

**CHRISTIANS SERVICE UNIVERSITY COLLEGE
DEPARTMENT OF ACCOUNTING AND FINANCE**

**ONLINE BANKING: IMPACT ON THE BANKING SECTOR IN GHANA. A
CASE STUDY OF ECOBANK GHANA LIMITED**

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**A PROJECT WORK PRESENTED TO THE BUSINESS STUDIES
DEPARTMENT OF CHRISTIAN SERVICE UNIVERSITY COLLEGE IN
PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF
BACHELOR OF BUSINESS ADMINISTRATION.**

JUNE 2019

DECLARATION

We have read the University regulation pertaining to plagiarism and certify that this work is our very own work towards the Degree of Bachelors of Business Administration and do not contain any unacknowledged work from any other source. We also declare that, we have being under supervision for this report herein submitted.

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ACKNOWLEDGEMENT

As usual, we give thanks to God almighty for His divine protection, guidance and even for the breath of life. Our families, for their undying love and loving encouragement. To our project supervisor Mad. Abigail Asamoah for her able assistance, guidance, suggestions and her supervision right from day one.

DEDICATION

This piece of work is dedicated to our families for their unconditional love and support.

To all Business Administration (Finance) Lecturers, for the impact of knowledge into us. Without them, we wouldn't have come this far.

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ABSTRACT

This study aims at examining the online banking: impact on the banking sector in Ghana. Specifically, it looks at concerns such as the various banking services available through internet banking in Ghana, factors influencing internet banking adoption in Ghana, factors impacting negatively on customers "utilization of internet banking and bank" perceptions of Internet banking and its operational value. The study was based on both qualitative and quantitative approaches and questionnaires were administered to some selected Internet banking customers and staff of the selected bank using purposive and simple random sampling techniques. With the aid of the SPSS windows software the data was analyzed using basic statistical tools such as frequencies and percentages. Findings from the study indicate that internet banking services in Ghana include checking of balances and account activity, request for cheque book and same bank funds transfer. The availability of other electronic products, frequency of internet use and management commitment to internet banking is some of the factors that affect internet banking adoption. Some level of value in terms of banking operations is derived from internet banking. Improved customer service delivery, lower transaction costs and improved cross-selling opportunities are some of the benefits. Also, customers are to a large extent satisfied with services provided through electronic delivery channels by Ecobank in Ghana. Internet banking is used as a marketing tool to attract and retain customers, expand market reach, and improve service quality, the extent and the intensity of banking products and services offered online is likely to have a significant impact on the bank's overall performance. The study concludes that generally, online banking has a positive and significant influence on the financial performance of commercial banks in Ghana. This is because online banking cut banks

costs, increase commission income, reduce staffing levels and make banking more convenient for customers.

CHAPTER ONE

INTRODUCTION

1.0 Background of the study

The development of Information and Communication Technology (ICT) in Sub-Saharan Africa over the last two decades is drastically altering the way businesses are operated in Sub-Saharan Africa in general and Ghana in particular. The introduction of ICT has also led to the fast growth and development of the service sector, making the sector one of the leading worldwide. Added to this is the introduction of electronic commerce popularly referred to as Online banking refers to the use of the Internet as a remote delivery channel for banking services, including viewing and verifying transactions on account, Checking Balances, Printing Statements, Monitor uncredited and unpaid cheques, and many more as e-commerce which is thought to hold the promise of a new commercial revolution by offering an inexpensive and direct way to exchange information and to sell or buy products and services (Abor, 2005).

This technological innovation has also brought in a level playing field for businesses by eliminating geographical, regulatory, and industrial barriers (Zafar, Zaheer, Saleem-ur-Rahman and Kashifur Rehman, 2011). In the words of Balachandher, Santha, Norhazlin, and Rajendra (2001), this revolution in the market place has set in motion a revolution in the banking sector for the provision of a payment system that is compatible with the demands of the electronic marketplace. According to Awad (2000) there are four electronic commerce activities internet users perform.

These activities require a banking relationship and are: shopping, banking, investing, and online electronic payment for Internet services. The enormous increase of the internet is changing the way businesses interact with consumers as most businesses are now conducted using the internet. Online banking according to Daniel (1999) is therefore defined as the provision of information or services by a bank to its customers over the internet. To realize the contributions of internet-banking to the growth of a country, Nupur (2010) noted that there was the need for the increase in internet access, development of new online banking features, growth of household internet usage, and the development of a good legal and regulatory framework. The advent of electronic banking in general and internet banking in particular has led to the development of service quality dimensions to measure the extent of customers' satisfaction. Service quality developed by Zeithaml (1988) is one of the more widely used instruments for assessing customer satisfaction. The extensive use of the Service quality instrument since the rise in the usage of internet according to Mols (2000) is because internet based home banking might bring a radical change in the way banks maintain their relationships with their customers.

Ghana can boast to be one of the best performing financial sectors in sub-Saharan Africa and the banking sector is the nucleus around which the financial sector revolves. In Ghana, until the year 2003, internet banking was not very common. After 2003 when most banks were made universal banks, internet banking became very common and easily assessable to all who subscribe to the service. There are minimal researches on internet banking on the Ghanaian banking sector as compared to other electronic banking innovations. Nevertheless, comprehensive research investigating the relative importance of factors influencing the adoption of internet banking and other customer preferences, particularly for the case of Ghana has never been carried out to the best of knowledge of the researcher.

This is why the researcher is interested in conducting a study to assess the impact of internet banking service quality on customer satisfaction in the banking sector of Ghana.

1.1 Statement of the problem

The Ghanaian banking sector after the liberalization has operated in a relatively stable environment, however, with the advent of Internet banking, the industry is characterized by dramatically aggressive competition. These competitions have made banks in Ghana adopt new technologies such as internet banking to make the banking process faster and easier whilst satisfying the needs of the customers. The argument has been that most of the product and services offered by the internet banking technology does not meet customers' need and quality.

Additionally, such services are skewed to only some selected affluent customers to the neglect of majority of the Ghanaian banking customers who do not have access to internet, computers and even electricity. Others argued that the cost of acquiring the internet facility, computers and even the security of internet banking transactions are very high or expensive for the average Ghanaian bank customer hence internet banking does not really satisfy the Ghanaian bank customer in any way.

Therefore, income and educational level of customers plays an important role in the adoption of internet banking facilities. Furthermore, most of the internet banking services provided by the banks in Ghana is usually unreliable with most customers unaware of the content of the internet banking services offered by their bank. Most of the product and services offered by internet banking is not accessible in all part of Ghana especially in the typical rural areas where access to electricity or alternative sources of energy is a problem. Additionally, with the high illiteracy rate among the Ghanaian populace the use of the internet is left in the hands of individuals who have gotten some level of education or can

read and write. This therefore means that education plays a crucial role in determining the usage and satisfaction level of customers who subscribe to internet banking services. Additionally, as majority of the illiterate are the aged, it means that the aged would be left out when it come to the adoption of internet banking. Despite these challenges, there is an increasing adoption of internet banking in Ghana by the Ghanaian banks. In spite of the increasing adoption of internet banking and it relevance towards customer satisfaction in the Ghanaian banking industry, very little empirical investigation or research has been conducted in understanding factors of internet banking service quality that lead to customer satisfaction. This study therefore tries to fill this empirical gap in research by conducting a study on impact of internet banking service quality on customer satisfaction in the banking sector of Ghana.

1.2 Objectives of the study

The main objective is;

1. Assessing the impact of internet service quality on customer satisfaction in the banking sector of Ghana

Specific objectives of the study are:

1. To assess what internet banking entails and the reasons for its adoption by the banking sector.
2. To identify the major service quality dimensions that satisfies customers.
3. Examine the benefits and challenges associated with electronic banking
4. To identify the impacts of online banking in the banking sector
5. To identify the possible challenges associated with the internet banking
6. To suggest solutions to improve upon internet banking activities.

1.3 Research questions

1. How do we assess what internet banking entails and the reasons behind its adoption by the banking sector.
2. Do the major service quality dimensions satisfy customers in internet banking?
3. What are the benefits and challenges associated with electronic banking services?
4. What impact does the online banking have on the banking sector?
5. What are the possible challenges facing internet banking?
6. What solutions can be put in place to improve upon internet banking activities?

1.4 Significance of study

The internet and internet based technologies have revolutionized the way banks operate and interact with their environment. The findings of this study would be useful to policy makers in the banking sector in the development of a national policy framework for electronic banking adoption in Ghana to facilitate economic and social growth. This study would also assist all stakeholders in the banking industry identify and formulate strategies that will promote online banking. This study also seeks to address the lack of studies on online banking adoption in developing countries such as Ghana and also help researchers in studies related to online banking.

1.5 Limitation of the study

The study is limited to the problems that will be encountered when the project is being embarked on. It will be also difficult in collecting data from customers who do not use smart phones. Also financial constraints is a limitation with the reason that not all data will be acquired. Additionally, the internet is not well accessible by all literate people in Ghana who have multi-purpose phones and e-mail addresses; hence the study is limited to such people. Although the study is for the whole Ghanaian banking sector only a selected few

will be used for this study. The main reason for this selection is because only fewer customers in the Ghanaian banking industry use and have internet facilities. The study is specifically limited to only internet banking customers of the various banks in the country. Additionally, only customers from the head offices of the various branches are used for this study.

1.6 Scope of the study

The study shall provide the impact of internet banking service quality on customer satisfaction in the banking sector of Ghana. The scope of the study concentrates on two major areas. This comprises of the contextual and geographical scope of the study. Contextually, the research will emphasize on Online banking focusing its potential impact on customer service delivery. There are numerous and emerging types of electronic banking such as Automated Teller Machine (ATM), internet banking, mobile phone banking, debit cards, E-switch telephone banking, SMS banking, home banking, and network banking just to mention a few. However, four of the numerous electronic banking has been randomly selected because of numerous electronic banking services in Ghana. In doing this all the existing electronic banking services were identified and out of which those available in Ghana were selected from which four of them were randomly selected by making a survey to know which ones were available to the banks chosen for the research. After the survey SMS service, ATM services, mobile banking and internet banking were selected. There are a lot of banks that offer electronic banking to its customers in Ghana; hence the study will be limited to some chosen banks.

Again, the geographical scope of the study is situated within the Kumasi metropolis. However, bank within the Kumasi metropolis are many and as such it is practically

impossible for the researcher to study all the customers in these banks. For this reason the scope encompasses one selected Ecobanks where the four electronic banks were prevalent. These included Harper road branch, Bantama branch, and Adum branch forms the geographical scope of this study.

1.7 The organization of study

This project is divided into five chapters. The first chapter deals with the introduction to the study, background of the study, problem statement, the research question, research hypothesis as well as the limitation of the study and the organization of the study. Chapter two is devoted to the history of the banking sector in Ghana. The chapter is also divided into three main sections: the banking sector before independence; the sector between independence and the pre-reform sector of the 1980s; and the post-reform era till date. Chapter three presents the theoretical and the empirical literature on which this study is based or built. Chapter three looks at the issues of service quality, customer satisfaction as well as the demographic variable and how they have impact on the service quality and customer satisfaction. Chapter four is the research methodology or method.

In chapter four, the research instrument, design, sampling and sampling techniques as well as data analysis are extensively discussed. Chapter five present the summary of findings, conclusions and recommendations.

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

Information and Communications Technologies (ICTs) have changed the approaches to conducting business transactions and meeting the growing demands of customers for most organizations. The promise of ICTs in the banking sector has been seen in terms of its potential to increase customer base, reduce transaction costs, improve the quality and timelines of response, enhance opportunities for advertising and branding, facilitate self-service and service customization, and improve customer communication and relationship (Garau, 2002). Most banks in developed and some in developing parts of the world are now offering e-banking services with various levels of sophistication. However, most African banks seem to be content with having a Web presence with only a few of them making strides towards full-fledged e-banking applications. Since the mid-1990s, there has been a fundamental shift in banking delivery channels toward using self-service channels such as internet banking services.

2.1 What Is Internet Banking?

According to the Internet Banking Comptrollers Handbook (1999) cited by Ntsiful, Ackaand Odorh (2010), Internet banking refers to systems that enable bank customers to access accounts and general information on bank products and services through a personal computer (PC) or other intelligent devices. Internet banking products and services can include wholesale products for corporate customers as well as retail and fiduciary products for consumers. Internet banking according to Essinger (1999) cited by

Abor (2004) is: “to give customers access to their bank accounts via a website and to enable them to enact certain transactions on their account, given compliance with stringent security checks.” Mols (1999) also mentions that by the use of the Internet it is possible for banks to offer a number of home banking services, such as bill payment and money management services 24 hours a day.

Johns and Perrott (2008) present a simple model of internet banking represented in Figure 2.1 as cited by Adams and Lamptey (2009). Internet banking involves a bank, internet technology and users’ computers. The bank’s customers i.e. business based customers and home based customers can have access to their bank account through the internet.

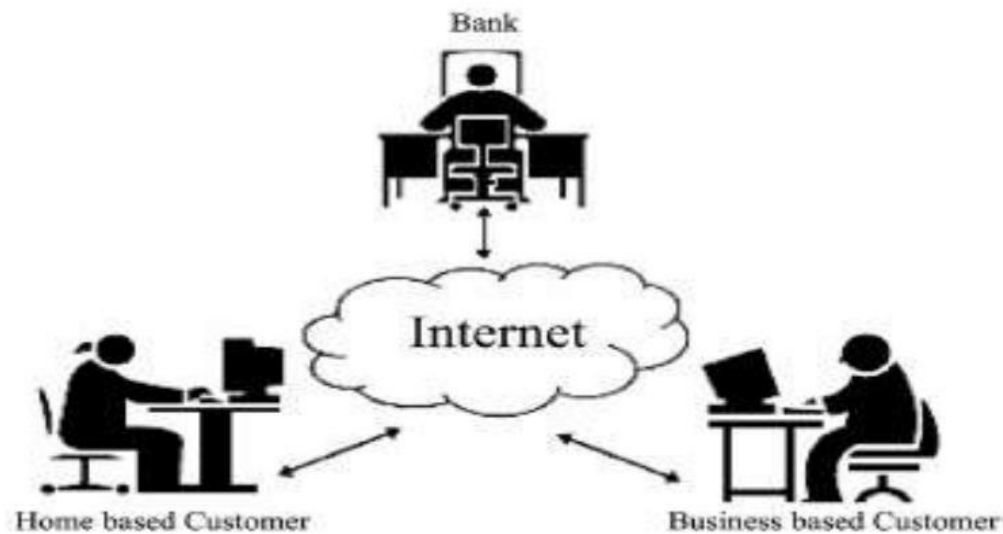


Figure 2.1 Internet banking model

Source: Johns and Perrott (2019)

The products and services obtained through Internet banking may mirror products and services offered through the traditional bank delivery channel when a customer visits the bank premises.

Electronic banking services range from information push services where customers receive information about the bank, its products and services, to information-download services where customers can download account information and full-transaction services where customers can perform most banking transactions (such as transfer between accounts, bill payment, third party payment, card and loan applications, etc.) electronically (Boateng and Molla, 2006; Singh and Malhotra, 2004).

Internet banking allows funds to be transferred from a checking account to a savings account, or vice versa. Customers can fill out loan applications for anything from personal loans to mortgages online and can even use internet banking for investments. Internet banking accounts can be accessed any time, day or night as long as there is an internet connection of any kind. Extra caution is taken when setting up internet banking systems. Customers who have accounts online use complex passwords. The information will be encrypted. Furthermore, if customers try to make risky transactions, they will be asked more security questions.

2.2 Internet Banking Adoption

During the past few years online banking acceptance has been rapid and currently 55 percent of the private banking customers in Finland have an online banking contract with their bank (The Finnish Bankers' Association, 2003; cf. NordeaOyj, 2003).

In general, Europe has been and still is the leader in online banking technology and usage (Schneider, 2001). By comparison, at the end of 2000 only roughly 20 percent of the US banks offered online banking services and only 20 percent of US private banking customers equipped with an internet connection used online banking services

(Sheshunoff, 2000; Orr, 2001). By the end of 2002 about 120 largest US banks offered online banking services (Pyun et al., 2002).

2.2.1 Why Adopt Internet Banking?

Pikkarainen et al (2004) in their work on Consumer acceptance of online banking find two fundamental reasons underlying online banking development and diffusion. First, banks get notable cost savings by offering online banking services. It has been proved that online banking channel is the cheapest delivery channel for banking products once established (Sathye, 1999; Robinson, 2000; Giglio, 2002). Second, banks have reduced their branch networks and downsized the number of service staff, which has paved the way to self-service channels as quite many customers felt that branch banking took too much time and effort (Karjaluoto et al., 2003). Therefore, time and cost savings and freedom from place have been found the main reasons underlying online banking acceptance (Polatoglu and Ekin, 2001; Black et al., 2002; Howcroft et al., 2002).

2.2.2 Internet Banking Acceptance using Technology Acceptance Model

It has been noted that users' attitudes towards and acceptance of a new information system have a critical impact on successful information system adoption (Davis, 1989; Venkatesh and Davis, 1996; Succi and Walter, 1999). If users are not willing to accept the information system, it will not bring full benefits to the organization (Davis, 1993; Davis and Venkatesh, 1996). The more accepting of a new information system the users are, the more willing they are to make changes in their practices and use their time and effort to actually start using the new information system (Succi and Walter, 1999) as cited by Pikkarainen et al (2004).

One of the most utilized model in studying information system acceptance is the Technology Acceptance Model (TAM) (Davis et al., 1989; Mathieson, 1991; Davis and 9

Venkatesh, 1996; Gefen and Straub, 2000; Al-Gahtani, 2001) in which system use (actual behavior) is determined by perceived usefulness (PU) and perceived ease of use (PEOU) relating to the attitude toward use that relates to intention and finally to behavior. Pikkarainen et al (2004) in their study of consumer acceptance of online banking in Finland in the light of the technology acceptance model (TAM) added with new variables derived from online banking acceptance literature on one hand and from a focus group interview with bank managers on the other. The model they developed proposed that online banking acceptance can be modeled with the variables derived from the TAM (PU and PEOU) and four other variables referring to perceived enjoyment (PE), information on online banking, security and privacy, and the quality of the Internet connection. By applying these into online banking context they hypothesize:

H1. Perceived usefulness (PU) has a positive effect on consumer acceptance of online banking

H2. Perceived ease of use (PEOU) has a positive effect on consumer acceptance of online banking

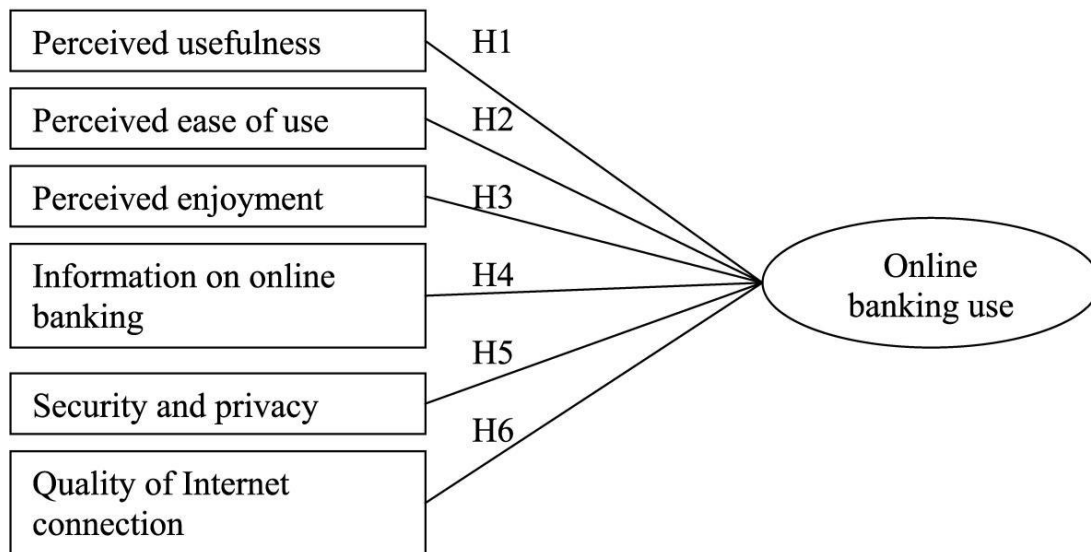
H3. Perceived enjoyment (PE) has a positive effect on consumer acceptance of online banking

H4. The amount of information a consumer has about online banking has a positive effect on consumer acceptance of online banking

H5. Security and privacy have a positive effect on consumer acceptance of online banking

H6. The quality of the Internet connection has a positive effect on consumer acceptance of online banking

Figure 2.2 The research model - Consumer acceptance of online banking



(Source: Pikkarainen et al 2019)

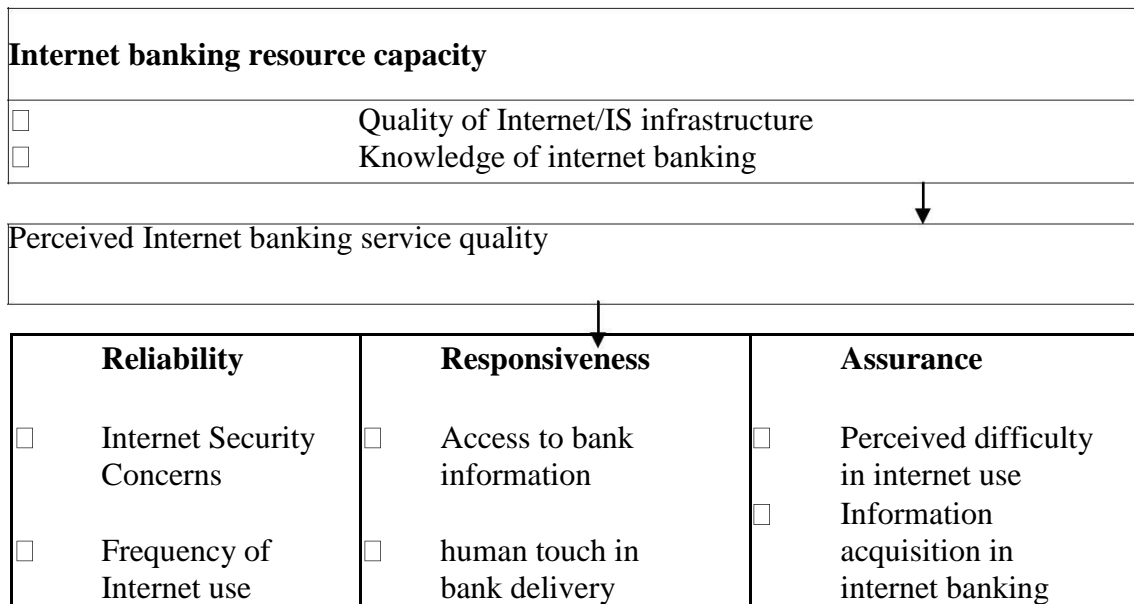
The model was tested with 268 Finnish consumers and revised, with the use of a factor analysis; five factors were identified suggesting that PU, PEOU, PE, information on online banking, and security and privacy have an impact on the acceptance of online banking. Thus, from the hypothesized model used the factor referring to quality of Internet connection did not suite in the model. This might hint that speed and reliability of the Internet connection is not regarded as important owing to the fact that reliable Internet connections have become so common place among the respondents.

2.2.3 Internet Banking acceptance based on Service Quality

SERVQUAL (Parasuraman, Berry, and Zeithaml, 1985, 1988, 1991) is one of several theories that have had considerable applicability in Information Systems (IS) and Internet related research. SERVQUAL (service quality) is basically an operational instrument used in measuring customer perceptions of service quality along five key dimensions:

tangibles, reliability, responsiveness, assurance and empathy. Tangibility refers to the tangible aspects of an intangible service delivery, including physical facilities and staff appearance, etc. Reliability refers to the ability of the service provider to execute the delivery of the service in an accurate and dependable manner, whilst responsiveness refers to the willingness of the service provider to respond to customer needs in a timely manner. Assurance refers to the ability of the service provider to inspire trust in the customer while empathy is the extent to which the provider is able to identify the obvious and latent needs of the Customer and offer caring individualized service. Woldie, Hinson, Iddrisu and Boateng, (2008) in their research on Internet banking: an initial look at Ghanaian bank consumer perceptions, adopted a variation of SERVQUAL which is essentially a two tier SERVQUAL model as shown below. At one level they examined the resource prerequisites for the adoption of Internet banking and then evaluated Internet banking perceptions along three traditional SERVQUAL model dimensions: reliability, responsiveness and assurance. They found in a pre-test of the SERVQUAL dimensions of 20 IT managers of sampled firms in the Association of Ghanaian Industries database. They discovered that reliability, responsiveness and assurance are the SERVQUAL dimensions most likely to impact the perceptions of Internet banking adoption amongst Ghanaian corporate entities. The results of the study revealed that Ghanaian firms are willing to use Internet banking services if they are provided by their banks although 86% of the respondents said they would still visit their banks even if their companies adopt Internet banking.

Figure 2.3 Variation of SERVQUAL



(Source: Woldie et al 2019)

Results from a study on Consumers' attitudes towards online and mobile banking in China by Laforet and Li (2005) showed Chinese online and mobile bank users were predominantly males, not necessarily young and highly educated, in contrast with the electronic bank users in the West. The issue of security was found to be the most important factor that motivated Chinese consumer adoption of online banking. Main barriers to online banking were the perception of risks, computer and technological skills and Chinese traditional cash-carry banking culture. The barriers to mobile banking adoption were lack of awareness and understanding of the benefits provided by mobile banking. The demographic, attitudinal and behavioral characteristics of online and mobile bank users were examined. Respondents from six major Chinese cities participated in the consumer survey.

2.3 Benefits of Internet Banking

Internet banking does offer many benefits for both banks and their customers. The banks are doing what they can to encourage customers to sign up to it. The benefits of internet banking to banks include;

2.3.1 Less Expensive to Maintain

Internet banking costs less. This is because there are fewer buildings to maintain, and less involvement by salaried employees, there is a much lower overhead with online banking. These savings allow banks to offer higher interest rates on savings accounts and lower lending rates as well as lower service charges. Some banks also offer better deals such as free bill paying services to encourage their customers to do their banking online. (Source: <http://correctbanking.com/index.php>)

2.3.2 Gain Customer Loyalty

In a recent study conducted by Forrester Research as cited by Nath, Schrick and Parzinger (2001), 61% of respondents claimed that if their banks offered the financial

Services they wanted, they would prefer to utilize the bank's service (Dixon, 1999).

Having the consumers' interest in mind, most banks are making efforts to offer a focal point of financial services including cheque Book request, funds transfer, loan applications and repayments, insurance and be able to send secure messages to a customer's branch. The Internet allows for this convergence of financial services in one location which previously was unavailable. The idea is to attract customers who will more frequently patronize the banks web sites that offer financial services thereby creating a more loyal customer who depends on the bank for many financial services at one location. As more customers patronize, higher revenue per customer can be generated.

The benefits of internet banking to customers include;

2.3.3 Ease of Account Monitoring

Bouncing a cheque (accidentally) is a thing of the past for internet banking customers because monitoring an account can be done online any time, day or night. Customers can track your balance daily, see which cheque has cleared and know when deposits and payments are made. This is all possible by simply going online to the bank's website and logging into your account. Internet banking customers can keep their accounts balanced using a computer and their monthly statement. A customer's bank account information can be downloaded into software programs such as Microsoft Money or Quicken; making it easy to reconcile an account with just a few mouse clicks. The convenience of the data capture online makes it much easier to budget and track where your money goes. Internet bank may even allow you to view copies of the cheques you have written each month. (Source: <http://correctbanking.com/index.php>)

2.3.4 Ease of Transacting

There are sound reasons why internet banking is growing. The economic advantages have encouraged banks to provide an increasing range of easy to use services via the internet. Customers have found doing business online simple and speedy and have become very comfortable with the arrangement. Internet banking gives people more control over their money in a very convenient way that they find enjoyable and reassuring. Internet banking offers a great deal more convenience than you could get from conventional banking. Customers are not bound by 'banking hours' and don't have to go there physically. Time is not wasted when you have work to do because you can do your office's banking without leaving the office. No matter where you are or

what time it is, you can easily manage your money. (Source: <http://correctbanking.com/index.php>)

2.3.5 Quick Detection of Fraud

With the ability to view an account at any time, it is easier to catch fraudulent activity early before much damage is done. As soon as an internet bank account is logged into, customers quickly see whether there is anything amiss when they check on their deposits and debits. If funds are withdrawn from an account fraudulently, the customer will see it right away. This lets customers get started on correcting the problem immediately rather than having to wait a month after receiving an account statement by post to even know what is happening as is the case with traditional banking. (Source: <http://correctbanking.com/index.php>)

2.4 Challenges of Internet Banking

Some customers are hesitant because of problems they see in the industry. While there are some disadvantages to internet banking, many of the problems start with the consumer.

2.4.1 Technophobia

Technophobia is the fear or dislike of advanced technology or complex devices, especially, computers. There are still quite a few people who do not use internet banking because of their own lack of knowledge therefore are resistant to technology and feel that it is too difficult to learn. People who have this problem are usually older because young people are exposed to computers at an early age these days. Some of the same people also fear using the internet. Others who will use computers offline will not use them to go on the internet for the fear of losing their privacy. Many of such people have

exaggerated fears in their minds. For them, internet banking will be impossible, unless they come to terms with their fears. Certain people just do not have proper equipment to go on the internet. It does not take an extremely advanced computer to do internet banking transactions. However, all what is required is basic modern computer equipment with an internet connection. Most banks now expect you to have a 128-bit encryption browser for enhanced security. (Source: <http://correctbanking.com/why-some-people-fear-internet-banking.php>)

2.4.2 High Cost of Internet Services

The high cost of internet services and products is leaving majority of Ghanaians out of the enormous opportunities and benefits that the technology offers in education, governance, commerce and research. The production, packaging and manner of distribution of internet services make the technology expensive. Also internet services are expensive because Ghana has no nation-wide telecommunication backbone for data network which makes accessing and broadcasting bandwidth for the industry a big challenge. (Source: <http://www.ghanabusinessnews.com/2008/12/06/ghanas-low-internet-penetration-high-cost-and-national-growth/>)

2.4.3 Security

Security is a problem for many users of internet banking. The user names and passwords are often complex. This is good, for the most part, because no one else would guess them. However, it can be a problem if the customer cannot remember them. The customer might not be able to access their account when they want to, without going through an intense security procedure. What is even worse, many people who know they will have trouble remembering their usernames and passwords for internet banking will write them down and keep them near their computers. This makes it easy for thieves to

get in and steal money from their accounts. (Source: <http://correctbanking.com/why-some-people-fear-internet-banking.php>)

1.2 *Fraud*

Internet banking, like any other business arena, is susceptible to fraud. Phonies abound in every type of business, and Internet banking is no different. One kind of fraud is done on fake bank websites. These are look-alike sites that imitate your internet banking website. They sometimes pop up when there is a slight misspelling of your bank's web address. If care is not taken, a customer can type in his username and password before he realizes he is not connected to his own bank at all. Another type of fraud is "phishing." This is the use of emails to lure victims onto a fake bank website to steal their information. A victim might open the email and find a request for information from his "bank" with a link provided. If the victim clicks on the link and go to the fake bank site, the victim might give up all kinds of valuable information if attention is not paid to what is happening. Victims could be asked not their your specific internet banking information but also other private data like social security number, or driver's license number. (Source: <http://correctbanking.com/why-some-people-fear-internet-banking.php>)

2.4.5 *Up time of Internet Banking Service*

Then, there are disadvantages that are really only to do with the internet banking more than the customers. One problem happens when the bank's computer system has an extremely high volume. Customer transactions may not be made in a timely manner. There can be other failures in the communications of banks that will cause errors or lags. If a computer virus ever got into the bank's computers, it could be a real problem. Clearing up the chaos might take a while. Fortunately, internet banking

companies take many precautions to prevent this, so it is extremely unlikely to happen.

2.4.6 Expensive and Unreliable Internet Connection

Extremely slow internet connection and frequent breaks in this service affect the use of internet banking services. Broadband connections via satellite do not live up to their hype and multinational telecommunication giants, offering mobile broadband do not extend their 3.5 G (third generation) of developments in wireless technology coverage to rural areas in Africa and particularly Ghana. All the above factors conspire to make Internet access unattractive to potential users. The poor quality of service comes with high connection costs due to the high operational costs incurred by providers. High connection cost for a service that does not guarantee value for money is a big disincentive for most users in Ghana. (Source: <http://www.ghanabusinessnews.com/2008/12/06/ghanas-low-internet-penetration-high-cost-and-national-growth/>)

While there are some challenges with internet banking, most of them can be overcome with knowledge and caution.

2.5 Internet Banking Security

Internet banking companies are working hard to make the service as secure as possible. They work with experts in the field of security. Most Internet banking system is secured by industry standard methods that ensure privacy of transactions during transmission. According to Hutchinson and Warren (2003), Internet users are concerned with privacy issues including transparency, collection, use and disclosure of their personal information.

Eight security requirements have been proposed as the basis for the e-commerce security framework (Labuschagne, 2000) cited by Hutchinson and Warren (2003). (Ntsiful, Acka and Odorh, 2010)

- **Identification and authentication** –The ability to uniquely identify a person or entity and to prove such identity.
- **Authorization** – The ability to control the actions of a person or entity based on its identity.
- **Confidentiality** –The ability to prevent unauthorized parties from interpreting or understanding data.
- **Integrity** –The ability to assure that data have not been modified accidentally or by any unauthorized parties.
- **Non-repudiation** – The ability to prevent the denial of actions by a person or entity.
- **Availability** –The ability to provide an uninterrupted service.
- **Privacy** –The ability to prevent the unlawful or unethical use of information or data.
- **Auditability** –The ability to keep an accurate record of all transactions for reconciliation purposes.

NOIE et al (1999) cited by Hutchinson and Warren (2003), point out that the security offered by banks which customers also anticipate should include:

- careful reference to their authorized websites in their publications;
- verification via the use of a digital certificate;
- evidence of security protection displayed on the screen e.g. lock icon;
- protection of PINs and passwords; on-screen and mouse-operated keypads for sensitive information;

- virus protection;
- at least 128-bit encryption;
- firewall implementation;
- Stated limits to customer liability for unauthorized use of access codes. (Ntsiful, Acka and Odorh, 2010)

Some of these methods include the following;

2.5.1 Automatic session timeout

Internet banking sites automatically logs customers out of the service to reduce the risk of someone else accessing their account if they leave their computer unattended. The banks who provide the service do however recommend that customers use the logout function of the site as soon as they finish their Internet banking session. (Source: <http://correctbanking.com/how-to-increase-your-internet-banking-security.php>)

2.5.2 Scramble pad

To help protect information entered from a customer's PC, banks have included the 'scramble pad' feature on their Internet banking logon page. Help with using the scramble pad is available from the Help button on the Internet banking logon page. By using the scramble pad, it becomes more difficult for key-logging viruses, which may have been inadvertently downloaded onto your PC, from compromising your access codes. Use of the scramble pad heightens the protection of customers' information and reduces the possibility of unauthorized transactions occurring on their accounts. (Source: <http://correctbanking.com/how-to-increase-your-internet-banking-security.php>)

2.5.3 Digital certificates

Digital Certificates are used by banks to ensure that their customers are really connected to them. Customers can ensure that are using the banks verified site by double clicking the padlock symbol (located at the bottom right hand corner of the window for most web browsers). (Source: <http://www.buzzle.com/articles/internet-banking-security.html>)

2.5.4 Encryption

All communication between a customer's browser and the banks secure Internet banking sites is encrypted using 128bit SSL encryption technology to ensure confidentiality of transactions performed on the site. (Source: <http://correctbanking.com/how-to-increase-your-internet-banking-security.php>)

2.5.5 Identity Verification

Traditionally, when customer logs on to Internet Banking they simply use their usernames and passwords. Today, a new multi-layered approach is available to provide an additional layer of security to help protect customers against possible attempts at online fraud. Identity verification is an effective and convenient form of enhanced authentication which uses a telephone number provided by the customer. At the time of making some money transfers, the customers will receive an automated call which provides them with the Identity verification code to complete your transaction. All the customer need to do is simply enter the Identity verification code into the Internet banking screen to complete the transaction. This additional layer of protection helps to prevent unauthorized payment transactions on customers' accounts. While it's a simple step, this extra layer of security provides greater peace of mind for customers Internet

Banking payment transactions. (Source: <http://www.buzzle.com/articles/internet-banking-security.html>)

There are things the customer must also do to increase security.

2.5.6 Appropriate Web browsers

The banks suggest that customers browsers have 128-bit encryption. This insures that your information will be safe as it leaves your computer just as it is when it is on the bank's secure server. Customers need to have the latest version of web browsers and latest operating system which have 128-bit encryption. (Source: <http://correctbanking.com/how-to-increase-your-internet-banking-security.php>)

2.5.7 Strong User Credentials

Credentials for accessing the service are given to customers by the bank and they are allowed to choose their own passwords. There are specific rules about how many characters it must have. There is a specification as to how to construct the password. You must use alphabets and numbers, upper and lower case letters and special characters. The customer must choose something that is not easily guessable. Some

banks go the extra mile of sending a token to customers' mobile phones immediately

they enter their username and password. The token must be inputted to grant full access to the service. (Source: <http://correctbanking.com/how-to-increase-your-internet-banking-security.php>)

2.5.8 Cautious Use of the Service

It is always important to log off when after internet banking transactions. If a public computer is used, it is even more important. However, doing internet banking on a public computer, such as one in a library, is not the most secure course. An industrious internet thief can get some information off a public computer without too much

trouble. However, some internet banking companies offer a special service that prevents your banking transactions from going into a computer's cache memory. This feature makes banking at a public computer much safer. (Source: <http://www.buzzle.com/articles/internet-banking-security.html>)

It is also important that, while using a computer in public, no one can see the screen during internet banking transactions. While many people feel comfortable setting their laptops up and doing their business anywhere, it is not always wise.

Sometimes, no matter the measures in place, a fraudster will find a way into one's bank account. The best defense is to monitor an account carefully.

2.6 Internet Banking Fraud

Internet banking fraud is fraud or theft committed using online technology to illegally remove money from, or transfer it to, a different bank account. First, the criminal obtains the customer's account access data, i.e. logon name and password. Second, the criminal uses this information to transfer money to other accounts and withdraws the funds. Offenders often employ one of the many popular fraud schemes to obtain personal information. These fraud schemes include, but are not limited to: "Over the shoulder looking", "phishing" and Trojans.

"Over the shoulder looking" scheme involves the offender observing his potential victim making financial transactions and recording the personal information used in the transaction.

The "phishing" scheme involves using phony emails and/or fake websites. The word "phishing" was obtained from combining the words "password" and "fishing". Criminals send emails which appear to be from the customer's bank that direct customers to a fake

website. This website mimics the bank's website and prompts customers for their internet banking account access data.

Trojans are usually emails that may contain files, pages or attachments to open. Once opened, they secretly install a program that can monitor customers' online activity, down to what keys they are pushing on what page. Once a Trojan detects that the customer opens an online banking website, it captures login name and password, and sends it to the criminal.

2.7 Some Measures Taken to Improve Internet Banking Security

2.7.1 *One Time Passwords*

To improve security, some banks use "one time passwords", also called OTP. Upon activation of the customer's account for online banking, the bank mails a list of OTPs to the customer. Each time the customer performs a transaction, he enters one OTP for verification. Once used, the OTP becomes invalid. If the customer runs out of OTPs, he is sent a new list. (Source: <http://internetbankingfraud.com/>)

2.7.2 *Hardware Tokens*

The high-tech alternative to paper OTP lists are "hardware tokens". These devices have the form factor of a key chain attachment, featuring a crypto processor and a display. A hardware token displays a new OTP every 60 seconds. Because each OTP is only valid for a limited period of time, they provide significant protection against "over the shoulder looking" and phishing schemes.

(Source: <http://internetbankingfraud.com/>)

2.7.3 Transaction Specific OTPs

The shortcoming of both paper OTP lists and hardware tokens lies in the fact that each OTP is not transaction specific. That is, the same OTP can be used to verify either a genuine or a fraudulent transaction. One possible way to come by this flaw is to use a "key generator" device that generates an OTP based on primary transaction parameters.

A key generator looks similar to a pocket calculator. It has a keypad that lets the customer enter the source account, target account, transaction amount, and a PIN. Based on these parameters, the key generator generates a transaction specific OTP. The customer now enters the transaction parameters into the online banking application including the generated OTP. When the online transaction is received by the bank's server, it performs the same calculations as the key generator and thus verifies the OTP.

If a criminal captures such an OTP, he cannot use it for a fraudulent transaction, since this OTP can only be used to verify a transaction with the same parameters as entered on the key generator. Because the key generator is a separate hardware device with no connection to the Internet, it is immune to getting attacked by malicious software. (Source: <http://internetbankingfraud.com/>)

2.7.4 OTP by SMS

Some of the disadvantages of using key generators are avoided by sending OTPs to the customer using SMS. With this approach, the customer first sends the complete transaction to the bank's server. The bank's server then creates a random number as OTP and sends it to the customer's mobile phone as text message. The customer now enters this transaction specific OTP into the online banking application, and sends it also to the bank's server. If the generated OTP matches the one transmitted by the customer, the transaction is verified. (Source: <http://internetbankingfraud.com/>)

2.7.5 Smart Cards and USB Tokens

Smart cards and USB tokens employ a different approach to authentication. Smart cards contain crypto processors without a display. They must be electrically connected to the customer's PC using a card reader device. USB tokens are essentially the same, only that they render card readers unnecessary by plugging directly into the customer PC's USB port.

By exchanging crypto keys with the bank's server, the bank's server can be sufficiently sure that the online transactions secured with this approach stem from the genuine customer. While smart cards have been hacked in the past, the latest generation smart cards will likely provide a high level of fraud protection for many years. (Source: <http://internetbankingfraud.com/>)

2.7.6 Transaction Monitoring

Transaction monitoring occurs in the bank's data centre. For each transaction, the transaction monitoring software scrutinizes the current transaction's parameters, and compares it with the previous transaction of both the customer and the counterparty of the transaction histories. By comparing the current transaction pattern to a stored known fraud patterns, the software can flag suspicious transactions "on the fly". Such transactions are then referred to a call centre for manual verification.

(Source: <http://internetbankingfraud.com/>)

2.8 Internet Banking In Ghana

Many people are becoming acquainted to the internet in Ghana. The use of the Internet in Ghana has also seen significant increases since the liberalization of the telecommunication industry in 1990s.

Due to the maturity of Internet technology in recent times and the drastic growth of Internet users, financial institutions have had to take advantage of it to serve their clients. The banking industry is facing an increasingly demanding environment as many consumers and businesses become more sophisticated. Over the past six years banks that have entered the country include Zenith Bank (originally from Nigeria), Standard bank (the most capitalized bank in Africa; originally from South Africa), United Bank of Africa (originally from Nigeria), UT Bank, Fidelity Bank (formally Fidelity Discount House) and Access Bank. All these banks aim at increasing their market share by redefining service delivery position so as to remain in the competitive environment of the banking terrain. This is because delivering quality service and product have become an integral part of banks growth and their survival in today's competitive banking industry.

Internet banking is an instrument in the service delivery arsenal for banks. Online banking is the fastest growing service that banks can offer in order to gain and retain new customers (Moody, 2002) cited by Singh (2004). Many more banks have introduced internet banking in recent years with nineteen (19) out of the Twenty – seven (27) banks in Ghana offering internet banking services to their customers.

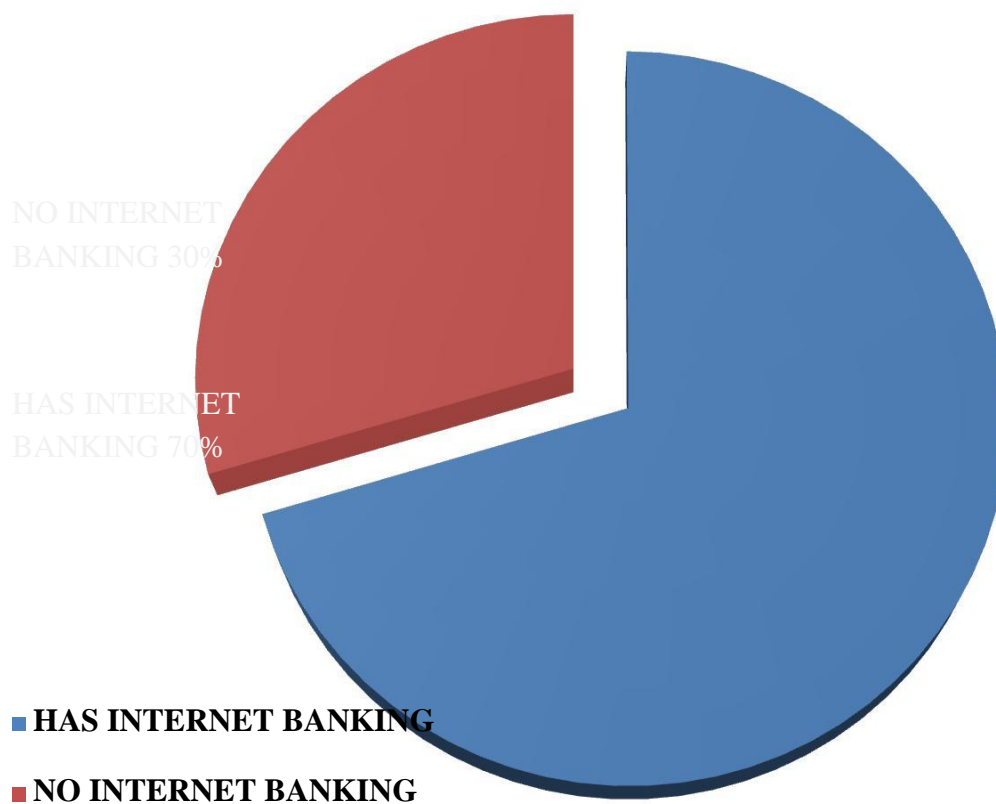
Table 2.1 List of banks in Ghana with/without Internet Banking Services

Bank Name	Internet Banking?
Access Bank (Ghana) Limited	YES
Agricultural Development Bank	YES
Amalgamated Bank Ltd	YES
Bank of Baroda (Ghana) Ltd.	NO
Barclays Bank Ghana	YES
CAL Bank	YES
Ecobank Ghana Ltd	YES
Energy Bank (Ghana) Ltd	NO
Fidelity Bank	YES
First Atlantic Merchant Bank	NO
Ghana Commercial Bank Ltd	YES
Guaranty Trust Bank (Ghana) Limited	YES
HFC Bank	YES
Intercontinental Bank Ghana	YES
International Commercial Bank Ltd	NO
Merchant Bank (Ghana) Limited	YES
National Investment Bank Ltd	YES
Prudential Bank Ltd	YES
Sahel-Sahara Bank	NO
SG-SSB Ltd	NO
Stanbic Bank Ghana Ltd.	YES
Standard Chartered Ghana	YES
The Trust Bank	YES
Unibank Ghana Ltd	YES
United Bank for Africa (Ghana) Ltd	NO
UT Bank Limited	NO
Zenith Bank (Ghana) Limited	YES

Source: field survey 2019

In Ghana, only 30% of the total number of banks do not provide internet banking services to their customers as shown in the diagram below. However, most of these banks have plans of providing internet banking services in the near future.

Figure 2.4 Proportion of Total Number of Banks With/Without Internet Banking in Ghana



2.9 Conclusion

Internet Banking is of quite eminence to customers and banks because it gives great advantages to the customer and the bank. Customers have found doing business online simple and speedy and have become very comfortable with the arrangement. Internet banking gives people more control over their money in a very convenient way that they find enjoyable and reassuring. However it comes with its own risks and responsibilities. It requires thought and caution, but it can be done. It is important to remember that every customer is responsible for the way they protect their information online. This includes not falling for "phishing" scams.

CHAPTER THREE

METHODOLOGY AND ORGANIZATIONAL PROFILE

3.1 Research Design

Research design is a comprehensive plan for data collection in an empirical research project Bhattacharjee, (2012). Burns and Grove, (2003) define a research design as “a blueprint for conducting a study with maximum control over factors that may interfere with the validity of the findings”. Parahoo, (1997) describes a research design as “a plan that describes how, when and where data are to be collected and analyzed. Bhattacharjee, (2012) further describe research design as a “blueprint” for empirical research aimed at answering specific research questions or testing specific hypotheses, and must specify at least three processes: (1) the data collection process, (2) the instrument development process, and (3) the sampling process.

The design focuses on relevant and a purpose – driven activities which seek to collect and analyses accurate data to achieve the research objectives taking into consideration limited resources and time available for the research. Saunders et al (2007), indicate various categories and approaches to designs depending on the researcher’s objectives and the research questions. Any approach of design chosen by the researcher comes with its own merits and challenges. Anol, (2012) also talks about the attributes of research designs that the quality of research designs can be defined in terms of four key design attributes: internal validity, external validity, construct validity, and statistical conclusion validity. The author postulated that, internal validity, also called causality, examines whether the observed change in a dependent variable is indeed caused by a corresponding change in hypothesized independent variable, and not by variables extraneous to the research context. Moreover, he said external validity or generalizability refers to whether the observed associations can be generalized from the sample to the population (population validity), or to other people,

organizations, contexts, or time (ecological validity). The other dimension is Construct validity which examines how well a given measurement scale is measuring the theoretical construct that it is expected to measure. Finally, Statistical conclusion validity examines the extent to which conclusions derived using a statistical procedure is valid.

The research is an explanatory type seeking to establish a relationship between two phenomena and the meaning these relationships have, by explaining patterns related to the events. In this research, the designs were carefully chosen considering typically the research questions and objectives to ensure that the questions are appropriately answered and objectives adequately met. The design is the foundation of the research upon which all other components including data collection, and analysis of questions posed to respondents were critically analyzed ensuring that the whole research objectives are achieved.

There are various research designs used in social sciences. Saunders et al (2007), enumerated various design options available to researchers including, observations, Experiments, case study, survey, archival research strategy etc. The research design used in this research was a survey design. Survey research involves acquiring information about one or more groups of people – perhaps about their characteristics, opinions, attitudes, or previous experiences – by asking questions and tabulating their answers. The ultimate goal is to learn about a large population by surveying a sample of that population (5090 chapter 8, Muwaga Musa Musa).

It also refers to data collection and analysis situation where the respondents respond to predetermined questions and answers prepared before - hand. The major tool for data gathering was questionnaires. The questionnaires were administered through both online and face – to – face mode. The survey is more useful and feasible with regard to the objectives and intentions of the

research. This is possible in terms of providing and generating credible, reliable and accurate research outcomes. The design demonstrates feasible data collection and analysis where insufficient or no data exist. The survey design was chosen because it helps the research to measure both past, present and future behaviours of the respondents.

3.2 Population of the study

The population for this survey is the entire customer base of Ecobank Ghana Limited in the Kumasi Metropolis that is the three (3) branches, staff, Customers and management. However, the research was limited to three branches in the Kumasi Metropolis which has about three thousand five hundred customers (35,000). These include the Harper road, Bantama branch, and Adum branch. These branches were selected with the intention that they are geographically, and demographically representative of the Metropolis and could also represent a workable sample for the research objectives. Typically, the Harper road branch captured the responds from the academia, Adum branch captured the views of market women and the Bantama branch captured the responds of business communities and elites in the society. The sample selected hope to provide a balance view of cross section of the population.

3.3 Sampling Techniques and Sample Size

Sampling is the statistical process of selecting a subset (called a “sample”) of a population of interest for purposes of making observations and statistical inferences about that population Anol,(2012). Sampling is a process of selecting the population that is both statistically and logically sound. Anol, (2012) again, said “It is extremely important to choose a sample that is truly representative of the population so that the inferences derived from the sample can be generalized back to the population of interest”

Sampling enables the research to obtain information from the entire population by examining only portion of the population. It helps to make inferences or objective judgment of the whole population. A working definition for sampling is selecting any number of persons, units of elements under research to represent the total population based on which generalization or inferences can be drawn.

The sample is the section of the wider population that will be engaged in the survey and sampling is the process of identifying who you will aim to contact from that population. Anol, (2012) says the sampling process comprises of several stage. According to the author, the first stage is defining the target population. He defined population as all people or items (unit of analysis) with the characteristics that one wishes to study.

The unit of analysis may be a person, group, organization, country, object, or any other entity that you wish to draw scientific inferences about. Sometimes the population is obvious. Moreover, the second step in the sampling process is to choose a sampling frame. This is an accessible section of the target population (usually a list with contact information) from where a sample can be drawn.

The sample frame for this study is the customers of Ecobank in the Ashanti Region, staff of the bank, customers and some branch managers. There are various types of sampling techniques such as probability sampling and non – probability sampling. In probability sampling, each unit in the research has a nonzero chance of being selected in the sample. Such samples are usually selected randomly.

On the other hand, with non-probability sampling methods each item under the study has an equal chance of being selected. Probability sampling has the advantage of the most unbiased method, but has a major challenge of sampling huge number of items sometimes the complete sample

frame. Convenient sampling method was adopted and used in this research. The customers who transact business with Ecobank Limited form the sample frame for the research.

The customers were sampled based on convenient selection, thus convenient sampling technique was used to determine customers who took part in the survey. Meanwhile, purposive sampling was used to select the staff of Ecobank who took part in the survey. Lastly, snowball technique was used to select online respondents. This was done by sending a link to various whatsapp and facebook platforms where respondents were allowed to refer the link to friends.

3.3.1 Sample size

In all a total of (136) one hundred and thirty six respondents were selected. Sample size for the research includes customers, employees and management of Ecobank. A total of 50 customers were selected from each of the three branches chosen for the purpose of this research. However in order to avoid coverage error, the research also administered an online questionnaire to sample the view of (50) Fifty virtual customers. Also, a total of (16) Sixteen employees including managers were selected for the research. According to Penny S. el tal. Coverage error refers to a situation where researchers draw probability samples not from the full set of elements in a population of interest but rather from more limited sampling frames. The greater the discrepancy between the population and the sampling frame, the greater potential there is for coverage error. The online survey was conducted to ensure the research represent the view of the virtual customer and minimize coverage error.

Fig. 3.1 Sample Size

Branch location	staff	customers
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HARPER ROAD	15	31	
BANTAMA	20	20	
KEJETIA –ADUM	15	35	
TOTAL	50	86	136

Source: field data, 2019

3.4 Method of Data Collection

There are various ways and approaches to collecting information for research about a problem or phenomenon. Under this study, primary data was collected through both quantitative and qualitative means. These data were collected from customers and staff of Ecobank Limited using questionnaires.

Primary data were collected through designed and administered questionnaires to customers of Ecobank limited within the premises of the branches selected for the purpose of this study. Both open – ended and close – ended questions were asked to collect the primary data to enable the research to discover the behavior, attitude, and influence that the rebranding exercise had on customers. The questionnaires were administered within two weeks period.

Moreover, online survey was conducted. This method has lot of advantages. First of all, it was the more cost effective and requires less equipment than others methods. Also, generally speaking, people are not anxious to complete questionnaires because they already had enough time to fill out the questionnaires at their comfort. Then, it was really easy to analyze questionnaires because it requires just a software package.

First of all, we started with the **online survey**. Here, the study focuses on students groups. Therefore, to reach this target, we used the database of the Fan page Facebook of CSUC Business School and Whatsapp groups of final year students. Also, students spent a large part of their time on internet and more especially on Facebook and whatsapp. In this way, it will be easy to catch their attention and to run the survey.

Secondary data were collected from the CSUC School Library, media (newspapers, online). The data gathered from the secondary sources helped to enrich the content of the literature review section.

3.5 DATA ANALYSIS

Data analysis is the process of reducing the raw data generated during the interviews and questionnaires into workable size by removing all irrelevant response and sort out which will be used for analysis. The analysis help eliminate irrelevant materials into manageable size, developing summaries and applying statistical inferences. Consequently, the following steps were taken to analyses the data collected for the study. The data was edited to detect and correct, possible errors and omissions that were likely to occur, to ensure consistency across respondents. This ensures that only data fit for the research objective is subjected to further examination.

Statistical Package for Social Science (SPSS) was used in processing primary data collected through both online and field questionnaires from respondents. The SPSS was used for frequency tabulation of data analysis. Regression analysis was used to establish the effect of the independent variable on the dependent variable.

3.6 Study Area and Organisational Profile

Kumasi is a Metropolis and the Capital of the Ashanti Region. Kumasi is the largest city and main business Centre in the Ashanti Region. The city is the hub of all business activities and host for major government agencies in the region. Apart from individual businesses, Kumasi metropolis host many financial institutions including Ecobank.

Ecobank has reinvented itself by rebranding its online banking, core values, and other brand elements to meet emerging challenges and tap into opportunities in the Ghanaian economy. It brought to three the number of times the bank has online banking within its 27 – years of operation. Ecobank, an indigenous bank, started operations in 1990 as Continental Acceptance Limited but its logo was reviewed in 1994 to reflect trends at the time. In 2004, the bank was rebranded to reflect its status as a listed entity. After 13 years of providing commercial banking services to its cherished customers, the bank concluded that online banking was necessary to foster a closer bond of relationship between the bank and its customers. With successful online banking, the bank promises to leverage the new identity to deliver enjoyable customer experiences and engagement.

CHAPTER FOUR

ANALYSIS, DISCUSSION AND REPRESENTATION OF RESULTS

4.0 Introduction

This chapter discusses and analyses data gathered from the field. The analyses were done based on the responses from respondents, using various forms of graphical representations. Here empirical data collected on the Ghanaian internet bank are presented. The data was collected through personal interview and questionnaires. The outputs are presented in tables and charts.

4.1 Socio-demographic Characteristics of customers.

A total of one hundred and fifty (150) questionnaires were distributed, however, one hundred and thirty – six (136) were received. Also, of the forty (45) questionnaires sent out to staff of the banks, forty –three (43) were received. In terms of gender, one hundred and fifteen (115) males were sampled and Twenty- one (21) were females.

In studies like this it is important to analyze the background information of the respondents. This is because people's social background influences their thinking pattern and to larger extent what they do. The background information comprised of age, gender, educational level, and the number of years they have saved with the bank.

Table 4.1 Socio-demographic characteristics of respondents (Customers)

Variable	Classification	Frequency	Percentage
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Gender	Male	115	84.6
	Female	21	15.4
	Total	136	100.0
Age	Below 30	28	20.6
	30-39	50	36.8
	40-49	26	19.0
	50-59	20	14.7
	60 and above	12	8.8
	Total	136	100.0
Education	Diploma	70	51.5
	Degree	50	36.8
	Others	16	11.8
	Total	136	100.0
Years with the bank		70	51.5
	1-3 years		
	4-6 years	36	26.5
	7-9 years	15	11.0
	10 years and above	15	11.0
	Total	136	100.0

Source: Field Data, 2019

From table 4.1, it is revealed that majority 115 (84.6%) of the respondents are males whiles, 21(15.4%) of them are females. Though the number of males sampled is more than the females, it did not affect the result of the study. This is because the gender of the interviewee did not have any direct bearing on the responses he or she provided. Again, 28(20.6%) respondents were below the age of 30 years while 50 respondents (36.8%) fell within the age range of 30 and 40. Also, customers who were within the ages of 40-49 accounted for 19.0 % but 14.7 % and 8.8 % were within the ages of 50-60 and above 60 years respectively. This finding suggest that most of the customers were found in the working age bracket as they might be much involve in transaction daily banking business. The results further showed that 51.5% of the respondents have obtained

education up to the diploma level while 36.8% have had degree. Only 11.6% of the respondents have had other level. This finding is attributed to the fact that banking processes requires some basic literacy and as such it was no surprise that all the respondents had some level of formal education.

4.2 Socio-demographic Characteristics of Bank Staff

Also a total of 29 bank officials selected from the sampled banks completed the questionnaires. These officials were purposively selected based on their knowledge in the various e-banking products currently implemented by the bank. The background characteristics of these respondents are summarized in Table 4.2. The background information solicited includes respondents' gender, age, education, work experience and rank.

Table 4.2 Frequency Distribution of the background information of selected bank officials.

Variable	Classification	Frequency	Percentage
Gender	Male	18	62.1
	Female	11	37.9
	Total	29	100.0
Age	Below 30	9	31.0
	30-39	13	44.8
	40-49	4	13.8
	50-59	3	10.3
	Total	29	100.0
Education	Basic JHS	0	-
	SHS	0	-
	Tertiary	29	100.0
	Total	29	100.0

	1-3 years	14	48.3
Years with the bank	4-6 years	9	31.0
	7-9 years	2	6.9
	10 years and above	4	13.8
	Total	29	100.0

Source: Field Data,2019

Out of the total of 29 officials, majority 18 (62.1%) were males whiles the remaining 11

(37.9%) were females. This finding throws much light on the patriarchal nature of the Ghanaian society. In both the 2000 and 2010 national population censuses females were reported to be more than males in Ghana. However, this is not reflected in job acquisition as in this study just as many organizations males are more than females. This could stem from the dual factors of the traditional perception that the women's place is in the kitchen and the reproductive/community roles they play. Again, majority of the respondents 29(100%) have had formal education up to the tertiary level. Interestingly none of the respondent had basic level of education. This implies that the banks under study had quality human resource who can contribute to the success of their various banks should the right needed support be put in place. The respondents also have varying level of experience in their field of operations. It can be observed that 44.8% of the respondents have worked with the bank for between 1 to 5 years, 31% have worked with the bank for between 6 to 10 years; while 13.8% have worked with the bank for over 15 years. This result shows that the respondents have the necessary experience in banking to respond appropriately to the questions posed. As far as the rank of the respondents are concerned, 14(48.3%) are junior staff; 13(44.8%) are senior staff; whiles the remaining 6.8% occupy management positions.

Table 4.3 Internet Banking Service

Internet Banking Service	Frequency	Percentage
Yes	26	100
No	-	0.0
Total	29	100

Source: Field Data, 2019

Also a total of 29 bank officials selected from the sampled banks completed the questionnaires. These officials were purposively selected based on their knowledge in the various e-banking products currently implemented by the bank.

From table 4.3 it is evident that customers are generally aware of e-banking products in the banks. For instance, out of a total of 29 respondents sampled, majority 29(100.0%) stated that they have internet-banking products available in the bank. Which implies that the bank has been in the internet service for the past 20 years. This response gathered could stem from the fact that electronic banking is a new phenomenon of banking in Ghanaian business environment as such customers may have had fewer years transacting business on electronic platforms.

Table 4.4 Subscribe To Internet Banking

Subscribe to internet	Frequency	Percentage
Yes	100	73.5
No	36	26.5
Total	136	100

Source: Field Data, 2019

From table 4.2.3 it is evident that customers are generally aware of e-banking products in their respective banks. For instance, out of a total of 136 respondents sampled, majority 100(73.5%) stated that they have Subscribe to internet-banking products available in their banks. Only 36(26.5%) gave a contrary view.

Figure 4.1 Subscribe To Internet Banking



Table 4.5 Patronage of E-banking products by Customers

Patronage	Response	Frequency (N)	Percentage (%)
Years of electronic business transactions	Less than 2years	60	44.0
	Less than 3 years	40	29.0
	Less than 4years	20	14.7
	4 years andabove	16	11.8
	Total	136	100.0

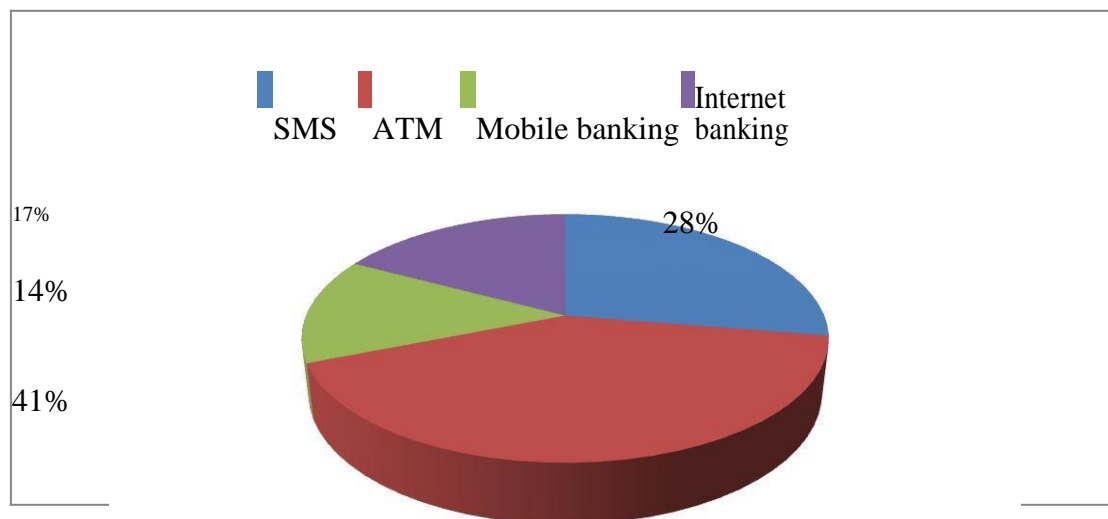
Source: Field Data, 2019

Table 4.5 depicts the responses provided for the number of years, frequency and rate at which customers patronize electronic banking. The analysis shows that 44.0 % of the respondents had patronized electronic banking services for less than two years and 29 % for three years. Again respondents who indicated that they have transacted business electronically for less than four years were 14.0% and those above four years were 11.8%. this response gathered could stem from the fact that electronic banking is a new phenomenon of banking in Ghanaian business environment as such customers may had fewer years transacting business on electronic platforms.

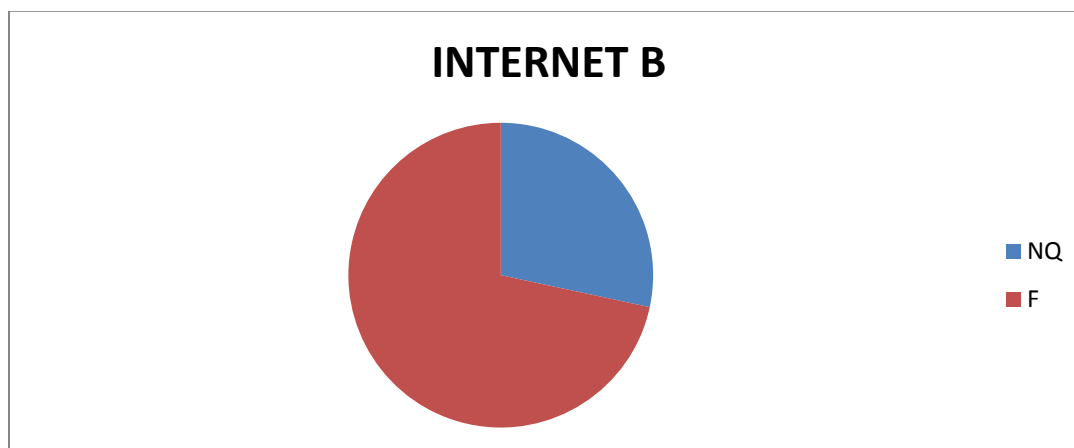
4.3 Factors Influencing Internet Banking Adoption.

Reasons given by bank staff during interviews for introducing internet banking included profit, competition, convenience and customers request. The reasons, however, centered mostly on customer request, competition, and convenience.

Figure 4.2 Responses of bank officials regarding the most patronized e-banking products.



Source: Field data, 2019



Source: Field data 2019

As presented in Figure 4.1, and Figure 4.2, ATM received the highest patronage compared to all other e-banking products. This finding is in agreement with the findings of Abor (2004) who indicated that the ATM is the main e-banking product that has seen much patronage in Ghana for the past decade. This may be as a result of the fact that the ATM plays a very vital role in the banking process. This includes the fact that the machines work even when the banks close and especially on the weekends. The situation may be on the rise especially as some banks are taking giant step in implanting ATM machines that has been configured to accept cash deposits. This result is not surprising because among most of the innovative e-banking products/services introduced over the years, the use of ATM technology is highly convenient for customers and users. Bank customers can easily obtain cash from their banks without having to be physically present at the bank premises. Apart from benefit of convenience, the ATM innovation is one of the most secure means for customers to access their cash. The ATMs innovation gives banking customers greater access to their money by taking banking to their doorsteps. There are virtually no queues in banking halls, no time limit for cash withdrawals and customers can easily access their bank balances. It is also one of the simplest e-banking products as customers do not go through difficulties in cash withdrawal. All these benefits have contributed to make the ATM

innovation one of the most successful banking innovations. The findings also concur with Humphrey *et al.* (2006) who found that ATMs are highly patronized compared to other e-banking platforms.

4.4 Activities Perform With Internet Banking Services by Customers

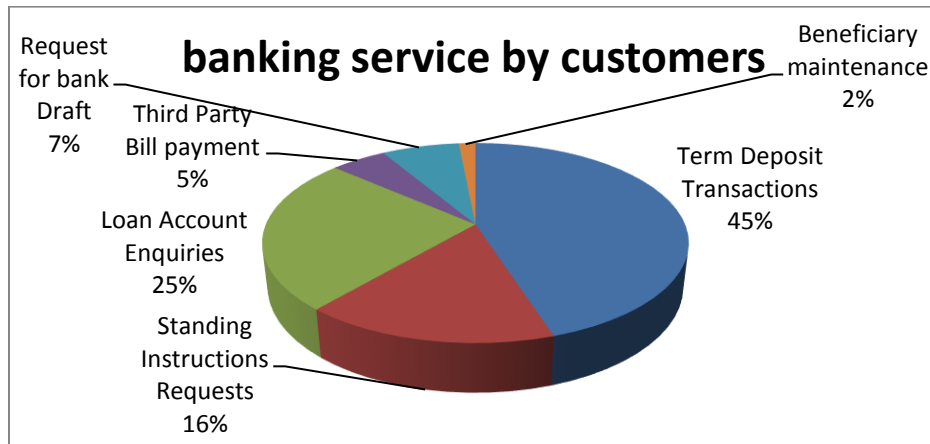
Customers of the Ecobank also indicated the services they would want to be available through internet banking. Banking services which customers desired to be made available online includes services such as Loan Account Enquiries, Standing Instructions Requests, Term Deposit Transactions, and Requests for bank Draft, Third Party Bill payment and Beneficiary maintenance as shown in Table 4.3.

Table 4.6 Activities Perform With Internet Banking Services By Customers.

Banking Services	Frequency	Percentage (%)
Term Deposit Transactions	61	44.0
Standing Instructions Requests	22	16.2
Loan Account Enquiries	34	25
Third Party Bill payment	7	5
Banking Services	10	7
Beneficiary maintenance	2	1.5
	136	100.0

Source: Field Data, 2019

Figure 4.2 Activities perform with internet banking services by Customers.



Source: field survey, 2019.

Table 4.7 activities perform with internet banking services by Customers depicts the responses provided for the number of years, frequency and rate at which customers patronize electronic banking. The analysis shows that 44.0 % of the respondents had patronized electronic banking services for less than two years and 29 % for three year. Again respondents who indicated that they have transacted business electronically for less than four years were 14.0% and those above four years were 11.8%. this response gathered could stem from the fact that electronic banking is a new phenomenon of banking in Ghanaian business environment as such customers may had fewer years transacting business on electronic platforms.

4.5 Customer expectations and requirements of internet banking service.

When customers were asked to judge how their expectation and requirement of internet banking services have been met, majority rated it above average. As shown in Table 4.5, 24% answered Very Good, 39%, save time 30% rated it as average, 6% Available everywhere and 1% Easy to Transact banking service.

Table 4.7 Measurement of Expectations and Requirements of Internet Banking by customers.

Rating	Frequency	Percentage
Very Good	32	24.0
Save Time	53	39.0
Very convenience	41	30.0
Available everywhere	8	6.0
Easy to Transact banking service	2	1.0
Total	136	100

Source: field survey, 2019

4.6 Frequency of internet use by customers

The frequency of internet use is necessary for the successful adoption of Internet banking. The results on Internet use by respondents show that all the respondents were computer literate and most of them use the internet daily. 70% of the respondents use the internet daily, 21% weekly and only 9% use the internet monthly as shown in Table 4.4.

Table 4.8 Frequency of Internet Use by Customers.

Frequency	Count	Percentage
Daily	12	9.0
Weekly	29	21.0
Monthly	95	70.0
Total	136	100

Source: field survey, 2019.

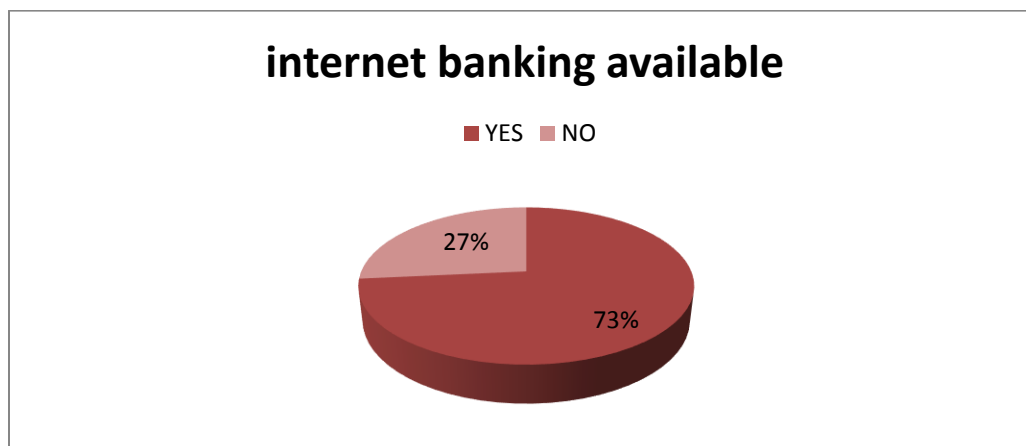
Assessing the frequency of use of the internet banking product, 70% of the respondents indicated that they use Internet banking three to eight (3 – 8) times every month, whilst 21% use it once to three (1 – 3) times in a week. However about 18% indicated they use internet banking eight or more times in a month as indicated in figure 4.1.2

Table 4.8 Internet Service available

Internet Availability	Service Frequency	Percentage
Yes	100	73.5
No	36	26.5
Total	136	100

Source: Field Data, 2019

Fig 4.3 Internet Banking



Assessing the frequency of use of the internet banking product, 73.5% of the respondents indicated that the internet banking service is always available, whilst 26.5% indicate that service is not available always because as long as the service provider goes down service also goes down.

4.7 Customers complain of internet-banking

Though e-banking is seen by many customers and bankers as the convenient way of banking, it is fraught with a number of challenges. Challenges such as insecurities of e-banking, Instability in power supply, example fraud committed by internet hackers, difficulties in transacting electronic banking such as, network and system errors have affected the level of patronage of these products. The study sought to examine the key challenges associated with e-banking from the perspective of customers and the bank.

4.8 Some Security Measure Put in Place by Banks

Bank officials interviewed also stated some of the security measures that have been put in place to protect their customers from internet banking fraud as follows, One Time Passwords (OTP) Automatic Session Timeout, Digital Certificates and Encryption

Table 4.8 how long does it take to transact using internet banking?

How long do it take to transact using internet banking	Frequency	Percentage
1-15 minutes	70	71.0
16- 30 minutes	50	36.8
1hour	16	11.8
Total	136	100

Source: Field Data, 2019

As shown in Table 70(71.5%) customers indicate that they transact business with internet every 1-15minutes while 36.8%, and 11.8% used it 16-30minutes and 1hour respectively.

4.9 Advantages of online-banking to customers.

Responses provided when participants were asked to state the benefits they derived from electronic services and products. The responses show that 20.3% claimed that e-banking is convenient and that is the advantage they derived from it. They further explain that services such as the ATM prevent them from joining longer queues at the banking hall. Also, 26.1 percent of the respondent reported that electronic banking in generally is fast. They gave instances where remaining balances are easily received on phones via text messages and electronic mails rather walking to the banking hall to request for it. 53.6% of the respondent indicated that electronic banking is always available in 24 hours daily. The ATM for example operates at weekends and nights when the banking gates are locked. Online banking also plays a vital role in remittances, thus customers are able to electronically receive money from abroad. Remittances over the years have played a vital role in the socio- economic development of Ghana.

Table 4.8 Positive Impact internet-banking

Internet Availability	Service Frequency	Percentage
Yes	25	86
No	4	14
Total	29	100

Source: Field data, 2019

Table presents the responses provided when participants were asked to state the benefits they derived from electronic services and products. The responses show that e-banking is convenient and that is the advantage they derived from it. They further explained that services such as the ATM prevent them from joining longer queues at the banking hall. Electronic banking in general is fast. They gave instances where remaining balances are easily received on phones via text messages and electronic mails rather walking to the banking hall to request for it. Electronic banking is always available in 24 hours daily. The ATM for example operates at weekends and nights when the banking gates are locked.

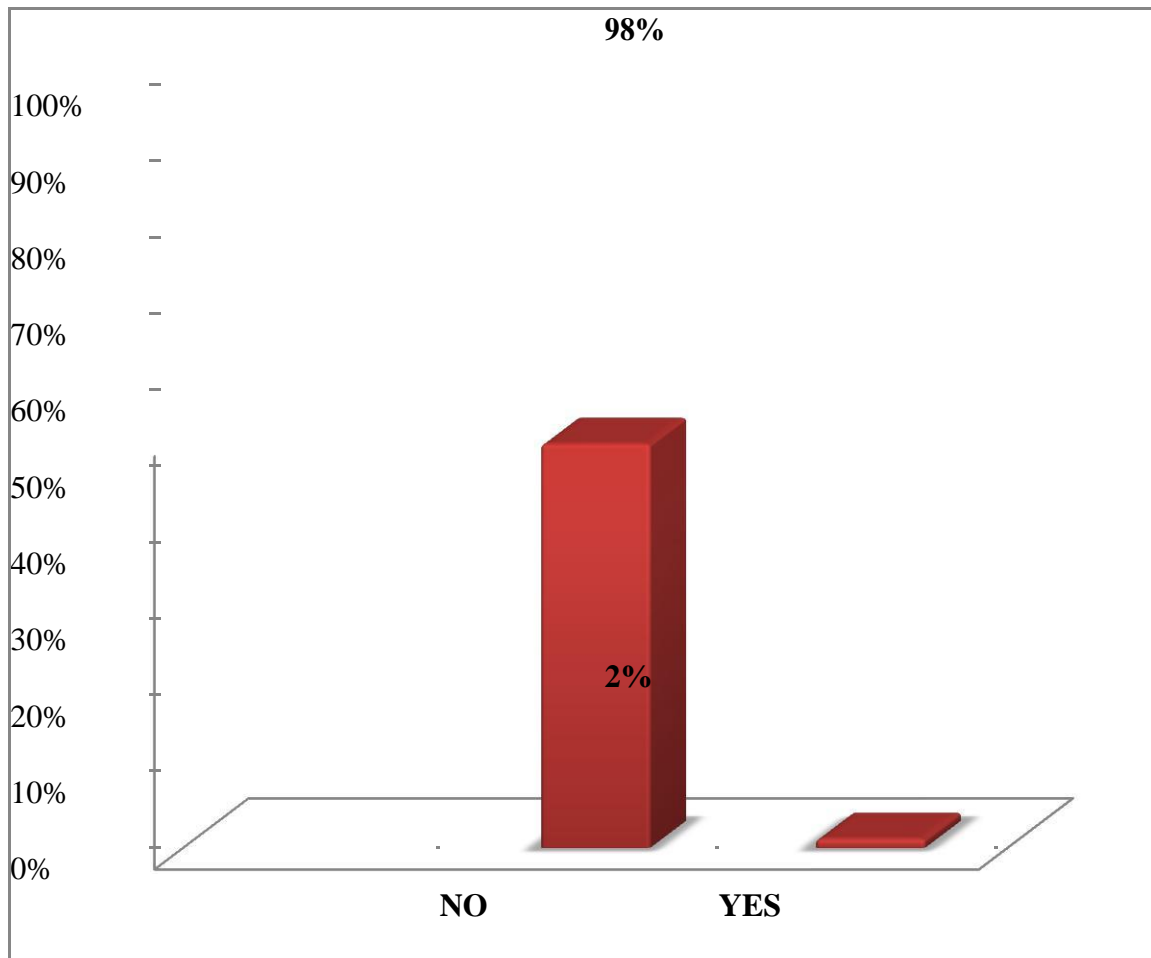
4.10 Challenges affecting internet banking

The following were indicated by bank staff as challenges to internet banking; lack of familiarity, cultural reluctance, security concerns, knowledge of IT and e-business, and high cost associated with ICT investments. A compilation of responses from bank officials are as follows, 37 respondents indicated lack of familiarity, 27 also indicate cultural reluctance, 24 security concerns, 36 knowledge of IT and e-business, and 40 indicated high cost associated with ICT investments.

4.9 Internet banking fraud

Customers were asked to indicate whether they have ever had their accounts attacked by fraudsters. 98% of them pointed out that they had never been attacked by fraudsters while only 2% indicated otherwise.

Figure 4.6 Customers who have experienced Internet Fraud



Source: field survey, 2019

Bank officials interviewed also stated some of the security measures that have been put in place to protect their customers from internet banking fraud such as, One Time Passwords (OTP) Automatic Session Timeout, Digital Certificates and Encryption

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.0 Introduction

This chapter deals with summary of study, conclusion and recommendations. The conclusions would be made from the analysis and the literature review.

5.1 Summary of Findings

This study sought to look at the perceptions of banks and their customers regarding the online banking: impact on the banking sector in Ghana. In this regard this research sought to find out the banking services are available through internet banking in Ecobank, the factors that influence internet banking adoption in Ecobank, how Internet banking affect customers and their relationships with their bank, and bank officials perceptions of Internet banking and its operational value.

5.1.1 Factors Influencing Internet Banking Adoption in Ecobank

Internet banking is based on knowledge of Internet use. The results on Internet use by respondents show that most of the internet banking users also uses the internet daily and all the respondents are computer literate. This is necessary for successful adoption of Internet banking. Bank officials indicated that the Lack of familiarity, Cultural reluctance, knowledge of IT and e-Business, High costs associated with ICT investments are other factors affecting internet banking adoption. The results obtained show that customers are content with the kind of internet banking services they receive. Bank management is very committed to the provision of internet banking services as indicated in the responses given by bank officials.

5.1.2 Internet Banking Services Offered in Ecobank

The frequent use of the internet is necessary for the adoption of internet banking. The services provided by Ecobank include the checking of balances and account activity, transfer funds between customer accounts at same bank, transfer funds to same bank but another customer, viewing and printing of accounts statement, cheque books request, stop cheque payments, view status of cheques, a facility to send a secured message to customer care, third party bill payment; Loan accounts enquiries, Standing Instructions requests, Term Deposit Transactions, Request for bank Draft and Funds Transfer to other customers in different domestic banks.

5.1.3 Factors impacting negatively on Internet banking Utilization

5.1.3.1 Security Risk and Access to Internet in Ecobank

Also, customers who use internet banking indicated security as a major concern in their use of online banking alongside issues such as access to internet connectivity and internet banking service availability.

5.1.4 Effect of Internet Banking on Customers in Ecobank

Due to the numerous advantages internet banking offers, both bank officials and customers are enthused about the facility. The results indicate that a high percentage of respondents agreed that Internet banking would lead to an increased customer loyalty and customer-banker relationship. These findings seem to confirm the notion advocated by many that Internet banking can create more loyal customers by offering multiple financial services through banks web sites.

5.1.5 Internet Banking Fraud

Internet banking like any other business is susceptible to fraud. In Ghana, internet banking fraud has not been uncontrolled as the results of the study shows. Banks have however put in place some measure of security to protect their customer's online transactions. Automatic session timeouts,

digital certificates and encryption are some measures put in place by banks. High risk transactions such as funds transfers are protected using one time Passwords.

5.1.6 Internet Banking and its Operational Value in Ecobank

Internet banking attracts customers due to the convenience it provides. Operationally, it's a tool in the service delivery and improves customer service delivery.

The introduction of internet banking has reduced the cost of maintaining customer accounts given that the use of passbooks, withdrawal slips and other stationary have significantly reduced. This assertion was confirmed by bank official's responses to questionnaires and interviews even though they were reluctant to give figures to support it. However, with the incidents of internet fraud cases rising in Ghana, the risk of internet banking fraud is imminent.

5.2 Conclusion

Considering analysis of the data for the study, it can be deduced that the future holds a lot of prospects for internet banking in Ghana. However, the phenomenon in Ghana is plagued with difficulties that can understandably be considered as teething problems. The few banks in Ghana that have implemented internet banking are chalking up some successes even with the problems that come with it. These challenges include the problems of internet connectivity, high cost of implementation, Security concerns for customers, perceived customer readiness and other problems they encounter. The banks have demonstrated enough zeal for internet banking and are taking measures to enroll more customers.

The internet banking services provided by Ecobank in Ghana generally cover information-push where customers can access banking information, information download where customers can access account information and simple transactional banking involving fund transfer. Full transactions such as bill payments and short-term recurring payments are services provided by a

few internet banks in Ghana. Most of the products and services enumerated are only banking services. Thus, the internet banking providers have a wide range of services they can offer as they amalgamate existing products and services.

5.3 Recommendations

Following the findings of this study, the under listed recommendations have been proposed for practice.

1. The place of Information Technology (IT) in the financial sector cannot be over stated. It is thus paramount that the management of Ecobank invests massively in IT in order to further promote efficient and smooth service delivery via e-banking services.
2. There is the need to educate customers extensively on the use of electronic services such as internet banking, SMS (mobile) banking and e-zwich banking services which are not well patronized.
3. E-banking services should be developed extensively in the face of competition in the banking industry to sustain the pressure and maintain profits.
4. It is important that, the bank create an e-banking unit that will monitor progress and challenges of such services. This will ensure effective and efficient e-banking services.
5. It is particularly important that banks in Ghana that are providing Internet banking products and services ensure that the privacy and security of their Internet banking customers are effectively guaranteed. This will embolden customers to continue using the service.
6. Banks must ensure that the internet banking service is always available. Periodic routine maintenance and replacement of faulty equipment must be prompt to prevent service disruptions.

7. Banks should intensify the campaign on internet banking services to prospective customers by ensuring to provide customers with quality internet banking service which is always available.

5.4 Suggestions for Further Research

1. Further studies should also be done on the challenges that affect the adoption of online banking among customers in commercial banks in Ghana since only a very small proportion of the customers have adopted it.
2. The study also recommends that further studies should be done on the effect of online banking on other banks operations and customer acquisition.
3. A similar study should also be done whereby the data collection relies on primary data.
4. A further study should also be done on the effect of other forms of technological adoption such as ATMs and mobile banking on the operational efficiency and also the financial performance of commercial banks in Ghana.

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APPENDIX

CHRISTIAN SERVICE UNIVERSITY COLLEGE

ONLINE BANKING: IMPACT ON THE BANKING SECTOR IN GHANA

This questionnaire has been designed to solicit information for purely academic purposes. This is to enable the researchers. Final year students of the above-mentioned institution to complete their research on the topic; Online Banking: Impact on the Banking Sector in Ghana a case study of Ecobank.

Part I: Demographic Information

Please respond to the following statements by ticking (✓) one answer from each question that applies to your circumstances.

QUESTIONNAIRE ON ONLINE BANKING FOR CUSTOMERS

The purpose of this questionnaire is to assess Impact on the Banking Sector in Ghana a case study of Ecobank.

1. Please indicate your gender?

☐ Male

☐ Female

2. Select your age range? ☐ 15-25 years ☐ 26-40 years' ☐ above 40 years

3. How often do you use the internet? ☐ Daily ☐ Once a week ☐ every fortnight ☐ Once a month

4. Do you subscribe to internet banking?

☐ Yes

☐ No

5. How long have you been using the Internet for your banking transaction?

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.....
.....

6. Why did you opt for the internet banking services?

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

7. What activities can you perform with the internet banking services provided?

.....
.....
.....
8. On average, how long do you take to transact when using the Internet banking service?

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.....
.....
9. How frequently do you use internet banking?

.....
.....
.....
10. Is the Internet Banking service always available?

☐ Yes

☐ No

11. If No, How often does the service go down?

.....
.....
12. Does your bank inform customers when there are problems with internet banking system?

☐ Yes

☐ No

13. What are some of the reasons they give for such problems?

.....
.....
.....
14. How does your bank respond/act in order to resolve these problems?

.....
.....
.....
15. Can you give a brief description of how the internet banking services provided by your bank has helped you or your business?

.....

.....

.....

16. Do you think it is safe using the internet banking?

- ☐ Yes
- ☐ No

17. If No, what do you suggest can be done to ensure security?

.....

.....

.....

This questionnaire has been designed to solicit information for purely academic purposes. This is to enable the researchers. Final year students of the above-mentioned institution to complete their research on the topic; Online Banking: Impact on the Banking Sector in Ghana a case study of Ecobank.

Part I: Demographic Information

Please respond to the following statements by ticking (✓) one answer from each question that applies to your circumstances

RESEARCH QUESTIONNAIRE FOR BANK STAFF

The purpose of this questionnaire is to assess Impact on the Banking Sector in Ghana a case study of Ecobank.

1. Please indicate your gender?

Male

Female

2. Select your age range? ☐ 15-25 year's ☐ 26-40 years' ☐ Above 40 years

3. Please what is your work position or work designation?

.....
.....

4. Does your bank offer internet banking services?

☐ Yes

☐ No

5. If Yes, how long have you being doing this?

.....
.....

6. What influenced your decision to offer internet banking services?

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

7. Can you give us a breakdown of the various services your institution provide internet banking?

8. How many of your customers subscribe to this service?

.....

.....

9. What are the complaints given by customers in using the Internet banking services?

.....

.....

.....

10. How do you respond to these complaints?

.....

.....

.....

11. Has the introduction of Internet services positively impacted your business?

☐ Yes

☐ No

12. If Yes, please explain and If No, explain

.....

.....

.....

13. What challenges have you been facing since the introduction of the Internet banking services?

.....

.....

.....

14. What measures have you adopted/been adopting to combat these challenges?

.....

.....

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.....

15. Has your bank being a victim of internet fraud due to the internet banking service you provide?

☐ Yes

☐ No

16. If Yes, how were you able to detect and address it?

.....

.....

.....

17. What security measures have you put in place to address future occurrences?

.....

.....