

**ASSESSMENT OF KNOWLEDGE AND UTILIZATION OF
E-BANKING FACILITIES IN GHANA COMMERCIAL BANK
LIMITED IN THE YILO KROBO AND THE ASUOGYAMAN
DISTRICT ASSEMBLIES**

BY

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DECLARATION

I, hereby declare that this submission is my own work towards the Commonwealth Executive Master in Business Administration and that, to the best of my knowledge. It contain no material which has been previously published by another person or material which has been accepted for the award of any other degree of the University, except where due acknowledgement has been made in text.

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DEDICATION

This project work is dedicated to my loving husband Mr John Owusu-Afriyie and the Owusu-Afriyie daughters; MaameAchiaa, Nana Fosuaa and AwuramaOwusuaa who inspired me throughout the years of study and throughout the writing of the project work.

KNUST

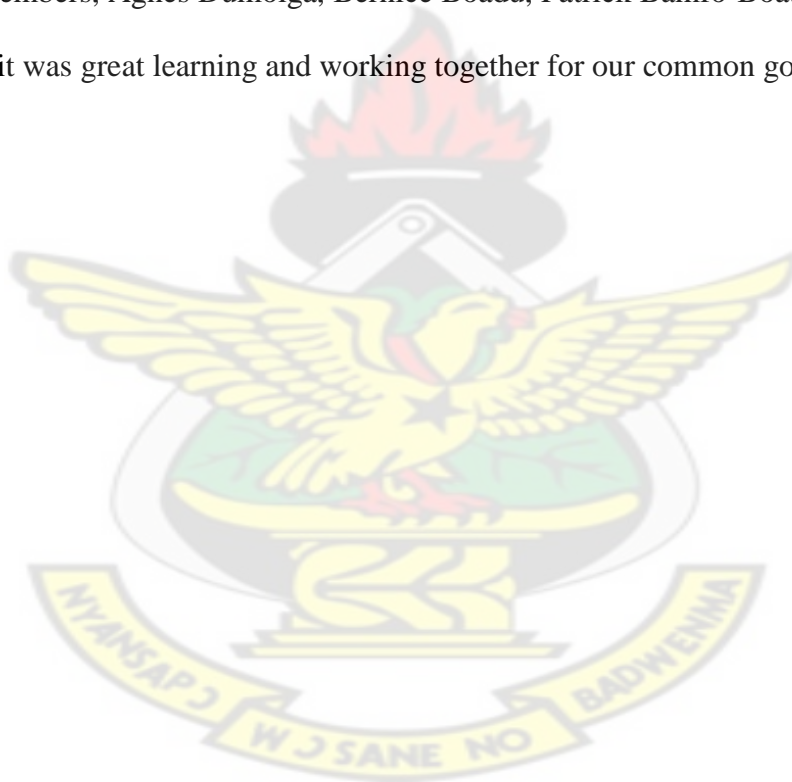


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ABSTRACT

The attempt to catch a greater share of the market coupled with the quest for easy, convenient, cost saving and readily available banking, most banks are now focusing on e banking instead of opening more branches at different geographical locations. In spite of the introduction of e banking, most customers still queue in banking halls struggling to transact business. The study was undertaken in Somanya and Akosombo to assess the knowledge and utilization of e-banking facilities in the Ghana Commercial Bank. Specifically, the study sought to: assess the availability of e-banking facilities in the Ghana commercial bank; assess customers' awareness of e-banking facilities in the Ghana Commercial Bank; examine customers' knowledge and utilization of e-banking facilities and find out how effective these services are to benefit customers.

In this study, systematic sampling technique was used to select a sample of 100 respondents for the study. The data was analyzed by means of SPSS. Charts and frequency table were used to summarize the data. It discovered that e-banking facilities were available and assessable at GCB and they included internet banking, the use of electronic cards and SMS mobile banking. The study however, discovered that even though knowledge about e banking is high among the study population, utilization of these facilities is low. Lack of internet facilities and delay in issuing electronic cards were found to be the factors influencing e-banking in the study area. The researcher recommends that issuing of electronic cards should be decentralized finally; bankers should increase the awareness creation.

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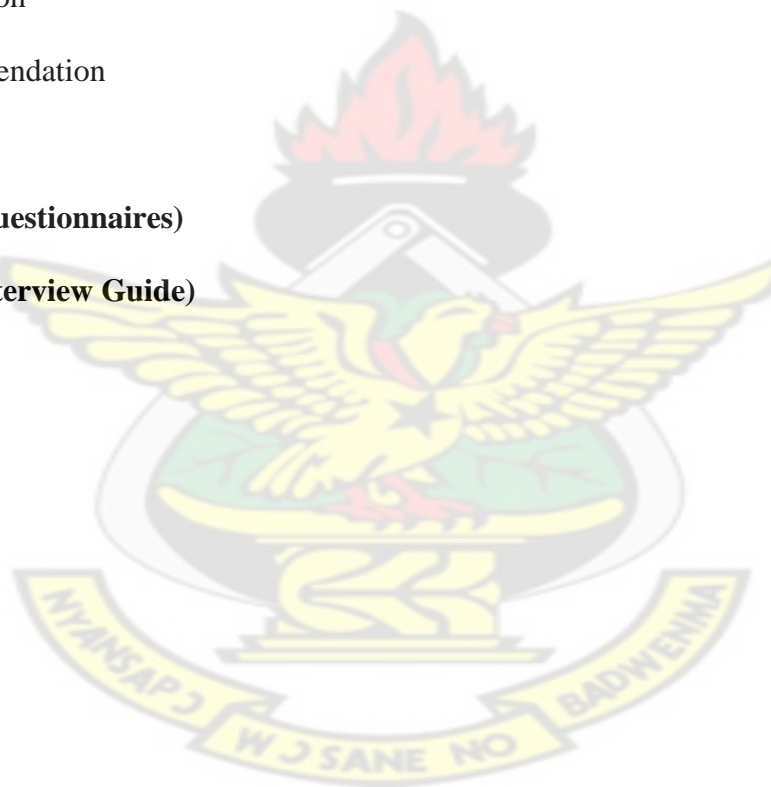
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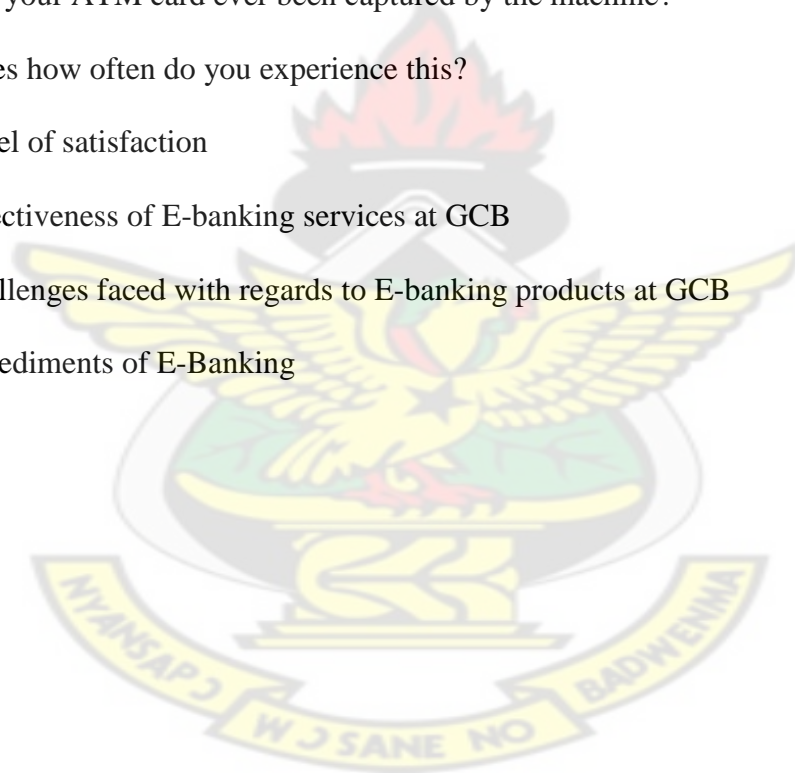
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CHAPTER ONE

1.1 BACKGROUND TO THE STUDY

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.

The Ghana Commercial Bank Limited, 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 the Ghana Commercial Bank Limited has displayed all the services permitted on the internet on the menu.

The types of e-banking services provided by the Ghana Commercial Bank Limited are: internet banking (commernetplus), e-statements, e-alerts, sms-mobile banking, e-zwich and ATM cards-readycash cards, master cards, Visa, Debit and Credit cards.

The researcher wants to investigate whether or not customers are patronizing these services and provide reasons for that.

1.2 STATEMENT OF THE PROBLEM

Banking relies on information technology to acquire process and deliver information.

E-banking offers customers with faster, accessible convenient and readily available services.

For bankers, e-banking is much more efficient and cost saving and has facilitated change in the banking business (Turner, 2002).

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 have adopted the use of the internet and other electronic channels such as the ATM, Mobile banking and the Cards.

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 Ghana Commercial Bank Limited, clients still opt for the traditional way of banking. They have not taken full advantage of such facilities. This low 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 the investigator has decided to study into the knowledge and patronage or adoption of e-banking facilities in Ghana Commercial Bank Limited (G.C.B).

1.3 OBJECTIVES OF THE STUDY

1.3.1 GENERAL OBJECTIVE

The aim of this study was to assess the knowledge and utilization of e-banking facilities in Ghana Commercial Bank Limited in the study areas.

1.3.2 SPECIFIC OBJECTIVES

Based on the problems stated above, the study sought 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 Ghana Commercial Bank Limited;
3. Assess the knowledge and utilization of e-banking services by customers;
4. Examine how effective the usage of e-banking facilities benefits customers.

1.4 RESEARCH QUESTIONS

The pertinent research questions are:

1. What types of e-banking facilities are available and accessible at the various bank branches?
2. Are customers aware of the availability of e-banking facilities at GCB?
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?

1.5 SIGNIFICANCE OF STUDY

One major significance of this study is that it would 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 would also help bank managers' plan how to make these facilities customer friendly. Again, the study would also help the managers of the bank to the effectiveness of their e-banking services and products.

The study would 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.

1.6 SCOPE OF THE STUDY

The study was limited to the YiloKrobo and the Asuogyaman Districts in the Eastern Region of Ghana. It was aimed at ascertaining the knowledge and utilization of e-banking facilities at the Ghana Commercial Bank Limited.

1.6.1 STUDY AREA

This research was undertaken at Akosombo and Somanya. Akosombo is located in the Asuogyaman District whilst Somanya is in the YiloKrobo District. Both Districts are in the Eastern Region of Ghana.

1.6.2 THE ASUOGYAMAN DISTRICT

The Asuogyaman District is one of the districts created in the Eastern Region to ease the administration of the country. It was one of the new forty-five districts created in 1988 as a result of Ghana Government's recommendation exercise in the decentralization programme. The district covers a total estimated surface area of 1,507 square kilometers and

constitutes 5.7% of the total area of Eastern Region, making it the 10th largest district in the region. The district capital is at Atimpoku.

The Asuogyaman District is the highest political authority in the district with the power to exercise a wide range of legislative and executive functions. The Assembly has a guideline that corresponds with guidelines as prescribed by the Ministry of Local Government and Rural Development. Major sources of employment include the Volta River Authority (VRA), the Akosombo Textile Limited (ATL), the District Assembly and the Volta Lake Transport. Others in the informal sector include fishing, farming and petty trading, public and civil servants.

1.6.3 THE YILO KROBO DISTRICT

Somanya is the capital of the Yilo Krobo district assembly (now the Yilo Krobo municipal assembly). The township itself has a population of 20,469 as at the end of 2011 (according to the planning office of the municipal assembly). It is situated along the Adenta-Akosombo road (about one hour drive from Accra), and about 10 minutes drive from the main Tema/Akosombo/Ho highway.

The town is surrounded by five districts – Upper Manya Krobo, Lower Manya Krobo, Asuogyaman, Akuapem north and Dangme west, each less than 45 minutes drive away. The main activities in the Somanya township is petty trading, with few corporate institutions engaged in mostly trading, lots of artisans such as car mechanics, carpenters, metal fabricators, tailors and seamstresses, hairdressers, a number of farmers both peasant and commercial especially mango farming. The town has a number of public institutions with one college of education, four government Senior High Schools and three private ones, more than 15 public and private Junior High Schools. There is a municipal assembly with its various departments, and three major public hospitals.

There are a number of government workers with Ghana Commercial Bank alone processing between 3,000-4,000 public workers' salaries besides other salaries from private institutions.

There are four major banks – Ghana Commercial Bank Limited, Barclays Bank Ghana. ManyaKrobo Rural Bank, Upper ManyaKrobo Rural banks, besides competition from other Ghana Commercial Bank branches and Rural banks in adjoining districts.

1.7 LIMITATIONS OF THE STUDY

The study was constrained by time. The time allotted for the research was, to the researcher, short. This made it impossible to use a very large sample size for the study. In addition, due to the busy schedules of customers, they could not complete filling the questionnaires on time. This in part, contributed to the delay of the project.

1.8 ORGANISATION OF THE STUDY

This phase of the study deals with how the study has been organized.

Chapter one deals with the introduction and background to the study. The section contains the statement of the problem; the research questions, and the objectives of the study. The researcher also stated its significance, the research methodology, the scope of the study and ended the chapter with the organization of the study.

Chapter two deals with review of related literature. Here, the researcher has discussed the views of other researchers, which are related to the knowledge and utilization of e-banking facilities.

Chapter 3 contains the introduction to the chapter, and the study design. The study design outlines the sources of data, the target population, the sampling techniques and sample and

the methods of data collection. The chapter also includes data management procedures and tools for data analysis.

The fourth chapter deals with data analysis. It deals with a careful examination of the data collected. Here, the researcher assessed, described and explained the data in relation to the study objectives.

The study ended with chapter five. In this chapter, the researcher summarized the major findings; provided recommendation and drew conclusions from the study.



CHAPTER TWO

LITERATURE REVIEW

2.1 INTRODUCTION

Electronic banking as shortly called ‘e-banking’ is a high order construct, which consist of several distribution channels. It must be noted that electronic banking is a bigger platform than just banking via the internet. However, the most general type of electronic banking in our times is banking via the internet.

This chapter reviews the various literatures on the topic of the study. It basically deals with a review of works that have been done by researchers as well as other international, national bodies and governments in relation to e-banking. In order to provide a rationale and context for the study’s objectives identified in the previous section, a 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 are sub-topics to be discussed in this chapter. E-Banking and the motivation behind its participation by operators is also reviewed. Again, the benefits of e-banking for both bankers and customers and the barriers to e-banking are also captured.

2.2 EXPLANATION OF E-BANKING

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 and Nath, Shrick and 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). As defined by dictionary.reference.com, 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 F D (1999) is the provision of information or services by a bank to its customers, via a computer, television, telephone, or mobile phone. Burr W (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, M (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, Telebanking, 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 (ibid). 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 E 1999; Jayawardhena and Foley, 2000). According to Nehmzow C (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. The table below (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, 3 rd generation	Access with text message (SMS), Internet connection (WAP), or high speed 3 rd generation mobile connection (also Internet based).

Source: Electronic banking special issues, 2005

2.3 Evolution of E-Banking- A brief Account

Devlin J F (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 J F (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 J F (1995). One survey conducted by the TechWeb News in 2005 (TechWeb, 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.

2.4 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 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 an important role in 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).

2.5 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 (Sathye, 1999; Polatoglu and 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) explains 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 and 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.

2.5.1 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 (Araujo and Araujo, 2003; Noteberget al.2003). 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 (Dabholkar, 1996; Gerrard and Cunningham, 2003; Karjaluoto et al, 2002; Meuter et al, 2000; Polatoglu and Ekin, 2001) and quick service (Karjaluoto et al, 2002; Kluglak, 1997), 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 (Karjaluoto et al, 2002; Kluglak, 1997).

2.5.2 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 and Prasad, 1999; Davis et al, 1989; Hu et al, 1999, Venkatesh, 1999; Venkatesh and Davis, 1996; Venkatesh and Morris, 2000). Information technologies that are easy to use will be less threatening to the individual (Moon and Kim, 2001). 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

(Davis, 1989; Venkatesh and Davis, 1996). 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.

2.5.3 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 and 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 (Black et al, 2002). In internet banking, security is one of the most important future challenges, because customers fear higher risk in using the web for financial transactions (Aladwani, 2001; Black et al, 2002; Gerrard and 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.

2.6 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).

2.7 E-BANKING AND THE MOTIVATION BEHIND ITS PARTICIPATION BY OPERATORS

E-banking is a significant investment, so the question must be answered as to what motivates banks to participate and deal with the associated problems and risk. Shah & Clarke (2009) summarizes some of the reasons often cited by banks to be their primary motive for implementing e-banking.

2.7.1 CUSTOMERS' DEMANDS

With the emergence of the digital economy, the balance of power seems to be shifting to customers. Customers are increasingly demanding more value, 24 hours availability, with goods customized to their exact needs, at less cost, and as quickly as possible. To meet these demands, banks need to develop innovative ways of creating value, and e-banking is seen as one of those innovative ways to meet customers' expectations (Shah & Clarke, 2009).

2.7.2 SELLING MORE TO EXISTING CUSTOMERS

The financial services markets in most developed countries have matured considerably and there is very limited scope for creation of new markets. This means that the most common route to growth is to sell more products to existing customers. Early indications are encouraging as both the volume and value of new business generated from the Internet channel are growing for the banks, which have implemented e-banking. In some cases, such as Woolwich in the UK each e-banking customer holds four financial products on the average, which is a considerably higher figure than for traditional banking customers (Shah & Clarke, 2009).

2.7.3 CHANGES IN THE ENVIRONMENT

There have been some significant shifts in the importance of different sectors of the economy. In most western countries, primary (such as mining, agricultural) and secondary

(manufacturing) have been steadily declining, whilst the service(e.g. financial services) sector is growing in importance. This has increased the prominence of service sector organizations, resulting in more pressure on them to diversify their offerings and look beyond their immediate markets to create value. New technologies such as the Internet and mobile telecommunications are seen as key enablers in accessing new markets and the creation of value. Social changes are also forcing banks to change the way they interact with their customers. Customers are increasingly mobile (they move or travel more often), and this, coupled with the rise of single person households, means that demand for flexible services is rising at rapid pace (Shah & Clarke, 2009).

2.7.4 E-BANKING IS A HYGIENE FACTOR

Some banks are offering e-banking because their competitors have done it, and not doing so will mean losing an important customer segment to traditional competitors as well as new entrants to the financial sector. If this is their sole reason for doing so, they often drag behind their competitors and lack of enthusiasm prevents them from using e-banking to boost other sources of innovation, which are often enabled by the new technologies (Shah & Clarke, 2009).

2.7.5 ACHIEVING COMPETITIVE ADVANTAGE

Most organisations aspire to achieve competitive advantage, but few attain truly succeed, and even if attained, few are able to sustain this. As Internet banking has spread widely, it is no longer a source of competitive advantage on its own, at least in developed world. E-banking with the help of other technologies such as data mining can however help in other sources of competitive advantage such as faster product development, superior customer service and cross selling. To gain competitive advantage, banks must continually develop new and innovative services to differentiate themselves from the competition, as having a large branch network or even e-banking is no longer seen as a main source of competitive

advantage. Innovative products and state of the art customer service are the key differentiating factors and e-banking could play a central role in achieving both. New types of interactions enabled by the Internet and other communication technologies create innovative relationships between consumers, marketers and suppliers of products and services (Shah & Clarke, 2009).

2.7.6 TO ACHIEVE EFFICIENCIES

Some banks look at e-banking from a cost savings point of view. They may however fail if they are thinking only of providing low cost transactions, as these costs only become lower once a bank exceeds a critical mass of online customers, owing to the large upfront costs of implementing e-banking. Conducting cost/benefit analysis on a regular basis often gives a clearer picture in this regard, enabling the analysis of feasible alternatives in terms of the major costs involved together with the major benefits that are expected to accrue. E-banking can also help lower operational costs since, to offer e-banking, banks have to fine-tune their business processes, systems and the ways in which employees communicate with one another. This may be seen as an unnecessary and costly exercise initially, but in the long-run can prove immensely valuable, and may even enable a bank to survive the economic pressures and downturns (Shah & Clarke, 2009).

2.8 BENEFITS OF E-BANKING TO BANKS

Understanding e-banking is important for several stakeholders, not least of which is management of banking related organizations, since it helps them to derive benefits from it. The Internet as a channel for services delivery is fundamentally different from other channels such as branch networks, telephone banking or Automated Teller Machines (ATMs). Therefore, it brings up unique types of challenges and requires innovative solutions. Many banks and other organizations have already implemented or are planning to implement e-

banking because of the numerous potential benefits associated with it (Shah & Clarke, 2009). Some of these major benefits are briefly described below.

2.8.1 ATTRACTING HIGH VALUE CUSTOMERS AND RETENTION OF OLD ONES

E-banking often attracts high profit customers with higher than average income and educational levels, which helps to increase the size of revenue streams. For a retail bank, e-banking customers are therefore of particular interest, and such customers are likely to have a higher demand for banking products. Most of them are using online channels regularly for a variety of purposes, and for some there is no need for regular personal contacts with the bank's branch network, which is an expensive channel for banks to run (Berger & Gensler, 2007). Some research suggests that adding the Internet delivery channel to an existing portfolio of service delivery channels results in nontrivial increases in bank profitability since high-income earning customers with greater profit potential would save in those banks (Young, 2007).

Sheshunoff (2000) says further that the single most important driving force behind the implementation of full service Internet banking by banks is the need to create powerful barriers to customer exiting. He argues that once a customer moves to full-service Internet banking, the likelihood of that customer moving to another financial institution is significantly diminished. The main reasons for this behavior can be found in the consumer behavior theory: switching always requires much time and effort from the individual consumer. He concluded that the competitive advantage of Internet banking for banks is very significant.

2.8.2 IMAGE ENHANCEMENT

E-banking helps to enhance the image of the organization as a customer focused innovative organization. This was especially true in early days when only the most innovative organizations were implementing this channel. Despite its common availability today, an attractive banking website with a large portfolio of innovative products still enhances a bank's image. This image also helps in becoming effective at e-marketing and attracting young/professional customer base (Shah & Clarke, 2009). In relation to internet banking, Brogdon, (1999); Jayawardhena and Foley, 2000) elucidate that one of the main benefits of Internet banking to banks is enhancement of the bank's reputation.

2.8.3 INCREASE IN REVENUES

Because of a possible increase in the number of customers, retention of existing customers, and cross selling opportunities, the revenue base of e-banking operators is most likely to increase. It has also allowed banks to diversify their value creation activities. E-banking has changed the traditional retail banking business model in many ways, for example by making it possible for banks to allow the production and delivery of financial services to be separated into different businesses. This means that banks can sell and manage services offered by other banks (often foreign banks) to increase their revenues. This is an especially attractive possibility for smaller banks with a limited product range (Shah & Clarke, 2009). E-banking has also resulted in increased credit card lending, as it is a sort of transactional loan that is most easily deliverable over the Internet. Electronic bill payment is also on rapid rise, which suggests that electronic bill payment and other related capabilities of e-banking have a real impact on retail banking practices, and rapidly expanded revenue streams (Young, 2007).

2.8.4 EASIER EXPANSION

Traditionally, when a bank wanted to expand geographically it had to open new branches, thereby incurring high startup and maintenance costs. E-channels, such as the Internet, have

made this unnecessary in many circumstances. Now banks with a traditional customer base in one part of the country or world can attract customers from other parts, as most of the financial transactions do not require a physical presence near customers living/working place. In a case study, a bank based in the southern part of the UK was attracting customers from northern England, where it had no branches. In many countries, banks share their resources such as ATMs or use post offices as their main interaction points, with customers for services such as cash and cheque deposits (Shah & Clarke, 2009).

2.8.5 LOAD REDUCTION ON OTHER CHANNELS

E-Channels are largely automatic, and most of the routine activity such as account checking or bill payment may be carried out using these channels. This usually results in load reduction on other delivery channels, such as branches or call centers'. This trend is likely to continue as more sophisticated services such as mortgages or asset finance are offered using e-Banking channels. In some countries, routine branch transactions such as cash/cheque deposit related activities are also being automated, further reducing the workload of branch staff, and enabling the time to be used for providing better quality customer services (Shah & Clarke, 2009).

2.8.6 COST REDUCTION

The main economic argument of e-banking so far has been reduction of overhead costs of other channels such as branches, which require expensive buildings and a staff presence. It also seems that the cost per transaction of e-banking often falls more rapidly than that of traditional banks once a critical mass of customers is achieved. The consensus is that fixed costs of e-banking are much greater than variable costs, so the larger the customer base of a bank, the lower the cost per transaction would be. Other costs such as systems integration and extra security measures also take their toll (Shah & Clarke, 2009). According to Robinson

(2000) the cost of an electronic transaction dramatically less is when done online compare to at a branch.

2.8.7 ORGANIZATIONAL EFFICIENCY

To implement e-banking, organizations often have to re-engineer their business processes, integrate systems and promote agile working practices. These steps, which are often pushed to the top of the agenda by the desire to achieve e-banking, often result in greater efficiency and agility in organizations. However, radical organizational changes are also often linked to risks such as low employee morale, or the collapse of traditional services or the customer base (Shah & Clarke, 2009).

E-banking is fast becoming a norm in the banking industry, and is being implemented by many banks in developed and developing economies around the globe. The main reason behind this success is the numerous benefits it can provide to operators. It can provide a cost effective way of conducting business and enriching relationship with customers by offering superior services, and innovative products, which may be customized to individual needs.

2.9 BENEFITS OF E-BANKING TO CONSUMERS

A 'customer first' approach is critical for success in e-banking. Customers hold the key to success and bankers must find out what different customers want and provide it using the best available technology, ensuring that they are acting on the latest, most up-to-date information. In modern business environments, customers want greater choice. They want the traditional range of banking services, augmented by the convenience of online capabilities and a stronger focus by banks on developing personal relationships with customers (Shah & Clarke, 2009).

Avkiran (1999) stressed that e-banking can be made available 24 hours a day throughout the year, and a widespread availability of the Internet, even on mobile phones, means that

customers can conduct many of their financial tasks virtually anywhere and anytime. However, it is much more feasible in developed countries, but gradually gaining grounds in developing countries.

Sathye (1999) expounds synonymously that, the emergence of Internet has had a significant impact on the diffusion of electronic banking. With the help of the Internet, banking is no longer bound to time or geography. Consumers all over the world have relatively easy access to their accounts 24 hours per day; seven days a week. It makes available to customers a full range of services including some services not offered at branches. This affirms the fact that, wireless communications in e-banking are becoming accessible.

Mols (1998) further pronounces from a survey conducted in Denmark that, internet banking makes it possible for banks to offer consumer a variety of services 24/7.

Yet again, e-banking from a customer's point of view is that most banks provide accounts aggregation services, at least internally. Accounts aggregation enables a consumer to be presented with all his or her account details (current account, saving account, mortgage account) on a single page. Customers can have their financial data from many banks on one page but it currently requires consumers to provide their account passwords to the aggregator Sathye (1999).

Furthermore, the greatest benefit of Internet banking is that it is cheap or even free to customers. However, price seemed to be one factor militating against Internet banking (Sathye, 1999). Two important factors in the price debate are on the one hand geographical differences and on the other hand disparities between the costs of e.g. Internet connections and telephone call pricing. It has also been argued that electronic banks are more likely to change in response to customers' demands (Brogdon, 1999).

Internet banking has the advantage that the customer avoids traveling to and from a bank branch. In this way, Internet banking saves time and money, provides convenience and accessibility, and has a positive impact on customer satisfaction (Karjauloto, 2003). Customers can manage their banking affairs when they want, and they can enjoy more privacy while interacting with their bank.

Moreover, it has been claimed that Internet banking offers the customer more benefits at lower costs (Mols, 1998). Turban et al. (2000) indicated that Internet banking is extremely beneficial to customers because of the savings in costs, time and space it offers, its quick response to complaints, and its delivery of improved services, all of which benefits make for easier banking.

2.10 BARRIERS TO E-BANKING

The following factors demonstrate why e-banking may be difficult to implement, or why a bank may not realise the full benefits from it.

2.10.1 ACCESS TO THE INTERNET

Although the growth of the Internet has been very fast, there is still a large population not connected to the Internet. Lack of computer literacy, high cost of hardware and call charges and various other social and economic factors are some of the reasons cited for this (Walczuch et al., 2000). This is changing fast as more and more people connect to the Internet, and numbers are expected to grow even faster with the maturity of mobile communications (Samuals, 2002). However, this is still more of a problem in some developing countries, where the telecommunications infrastructure is less developed.

2.10.2 CONSUMER BEHAVIOUR

A large number of consumers of financial services are still reluctant to conduct their financial management online. A study of consumer habits in 10 countries found that two-thirds of consumers do not consider online services important and that almost 30 percent do not know whether their bank offers Web-based services (Regan & Macaluso, 2000). Changing consumer behaviour takes many years, as was the case with the 10-year adoption cycle of the ATM. This process can be accelerated with aggressive marketing and high value-added features, two things that are lacking in today's online banking market (Franco & Klein, 1999). This can also be true for some businesses, which may be even slower than consumers in adopting new technologies. Factors such as security, perceived difficulties of use, perceived usefulness; functionality and lack of promotion (such as availability of cheaper products on new channels) are most commonly cited factors, which are hindering the widespread adoption of new technologies (Cheng et al., 2006).

2.10.3 LANGUAGE AND CULTURE ISSUES

These play a major role in global e-Commerce. Although English is accepted as the primary language of the Internet worldwide, in some cases a website has to be designed specifically to suit the market that it is trying to reach. The main problems associated with this are speed and cost. It takes a human translator up to a week to translate a small website into just one language (Turban et al., 2000). Financial services related websites are usually very large and consume large resources in the translation process. The problem does not end with the translation of a website; it also needs to be adapted to the local culture to attract visitors. Banks around the world would do well to learn from Swiss banks, which successfully offer their services in several different languages (Turban et al., 2000).

2.10.4 FEAR OF COMPETITION

Some banks have been hesitant to promote e-banking systems, fearing that their costs will become too high and that it will be difficult for them to match the prices of competing Internet only banks (Shah & Clarke, 2009). These fears have proven to be significant in most developed markets. Mols (1998) also stresses this point but suggests that not offering Services is not an option, instead, companies should focus on other means such as product differentiation to protect themselves from excessive competition. Traditional banks could also use their well-established brand names and product development expertise to manage competition from new entrants (Mols, 1998).

2.10.5 SECURITY ISSUES

Internet security is still one of the major issues hindering the growth of Internet related trade. Since the Internet is an open network, high security risks are involved with financial transactions (Han & Noh, 1999-2000). Internet fraud is common, and related stories get immediate media attention, making people hesitant to bank online. Different security methods (including hardware and software) are being tested and employed currently but there is still some way to go to win the trust of a large majority of customers (Mols, 1999).

2.10.6 PROJECT MANAGEMENT

Project management is a vital part of an E-Commerce implementation strategy, and lack of project management skills with some banks is considered a major barrier to the implementation of e-banking (Martin, 1998). E-commerce projects must be carefully planned and executed. There are some factors, which relate specifically to software projects but can be

applied to e-Commerce projects. Appleton (1997) recognizes that the important skills needed for a software systems implementation are team building and communication skills, which she refers to as 'soft skills'. Projects need to be business driven with a cross-functional project team, and a rapid decisionmaking process to help ensure that the project does not fall behind schedule(Martin, 1998).

2.10.7 AVAILABILITY OF RESOURCES

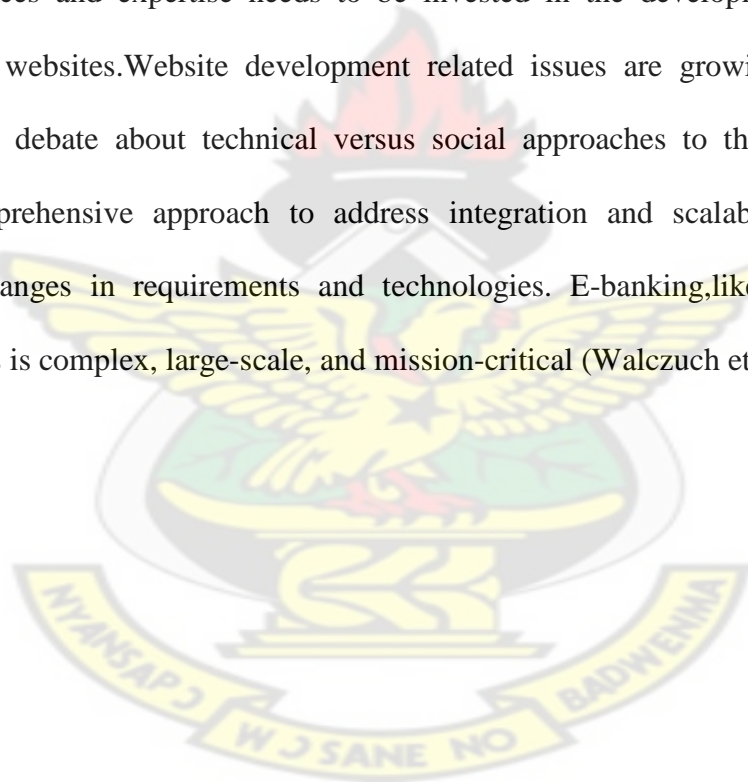
For some banks, lack of financial and human resources will be a problem because offering the sophisticated Internet based services is an expensive project requiring major changes in IT infrastructure (Mols, 1998). Walczuch et. al. (2000) synonymously reports that the primary deterrents for businesses establishing a Web presence is startup costs and the costs associated with major organizational changes required for such moves. Mols (1998) suggest strategic partnerships between banks to share such costs. These partnerships could combine to develop e-banking related systems. However, finding suitable partners in very competitive environments may prove difficult.

2.10.8 TECHNICAL ISSUES IN E-BANKING

Banks rely heavily on ICT for their internal operations and their interaction with individual as well as business customers. To deliver services via the e-banking channel, a bank needs Internet technologies for universal connectivity, back end applications such as account systems, support applications such as Customer Relationship Management (CRM systems), communication technologies to link e-banking to the payment systems. Backend systems include data processing systems, accounts management systems and management information systems. These systems form the backbone of e-banking. Most of these systems were developed before the arrival of e-banking (thus the term legacy systems used for them) so they often lack connectivity, meaning they are difficult to connect to each other or with new

systems. E-banking often requires rapid modification in systems to respond to changes in the market, and because of lack of flexibility in these systems they are very difficult to modify swiftly. Lack of integration with other systems is one of the most common reasons for the failures of e-banking projects (Shah & Clarke, 2009).

In addition, e-banking is feasible when there is a website with which customers can access. The main difference is that when customers login they do most of the work themselves without any assistance. Therefore developing a user friendly and functionality rich website is critical in the e-banking environment. To create a positive experience, a great deal of planning, resources and expertise needs to be invested in the development and ongoing maintenance of websites. Website development related issues are growing in complexity giving rise to a debate about technical versus social approaches to the development. It requires a comprehensive approach to address integration and scalability, and dynamic responses to changes in requirements and technologies. E-banking, like other electronic business systems is complex, large-scale, and mission-critical (Walczych et. al. 2000).



CHAPTER THREE

RESEARCH METHODOLOGY

3.1 INTRODUCTION

This chapter deals with the procedure employed by the researcher to achieve the objectives of the study. The purpose is to state how this research has been carried out and to provide evidence that the study has passed through the appropriate scientific method of investigation. The chapter consists of topics and sub-topics such as the introduction, the study design, sources of data, the target population, the sampling technique and sample size, method of collection and data management. Data analysis procedure will also be presented here.

3.2 STUDY DESIGN

This phase of the study is concerned with the researcher's total plan for the investigation. The study design refers to the plan, structure and strategy of investigation that enables the researcher to obtain answers to the study objectives. It reflects the purpose or the goals of the study, the time frame and the units of analysis, the research motive and the method for the design.

The study was a descriptive one in which observations made about knowledge and adoption of e-banking facilities were described.

Survey, a non-experimental design was used to find out information relating to the objectives of the study. To Babbie(1989,), 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.

In this survey, two sources of data were used. These were primary and secondary sources of data. The primary sources of data constituted the units of analysis and these were customers and the managers of the Ghana Commercial Bank Limited.

3.3 TARGET 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 Ghana Commercial Bank Limited in the study areas who have been banking with the bank for at least continuously one year. From this population, a sample of 100 customers was selected for the study.

3.4 SAMPLING TECHNIQUE AND SAMPLE SIZE

This section deals with how to get the sample from the population and the number of respondents to be used in the study. The sampling technique is a scheme that was used by the researcher to select the sample from the population.

For the purpose of this study, systematic sampling method was used to select participants involving customers of the bank. This sampling procedure will involve the selection of participants from the list of customers of the bank. By this, the nominal roll of customers was used where every n th person from the list were selected among the customers. The method was used to select hundred (100) clients in both Somanya and Akosombo for the study. This

comprised 58 male and 42 females. Two bank managers and two operations managers were also interviewed.

This sampling technique described above was used to select 100 respondents from the population of clients of Somanya and Akosombo branches respectively. These 100 respondents were the main sources of primary data that provided answers to the research questions.

3.5 RESEARCH INSTRUMENT

This phase of the study design was concerned with how to obtain the needed information from the sample selected and the data collection instruments to be used. In this social survey, the researcher used questionnaires and interview guides 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 answered by participants included both closed-ended and opened-ended types. Mutually exclusive and exhaustive response categories of different types for closed-ended questions have been considered. The open-ended questions were pre-coded to facilitate data processing. The open-ended questions were also included so that participants will also express their views about knowledge and utilization e-banking facilities. Thus spaces will be provided for them to express their views and opinions.

To ensure confidentiality the data collecting instruments made anonymous.

To ensure reliability and validity, the questionnaires and interview guides were pilot tested.

3.6 SOURCES OF DATA

The researcher used both primary and secondary data for the research.

3.6.1 SECONDARY SOURCES OF DATA

The researcher searched and used this information obtained from primary sources by other researchers that are related to knowledge and adoption of e-banking facilitates at the study area. This information was obtained from published books, journals and magazines. This information was used to explain the nature of the problem; review related literature and provided the basis for analysis and comparison, with the primary data collected through the sample survey.

3.6.2. PRIMARY SOURCES OF DATA

In this survey, the researcher used primary data for the analysis. This original data was collected from respondents through a sample survey of customers of Ghana Commercial Bank Limited in the YiloKrobo and the Asuogyaman Districts. The managers of Ghana Commercial Bank Limited were also interviewed. This enabled the researcher to get a first-hand objective information from the field and study outcomes with higher levels of confidence.

3.7 ADMINISTRATION OF RESEARCH INSTRUMENT

The interviews were with the managers of the bank after banking hours. The researcher used the interview guide to ask questions. The researcher told the customers that the study was purely for academic work and that any information provided would not be disclosed. The customers were selected systematically using the nominal roll and the questionnaires were

given to them to fill. Some of the questionnaires were administered through personal or face-to-face interview to elicit response from participants. Interview guide was also used to obtain information from the bank managers.

Because of their busy schedules, some respondents could not finish answering the questions. A later date was scheduled for the collection of the completed questionnaires.

3.8 DATA ANALYSIS PLAN

This part of the study design was concerned with preparing the data collected for processing and analysis. This was to ensure the data collected is devoid of avoidable errors. This comprises editing, coding, data cleaning and data entry.

The data collected was edited. The researcher proofread and corrected abnormalities found in flow of information provided by the participants.

The questionnaires were coded to enable data collected to be processed using SPSS(version 16.0). Numerical values were assigned to the various categories of the variables used in the analysis of the data collected. Because most of the items have been pre-coded, the open-ended questions were post coded.

The data collected was also cleaned. This involved: checking whether codes have been miswritten; checking whether codes have been misread by the researcher and the assistants during the transfer of codes to the margins of the questionnaires and checking whether data appeared in columns that should have been blank.

The data, after all the above was entered into the computer software known as Statistical Package for Social Science (SPSS version 16.0) to make analysis easier.

After data entry, the researcher analysed it at univariate level of analysis. This was to analyse the frequencies associated with the various individual variables. Frequency tables and charts were used to summarise the data. Findings from the two study areas were however compared.

KNUST



CHAPTER FOUR

4.0 INTRODUCTION

This phase of the study presents a descriptive analysis of the data collected from the participants by means of interviews and questionnaires. The chapter deals with assessment, explanation and discussions of data in relation to the objectives of the study.

The data has been summarized by means of statistical tables and graphs, and where necessary, to determine the structure of the individual variables studied.

The research questions that translated into the specific objectives that guided the study were:

1. Which e-banking facilities are available at Ghana Commercial Bank?
2. Are customers aware of all these facilities?
3. How effective are these facilities to benefit customers?
4. How accessible are e-banking facilities at Ghana Commercial Bank to customers?

4.1 BIO-DATA

One hundred respondents were used for the study. Out of this number, 76 fell within the age range 21 to 40. A random selection sampled 58 males against 42 females for the study. Majority of the participants were employed in the formal sector. The data also indicated that majority (58%) of the participants has tertiary education background and this confirmed why most of the respondents were employed in the tertiary sector.

4.2 E-BANKING FACILITIES AVAILABLE AT THE GHANA COMMERCIAL BANK LIMITED

Literature shows that e-banking facilities include internet banking, SMS-mobile banking, point of sale devices and ATMcards-readycash, mastercards, visa, debitcards, creditcards, e-zwich, e-alert and e-statement.

Pupa (2003), in his 'e-banking: Challenges and opportunities' stated that even though public sector banks have acceptance of technology, they are at different level of computerization as compared to private banks. In order to find out which of the e-banking services and products were available at the time of the study, the researcher interviewed the managers at the branches studied (Ghana Commercial Bank at Somanya and Akosombo). The interviews revealed that the Ghana Commercial Bank is at pace with many other private banks all over the world. According to the managers, e-banking services and products available at the Ghana Commercial Banks included the use of the automated teller machine (ATM), e-zwich and other cards such as the mastercardvisa and debit and credit cards. The Ghana Commercial Bank also offers, at the time of the study, internet banking and SMS-mobile banking. Contrary to Pupa's (2003) argument, Ghana Commercial Bank Limited had e-banking facilities like the private banks.

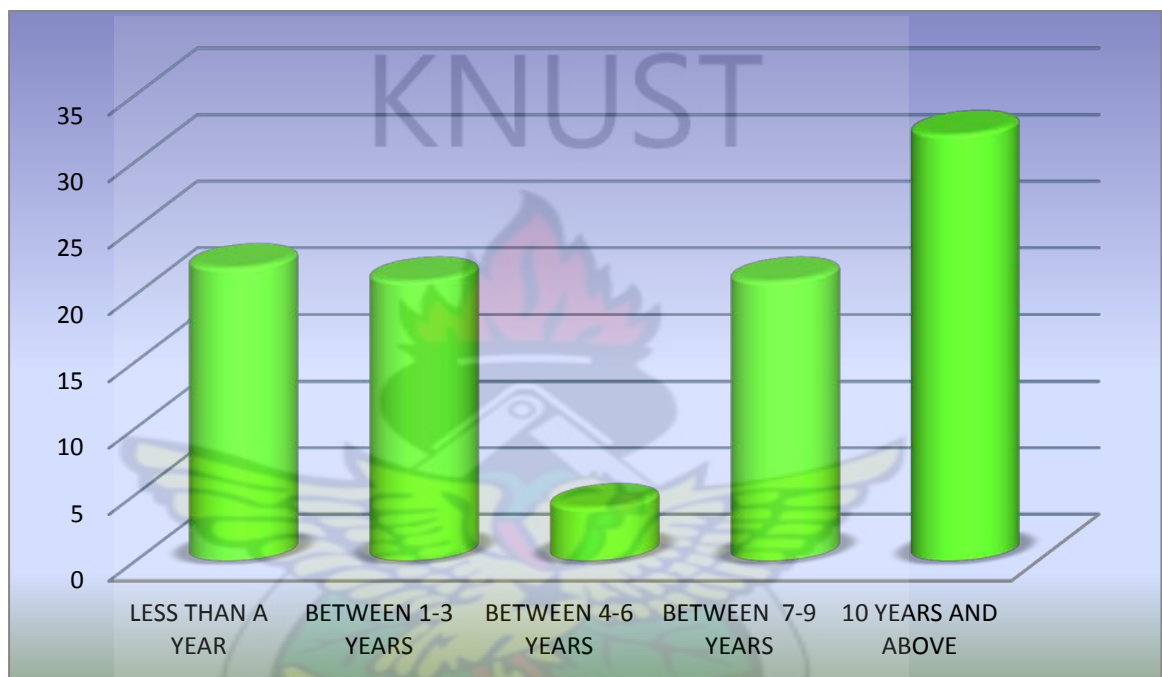
The interview also revealed that all these services were introduced so that banking in these commercial towns would be easier, faster and convenient.

4.2.1 AWARENESS OF E-BANKING FACILITIES AT GHANA COMMERCIAL BANK

In an attempt to find out whether customers were aware of the types of e-banking facilities available at the Ghana Commercial Bank, series of question were asked. These included: "How long have you been with Ghana Commercial Bank (GCB)?" "What type of account do you hold?" "How often do you visit the bank?" "Have you heard of any e-banking services available at the Ghana Commercial Bank?" "And have you ever utilized any e-banking facility before?"

The research discovered that out of the 100 participants used in the study 32, representing 32% have been banking with Ghana Commercial Bank for ten (10) years and above. Only 22% of the participants indicated that they started banking with Ghana Commercial Bank for less than one year. The bar chart below presents how long respondents have been banking with the Ghana Commercial Bank.

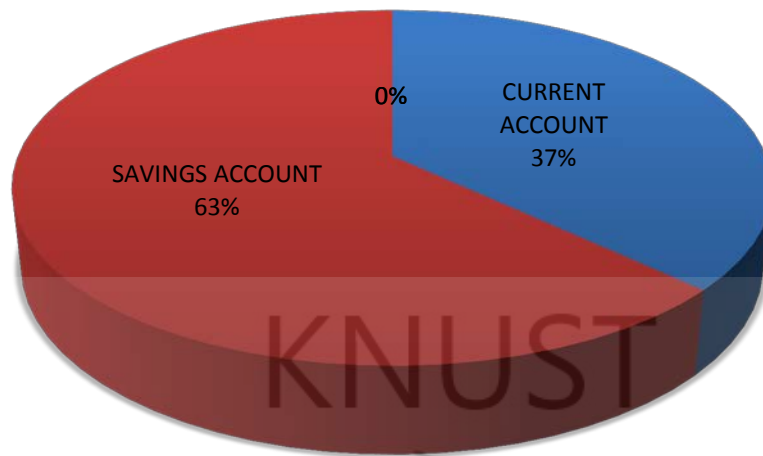
FIGURE 1: HOW LONG HAVE YOU BEEN BANKING WITH GCB?



Source: Field Survey, 2

Participants were also asked to state the type of account they held with the Ghana Commercial Bank. Out of the 100 respondents, 63% held current account whilst the remaining 37% held savings account. The figure below shows the type of accounts respondents held with the GCB.

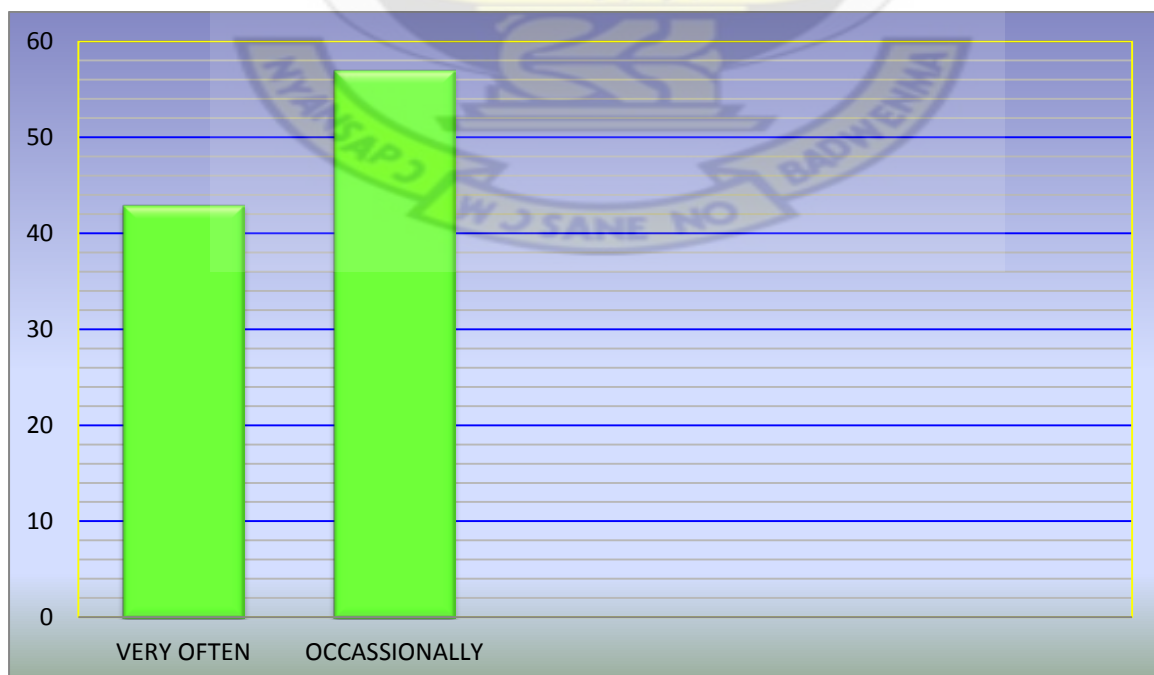
Figure 2: What type of account do customers hold with GCB



Source: Field Survey, 2012

Respondents were also asked to state how frequent they visited the bank to transact business. Out of the 100 participants used for the study, 57, representing 57% stated that they occasionally visited the bank whilst the remaining 43% also visited the bank very often to transact business. The bar chart below presents how often customers visit the bank

FIGURE 3: HOW OFTEN DO YOU VISIT THE BANK?



4.3 KNOWLEDGE AND UTILIZATION OF E-BANKING

The internet banking literature supports that individual factors like knowledge (Sathye, 1999; Polatoglu and Ekin, 2001) has an impact on consumer's adoption of internet banking.

Consumers' level of awareness of internet banking influences the adoption of internet banking.

In order to determine respondents' knowledge about e-banking, the researcher asked whether customers of Ghana Commercial Bank Limited have heard the following e-banking facilities:

- i. Internet banking
- ii. Electronic cards
- iii. SMS mobile banking
- iv. Electronic transfers

The study showed that everybody has ever heard of e-banking in the study areas before. This is what the investigator termed as basic knowledge or awareness. All the customers used in this study have heard of at least one e-banking service or product. This implies that respondents have basic knowledge about e-banking at GCB, Somanya and Akosombo. The table below shows respondents basic knowledge about e-banking by the number of e-banking facilities they have heard of.

Table 4.01: Have you heard of any of the following E-Banking Services Before?

	frequency	Percentage
1	26	26.0
2	33	33.0
3	16	16.0
4	16	16.0
Others	6	6.0
7	3	3.0
Total	100	100.0

Source:FieldSurvey, 2012

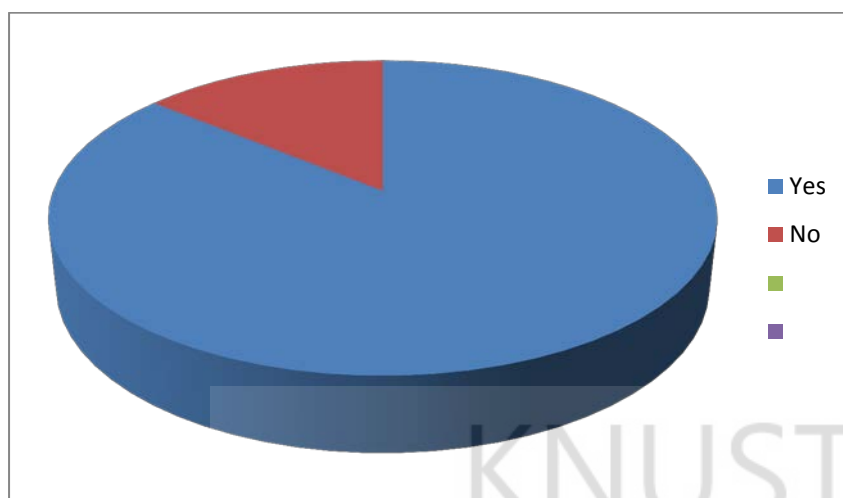
Because the list of e-banking facilities given to respondents in the questionnaire was not exhaustive, participants were asked if they knew of others that were not included in the list. Some of the participants named e-zwich whiles that question was not applicable to others.

From the table above it could be seen that 33% respondents have heard of two e-banking facilities; 26% have heard of one and only 3% have heard of 7 e-banking facilities.

Participants were also asked to state if they have ever utilized any of the e-banking services or products before. The responses have been summarized in the pie chart below.

The study showed that majority (86%) have ever used at least one of the service or products before. When further asked to state which of the e-banking services and products. Participants gave the responses presented in the table 4.02 below.

Figure 4: Use of Any E-Banking Service



Source: Field Survey, 2012

Table 4.02: If yes which of them?

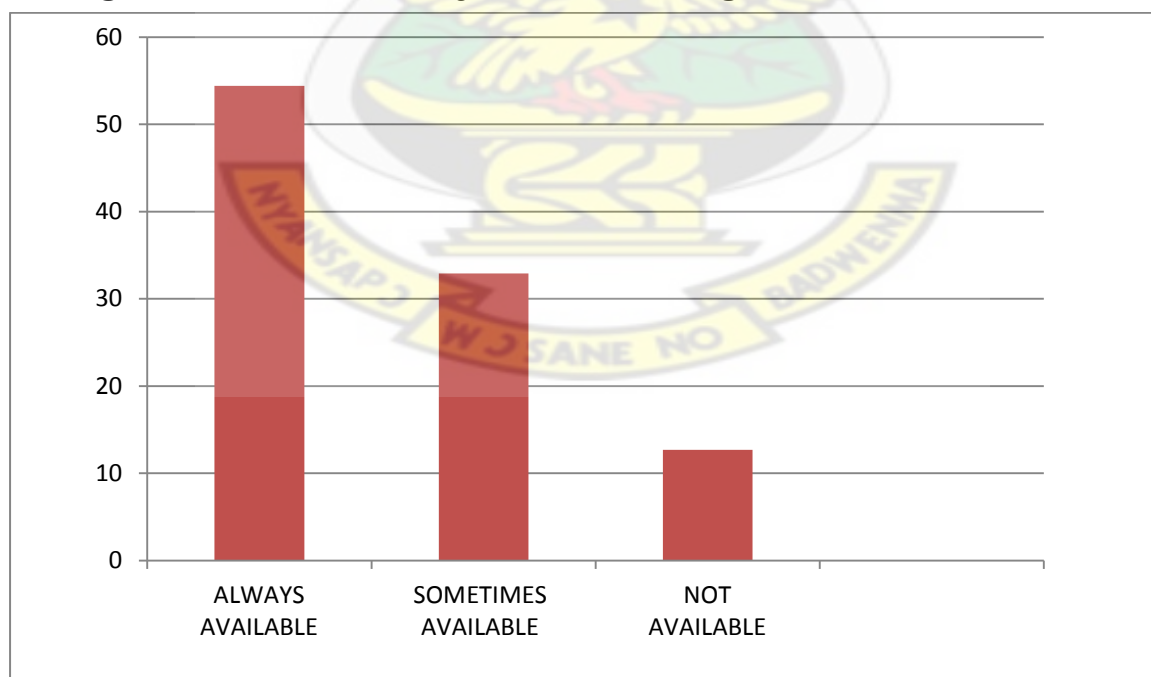
	Frequency	Percentage
Internet Banking	1	2.2
Electronic cards (ATM)	15	32.6
SMS Mobile Banking	30	65.2
Electronic transfers	1	2.2
Total	46	100

Source: Field Survey, 2012

It was revealed that only 2.2% of the participants used internet banking and 2.2% used electronic transfers. Less than 50% of the respondents used electronic cards such as the ATM and the e-zwich. This means customers of the bank prefer SMS- mobile banking and the use of the ATM to the use of the internet and electronic transfers. Over 50% of the respondents did not answer the question. This made it difficult to ascertain customers' status concerning the use of e-banking services. The researcher, however, argued that those who did not respond to that question did not utilize any e-banking service.

The data showed that even though customers of the GCB have basic knowledge about e-banking, they do not patronize these services. This did not confirm the argument by Sathye (1999) that lack of awareness about electronic banking and its benefits contribute to the non-adoption of electronic banking. This finding could best confirm Roger and Shoemaker's (1971) finding that consumers go through "a process of knowledge, persuasion, decision, implementation and confirmation" before they are ready to adopt a product or service. The few respondents who indicated that they patronized e-banking facilities are suspected to have come from the Asuogyaman District, where most of them were VRA, ATL and Volta Lake Transport workers who have no time to queue in the banking halls. According to this survey, customers who have used e-banking facilities at the Ghana Commercial Bank stated that these facilities were always available. 54.4% said e-banking facilities at GCB were available and 32.9% also rated what they used as 'sometimes available'. The bar chart below illustrates this information.

Figure 4: Availability of e-banking facilities



Source: Field Survey, 2012

Respondents were further asked to indicate which e-banking facilities they knew was available and accessible to them, whether they utilized them or not. They were to chose on the likert scale whether these facilities were always available sometimes available or not available at all. 43.6% of the respondents stated that electronic cards were always available whilst the majority stated they have difficulty in obtain in g these cards. Electronic transfers were also not readily available the study discovered that SMS mobile banking was always available. The responses of participants' used in the study are summarized by means of the frequency table below.

Table 4.03: Available & Accessible E-Banking

Facility	Always available		Sometimes available		Not available	
	Yes %	No %	Yes%	No%	Yes%	No%
Electronic cards	43.4	56.4	43.6	56.4	00.0	00.0
SMS mobile banking	74.4	25.6	25.6	74.4	00.0	00.0
Electronic transfer	26.7	73.3	60.0	40.0	13.3	86.7
Internet banking	54.4	43.6	32.9	67.1	12.7	87.3

Source: field survey, 2012

The investigator also asked the participants in an open-ended question to state what they knew about e-banking. Participants' responses included banking using computers and mobile phones, (39.2%) Banking via the internet (20%) and electronic banking services (14.4%). Yet, others (21.6%) defined e-banking as banking outside the banking hall. The table below throws more light on respondents' responses on what they knew about e-banking.

Table 4.04: Respondents' Understanding of Banking

	frequency	Percentage
Banking using computers and mobile phones	38	39.2
Banking via internet	20	20.6
Electronic banking services	14	14.4
Banking outside the banking hall	21	21.6
Not much	4	4.1
Total	97	100.0

Source: Field Survey, 2012

4.3.1 HOW LONG CUSTOMERS HAVE HEARD ABOUT E-BANKING

The researcher asked the participants to state how long they have been aware of e-banking. It came out from the data that 33.3% of the participants have heard about e-banking for one (1) year now whilst only 4.8% have heard about it for 10 years now. This is shown in the table below:

Table 4.05: How Long Have You Heard About E-Banking?

Number of years	frequency	Percentage
1	28	33.3
2	16	19.0
3	13	15.5
4	3	3.6
5	10	11.9
6	7	8.3
8	3	3.6
10	4	4.8
Total	84	100

Source: Field Survey, 2012

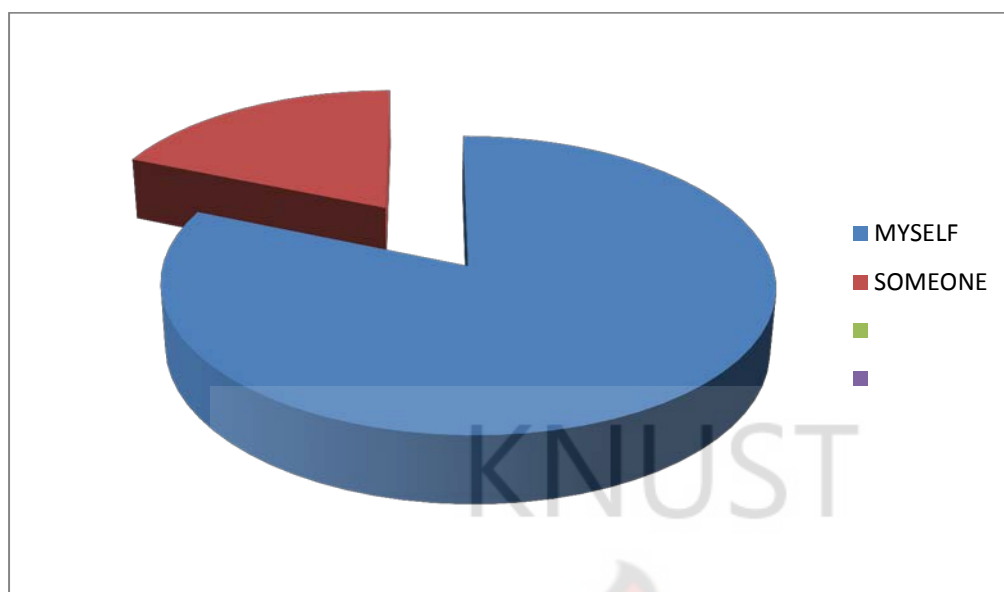
Respondents have long heard of e-banking enough to be able to adopt and patronize it. However, the patronage or utilization rate is very low.

4.3.2 USE OF ATM

In order to find out customers knowledge and utilization of ATM, they were asked whether they operated it themselves or not. 81.3% stated that they operated the machine themselves whilst 18.7% said someone around helped them. This is an indication that majority of the customers know how to use the ATM to transact business with the bank.

Furthermore, the research discovered that 82% of the respondents were aware that ATM can be used to check account balance. Most of the respondents also further stated that they utilized the SMS-mobile banking where they received text on their phones about transactions made on their balances.

Figure 4.6: Operating the ATM



Source: field data, 2012

Table 40.6: Are you aware That ATM can Be Used To Check Account Balance

	Frequency	Percent	Percent
Yes	82	82.0	82.0
No	18	18.0	18.0
Total	100	100.0	100.0

Source: Field survey

From the table above it could be observed that 82% of the respondents used in the study, are aware that ATM could be used to check account balance only 18% were not aware even though they use ATM. This means they use the ATM only to withdraw money.

4.4 EFFECTIVENESS OF E-BANKING AT GCB

The United Nation Conference on Trade and Development (UNCTAD, 2002) report has identified four challenges that developing countries are expected to overcome, in general to achieve the advantages that the e-banking initiative bring about A lot of variables influence e-

banking especially in developing countries. This includes ability to adopt global technology to local requirement, adequate level of infrastructure and human capacity; ability to strengthen public support for e-finance; the ability to create necessary level of regulatory and institutional frameworks and the ability to mainstream small and medium scale enterprises towards e-banking.

To find out the variables that influence the knowledge and utilization of e-banking in the areas, the investing asked respondents if his/her electronic card ever got stacked in the machine. The table below represents the participants' responses.

Table 4.07: Has Your ATM Card ever been Captured by the Machine?

	Frequency	Percent	Percent
Yes	34	34.0	34.0
No	66	66.0	66.0
Total	100	100.0	100.0

Source: Field survey

The study shows that 66% of the respondents in the study areas never experienced that problem. Since majority did not experience that problem, it could mean therefore, that, even the few who experienced that were not experienced in the operation of the automated teller machine. This would also explain why some clients said someone operated the machine for them.

Again, 58.0% reported that there has been frequent breakdown of the ATM whilst 42.0% never experienced that. This showed that even though there have been some breakdowns of ATM, it was not frequent and that those who might have experienced it frequently experienced it by chance. However, the data showed that majority of the respondents who subscribed to internet banking and SMS mobile banking experienced failure to receive

notifications and bank statements. 64.1% of those respondents reported that they often experienced that whilst 35.9% said the problem was very often. The responses from the survey are presented in the table below.

Table 4.08: If Yes How Often Do you experience This

	Frequency	Percent
Often	25	64.1
Very often	14	35.9
Total	39	100.0

Source: field survey, 2012

4.4.1 LEVEL OF SATISFICATION WITH E-BANKING

Participants were asked to choose on the likert scale ranging from ‘very satisfied’ to ‘not at all satisfied’, concerning various e-banking facilities available at GCB. In this analysis, ‘very satisfied’ and ‘satisfied’ were considered as satisfaction whereas ‘not satisfied’ and ‘not at all satisfied’ were considered as dissatisfaction. The details were however presented in the table.

Table 4.0.9: Level of Satisfaction

	Frequency	Percentage
Very satisfied	24	30.4
Satisfied	19	24.4
Not satisfied	7	8.9
Not at all satisfied	19	24.1
Not applicable	10	12.7
Total	79	100.0

Source: Field Survey, 2012

The study revealed that customers utilizing the internet banking services; electronic cards; SMS mobile banking and electronic transfers were satisfied with the services. When asked how effective these services were, 13.7% of the customers stated that these services were very effective whilst 75.8% stated that they were effective. The table below presents the responses of the customers concerning the effectiveness of the e-banking services at GCB at Somanya and Akosombo.

Table 4.10: Effectiveness of E-Banking Services at GCB

	frequency	Percentage
Very effective	13	13.7
Effective	72	75.8
Not effective	7	7.4
Not at all effective	3	3.2
Total	95	100.0

Source: Field Survey, 2012

In this study, 61.5% of all respondents who utilized e-banking facilities further stated that the services were satisfactory as indicated by the table above. From the above information, it could be deduced that e-banking services were available at GCB and that the GCB rendered effective and efficient services to their clients. This means the low utilization in the study area could not be attributed to the inefficiency on the part of the bankers.

The researcher also attempted to find out which challenges they faced in using the e-banking services. 56.9% of the clients who use ATM complained of the occasional breakdown of the machine whilst 12.5% said they had problem with the time taken to issue ATM cards. Table four summarizes the findings.

Table 4.11: Challenges Faced With Regards To E-banking Products At GCB

Challenge	Frequency	Percent
ATM sometimes out of service	41	56.9
IT takes long time to replace expired cards	9	12.5
ATM debits account without disbursing fund	3	4.2
Limit to amount of transfers	5	6.9
It takes day to receive notification via SMS	7	9.7
The use of master card is limited to GCB and some few banks compared to VISA card which is dominant to most banks making interbank transaction difficult	4	5.6
Quality cards should be produced	3	4.2
Total	72	100

Source: Field Survey, 2012

Again, customers who stated that they did not utilize any or some particular e-banking services were further asked why they were not using the e-banking facilities. 98.4% stated that they were not using internet banking because they were not having internet facilities at home. This supports the argument that eventhough the growth of the Internet has been very fast, there is still a large population not connected to the Internet. Lack of computer literacy, high cost of hardware and call charges and various other social and economic factors are some of the reasons cited for this, Walczuch et al., (2000). Only one (1) person stated “no”. This is consistent with the earlier findings that only one respondent uses internet banking. With regards to ATM, 61.1% indicated that delay in issuing ATM cards hinders the usage of ATM. Frequent breakdown of ATM; high internet charges at commercial internet café; social

diffusing in terms of discouragement from friends and relatives were variables affecting the utilization of e-banking facilities among the study population. These challenges, according to UNCTAD (2002) were expected to affect e-banking in developing countries. However, apart from delay in issuing electronic cards and absence of internet facilities, these factors do not significantly affect the utilization of e-banking. Customers' responses are presented in the table below.

Table 4.12: Impediments of E-banking

Source: Field Survey, 2012

Challenges	Yes%	No%	Total
Absence of internet facility in the home	98.4	1.6	100.0
Low or lack of computer knowledge	33.8	66.2	100.0
High internet charges at commercial internet café	37.9	62.1	100.0
Delaying in issuing electronic cards	61.1	33.3	100.0
Discouragement from friends and relatives	32.3	66.7	100.0
Frequent breakdown of ATM	46.5	53.5	100.0

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.0 INTRODUCTION

This chapter summarizes the major findings from the data collected. The investigator draws conclusions from the findings and recommends what could be done to improve e-banking in the study areas. This study was guided by some objectives. These were: to assess the availability of e-banking facilities at the Ghana Commercial Bank; to assess respondents' knowledge about e-banking and the rate at which they utilize e-banking facilities; to examine the accessibility of e-banking facilities at GCB and to find out the effectiveness of e-banking facilities in the study areas. The researcher therefore summarizes and concludes the study in relation to the objectives.

5.1 SUMMARY OF FINDINGS

5.1.1 AVAILABILITY OF E-BANKING FACILITIES AT GCB

The research discovered that Ghana Commercial Bank Limited has introduced a wide range of e-banking facilities in order to capture a greater share of the market. It was discovered from the survey that e-banking services and products available at the Ghana Commercial Bank Limited branches included the use of the automated teller machine (ATM), e-zwich and other cards such as the mastercard visa, debit internet banking , credit cards,and e-statements.

5.1.2 KNOWLEDGE AND UTILIZATION OF E-BANKING FACILITIES

Concerning knowledge and utilization of e-banking facilities, the study brought to light that customers of the bank in the two study areas had some knowledge about e-banking. However,

the utilization rate was low. The researcher suspects that majority of the few who patronized e-banking facilities might be from the Asuogyaman District, where most of the respondents were employed in the formal sector, either with the Volta River Authority, Volta Lake Transport, Akosombo Textile Limited or with the District Assembly. Apart from availability of internet facilities, they appear not to have time to queue in the banking halls.

However, delay in issuing ATM cards hinders the usage of ATM. Frequent breakdown of ATM; high internet charges at commercial internet café; lack of internet facilities at home; social diffusing in terms of discouragement from friends and relatives were variables affecting the utilization of e-banking facilities among the study population. However, these factors do not significantly affect the utilization of e-banking

5.1.3 ACCESSIBILITY OF E-BANKING FACILITIES AT GHANA COMMERCIAL BANK

It became known that e-banking services and products were always available at the disposal of clients. This means e-banking facilities were accessible to customers for utilization. The internet, ATM and mobile phones are always at clients' disposal.

5.1.4 EFFECTIVENESS OF E-BANKING FACILITIES AT GHANA COMMERCIAL BANK

The study also showed that e-banking at Ghana Commercial Bank was very effective and efficient. Apart from delay in issuing electronic cards, clients used as respondents for the study rated as e-banking with GCB as effective. 75.8% rated it as 'effective' and 13.7% rated it 'very effective'. Because of its effectiveness, 89.0% wanted to recommend it to friends.

5.2 CONCLUSION

To conclude, this research discovered that there is a wide range of e-banking facilities at GCB in the study areas and these include internet banking, SMS mobile banking, e-alets ,e-statements ,ATM and other electronic cards (debit and credit cards and the e-zwich)

It was also discovered that GCB customers have some knowledge about e-banking. The level of knowledge is enough to enable customers utilize e-banking services. Despite this level of knowledge, the researcher concludes from the findings that utilization of e-banking facilities is low. Lack of internet facilities at home and delay in issuing cards, were found as variables influencing utilization of e-banking among the study population.

The study also concludes that e-banking facilities are accessible to customers and that they are effective in transacting banking business.

5.3 RECOMMENDATION

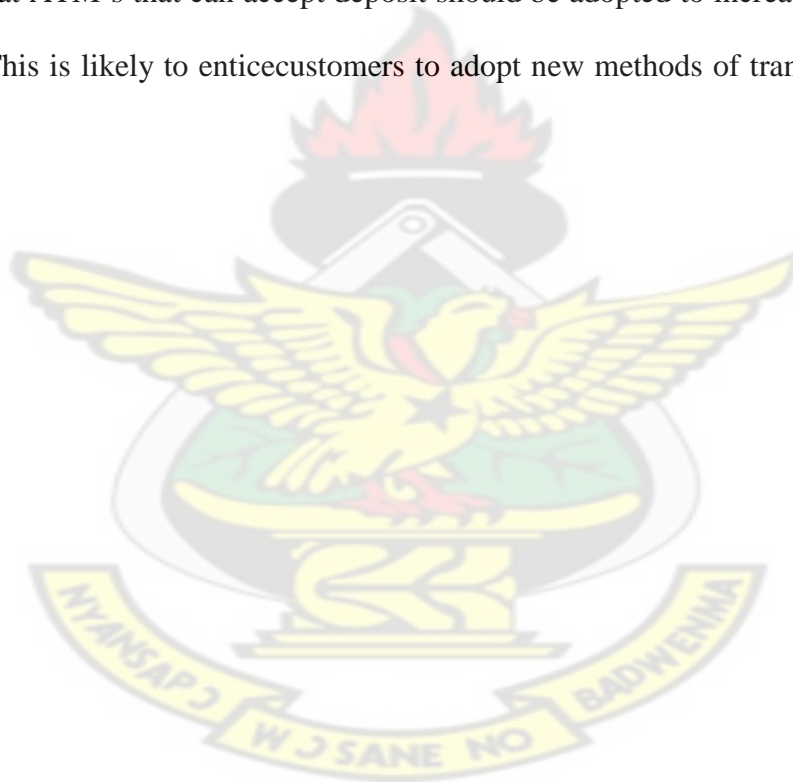
Despite customers' knowledge about e-banking, utilization is low, the researcher therefore, at this phase of the study makes the following five recommendations to improve the patronage of e-banking facilities among the study population.

The researcher recommends that the issuing of electronic card in the Ghana Commercial Bank Limited be done at the branches. This will prevent the delay of issuing the cards.

Again, the bankers should increase the awareness creation, focusing on personal contact with clients. Clients should be exposed to the benefits of e-banking over the traditional method of banking.

In addition, the bank should use promotions to sell e-banking products and services to the customers. In this case, most frequent users of e-banking facilities, at the end of the promotion should be awarded.

Finally, there should be constant monitoring of the ATM. Experts in ATM should be employed permanently and purposely to service and repair the machine immediately it breaks down. This employee can also guide and direct new users as to how to use it. The number of ATM should also be increased to avoid pressure on few ones. The researcher also recommends that ATM's that can accept deposit should be adopted to increase the efficiency of e-banking. This is likely to entice customers to adopt new methods of transacting banking business.



REFERENCES

- Agarwal, R., & Prasad, J. (1999). "Are individual differences germane to the acceptance of new information technologies"? *Decision Sciences*, Vol.30,2,361-391.
- Aladwani, A. M. (2001). "Online banking: a field study of drivers, development challenges, and expectations". *International Journal of Bank Marketing*, Vol.21,3,pp.213-225.
- Appleton, E. L. (1997). "How to Survive ERP", *Datamation*, pp.50-53.
- Araujo, I., & Araujo, I. (2003). "Developing trust in internet commerce". *Proceedings of the centre for Advances Studies Conference on Collaborative Research, October 6-9*, (pp. 1-15). Toronto, Ontario.
- Avkiran, N. K. (1999). "Quality Customer Service Demands Human Contacts". *International Journal of Bank Marketing*, 17(2), 61-71.
- Berger, S. C., & Gensler, S. (2007). "Online banking customers: insights from Germany". *Journal of Internet Banking and Commerce*, 12(1). Also available at http://www.arraydev.com/commerce/jibc/2007-04/SvenBergerFinal_PDFVersion.pdf
- Black, N. J., Lockett, A., Ennew, C., Winklhofer, H., & McKechnie, S. (2002). "Modeling consumer choice of distribution channels: an illustration from financial services". *International Journal of Bank Marketing*, pp.161-173.
- Burr, W. (1996) "Wie Informationstechnik die Bankorganisation verändern konnte. Bank und Markt Vol. 11, pp. 28-31.
- Chang YT (2003). "Dynamics of banking technology adoption: an application to internet banking, Department of Economics, Workshop Presentation", University of Warwick, Coventry, UK.
- Cheng, T. C. E. Lam, D. Y. C. & Yeung, A. C. L. (2006). "Adoption of internet banking: An empirical study in Hong Kong". *Decision Support Systems*, 42, pp.1558-1572.
- Colgate, M., Nguyen, V., & Lee, C. (2003). "An analysis of why New Zealanders remain with their service providers". *University of Auckland Business Review*, 5 (1), pp.57-62.
- Consoli, D. (2003). "The Evolution of Retail Banking Services in United Kingdom: A Retrospective Analysis". CRIC Working Paper No 13. ISBN: 1 84052 0116. Available at <http://129.3.20.41/eps/io/papers/0310/0310002.pdf/>
- Consulting G (2008). "Using technology to engage retail banking customers. Why banks must carefully manage their digital touchpoints to create a seamless customer experience". http://www.adobe.com/engagement/pdfs/gallup_retail_banking_white_paper.pdf

Dabholkar, P. (1996). Evaluations of new technology based self-service options: An investigation of alternative models of service quality. *International Journal of Research in Marketing* , 13, 29-51.

Daniel, E. (199) "Provision of electronic banking in the UK and the Republic of Ireland". *International Journal of Bank Marketing*. Vol. 17, No 2, pp. 72-82.

Devlin, J. F. (1995). Technology and Innovation in Retail Banking Distribution. *International Journal of Bank Marketing*, 13(4), 19-25.

Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS Quarterly* , 13, 318-339.

Franco, S. C., Klein, T. (1999). *Online banking report*. Piper Jaffray Equity Research., www.pjc.com/ec-ie01.asp?team=2

Goi C.L. (2005). E-banking in Malaysia: Opportunities and Challenges, *J. Internet Bank. Comm.*, 10(3).

Gerrard, P., & Cunningham, J. B. (2003). The diffusion of internet banking among Singapore consumers. *The International Journal of Bank Marketing* , 21 (1), 16-28.

Han, K. S., & Noh, M. H. (1999-2000). Critical Failure Factors That Discourage the Growth of Electronic Commerce. *International Journal of Electronic Commerce*, Winter, 4(2), 25-43.

Hu, P. J., Chau, P. Y., Sheng, O. R., & Tam, K. Y. (1999). Examining the technology acceptance model using physician acceptance of telemedicine technology. *Journal of Management Information Systems* , 16 (2), 91-112.

Jayawardhena, C. & Foley, P. (2000) "Changes in the banking sector- the case of Internet banking in the UK", *Internet Research: Electronic Networking Applications and Policy*, Vol. 10, No. 1, pp. 19-30.

Kamel S (2005). The use of information technology to transform the banking sector in developing nations, *Inf. Tech. Dev.* 11(4): 305-312.

Karjaluoto, H. (2001) "Measuring attitudes towards internet banking: Empirical evidence from Ireland", *Proceedings of the European Marketing Academy Conference*. Bergen, Norway, May 8-11 2001

Karjaluoto, H., Mattila, M., & Pento, T. (2002). Factors underlying attitude formation towards online banking in Finland. *International Journal of Bank Marketing* , 20 (6), 261-271.

- Kluglak, A. (1997). A strategy for selling service. *Security Distributing & Marketing* , 27 (7), 85-88.
- Lee, M., & Turban, E. (2001). A trust model for consumer internet shopping. *International Journal of Electronic Commerce* , 6 (1), 75-91.
- Martin, M. H. (1998, February 2). An ERP Strategy, *Fortune*, 95-97.
- Meuter, M. L., Ostrom, A. L., Roundtree, R. I., & Bitner, M. J. (2000). Self-service technologies: understanding customer satisfaction with technology based encounters. *Journal of Marketing* , 64(3), 50-64.
- Moon, J. W., & G, K. Y. (2001). Extending the TAM for a world-wide-web context. *Information and Management* , 38 (4), 217-230.
- Nath R, Shrick P, Parzinger M (2001). Bankers perspectives on Internet banking. e-Service Jour. Indiana University Press.
- Nehmzow, C. (1997). "The Internet Will Shake Banking Medieval Foundations", *Journal of Internet Banking and Commerce*, Vol. 2, No. 2
- Noteberg, A. E., Christiaanse, & Wallage, P. (2003). Consumer trust in electronic channels. *eservice Journal* , 2 (2), 46-68.
- Mols, N. P. (1998). The Behavioural Consequences of PC Banking. *International Journal of Bank Marketing*, 16(5) 195-201.
- Polatoglu, V. N., & Ekin, S. (2001). An empirical investigation of the Turkish consumers' acceptance of internet banking services. *International Journal of Bank Marketing* , 19 (4), 156-65.
- Regan, K., & Macaluso, N. (2000, October 3). Report: Consumers Cool to Net Banking. *E-Commerce Times*. <http://www.ecommercetimes.com/news/articles2000/001003-4.shtml>
- Robbinson, T. (2000), "Internet Banking-still not a perfect marriage", *Information Week*, Vol. 17, No. 4, 104-106
- Rogers, E.M (1995) "Diffusion of Innovation" (4th ed.), New York: The Free Press
- Rogers, E.M (1995) and Shoemaker, F. (1971) "Communication in Innovation" Free Press, New York, NY
- Sathye, M. (1999). "Adoption of internet banking by Australian consumers: an empirical investigation. *International Journal of Bank Marketing*, 17 (7), 324-334.

Shah M. and Clarke S. (2009) E-banking Management : issues, solutions, and strategies
Information Science Reference Hershey • New York Yurchak Printing Inc.

Samuals, M. (2002, May 16). More Europeans are Logging On. *Computing*, 33-34.

Suganthi, R., Balachander, K. G., & Balachandran. (2001). Internet banking patronage: an empirical investigation in Malaysia. *Journal of Banking and Commerce* , 6 (1), 20-32.

Turban, E., Lee, J., King, D., & Shung, H. M. (2000). *Electronic Commerce, a Managerial Perspective*. London: Prentice Hall.

United Nations Conference on Trade and Development (UNCTAD)
(2002). E-commerce and development report. New York and Geneva: United Nations.
Venkatesh, V. (1999). Creation of favourable perceptions: Exploring the role of Intrinsic Motivation. *MIS Quarterly* , 23 (2), 239-260.

Venkatesh, V., & Davis, F. D. (1996). A model of the antecedents of perceived ease of use; development and test. *Decision Sciences* , 27 (3), 451-481.

Venkatesh, V., & Morris, M. G. (2000). Why don't men ever stop to ask for directions? Gender, social influence, and their role in technology acceptance and usage behaviour. *MIS Quarterly* , 24(1), 115-139.

Wah, L. (1999). "Bnaking on the Internet", American Management Association Vol.. 88, No. 11, pp. 44-48.

Walczuch, R., Braven, G. D., & Lundgren, H. (2000, August 10-13). Internet Adoption Barriers for Small Firms in the Netherlands. In Chung, H. M. (Ed.) *Proceedings of the Americas Conference on Information Systems: Organisation Track*, 2, (pp.672-680). Long Beach, CA.

Young, R. D., Lang, W. W., Nolle, D. L., (2007). How the Internet affects output and performance at community banks. *Journal of Banking & Finance*, 31, 1033–1060.

<http://dictionary.reference.com/browse/electronic+banking>

<http://www.scribd.com/doc/26494919/Definition-of-E-banking> (long_)

Brogdon, C. (1999) "Banking and the Internet: Past, Present and possibilities,
<http://www.wp.stanford.edu/pub/gio/CS99I/banking.html>. Version

APPENDIX A

KWAME NKRUMAH UNIVERSITY OF SCIENCE AND TECHNOLOGY

INSTITUTE FOR DISTANCE LEARNING

QUESTIONNAIRE FOR CUSTOMERS

Introduction

This questionnaire is designed with the intention of collecting data in order to assess the knowledge and utilization of E-Banking facilities at Ghana Commercial Bank (GCB) in 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.

Instruction: Please tick (✓) or write where appropriate

SECTION A

BIO-DATA

1. Age group of respondent a) 21-25 [] b) 26- 30 [] c) 31 – 35 [] d) 36 – 40 []
e) 41- 45 [] f) 46 – 50 [] g) 51 and above []
2. Sex 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) Separated []
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

SECTION B

AVAILABILITY OF E-BANKING

6. How long have you been with the GCB? 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 GCB?

a) Current Account [] b) Savings Account []

8. How often do you visit the bank? a) Very often [] b) Occasionally []

9. Have you heard of any of the following e-banking services available at GCB?

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?

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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?

	Always available	Sometimes available	Not available	Not at all available
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 GCB?

a) Yes [] b) No []

15. Give reason(s) for your answer?

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SECTION C
KNOWLEDGE ABOUT E-BANKING

16. What do you know about e-banking?

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17. For how long have you heard about e-banking?

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?

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 []

SECTION 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. Has 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 GCB?

e-banking services	Level of satisfaction	Reason(s)
Internet banking	Very Satisfied [] Satisfied [] Not satisfied [] Not at all satisfied []	
Electronic Cards	Very Satisfied [] Satisfied [] Not satisfied [] Not at all satisfied []	
SMS Mobile Banking	Very Satisfied [] Satisfied [] Not satisfied [] Not at all satisfied []	
Electronic Transfer(s)	Very Satisfied [] Satisfied [] Not satisfied [] Not at all satisfied []	
Other(s), specify	Very Satisfied [] Satisfied [] Not satisfied [] Not at all satisfied []	

29. How would you rate the level of effectiveness of e-banking at the GCB?

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

30) What reason(s) would you give for your choice in question 29?

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31. What other challenges do you face with regards to e-banking products at the GCB?

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SECTION 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.....

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What is the reason why you are not utilizing e-banking?

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

39. Others, specify

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APPENDIX B

KWAME NKRUMAH UNIVERSITY OF SCIENCE AND TECHNOLOGY

INSTITUTE OF DISTANCE LEARNING

INTERVIEW GUIDE FOR GCB 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 Ghana Commercial Bank (GCB) in 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.

SECTION A: BIO-DATA

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

SECTION B: AVAILABILITY OF E-BANKING FACILITIES

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