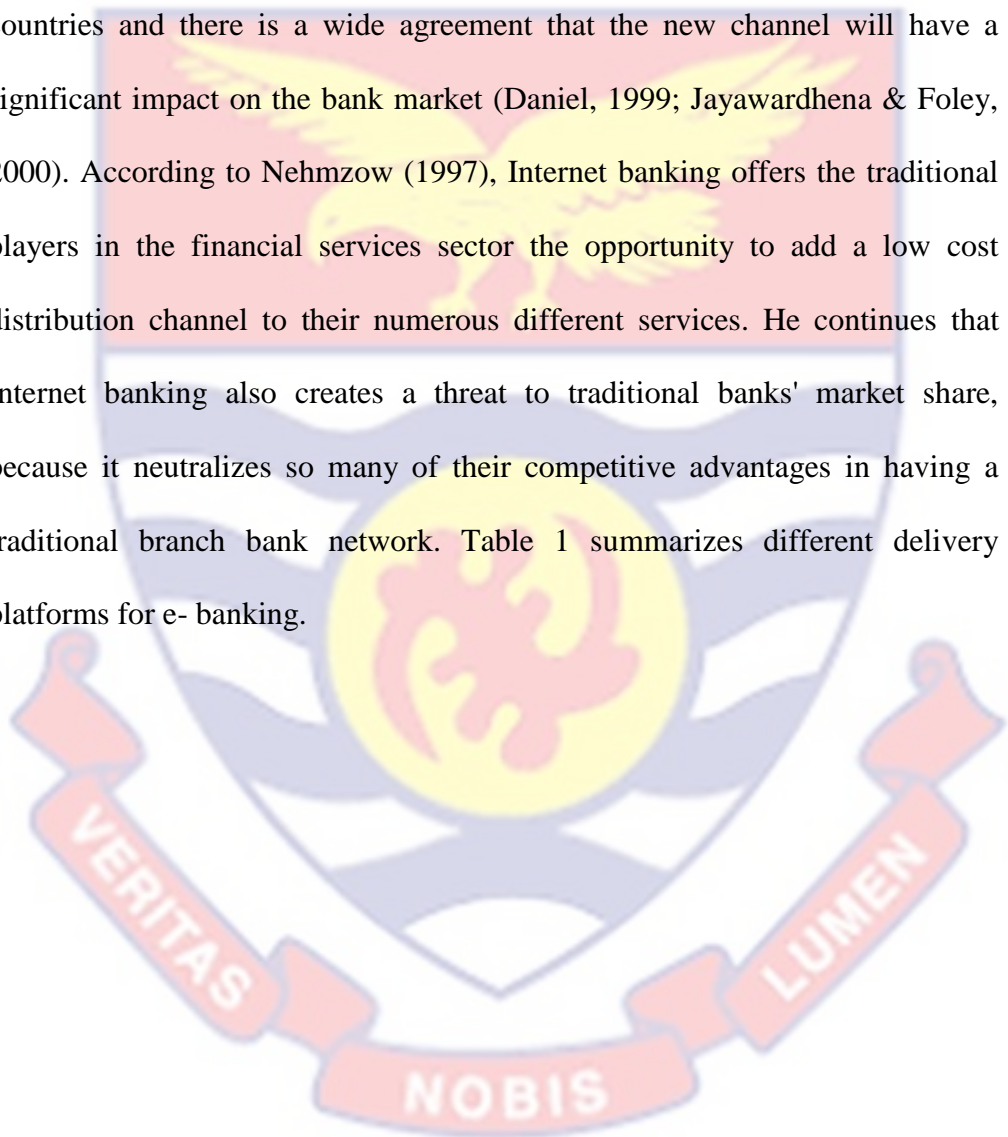
individual and corporate clients, and includes bank transfers, payments and settlements, documentary collections and credits, corporate and household lending, card business and some others (UNCTAD, 2002).

In terms of its components, electronic banking is said to have three different means of delivery: telephone, PC, and the internet. Daniel (1999), for example, introduces four different channels for electronic banking: PC banking, internet banking, managed network, and TV-based banking. In the same vein, the evolution of banking technology has been driven by changes in distribution channels as evidenced by automated teller machine (ATM), phone-banking, tele banking, PC-banking and most recently internet banking (Chang, 2003; Gallup Consulting, 2008).

It is worthy of note that internet Banking is different from PC home banking. The obvious difference is that Internet Banking is browser-based, whereas PC Home Banking requires customers to install a software package assigned by the bank on their PC. Moreover, PC Home Banking allows customers to do their banking services only on PCs that have been certain installed software package, such as include Intuit, Inc.'s Quicken and Microsoft Corp.'s Money (Karjaluo et al., 2002). The main electronic delivery channel in banking is the internet, accessed via personal computer. Telephone banking, TV-based banking, and managed network do not play such a big role in banking today. However, in the future the delivery platform is expected to shift from wired internet connections to wireless mobile technologies. Wahl (1999) elucidates in a different view that, electronic banking does not necessarily have to be on a computer screen. It can, for example, be on the tiny screen of a mobile phone or any other wireless device.

With these wireless applications, customers can, for example, consult their bank account balances and transaction histories, view pie charts of their holdings in a portfolio, initiate payments or orders to buy and sell securities, and send e-mail to their banks.

Electronic banking is the newest delivery channel in many developed countries and there is a wide agreement that the new channel will have a significant impact on the bank market (Daniel, 1999; Jayawardhena & Foley, 2000). According to Nehmzow (1997), Internet banking offers the traditional players in the financial services sector the opportunity to add a low cost distribution channel to their numerous different services. He continues that Internet banking also creates a threat to traditional banks' market share, because it neutralizes so many of their competitive advantages in having a traditional branch bank network. Table 1 summarizes different delivery platforms for e- banking.



**Table 1: Delivery Platforms for Electronic Banking**

Type of Service	Description
PC banking (private dial up)	Proprietary software, distributed by the bank, is installed by the customer on their PC. Access to bank via a modem linked directly to the bank
Internet Banking	Access their bank via Internet
Managed networked	The bank makes use of an online service provided by another party
TV Based	The use of satellite or cable to deliver account information to the TV screens of customers(Also internet based) information to the TV screens of customers (Also Internet based)
Telephone banking	Customers access their bank via telephone (Own personal ID and password required)
Mobile phone banking (SMS, WAP, 3rd generation)	Access with text message (SMS), Internet connection (WAP), or high speed 3rd generation mobile connection (also Internet based).

Source: Electronic banking special issues, 2005

### **Evolution of E-Banking**

Devlin (1995) stated that there have been significant developments in the e-financial services sector in the past 30 years. To Devlin (1995), until the early 1970s functional demarcation was predominant with many regulatory restrictions imposed. One main consequence of this was limited competition both domestically and internationally. As a result, there was heavy reliance on

traditional branch based delivery of financial services and little pressure for change. This changed gradually with deregulation of the industry during 1980s and 1990s, whilst during this time, the increasingly important role of information and communication technologies brought stiffer competition and pressure for a faster pace of change.

The internet is a relatively new channel for delivering banking services. Its early form ‘online banking services’, requiring a PC, modem and software provided by the financial services vendors, were first introduced in the early 1980s (Devlin, 1995). However, it failed to get widespread acceptance and most initiatives of this kind were discontinued. With the rapid growth of other types of electronic services since mid-1990s, banks renewed their interest in electronic modes of delivery using the Internet. The bursting of the Internet bubble in early 2001 caused speculation that the opportunities for Internet services firms had vanished. The “dot.com” companies and Internet players struggled for survival during that time but e-commerce recovered from that shock quickly and most of its branches including e-banking have been steadily, and in some cases dramatically, growing in most parts of the world, Devlin (1995).

One survey conducted by the TechWeb News in 2005 found e-banking to be the fastest growing commercial activity on the Internet. In its survey of Internet users, it found that 13 million Americans carry out some banking activity online on a typical day, a 58 percent jump from late 2002. The spread of online banking has coincided with the spread of high-speed broadband connections and the increasing maturation of the Internet user population.

### **Adoption of Internet Banking**

The emergence of new banking technology has created highly competitive market conditions, which have had a critical impact upon consumer behavior. Internet banking providers must, therefore, attempt to better understand their customers and their attitudes toward technology in general. If they succeed, banks will be able to influence and even determine consumer behavior, which will become a major issue in creating competitive advantage in the future. The interaction between the adoption and marketing of electronic delivery channels by the banks and the changing customer segments is creating new environments for distribution channels (Mols et al., 1998). There have been several discussions about what is behind adoption of e-banking and internet banking in particular. According to Rogers and Shoemaker (1971), consumers go through "a process of knowledge, persuasion, decision, implementation and confirmation" before they are ready to adopt a product or service. Knowledge has to do with the socio-economic characteristics, Personality variables and communication behavior towards innovativeness (Rogers, 1995). According to Rogers, early adopters have more formal education than later adopters have and are more likely to be adopted as fast as they can.

In relation to persuasion, Rogers (1995) emphasized that the potential adopter's attitude towards the innovation is formed in this stage. By anticipating and predicting future use satisfaction and risk of adoption, the potential adopter develops positive or negative attitudes to the innovation, which play important role of modifying the final decision (Rogers, 1995). Once an individual engages in activities that lead to either an adoption or rejection

of an innovation, the decision stage occurs then. In this stage, the adopter starts to actively seek out information about the innovation that assists the decision-making. In the implementation stage mental information processing and decision making come to an end, but the behavioral change begins. After the adoption of innovations, the adopter keeps evaluating the results of his/ her decision and this forms the confirmation stage (Rogers, 1995).

### **Empirical Review**

A number of studies have been done in the area of e-banking adoption in both industrial and financial sectors. Most of these studies can be used as a basis for studying banks. There are therefore abundant empirical findings on the knowledge and utilisation of e-banking.

### **Level of Awareness of E-Banking**

Consumers' level of awareness of internet banking influences the adoption of internet banking. The internet banking literature supports that individual factors like knowledge (Polatoglu & Ekin, 2001) has an impact on consumer's adoption of internet banking. Sathye (1999) highlighted that many consumers were simply unaware of internet banking and its unique benefits. Here knowledge refers to the consumers' awareness of internet banking and the benefits associated with internet banking, and their knowledge of how to use basic technology. Colgate et al. (2003) states that when consumers made decisions for different alternatives in the market place, the awareness of the existing alternatives was a determinant for consumers to stay with their current banking provider.

In this context, Sathye (1999) and Polatoglu and Ekin (2001) empirically supported the idea that consumer knowledge has an effect on

electronic banking adoption. Sathye (1999) explained that the lack of awareness about electronic banking and its benefits contribute to the non-adoption of electronic banking. Furthermore, Polatoglu and Ekin (2001) stated that the more knowledge and skills a consumer possessed about electronic banking, the easier it was for the consumer to utilize electronic banking. Therefore, consumers who are more aware of internet banking are more likely to perceive internet banking as more useful, easy to use and more reliable, thereby influencing adoption of internet banking. Hence the following hypotheses have been framed in this context; Awareness level of consumers on the concept of internet banking has a positive effect on the perceived ease of use of internet banking. Also, awareness level of consumers on the concept of internet banking has a positive effect on the perceived usefulness of internet banking. The last hypothesis states that awareness level of consumers on the concept of internet banking has a positive effect on the perceived reliability on internet banking (Polatoglu & Ekin, 2001). Awareness has been explained in three dimensions with respect to the conviction behind the concept and the usage. These are perceived usefulness, perceived ease of use, and perceived reliability.

### **Perceived Usefulness**

Davis (1989) asserts that the decision to use new technology is determined by the extent to which a person believes that it is cost effective in providing goods or services compared to the current method. PU is defined as the degree to which a person believes that using a particular technology will enhance his performance. The PU is also an important variable from TAM (Cardoso & Araujo, 2009). PU has been confirmed as an important variable

that influences users' technology acceptance and therefore has received a great deal of attention from previous researchers. Internet banking provides two major advantages: convenience (Gerrard & Cunningham, 2003; Polatoglu & Ekin, 2001) and quick service (Pikkarainen, Pikkarainen, Karjaluoto & Pahnla, 2004), compared to traditional banking services. Convenience and effective management of personal finances are two advantages in using internet banking. Therefore if consumer perceives internet banking to have perceived usefulness, then the consumer is more likely to perceive internet banking as easy to use and reliable and also influence adoption of internet banking. Hence it was hypothesized that; Perceived usefulness has a positive impact on perceived ease of use of internet banking, perceived usefulness has a positive impact on perceived reliability on internet banking, and also, perceived usefulness has a positive impact on consumer adoption of internet banking (Pikkarainen et al., 2004).

### **Perceived Ease of Use**

Perceived ease of use refers to the degree to which a person believes that using a particular system would be free of effort. Extensive research over the past decade provides evidence of the significant effect of perceived ease of use on usage, either directly or indirectly through its effect on perceived usefulness (Agarwal & Prasad, 1999). Information technologies that are easy to use will be less threatening to the individual (Jin & Kim, 2013). This implies that perceived ease of use is expected to have a positive influence on users in their interaction with internet banking systems. It is also found that ease of use positively correlates with use of consumer technologies, such as computer software. Suganthi et al. (2001) establishes therefore that, the more



the consumer perceives internet banking as easy to use, the more he or she is likely to adopt internet banking. This has brought to bear the hypothesis that perceived ease of use has a positive effect on consumer adoption of internet banking. That is, once an individual notifies that, he/she would not be constrained in an attempt to using e-banking/internet banking there is the high tendency of its adoption.

### **Perceived Reliability**

Customers frequently do not trust internet technology for two specific reasons: Security of the system and worries about the reliability of internet services (Lee & Turban, 2001). Strong concern about security is one common factor related to unwillingness to use internet channels for commerce (Black et al., 2002). Most customers are not satisfied with the infrastructure of web security systems. In internet banking, security is one of the most important future challenges, because customers fear higher risk in using the web for financial transactions (Gerrard & Cunningham, 2003; Sathye, 1999). This study considers “Reliability” which explains the degree to which internet banking is perceived to be safe and reliable” in the offering and secure transmission of financial transactions. If the potential adopter of internet banking perceives that the new technology is not safe and believes that mistakes are likely to occur, she or he is not likely to adopt (Dabholkar, 1996).

Sathye (1999) and Polatoglu and Ekin (2001) found that the security dimension was an important determinant for consumers who used electronic banking. Furthermore, Sathye (1999) found that security was positively related to the use of electronic banking. For banks, their immediate need is not simply to reduce fraud in internet banking. It is also about retaining consumers’

confidence and making customers rely, not just in their bank and its ability to deliver secure access to their money, but also in internet banking as a key delivery channel. Therefore, perceived reliability is expected to have a positive influence on adoption of internet banking. Perceived reliability has a positive impact on consumer adoption of internet banking.

### **Role of ICT in Banking**

Information and communication technologies are playing a very important role in the advancements in banking. In fact information and communication technologies (ICT) are enabling banks to make radical changes to the way they operate. According to Consoli (2003), the historical paradigm of IT provides useful insights into the 'learning opportunities' that opened the way to radical changes in the banking industry such as the reconfiguration of its organizational structure and the diversification of the product line.

Banks are essentially intermediaries, which create added value by storing, manipulating and transferring purchasing power between different parties. To achieve this, banks rely on ICT to perform most functions, from book keeping to information storage and from enabling cash withdrawals to communicating with customers (Shah & Clarke, 2009). In developed countries at least, this high degree of reliance on ICT means that banks spend a large chunk of their budget on acquiring as well as maintaining these technologies. A focus on ROI reveals that ICTs provide a very limited return unless accompanied by changes in organizational structures and business processes. These changes also need to be followed by a diversification of service offerings, with many banks introducing new product lines such as credit cards,

stock brokerage and investment management services. Thus, ICT has mostly enhanced productivity, as well as increased the choice for customers both in terms of variety of services available and in terms of the ways in which they are able to conduct their financial activities (Shah & Clarke, 2009).

Pikkarainen et al. (2004) indicated that banks have the choice to offer their banking services through various electronic distribution channels technologies such as Internet technology, video banking technology, telephone banking technology, and WAP technology. They also indicated that internet technology is the main electronic distribution channel in the banking industry. In other words, e-banking as an online banking that involves the provision of banking services such as accessing accounts, transferring funds between accounts, and offering an online financial service.

Wang, Wang, Lin and Tang (2003) claim that in the 1990s e-banking was under-utilised as business organisations used it only to market their products and services. Thornton and White (2001) examining customer orientations and usage of financial distribution channels in the Australian financial industry found that more recently most financial institutions faced with competitive pressure after the introduction of deregulation in 1983, have rethought their strategies to take full advantage of IT.

Rafiu (2007) opined that the challenge to expand and maintain banking market share has influenced many banks to invest more in making better use of the internet. The emergence of e-banking had made many banks rethink their IT strategies in competitive markets. This finding suggests that the banks that fail to respond to the emergence of e-banking in the market are likely to

lose customers and that the cost of offering e-banking services is less than the cost of keeping branch banking.

This notion was also confirmed in a study conducted by Jasimuddin (2004) who examined the role of e-banking in Saudi Arabia. The study indicated that the majority of Saudi banks had taken advantage of internet technology to establish web sites but few offered e-banking services. The study suggested that if the Saudi Arabian banking industry wished to be successful in the global economy it would need to integrate internet technology into its banking strategy.

Ayo (2006) investigated the prospects of e-commerce based on ability, motivation and opportunities (AMO) model and observed that virtually all companies have online presence. The paper reported the motivation and opportunities for e-commerce as low based on lack of e-Payment infrastructure and access to information and communication technology (ICT) facilities. Also, in an empirical assessment of customer acceptance of e-Commerce carried out in Germany, Buse and Tiwari (2006) observed that, the highest mobile users are top management, followed by self-employed, salaried class, students and others. Government employees were found not to patronize mobile banking; the most favoured reason for carrying out mobile banking is ubiquity, next is overview of bank account, followed by immediacy; and the highest fear of customers about mobile banking is that of insecurity, next is cost, and uncomfortably.

Mahdi and Mehrdad (2010) used chi-square to determine the impact of e-banking in Iran and the findings from the viewpoints of customers is that, e-banking cause higher advantages to Iranians. In other words, Iran banks

provide services that the customers are deriving satisfaction with particular reference to the use of e-banking.

In a similar study, Jayawardhena and Foley (2000) explored e-banking as a new delivery channel arguing that e-banking may help to overcome the inherent disadvantages of traditional banks; it is very clear that if e-banking conducted successfully it leads to big volume of transactions. Further, Pazi, Chatwin, Young, Birch and Wang (2009) argue that the internet may be exploited as a new delivery channel by the financial services industry to completely reorganize the structure of banks. It means that conducting e-banking in Iran leads more usage of ATM in Iran. The authors came to conclusion that the active ATM in banking sectors will cause cash circulation decreases, the efficiency of banking sector will increase, as: client banking costs decreases (less cash fees to pay); shop keeper/service provider costs will decrease; and bank costs decrease (cash storage, less checking and processing costs), customers have not enough knowledge related to e-banking in Iran. Accordingly the null hypothesis is rejected also. The authors believe that the lack of enough information on e-banking in Iran may cause less efficiency of Iranian banks.

Chiemeke, Evwiekpaefe and Chete (2006) conducted an empirical investigation on adoption of e-banking in Nigeria. The study identified the major inhibiting factors to Internet banking adoption in Nigeria such as, insecurity, inadequate operational facilities including telecommunications facilities and electricity supply, and made recommendations on how Nigeria banks can narrow the digital divide. Also, the report revealed that Internet banking is being offered at the basic level of interactivity with most of the

banks having mainly information sites and providing little Internet transactional services.

Similarly, Agboola (2006) investigated electronic payment systems and tele-banking services in Nigeria. The findings revealed that there has been a very modest move away from cash. Payments are now being automated and absolute volumes of cash transactions have declined. The result of the study revealed that tele-banking is capable of broadening the customer relationship, retain customer's loyalty and enable banks to gain commanding height of market share if their attendant problems such as, ineffectiveness of telecommunications services, epileptic supply of power, high cost, fear of fraudulent practices and lack of facilities necessary for their operation were taken care of. Thus, going by the findings of most studies, we can argue that the literature on the impact of e-banking is inconclusive especially in developing economies and serve as an open ground for more research in the area of e-banking. From this, a direction was not given as how there has been change to payment system and the research methods used and the coverage and the type of e-banking services that users perceived. This current study moves from this direction in terms of approach.

Hua (2009) conducted an experiment to investigate how users' perception about online banking is affected by the perceived ease of use of website and the privacy policy provided by the online banking website. Nyangosi, Arora and Singh (2009) argued that banking through electronic channels has gained increasing popularity in recent years. This system, popularly known as 'e-banking', provides alternatives for faster delivery of banking services to a wide range of customers. The overall result indicates that

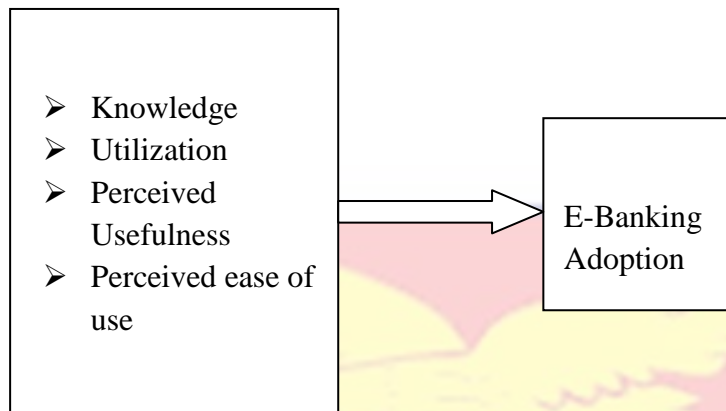
customers in India and Kenya have developed positive attitudes and they attach much importance to the emergence of e-banking. These though have indicated how users perceive online banking, they did not indicate the research methods used and the coverage and the type of e-banking services that users perceived.

Wise and Ali (2009) argued that many banks in Bangladesh want to invest in ATMs to reduce branch cost since customers prefer to use them instead of a branch to transact business. Rahman (2010) who is the Governor of Bangladesh Bank argued that Bangladesh Bank has achieved a historic milestone in the trade and business arena, departing from conventional banking with the introduction of e-banking recently; a giant stride towards digital Bangladesh. It can be realized that, this study did not indicate the actual methodology used and even the results from which policy implications can be drawn.

In all, it can concluded that, most of studies above did not indicate the research methods used and the coverage and the type of e-banking services that users perceived which this study seeks to bridge the gap to inform policy makers and other stakeholders.

### **Conceptual framework**

This framework has been taken from the theoretical principles of the the research in which the variables such as knowledge, utilization, perceived usefulness, perceived ease of use have been considered as independent variables and the variable such a e banking adoption has been thought of as the dependent variable as indicated below:



**Source: authors Construct**

From the above conceptual frame, e-banking adoption can be seen to be influenced by the indicators or variables

**Chapter Summary**

Therefore, the purpose of the above literature review was to review the studies on the knowledge and utilisation of e-banking with focus on the National Investment Bank in the Central Region Ghana. The chapter discussed the influence of knowledge, utilisation, perceived usefulness, and perceived ease of use on e-banking. Perspectives of different scholars and researchers were presented so as to establish what had already been done that was relevant for the study. On both the theoretical and empirical side, the literature revealed that e-banking is greatly influenced by knowledge, utilisation, perceived usefulness, and perceived ease of use. Indeed, empirical studies on analysing the adoption of e-banking facilities for developing countries cases including Ghana with focus on the banking industry using quantitative approach have been very elusive.



## CHAPTER THREE

### RESEARCH METHODS

#### Introduction

This chapter dealt with the procedure employed to achieve the objectives of the study. The purpose is to state how this study was carried out and to provide evidence that the study went through the appropriate scientific method of investigation. The chapter consists of sub-topics such as the introduction, the research design, study area, the target population, sample and sampling procedure, sources of data, data collection instrument, data collection procedure, and data processing and analysis as well as summary of the chapter.

#### Research Approach

The study is quantitative in nature and adopted a quantitative approach in which quantitative data were collected and analysed in order to describe the specific phenomenon in its current state. Quantitative approach was chosen because it enabled the study to assess the level of knowledge and utilisation of e-banking products by the customers in the said bank. It is used to obtain information concerning the current status of the patronage of e-banking services among bank users.

#### Research Design

The study is a descriptive one in which observations about knowledge and adoption of e-banking facilities were described, therefore survey, a non-experimental design was used to find out information relating to the objectives of the study. According to Babie (2010), this is probably the best method

available to social scientists who are interested in collecting original data for describing a population too large to be observed directly, as in this study.

### **Study area**

The study was conducted at the 3 branches of National investment bank (NIB) in Central region. The branches are Cape coast NIB, Swedru NIB and Dunkwa offin NIB. NIB was established by an act of parliament in 1966 to provide investment capital to industries and manufacturing companies. Over time it has expanded its functions and now into commercial banking activities such as savings accounts, current accounts , fixed deposit accounts etc. The bank has 52 branches nationwide with most of them being found at the region capitals.

### **Population**

This is the entire set of units for which the survey data are to be used to make inferences. Thus, the target population defines those units for which the findings of the survey are meant to be generalized. The target population used in the study included all customers of the three National Investment Banks in the central region totaling about fifteen thousand (15,000) (NIB Customer Service Data, 2017) who have been banking with the banks for at least continuously one year.

### **Sampling Procedure**

This section dealt with how to get the sample from the population and the number of respondents used in the study. The sampling technique is a scheme that is used to select the sample from the population. For the purpose of the study, simple random sampling technique was used to select participants involving customers of the bank. The reason for choosing this technique is that

it gives the respondents equal chance of being select for the study and can help achieve the objectives of the study. This sampling procedure will involve the lottery basis to select the participants from the list of customers of the bank. The method was used to select three hundred and seventy (370) clients for the study. This sample section was based on the Krejcie and Morgan (1970) sample determination table. The 3 bank managers were interviewed and customers were randomly sampled. These 370 respondents were the main sources of primary data that provided answers to the research questions.

### **Data Collection Instrument**

In this study, questionnaires and interview guides were used as the main instruments of data collection. The questions were spread out and made simple so as to avoid misinterpretation and boredom and enhance the response rate as respondents spent less time in answering many questions. Questions included both closed-ended and opened-ended types. Mutually exclusive and exhaustive response categories of different types for closed-ended questions were considered.

The open-ended questions were pre-coded to facilitate data processing. The open-ended questions were also included so that participants also express their views about knowledge and utilisation e-banking facilities. Thus, spaces were provided for them to express their views and opinions. To ensure confidentiality, the data collecting instruments were made anonymous. To ensure reliability and validity, the questionnaires and interview guides were pilot tested.

### **Data Collection Procedures**

To extract the maximum attention and involvement of the respondents in the study, data were collected by administering the interview guide and questionnaires to the participants. The procedure involved first, a letter of consent was dispatched to the respondents to seek the approval of the study. The participants were not only briefed on the purpose of the study with no use of deception but also informed on the academic purpose of the study hence encouraged to provide their candid information on the questions. A period of about two weeks was set for the interview with these stakeholders.

### **Sources of Data**

In this study, primary data were used. Primary data are data collected as firsthand information from the identified respondents. Primary data were sourced from the questionnaire from the field specifically from the respondents of the selected institution on the variables.

### **Pre-Testing**

The data collection instrument were pre-tested in order achieve accuracy and precision in the measures used. This is important to check whether the instruments will be able to measure the variables understudy. This involves reliability and validity tests.

### **Reliability and Validity**

These are very important concepts in research especially in primary studies. When results from a study are not reliable and valid, the conclusions and recommendations are void. To achieve reliability of the results, the study followed the widely used statistical test known as Cronbach's alpha to assess the level of reliability. Although studies do not have a specific Cronbach alpha

score, a score of closer to 0.7 and above is assumed to be relatively reliable (Pallant, 2007). The study also relies on both theoretical indicators and empirical measurements which have been validated to design the questionnaire to enhance the validity. Moreover, pre-test is also conducted to ascertain any shortcomings in the instrument and subsequently review the instruments to reflect the needed changes.

### **Ethical Considerations**

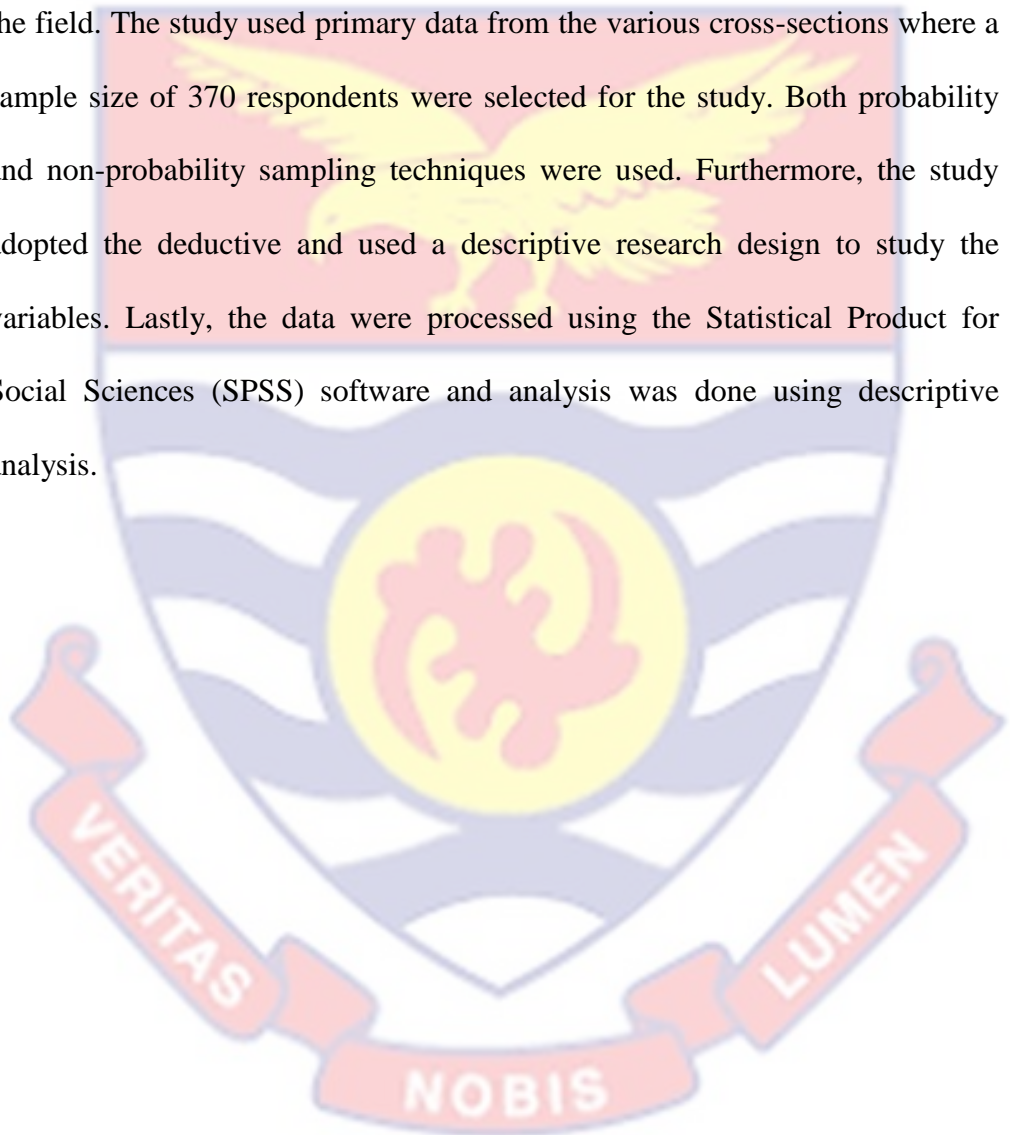
The study depended on the responses of respondents. This study sought to comply with ethical standards devoid of any liabilities to the respondents and also administer clear questionnaire intended to derive the needed response. Thus, the study assured the respondents that whatever they say by way of information will remain confidential. The purpose of the study was explained to the respondents. This was done to avoid deception. Not only the above, the study also sought the consent of the appropriate authorities before collecting the data. As a result, the respondents gave out information voluntarily for the study. The goal of ethics in research is to ensure that no one is harmed or suffered adverse consequences from participating in research activities.

### **Data Processing and Analysis**

This section of the study concerned with preparation of the data collected for processing and analysis. This was to ensure the data collected is devoid of avoidable errors. This comprised editing, coding, data cleaning and data entry. The questionnaires were edited, coded, entered to enable data collected to be processed using SPSS (version 20.0). The data analysis was done using descriptive statistics such as frequencies, means etc.

## Chapter Summary

This chapter presented the research methods appropriate for conducting the study. This study followed (Ankrah, 2014), Owusu-Afriyie (2012), Singhal (2017), and Amutha (2016) to design the appropriate research instrument for the study. Questionnaire were used for collecting the data from the field. The study used primary data from the various cross-sections where a sample size of 370 respondents were selected for the study. Both probability and non-probability sampling techniques were used. Furthermore, the study adopted the deductive and used a descriptive research design to study the variables. Lastly, the data were processed using the Statistical Product for Social Sciences (SPSS) software and analysis was done using descriptive analysis.



## CHAPTER FOUR

### RESULTS AND DISCUSSION

#### Introduction

This chapter presented the analysis of the data collected from the field. Specifically, it presented the findings of the study. This chapter is divided into sections. The first section dealt with the demographics of the respondents while the second, third, fourth and fifth sections dealt with the objectives of the study.

#### Demographics of the Respondents

This section presented the demographics of the respondents contacted during the data collection exercise. Table 2 presents the gender of the respondents. From Table 2, the results show that one hundred and ninety seven (197) of the respondents representing about 53.2% were females whereas one hundred and seventy-three (173) of them representing about 46.8% were males. Thus, the results imply that female respondents or customers of NIB in the study area were more than their male counterparts.

**Table 2: Gender of the Respondents**

Gender	Frequency	Percent
Female	197	53.2
Male	173	46.8
Total	370	100.0

Source: Field survey, (2018)

Table 3 also presents the age categories of the respondents in the study area. From the results, it can be seen that one hundred and fourteen (114) of the respondents representing about 30.8% were between the ages of 21-25 years while eighty-seven (87) of the respondents representing about 23.5% were between the ages of 26-30 years. In addition, eighty (80) of the

respondents representing about 21.6% were between the ages of 31-35. In addition, twenty-eight (28) of them representing about 7.6% were between the ages of 36-40 years, twenty-seven of them representing about 7.3% were between the ages of 41 to 45 years. Further, twenty-four (24) of the respondents representing about 6.5% were 51 years and above. Finally, ten of the respondents (10) representing about 2.7% were between the ages of 46-50 years.

**Table 3: Age of Respondents**

Age	Frequency	Percent
21-25 years	114	30.8
26-30years	87	23.5
31-35years	80	21.6
36-40years	28	7.6
41-45 years	27	7.3
46-50years	10	2.7
51-years and above	24	2.7
Total	370	100.0

Source: Field survey, (2018)

Furthermore, the results in Table 3 shows that the respondents between the ages of 21 and 25 years were more followed by those between the ages of 26 and 30 years up to those who were 46-50 years. This implies that majority of the customers in the area understudy were in their youthful age and for that matter they can contribute immensely to the success and development of the bank and the region at large (Salehi et al., 2008).

Table 4 indicates the level of education of the respondents. From the results it can be shown that, two hundred and thirty-one (231) of the respondents representing about 62.4% have tertiary education, whereas fifty-eight (58) of the respondents representing about 15.7% were in the



O’Level/SHS education rank whereas twenty-six (26) of them representing about 7.0% were in the JHS/Middle school education rank. In addition, twenty-eight (28) of the respondents representing about 7.6% were in the A’level rank level of education. Moreover, nineteen (19) of the respondents representing about 5.1% were in the primary school rank level of education. Lastly, five, three (5, 3) of them representing about 1.4%, 0.8% respectively were in the “no” education and others ranks respectively as indicated in Table 4. This by implication suggests that majority of the respondents in the area under consideration have high level of education which is good for human capital development and economic development within the region and the country at large (Christopher, Mike, Visit & Amy, 2006).

**Table 4: Level of Education**

Level of education	Frequency	Percent
Primary	19	5.1
JHS/Middle School	26	7.0
SHS/O’level	58	15.7
A’level	28	7.6
Tertiary	231	62.4
None	5	1.4
Others	3	0.8
Total	100	100.0

Source: Field survey, (2018)

Table 5 indicates the number of years the respondents have been with NIB. The results showed that, one hundred and seventy-two (172) of the respondents representing about 46.5% said they have been with the bank for 1-3 years whereas eighty-two (82) of them representing about 22.2% indicated 4- years, 54 of them representing about 14.6% indicated 10 years and above. In addition, forty-eight (48) of the respondents representing about 13.0%

indicated that they have been with bank for less than a year. Lastly, fourteen (14) of the respondents representing about 3.8% indicated 7-9 years. The results imply that majority of the respondents in the area under investigation have been with the NIB for 1-3 years followed by 4-6years, 10 years and above, and finally 7- 9 years. The results also imply that the respondents have prospects of doing business with the bank continuously which is good can boost business and economic development within the region.

**Table 5: Years with NIB**

Responses	Frequency	Percent
Less than a year	48	13.0
Between 1-3 years	172	46.5
4-6 years	82	22.2
7-9 years	14	3.8
10 years and above	54	14.6
Total	370	100.0

Source: Field survey, (2018)

Table 6 presents the type of account customers have with NIB in their respective locations. The results indicate that, two hundred and nineteen (219) of the respondents representing about 59.2% have savings accounts whereas One Hundred and fifty-one (151) of them representing about 39.7% have current accounts. Thus, the results imply that majority of the customers prefer having savings account with the banks. The many savings accounts are an indication that customers have good plans to cushion their future in case of any uncertainty.

**Table 6: Type of Account with NIB**

Type of Account	Frequency	Percent
Current Account	219	39.7
Savings Account	151	59.2
Total	370	100.0

Source: Field survey, (2018)

### Descriptive Statistics

Table 7 presents the results of the descriptive statistics on the variables under consideration. Respondents were presented with a set of measuring items captured under the objectives and respondents were to respond to each item using a rating scale measurement. Thus, from Table 7, an aggregated mean (M) and standard deviation (SD) were calculated for individual items in the questionnaire as well as the overall measuring indicator for the purpose of comparison. As depicted in Table 7, the evidence that emerged from the analysis of responses given by respondents suggested that on average, “the extent to which internet banking is available to respondents” is (M = 1.68, SD = 0.69) which is quite high.

In addition, respondents gave high approval rating (M = 2.02, SD = 1.13) to the statement “the extent to which electronic cards is available to respondents”. The next approval rating (M = 1.80, SD = 0.70) was given to the statement that “electronic transfer is available to respondents”. Also, in terms of “the extent to which SMS mobile banking is available to respondents” has a mean and standard deviation of (M = 1.58, SD = 0.66). The results imply that within the area under investigation, availability of electronic cards received the highest mean indicating how customers of NIB prefer these facilities.

**Table 7: Descriptive Statistics**

Variables	N	M	SD
The extent to which internet banking is available to respondents	370	1.68	0.68
The extent to which electronic cards is available to respondents	370	2.02	1.32
The extent to which SMS mobile banking is available to respondents	370	1.58	0.66
The extent to which electronic transfer is available to respondents	370	1.80	0.70

Source: Field survey, (2018)

**Assessing the Availability and Accessibility of the various E-Banking Facilities**

This section presents the results concerning the assessment of the availability and accessibility of the various e-banking facilities at the NIB which addressed the first objective of the study as indicated in Table 8. In assessing the availability and accessibility of the various e-banking facilities, the results in Table 8 shows that, one hundred and seventy-nine (179) of the respondents representing about 53.2% said electronic cards are available and they have access to when doing business with the bank. In addition, eighty-one (81) of them representing about 21.9% were of the view that SMS mobile banking is also available and it is accessible to them at any time. Moreover, seventy-nine (79) also representing about 21.4% indicated that they have access to internet banking in their respective locations. The results further show that fourteen (11) of them representing about 3.0% indicated availability and accessibility of electronic transfers at the NIB. Finally, two (2) of them

representing about 0.5% indicated availability and accessibility of other facilities apart from the ones indicated at the NIB. The results imply e-banking facilities available and that customers have access to them as seen in Table 8. Also, the results indicate that customers are interested in using these available facilities which in turn facilitate easy business transactions. In linking the results to the available empirical evidence, the results are line with studies such as Wise and Ali (2009), Nyangosi, Arora and Singh (2009), and Mahdi and Mehrdad (2010) who found that bank customers are taking advantage of the various electronic facilities making businesses flexible.

**Table 8: Availability and Accessibility of E-Banking Facilities at NIB**

Response	Frequency	Percent
Internet Banking	79	21.4
Electronic Cards	179	53.2
SME Mobile Banking	81	21.9
Electric Transfers	11	3.0
Others	2	0.5
Total	370	100.0

Source: Field survey, (2018)

**The extent to which Respondents have utilised E-Banking Services at NIB**

Table 9 presents the extent to which customers have utilised e-banking services at NIB in their respective locations. This question demands “Yes” or “No” responses. The results indicate that, three hundred and thirty-nine (339) of the respondents representing about 91.6% said “yes”, meaning they have utilised e-banking services at NIB whereas only thirty-one (31) of them representing about 39.7% said “no”. Thus, the results imply that majority of the customers are utilizing e-banking services offered by NIB. The results are

also in line with studies such as Wise and Ali (2009), Ching and Ellis (2004) and Mahdi and Mehrdad (2010).

**Table 9: Extent to which Respondents have utilised E-Banking Services at NIB**

Response	Frequency	Percent
Yes	339	91.6
No	31	8.4
Total	370	100.0

Source: Field survey, (2018)

**Assessing the Awareness of Customers of the E-Banking Facilities available at National Investment Bank**

This section presents the results concerning assessing the awareness of customers of the e-banking facilities available at NIB which addressed the second objective of the study. When the respondents were asked if they are aware of ATM they indicated their responses by “yes” or “no” as presented in Table 10. From Table 10, the results indicate that, three hundred and twenty (320) of the respondents representing about 86.5% said “yes”, meaning they are aware of ATM at NIB whereas only fifty (50) of them representing about 13.5% said “no”. Thus, the results imply that majority of the customers are fully aware of the use of ATM indicating how financially literate the respondents are in utilising e-banking services offered by NIB. The results are still in line with studies such as Kamel (2005), Nath, Shrick and Parzinger (2001), and Mahdi and Mehrdad (2010).

**Table 10: Awareness of ATM at NIB**

Response	Frequency	Percent
Yes	339	91.6
No	31	8.4
Total	370	100.0

Source: Field survey, (2018)

Further the results in Table 10 stress that many customers are now interested in using the e-banking facilities which are readily available at the bank which are facilitating business transactions. The results imply that awareness of e-banking facilities plays an important role in e-banking adoption as Goi (2005) explains that the lack of awareness about electronic banking and its benefits contribute to the non-adoption of electronic banking.

#### **Knowledge and Utilisation of E-Banking Services by Customers**

This section presents the results regarding the knowledge and utilisation of e-banking by customers which addressed the third objective of the study. The respondents were first asked if they have knowledge about e-banking by indicating either “yes” or “no”. From Table 11, the results indicate that, three hundred and fifty-five (355) of the respondents representing about 95.9% said “yes”, meaning they have full knowledge of e-banking while only fifteen (15) of them representing about 4.1% said “no”. Thus, the results imply that majority of the customers have full knowledge of e-banking indicating how this can transcend into effective business with the bank and the region as well. The results are in line with studies such as Agboola (2006) and Nyangosi et al. (2009) who indicated that knowledge of e-banking can effect on business activities.

**Table 11: Knowledge of E-Banking**

Response	Frequency	Percent
Yes	355	95.9
No	15	4.1
Total	370	100.0

Source: Field survey, (2018)

**The Extent to which Electronic Card Holders operate the ATM**

The respondents were further asked the extent to which they operate the ATM in their locations. According to the responses given, three hundred and twenty (320) of the respondents representing about 86.5% said they can operate the ATM themselves without any assistance. Moreover, forty-three (43) of the respondents representing about 11.6% said they can operate the ATM with assistance whereas seven of them (7) representing 1.9% said “others” meaning they have others ways of operating the ATM. By implication, majority of the respondents have full knowledge of operating the ATM and this show that customers really patronise the NIB e-banking services and it is good for business opportunities and development. The results are still in line with studies such as Agboola (2006), Jayawardhena and Foley (2000) and Nyangosi et al. (2009).

**The extent to which Respondents receive text messages for transactions**

This section presents the results regarding the text messages they receive through e-banking. The respondents were asked if they do receive text messages as part of e-banking in their dealing with NIB by indicating either “yes” or “no”. The results indicate that, three hundred and thirteen (313) of the respondents representing about 84.6% said “yes”, meaning they receive text messages while fifty-seven (57) of them representing about 15.4% said “no”.



The results imply that majority of the customers confirm that they receive text messages indicating how effective the services are. This confirms the studies by Agarwal and Prasad (1999) and Davis et al. (1989).

### **The Extent to which Respondents are Abreast with E-Banking**

In addition, the respondents were asked if they are abreast with e-banking by indicating either “yes” or “no”. The results show that, three hundred and ten (310) of the respondents representing about 83.8% said “yes”, meaning they are abreast with e-banking facility. However, sixty (60) of them representing about 16.2% responded “no”. This also indicates that some customers are still not abreast with e-banking facility. Overall, the results imply that majority of the customers are abreast with e-banking facility which indicates the rate at which people are recently embracing for effective businesses. This confirms the studies by Agarwal and Prasad (1999) and Davis et al. (1989).

### **Effective Usage of E-Banking Facilities and Benefits to Customers**

This section presents the results concerning how effective usage e-banking benefits customers in terms of if respondents’ have ever experienced their electronic cards stacked which addressed the last objective of the study. They were supposed to indicate either “yes” or “no”. The results show that, one hundred and seventy-five (175) of the respondents representing about 47.3% responded “yes”, portraying their usage of e-banking products particularly electronic cards sometimes give them problems in their dealing with NIB. However, one hundred and ninety-five (195) of them representing about 52.7% responded “no” portraying their usage of e-banking products particularly electronic cards have not given them problem in terms of their

cards getting stacked in the ATM. On the whole, the results that suggest that greater part of the respondents have not experienced such a problem by implication.

### **The Extent Respondents Experience Failure to send Notification and Bank Statement through E-Mail by the Bank**

Here, the respondents were supposed to indicate either “yes” or “no” to the questions in terms of any failure to send notifications or accessing bank statements of which the results. The results indicated that, one hundred and ninety-five (195) of the respondents representing about 52.7% responded “yes”, portraying they have experienced system failure in their attempt to send notification and accessing bank statements with NIB. This implies how serious the problem is which needs an immediate attention. However, one hundred and seventy-five (175) of them representing about 47.3% responded “no” portraying they have experienced system failure when sending notifications or accessing bank statements. This also implies that to some extent customers are benefiting from e-banking services offered by NIB. The results are in line with studies by Rafiu (2007) and Jayawardhena and Foley (2000).

### **How Respondents would Rate the Level Effectiveness of E-Banking at the NIB**

In addition to the objective above, the respondents were further asked to rate the level of effectiveness of e-banking at NIB using likert scale “very effective”, “effective”, “not effective”, “not at all effective”. The results indicated that, one hundred and six (106) of the respondents representing about 28.6% responded the e-banking is “very effective” whereas two hundred and thirty-one (231) of the respondents representing about 62.4% said the e-

banking at NIB is “effective”. In addition, thirty-one (31) of the respondents representing about 8.4% said the e-banking at NIB is “not effective” and only two (2) of the respondents representing about 0.5% said the e-banking at NIB is “not at all effective”. These results imply that majority of the respondents rated e-banking at NIB effective which is an indication that the customers really like the e-banking facilities offered by the bank. The results also imply that the bank is doing well in terms of meeting the demands of its customers in the country which will in effect facilitate business transactions. The results are in line with studies by Rafiu (2007) and Jayawardhena and Foley (2000).

### **Interview Guide Analysis**

In assessing the availability of the e-banking facilities at NIB, three branch managers were interviewed and their responses are summarized below. When they were asked to indicate the e-banking facilities available at the bank, they said that *internet banking, fast link which can be accessed through the NIB short code (\*710#), electronic cards, regular ATM, and SMS alert are all available at the bank. This confirms the responses given by the customers as seen above.*

Also, when they were asked whether customers are aware of the available facilities, almost all of them indicated “yes” implying that most customers are aware of the facilities offered by the bank. This still confirms the responses given by the customers which can facilitate business between them.

On the issue of availability and accessibility, when the managers were asked their take on this, they responded that almost all the branches of NIB across the country, e-banking facilities are available and accessible. However,

they indicated that some problems do sometimes occur in terms of accessibility. In general, these managers confirm that customers do patronise the e-banking facilities offered by the bank when they were asked whether the customers patronise the e-banking facilities.

### Chapter Summary

This chapter presented the analyses of the data presented from the field based on the stated objectives. The results were presented in the form of tables. The results of the study showed that on average, “the extent to which internet banking is available to respondents” is ( $M = 1.68$ ,  $SD = 0.69$ ) which is quite high. In addition, respondents gave high approval rating ( $M = 2.02$ ,  $SD = 1.13$ ) to the statement “the extent to which electronic cards is available to respondents”. The next approval rating ( $M = 1.80$ ,  $SD = 0.70$ ) was given to the statement that “electronic transfer is available to respondents”. Also, in terms of “the extent to which SMS mobile banking is available to respondents” has a mean and standard deviation of ( $M = 1.58$ ,  $SD = 0.66$ ).

Further, the study revealed that concerning the assessment of the availability and accessibility of the various e-banking facilities at the NIB which addressed the first objective of the study, majority of the said electronic cards are available and they have access to them. The results concerning assessing the awareness of customers of the e-banking facilities available at NIB which addressed the second objective of the study, majority of the customers indicated that they are fully aware of the e-banking services offered by NIB.

Also, the results regarding the knowledge and utilisation of e-banking by customers which addressed the third objective of the study, in which the

respondents were asked to indicate “yes” or “no” to the questions. Thus, the results indicated that majority of the customers have full knowledge of e-banking at NIB. Finally, the results concerning how effective the usage of e-banking benefits customers in terms of if respondents’ have ever experienced their electronic cards stacked which addressed the last objective of the study indicated on the whole, greater part of the respondents have not experienced such a problem in responding either “yes” or “no” questions.



## CHAPTER FIVE

### SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

#### Introduction

The purpose of this chapter is to present the summary, conclusions and recommendations of this study. The summary presents a brief overview of the objective, research methods and findings made in the study. On the other hand, the conclusions encapsulate the overall outcomes regarding the findings of the study in the light of the research objectives and questions. The recommendations also present specific remedies to be implemented by specific institutions. The chapter also presents some suggestions for future research in the area of the above topic of interest.

#### Summary

Banking industry is considered as a backbone of economy as every other industry needs banks to invest or move financially. E-banking trend is spreading fast in developing countries. Banks are advised to provide internet banking services to its national and international customers. It is proved as a cost effective way for banks. It has enriched relationship with customers by providing them easy to operate mechanism for banking functions. Many innovative banking products are customized to cater individual customer's needs. It provides a greater choice in terms of channel they can use to conduct their business and convenience in terms of when and where they can use e-banking. In recent past, banks are challenged by technological up scale that led to innovative products which stiffed up competition for market share. There is a shift from paper-based to electronic payments and reliance on ATMs rather than costly branch offices to deliver cash and other depositor related services.

Both banks and customers are increasingly migrating from traditional banking channels to the e-banking channel but despite the benefits and advantages of e-banking for both sides, it entails some critical issues both for customers and the banks.

The National Investment Bank (NIB), as part of its strategic management policies has introduced and incorporated e-banking facilities to make the organization provide optimum services to its clients. With e-banking (internet banking), users with personal computer and browser can get connected to the bank's website and perform any of the virtual banking functions as indicated early on. With the rapid diffusion of the internet in banking coupled with the quest to expand and capture a larger share of the banking market, most banks all over the world including NIB have adopted the use of the internet and other electronic channels such as the ATM, Mobile banking and the Cards

This study therefore was to examine the knowledge and utilisation of E-Banking facilities in the National Investment Bank in the Central Region of Ghana. The study used cross-section data set within a descriptive research design. The study employed descriptive statistics in analysing the data. The results of the study showed that on average, "the extent to which internet banking is available to respondents" is ( $M = 1.68$ ,  $SD = 0.69$ ). The respondents gave high approval rating ( $M = 2.02$ ,  $SD = 1.13$ ) to the statement "the extent to which electronic cards is available to respondents". The next approval rating ( $M = 1.80$ ,  $SD = 0.70$ ) was given to the statement that "electronic transfer is available to respondents". Also, in terms of "the extent to which SMS mobile banking is available to respondents" has a mean and

standard deviation of ( $M = 1.58$ ,  $SD = 0.66$ ). The results imply that, availability of electronic cards is what customers considered most.

Moreover, the study also revealed that, majority of the respondents said electronic cards are available at NIB and they have access to them. In terms of the awareness of customers of the e-banking facilities available at NIB, majority of the customers indicated that they are fully aware of the e-banking services offered by NIB.

Also, the results regarding the knowledge and utilisation of e-banking by customers in which the respondents were asked to indicate “yes” or “no” to the questions indicated that majority of the customers have full knowledge of e-banking at NIB. Finally, the results concerning how effective the usage of e-banking benefits customers in terms of if respondents’ have ever experienced their electronic cards stacked indicated on the whole that, greater part of the respondents have not experienced such a problem in responding either “yes” or “no” questions.

### **Conclusions**

The results obtained in this study clearly indicates that the objectives of this study was achieved. Based on the results obtained in this study the following conclusions were reached;

First of all, concerning the first objective, the results indicated that, majority of the respondents said electronic cards are available at NIB and they have access to them and that is what they considered most. In the case of the second objective, in terms of the awareness of customers of the e-banking facilities available at NIB, majority of the customers indicated that they are fully aware of the e-banking services offered by NIB. With the third objective,



regarding the knowledge and utilisation of e-banking by customers in which the respondents were asked to indicate “yes” or “no” to the questions indicated that majority of the customers have full knowledge of e-banking at NIB

Regarding the last objective, concerning how effective the usage of e-banking benefits customers in terms of if respondents’ have ever experienced their electronic cards stacked, the results revealed that greater part of the respondents have not experienced such a problem. Finally, the three managers interviewed indicated that almost all the branches of NIB across the country, e-banking facilities are available and accessible.

### **Recommendations**

Based on the results obtained from the study, the following recommendations are made;

There is the need for the management of NIB and the banking industry in general improve on their electronic banking services to increase availability and accessibility of these facilities since some respondents indicated non availability and accessibility of e-banking facilities. This can be achieved through properly widening of their coverage.

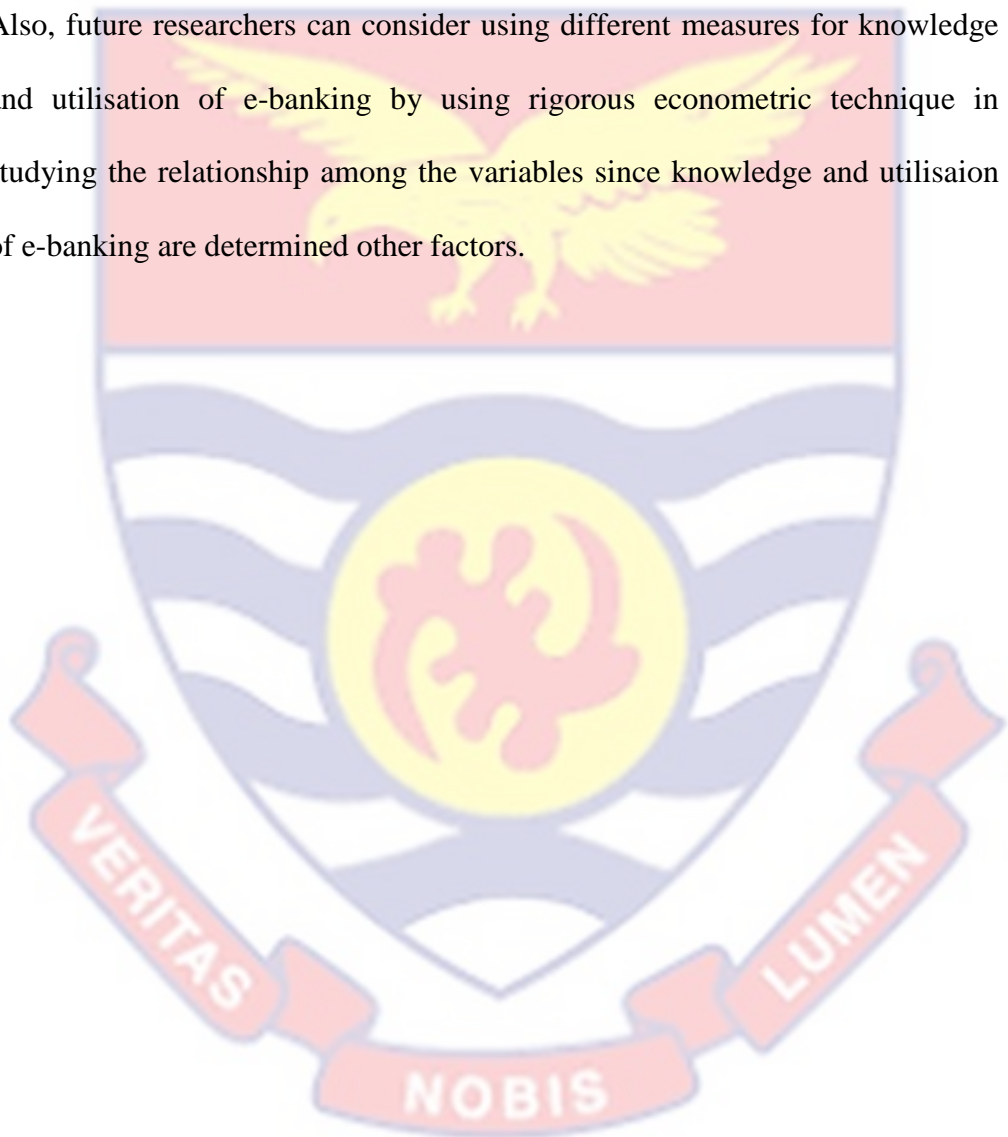
Furthermore, the management of the bank should intensify the awareness creation on the availability of e-banking facilities in the country since some respondents indicated that they are not much aware of these facilities. This can be done through excessive advertisements, organisation of seminars for customers and the use of information.

Finally, management of NIB and other financial institutions should still put in place policies and measures to ensure or improve on the knowledge and utilization of e-banking facilities. Also, the management team and policy

makers of the bank should improve on their activities to avoid any challenges faced by customers in utilising e-banking facilities.

### **Suggestions for Further Research**

Future research could be geared towards examining the adoption of e-banking and its effect on the performance of banks and customers' businesses. Also, future researchers can consider using different measures for knowledge and utilisation of e-banking by using rigorous econometric technique in studying the relationship among the variables since knowledge and utilisation of e-banking are determined other factors.



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## APPENDICES

### APPENDIX A

#### QUESTIONNAIRE FOR CUSTOMERS

##### Introduction

I am Richard Anane, an MBA Student at the University of Cape Coast, conducting a research on the topic “**Knowledge and Utilization of E-Banking Facilities at National Investment Bank (NIB) in the Central Region of Ghana**”. I will be very grateful if you could provide answers to the questions. All information provided will be used for academic purposes and as such, would be treated with confidentiality.

**Instruction: Please tick (✓) or write where appropriate**

##### **PART A BIO-DATA**

1. Age of respondent a) 21-25 [  ] b) 26-30 [  ] c) 31-35 [  ] d) 36-40 [  ]  
e) 41-45 [  ] f) 4-50 [  ] g) 51 and above [  ]
2. Gender a) Male [  ] b) Female [  ]
3. Occupation a) Farming [  ] b) Driving [  ] c) Petty Trading [  ] d) Artisan [  ]  
e) Teaching [  ] d) others, specify .....
4. Marital status a) Married [  ] b) Single [  ] c) Divorced [  ] d) Separate [  ]
5. Educational background a) Primary [  ] b) J.H.S/Middle School [  ] c) SHS/O' Level [  ]  
d) A' Level [  ] e) Tertiary [  ] f) None [  ]  
g) Others specify .....
6. How long have you been with the NIB? a) Less than a year [  ] b) Between 1-3 years [  ]  
c) 4-6 years [  ] d) 7-9 years [  ] e) 10 years and above [  ]
7. What type of account do you hold with NIB? a) Current Account [  ] b) Savings Account [  ]
8. How often do you visit the bank? a) Very often [  ] b) Occasionally [  ]

**PART B**

**AVAILABILITY OF E-BANKING SERVICES**

9. Which of the following e-banking services have you heard available at NIB?

- a) Internet banking [  ] b) Electronic Card(s) [  ] c) SMS Mobile Banking [  ]  
 d) Electronic transfer(s) [  ] d) other(s), specify.....

10. Have you utilized any of the above mentioned services? a) Yes [  ] b) No [  ]

11. If yes, which of them have you ever utilized? a) Internet banking [  ] b) Electronic Card(s) [  ] c) SMS Mobile Banking [  ]  
 d) Electronic transfer(s) [  ]

12. If no, why? .....

13. How would you rate the following e-banking products in terms of their availability, irrespective of whether you have used them before using the scale 1= Always Available, 2= Sometimes Available, 3 = Not Available and 4= Not Available at all?

<b>E-Banking Products</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
Internet banking				
Electronic Cards				
SMS Mobile Banking				
Electronic Transfer(s)				
Other(s), specify				

14. Would you recommend to a friend/relative to patronize e-banking at the NIB?

a) Yes [ ] b) No [ ]

15. Give reason(s) for your answer?

.....  
.....  
.....

**SECTION C**  
**KNOWLEDGE ABOUT E-BANKING**

16. Do you know about E-Banking? a) Yes [ ] b) No [ ]

17. For how long have you heard about E-Banking? a) Up to a year [ ] b) 2-4years [ ] c) 5-7years [ ] d) 8-10years [ ] e) Other(s),

Specify.....

18. Anytime you go to any electronic card terminal joint (eg. ATM) to withdraw money, who operates the machine (Question meant for ONLY electronic card holders)?

a) Myself [ ] b) Someone around [ ] c) Others,

Specify.....

19. Are you aware that the ATM can also be used to check account balance? a)

Yes [ ] b) No [ ]

20. Do you receive a text message on your mobile phone anytime there is a transaction?

a) Yes [ ] b) No [ ]

21. If no, why? Choose from the following:

a) I have not applied for SMS mobile banking service [ ]

- b) I have applied for the service but have never enjoyed it [    ]
- c) I am not aware of such a service [    ]
- d) Others specify.....

22. On the average, would you say you are abreast with E-Banking?

- a) Yes [    ] b) No [    ]

**PARTS D**

**EFFECTIVENESS OF E-BANKING**

25. Have you ever experienced a situation whereby your electronic card gets stacked in the terminal? a) Yes [    ] b) No [    ]

26. Do you experience frequent breakdown of ATM terminals anytime you want to access it?

- a) Yes [    ] b) No [    ]

27. Have there been instances of a failure to send notifications and bank statements through e-mail by the bank? a) Yes [    ] b) No [    ]

28. If yes, how often do you experience this? a) Often [    ] b) very often [    ]

29. How satisfied are you with the following E-Banking products at the NIB?  
Using the scale 1= Very Satisfied, 2= Satisfied, 3 = Not Satisfied and 4= Not Satisfied at all?

<b>E-Banking Services</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>Give Reasons</b>
Internet banking					
Electronic Cards					
SMS Mobile Banking					
Electronic Transfer(s)					
Other(s), specify					

30. How would you rate the level of effectiveness of e-banking at the NIB?

- a) Very Effective [ ] b) Effective [ ] c) Not effective [ ] d) Not at all effective [ ]

31. What other challenges do you face with regards to E-Banking products at the NIB?

.....  
.....  
.....

**PART E**

**IMPEDIMENTS OF E-BANKING**

32. What was the motivation behind your patronage of E-Banking?

- a) It was recommended by friends and relatives [ ]  
b) Once you open an account at the bank, you enjoy the service automatically [ ]  
c) It enhances communication between the bank and I [ ]  
d) Others, specify.....

What is the reason why you are not utilizing E-Banking?

33. Absence of internet facilities at home. a) Yes [ ] b) No [ ]  
35. Low/lack of computer knowledge a) Yes [ ] b) No [ ]  
36. High internet charges at commercial internet cafes a) Yes [ ] b) No [ ]  
37. Delay in issuing ATM cards. a) Yes [ ] b) No [ ]  
38. Discouragement from friends and relatives a) Yes [ ] b) No [ ]  
39. Frequent breakdown of ATMs. a) Yes [ ] b) No [ ]  
40. Others, specify .....

## APPENDIX B

### INTERVIEW GUIDE FOR NIB MANAGERS

#### Introduction

This interview is designed with the intention of collecting data in order to assess the “**Knowledge and Utilization of E-Banking Facilities at National Investment Bank (NIB) in the Central Region of Ghana**”. The researcher will be very grateful if you could provide answers to the questions. All information provided will be used for academic purposes and as such, would be treated with confidentiality.

#### **PART A: BIO-DATA**

1. Age.....
2. Gender.....
3. Marital status.....
4. Educational background.....
5. Working experience.....

#### **PART B: AVAILABILITY OF E-BANKING FACILITIES**

6. What are the E-Banking facilities available at NIB?.....
7. Are customers aware of these facilities.....
8. How available and accessible are these facilities to benefit customers?.....
9. In general, do customers patronize these facilities?.....