

**The impact of Electronic Banking Transaction in the Banking Industry
(The case of ADB, SG-SSB and Barclays Bank branches in the Eastern
Region).**

By

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ADMINISTRATION**

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DECLARATION

I hereby declare that this submission is my own work towards the MBA and that, to the best of my knowledge , it contains no material previously published by another person nor material which has been accepted for the award of any other degree of the University, except where due acknowledgment has been made in the text.

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ABSTRACT

In Ghana, developments in information and communication technology are radically changing the way business is done. These developments in technology have resulted in new delivery channels for banking products and services such as Automated Teller Machines (ATMs), Telephone Banking, PC-Banking, and Electronic Funds Transfer at Point of Sale (EFTPoS). This study evaluates the perceptions of banking customers regarding the effect of technological innovations on banking services in the Eastern Region. The study focused on customers with banks that have at least one form of electronic banking product in the Eastern Region. The of results of the study generally indicate that, out of the 257 respondents, 205 of them representing 79.8 % patronize electronic delivery product and service out of which users of the ATM occupies 58.8% the highest with EFTPos being the least with 3.1%. Turn around time and service delivery were 85.5% and 80.4% respectively and resulted in overall customer satisfaction to 78.2%. These shows that electronic banking has contributed positively to the provision of banking services and the growth of the Ghanaian banking industry.

DEDICATION

Dedicated to my late grandmother Madam Comfort Koramah.

KNUST



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To God be the glory for seeing me through a successful completion of this research work and the whole Commonwealth Executive MBA course with the Kwame Nkrumah University of Science and Technology Kumasi. I wish to express my outmost appreciation to my supervisor Mr. Anthony Ayakwah for his encouragement, time, direction and criticism that have made this work a success. I acknowledge with much gratitude to every facilitator who in diver's ways contributed to the completion of this research work.

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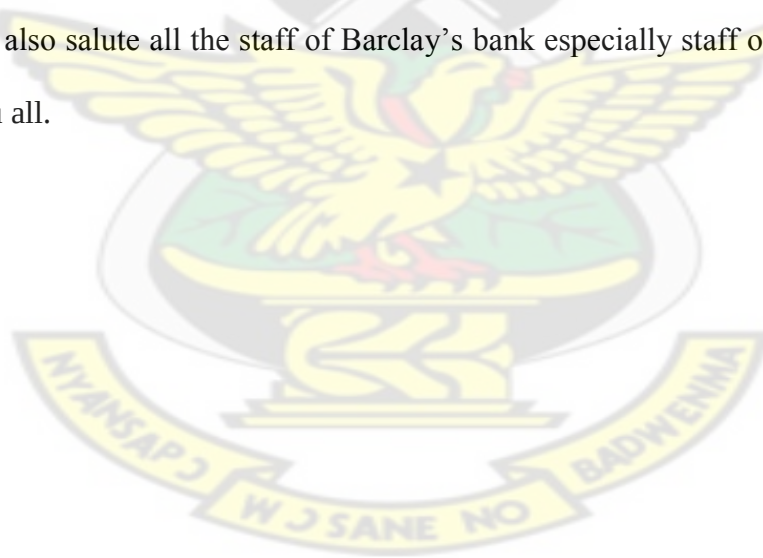


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CHAPTER ONE

INTRODUCTION

1.0 BACKGROUND OF THE STUDY

Banking in Ghana has gone through many changes in their service delivery with the aim of improving the quality of service being provided to the customers. Barclays Bank Ghana has a worldwide reputation for delivery of customer services. The bank on the 14th of February 1917 was established as Barclays Bank DCO (Dominion Colonial Overseas) which was changed to Barclays Bank of Ghana Ltd in 1971, Barclays Bank Ghana is now a wholly owned subsidiary of Barclays Bank PLC in the United Kingdom. Barclays Bank of Ghana Limited has an extensive retail and corporate banking network in the country, comprising 59 branches, 7 agencies, 10 Premier life Centers, 2 Premier Suites and 8 local business centers .Barclays is the first truly networked bank with 135 ATMs spread across 90 location nationwide via a state-of-the-art satellite communication system which ensures up-to-date data availability on customers account, anywhere in Ghana.

At the SG-SSB, the bank operates thirty eight networked branches across Ghana and serves corporate customers, individuals and small and medium enterprises. The bank was incorporated on July in 1975 with the name Security Guarantee Trust Ltd. The name was changed to Social Security Bank in 1976. In 1995 the bank was privatized and subsequently listed on the Ghana Stock Exchange. This was followed with the name changed to SSB Bank Ltd Societe Generale, the sixth largest bank in the Euro zone, acquired SSB Bank in March 2003. The name was changed to SG-SSB Limited in March 2004. The new name, SG-SSB signifies the banks status as a subsidiary of the Societe Generale group. SG-SSB aims to

continue to make a conscientious effort to improve the bank's profitability and quality service.

However, with regards to Agricultural Development Bank it was established by Act of Parliament to cater for the banking needs of the Ghanaian agricultural sector in a profitable manner. Before its current name, the bank was known as the Agricultural Credit and Co-operative Bank. The bank changed its name in 1970 when the parliamentary statute was amended to grant the institution full commercial banking powers. Therefore its range of services include development banking, corporate banking , personal banking, international banking , Diaspora banking service, treasury management services and money transfer service in partnership with Western Union. To enhance quality service in technology and telecommunication, the bank maintains a network of fifty branches located in all areas of Ghana. It also has four forms loan Offices and ten agency offices. This adds up to a total of sixty four service outlets. However, electronic play a significant role in the banking industry in order to satisfy the growing demands of customers.

Traditional banking operations such as withdrawing and depositing money, checking of balances and requesting for bank stat moments were mainly through the manual system. However these operations arc now modernized by means of electronic banking system. These electronic and communication technology which was introduced were mainly office automation devices. Telephone, telex, and facsimile were employed to speed up and make more efficient the process of servicing clients. For decades, they remained the main information and communication technologies used for transacting bank business.

Later in the 1980s as competition intensified and personal computers (PC) got proletarian, bank started to use them in back-office operations and later teller used to service client. With

advancement in technology various banks networked their branches and operations thereby making the one branch philosophy a reality. Standard Chartered and Barclays Bank pioneered this very important electronic novelty which changed this banking environment in the country.

These changes are made to make Ghana and its banking sectors a preferred information and communication technology and electronic data processing destination. Innovations in information processing, telecommunications, and related technologies – known collectively as “information technology” (IT) – are often credited with helping fuel strong growth in the many economies (Coombs *et al*, 1987). It seems apparent then that, technological innovation affects not just banking and financial services, but also the direction of an economy and its capacity for continued growth. IT is defined as the modern handling of information by electronic means, which involves its access, storage, processing, transportation or transfer and delivery (Ige, 1995). According to Alu (2002), IT affects financial institutions by easing enquiry, saving time, and improving service delivery. In recent decades, investment in IT by commercial banks has served to streamline operations, improve competitiveness, and increase the variety and quality of services provided. According to Yasuharu (2003), implementation of information technology and communication networking has brought revolution in the functioning of the banks and the financial institutions. It is argued that dramatic structural changes are in store for financial services industry as a result of the Internet revolution; others see a continuation of trends already under way.

Many banks are making what seem like huge investments in technology to maintain and upgrade their infrastructure, in order not only to provide new electronic information-based services, but also to manage their risk positions and pricing. At the same time, new off-the-

shelf electronic services such as online retail banking are making it possible for very small institutions to take advantage of new technologies at quite reasonable costs. These developments may ultimately change the competitive landscape in the financial services.

Electronic Banking in the context of this research would be limited to the use of Automated Teller Machines (ATMs) and PC banking; that is transfer of money from one account to another via internet. In an attempt to meet the standard of banking in the developed world, Ghana in view of integrating economy to the global economy, the electronic banking makes banking easy, faster, save time and cost. For this reason, electronic banking is of great benefit to organizations and individuals.

Currently, most financial institutions have benefited from such technology as Automated Teller Machines, debit and credit cards, can speed processes and mostly reducing cost of employment.

From the point of view of customers, choosing to use electronic banking has given them the opportunity to save time and reduced cost of service rendered to them around the clock availability of banking service and time saving in managing finance.

However, use of pay roll cards has help companies to pay their employees with ease and saves the cost of buying new cheque books to cash money. It also reduces the cost of replacing lost or stolen cheque books.

Despite the usefulness of electronic banking to organizations and individuals, it has several challenges which cause inconveniences to these groups. The challenges include;

- Customers disappointed sometimes by ATMs – the machine is either faulty or short of money for transaction.

- Computers in the banking institutions getting faulty, corrupt or unable to operate because of network problems.
- Customers queuing for longer hours because of poor nature of network for operations.
- Security – individuals being able to access other peoples' account when they lose their ATMs, cheque books and other items related.

1.1 STATEMENT OF THE PROBLEM

It is evident that technology is transforming activities in all aspects of life. The wind change has started blowing in Ghana with technology. Ghana, banks offering ATMs is network. With advancement in technology various banks networked their branches and operations thereby making the one branch philosophy a reality.

Despite the usefulness of electronic banking to organization and individuals, it has several challenges which cause inconveniences to these groups. These include customer being disappointed something by ATMs- the machine is either faulty or short of money for transaction. Computers in the banking institutions do get faulty, corrupt or unable to operate because of network s leading to customers queue for long hours. Also security-individuals are able to access other people account either when they loss their ATM cards or not, cheque books and other related items.

A number of studies have concluded that IT has appreciable positive effects on bank productivity, cashiers' work, banking transaction, bank patronage, bank services delivery, customers' services and bank services. They concluded that, these have positive effects on the growth of banking (Balachandher *et al*, 2001; Idowu *et al*, 2002; Hunter, 1991; Whaling, 1995; Yasuharu, 2003).

Therefore this research aims to ascertain the impact of electronic banking transaction in Ghana taking Barclays bank, SG-SSB and Agricultural Development Bank in the Eastern Region as the case study.

1.2 OBJECTIVES OF THE STUDY

The objectives are;

1. To examine the reliability of the banks' network.
2. To identify which e-banking services are mostly used by customers.
3. To find out if there are supplementary securities features in addition to PINs to prevent fraud.
4. To identify the problems encountered by customers in the use of the service.
5. Identified what constitute electronic banking and whether customers are receiving the satisfaction needed with the use of the electronic services

1.3 RESEARCH QUESTIONS

1. Whether the bank is having a reliable network system?
2. Which e-banking services are mostly used by customers?
3. What supplementary security features does the bank offer customers apart from PIN codes?
4. How are the banks able to solve the problems encountered by customers in use of the services?

5. How are banks able to satisfy their customers with the services provided through the electronic delivery channels?

1.4 SIGNIFICANCE OF THE STUDY

In actual fact, it is believed strongly that the research findings will help banks in Ghana, especially Ghana Commercial Bank to adopt more effectively, efficiently and convenient ways of electronic banking to both the bank and customers.

The study to a large extent will help unveil certain hidden challenges affecting e-banking in Ghana and giving some recommendation to help improve service of electronic banking.

To the academic community or institution, students and the researcher, it lays the necessary foundation or them to undertake similar research in the future. Besides, the study will bring to light the important role being played by electronic banking to national economic growth and development.

The justification of the study is for the partial fulfillment for the award of Executive Masters in Business Administration. Further, it will serve as a source of secondary data for other researchers and students who will undertake similar research issue.

1.5 SCOPE OF STUDY

This research work as designed to cover three Banks in the Eastern region (SG-SSB, BARCLAYS BANK and ADB) within the month of June 2012

1.6 LIMITATION OF THE STUDY

Some of the major weaknesses of the research are enumerated below;

The lack of literature on the topic will be a major problem which makes the researcher to rely on primary data and interviewing.

Time factor can also be a constraint because of the limited time to carry out this research to be submitted for vetting and defense.

Another shortcoming is the result of inadequate financial support; printing and coming out with a final work.

However, the quality and authenticity of this work cannot be sacrificed on the alter for the constraints mentioned above.

1.7 ORGANIZATION OF STUDY:

The report is presented in five chapters. Chapter one introduces the report by giving some background information on the subject matter and focus of the study. It also presents the problem statement, objectives and research questions posed for the study. Chapter two presents a review of relevant literature on the topic outlining what other people have done in the sector, and upon which the research seeks to build. Chapter three presents the outline and detailed description of the methodology used in undertaking the research; data sources, the research instruments and the tools used for the analysis as well as the presentation of the results. The fourth chapter presents the findings/results and their explanations which helped draw the relevant conclusions and make recommendations for the necessary actions to be taken. The summary of findings, conclusions and recommendations are presented in chapter five.

CHAPTER TWO

LITRATURE REVIEW

2.1 Overview of Information Technology

Oliver and Chapman (1996) defined information technology as the technology which supports activities involving the creation, storage, manipulation and communication of information, together with their related methods, management and application.

French (1998) also defined IT as the technology of computers, telecommunications, and other devices that integrate data, equipment, personnel and problem-solving methods in planning and controlling business activities. French goes on to say that information technology provides the means for collecting, storing, encoding, processing, analyzing, transmitting, receiving and printing text, audio or video information.

These two definitions point out the fact that information technology may be seen as the broadly based technology needed to support information system. These writers try to classify IT as collecting, storing and processing data into information. This can only be achieved through the use of technology. Seeing IT as a broadly based technology is the study of systems like computers and telecommunication for storing, retrieving and sending information (French 1998).

French's definition goes deeply into telecommunication while Oliver and Chapman are more concerned about the methods, management and applications used in bringing about change in how activities are created.

Rosenberg (1993) defined IT as any equipment or interconnected system or subsystem of equipment that is used in the automatic acquisition, storage, manipulation, management, movement, control, display, switching, interchange, transmission or reception of data or

information. The term IT includes computers, auxiliary equipment, software, firmware and similar procedures, services and related resources.

The above definition is somehow similar to that of Dewan (2002) which says that IT refers to applied computer systems including hardware (a computer and the associated physical equipment) directly involved in the performance of data- processing or communication functions; software – the programs, routines and symbolic languages that control the functioning of the hardware and direct its operations and often including : network (also called a net) – a system of computers interconnected by telephone wires or other means such as infra-red beam or fibre optic cable in order to share data or related information.

Rosenberg and Dewan both described IT as the interconnection of systems or subsystems working together under a common unit. They were also in one accord by the mentioning of the word computers. A computer is a functional unit that can perform substantial computation, including numerous arithmetic operations or logic operations, without intervention by a human operator during a run (Rosenberg, 1993).

Whereas Rosenberg and Dewan use the computer as a basis of describing information technology, French and Oliver and Chapman use the technology to describe IT. The technology involved in bringing about change in our daily activities became their major focus.

The pace of change brought about by new technologies has had a significant effect on the way people think, live and play worldwide. New and emerging technologies challenge the traditional process of teaching and learning, and the way education is managed. Information technology, while an important area of study in its own right, is having a major impact across all curriculum areas. Easy worldwide communication provides instant access to a vast array

of data, challenging, assimilation and assessment skills.

Howells (2000) also defines information technology as a subject taught at all levels from basic school to university concerned with all aspects of programming and operating computers or using data and systems generated by the use of computers for business or technical developments.

Howells therefore holds a different opinion about information technology. He describes IT as just a subject which is taught at various levels of education.

The role of computers and for that matter information technology in society is a large subject to consider. Computers are just one example of automation although they have special features. In a society which relies heavily on all forms of automation and on automated handling of information computers, IT is the main tool which is normally adopted.

Information Technology is not just a subject which is taught in schools but also the methods and equipments used in the management of many organizations. IT is not only the knowledge acquired, but using the knowledge acquired to bring about developments in the society (Howells, 2000).

According to Alu (2002), IT affects financial institutions by easing enquiry, saving time, and improving service delivery. In recent decades, investment in IT by commercial banks has served to streamline operations, improve competitiveness, and increase the variety and quality of services provided. According to Yasuharu (2003), implementation of information technology and communication networking has brought revolution in the functioning of the banks and the financial institutions. It is argued that dramatic structural changes are in store for financial services industry as a result of the Internet revolution; others see a continuation of trends already under way.

2.2 Traditional (Manual) Banking Systems

Traditional banking may also be said to be the process of receiving, recording, processing, posting and delivery of accounting information on customers of banks without the use of any mechanized, computerized or any electronic device. Computerization in banking became common over the following decades as bankers quickly realized that much of their labor intensive information handling could be automated on the computer.

2.2.1 Traditional Banking

A research by Adam (1999) showed that traditional or manual banking is the execution of the activities of banking such as borrowing, transfer, keeping of cash without the use of any electronic assorted device. In manual banking, the banker keeps records on customers in bulky books with hand writing.

According to (Cater, 2000) traditional banking is the process of receiving, recording, processing, posting and delivery of accounting information on customers of banks without the use of any mechanized, computerized or any electronic device. In manual banking, the labour intensive system of information handling process of banks was not programmed on the computer. According to Adam (1999), the manual system of information was replaced because of its associated problems.

With this system of banking, there were a lot of human errors in the cause of delivery service, thereby making customers lose interest in transacting business with the banks and rather keep cash on them. Moreover the system puts a lot of pressure on the employees of the banks, since an employee has to service a customer manually before attending to another customer thereby resulting in long queues in the banking halls.

In addition, base on what was said by the two writers it is the fact that customers of banks could only transact business within their main branches, thereby posing problems to customers who usually travel to other places to do business.

2.3 The Concept of Electronic Banking

E-banking is the newest form of delivery channel for delivery banking services and products. To some extent, the meaning of e-banking varies among researchers. Daniel (1999) explains e-banking as the provision of banking services to customers through internet technology. However, (Singh and Malhotra, 2004) defines e-banking in a more comprehensive way as the deployment of banking services and products over electronic and communication network directly to customers. Products and services are delivered through electronic and communication networks such as ATMs, the Internet, mobile devices and telephones. Among these technologies, the increasing penetration of personal computers, relatively easier access to the internet and a wider diffusion of mobile phones has drawn the attention of most banks to e-banking (Boateng and Molla, 2006). Stamoulis et al. 2002, on the other hand consider e-banking as a financial innovation that has been enabled by the creative use of emerging ICT and other business forces. The financial innovation incorporates ICT, customer, marketing, finance and strategy.

However, one common denominator which runs through the above three definition is the provision of services and products through a medium such as computer, television or mobile phone.

E-banking is the product of different generations of electronic transactions. Since the 1990s, the scope of e-banking has widened. Previously, it was virtually insignificant but now it is

well-known to millions of users worldwide. Automated Teller Machines (ATMs) were perhaps the earliest examples of e-banking that provided customers with electronic access to banking. Later, phone banking was introduced which allowed users to call their banks on ordinary phones to perform banking transactions. Nonetheless, phone banking was superseded by Personal Computer (PC) banking where customers have proprietary software installed on their personal computers by their banks to enable them bank from their homes.

With this medium, users are able to interact with their banks through a computer connected with dial up modem to a phone network. Currently, internet banking is the most recent of the several generations of systems. This mode of electronic banking is widespread in Austria, Singapore, Spain and Switzerland, Korea, and the Scandinavian countries. In these areas, about 75 percent of all banks offer internet banking services (Nitsure 2003).

According to Stamoulis et al. 2002, the profitability of electronic banking delivery channel by banks is calculated not only on the basis of revenue generated by charging customers but also exploring other avenues for reducing operating cost. The implementation of e-banking ensures operational efficiency as it is evident that expenses on labour, premises, back-office paper work and facilities are minimized. Also, through electronic banking banks now deal directly with customers as compared to the traditional brick and mortar model where customers transacted business over the counter. According to (Boateng and Molla, 2006) profitability of banks can be determined by different e-banking capabilities possessed by banks and can be seen in two dimensions. Firstly, the use of electronic banking delivery channels in serving customers. In developed countries, many banks began with the use of ATMs and have evolved to personal computer banking. Nevertheless, this evolution is not visible in recently established banks in developing countries.

In Africa, this evolution is visible in South Africa banking industry (Boateng and Molla, 2006). What appears to be the most commonly used electronic banking channel in Africa is the use of ATMs and most recently the emergence of mobile banking in Ghana. The slow evolution of e-banking in developing African countries has been the inability to rapidly adopt global technology to local requirements. Most developing countries lack adequate infrastructure, working capital and human capacity before the adoption of global technology, and thus difficult to achieve the benefits that come with e-banking initiatives.

The second is the sophistication of banking services delivered over electronic channels. Sophisticated e-banking services range from one way information-push services where customers obtain information about the banks products and services to information download. With information downloads services, customers are able to download account information and forms and also perform full transaction such as making transfers between accounts, bill payment and cards and loan applications electronically (Boateng, R. & Molla, A. 2006). these determinants that, banks need to decide on what e-banking services to provide, to which customers and when and how to provide customers with their services.

The three definitions above shows some kind of similarities banks not looking at the profitability of e-banking delivery channels but rather other avenues which will reduce their cost of operation.

In addition, Jayawardhena and Foley (2000) believe e-banking provides solutions to the inherent problems of traditional banking such as it being time consuming. As a result, it is eventually becoming a norm for banking institutions to encourage their clients to use electronic means of banking. Customers' acceptance of electronic banking saves banks considerably on operating and marketing cost, thus providing banks with economies of scale

(Levinsohn, 1998). The use of electronic delivery in service provision also eases enquiries, saves time and improves service quality. Due to these benefits, Hutchinson and Warren (2003) report that electronic banking presently accounts for over 50 percent of all banking transactions. Hutchinson and Warren (2003) also identified four drivers of electronic banking:

- Increasing demand of customers.
- Increasing competition between banks and new bank entrants.
- Banks relentless desire to exploit new ways to reduce operational cost and achieve efficiency.
- Global deregulation of financial markets.

Moreover looking at the above definitions, the benefits of electronic banking cut across them indicating the advantages over the traditional banking system. Again as banks adopt electronic banking delivery of products and services, the problem of reducing operational cost at the expense of maintaining and developing customer relationships would be experienced. Hence as consumer preferences differ among customers, service provision must be structured in ways that satisfy all categories of customers.

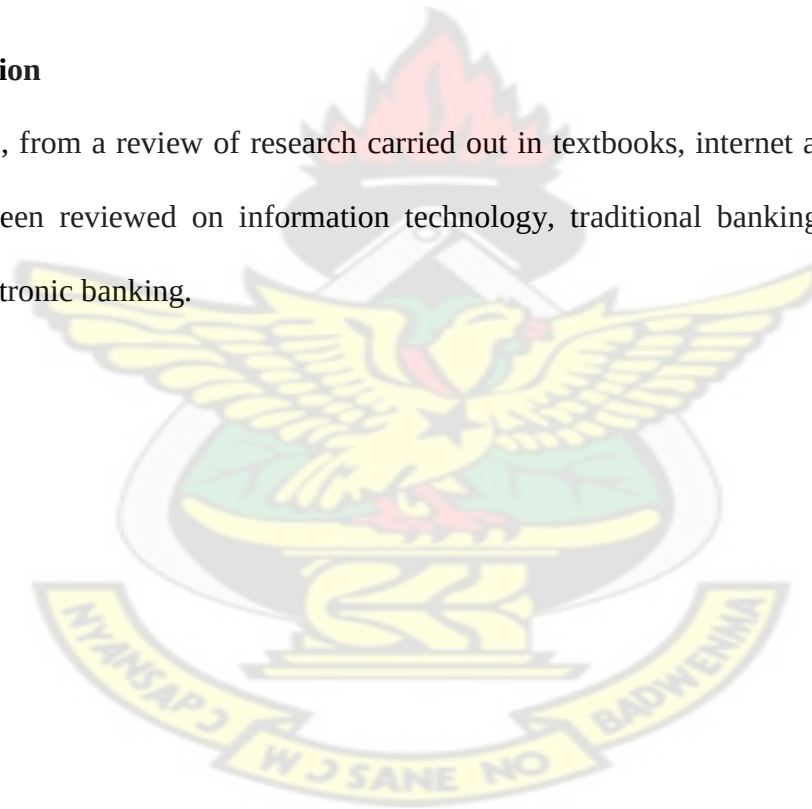
Again, banks that successfully integrate new technology in their business activities need to understand the impact of technology based transaction systems on customer perceptions and behavior (Moutinho and Smith, 2000). The implication is that banks need to know what satisfies and keep customers and as well develop innovative ways of providing satisfactory services to customers. Customer satisfaction is created as a result of high degrees of convenience and user-friendliness of electronic banking facilities. Currently, evidence

appears to suggest that customer growth is dependent on electronic banking (Katz and Aspen, 1997; Tilden, 1996).

Thus banks should be cautious of the impact of e-banking on current and future relationships as it largely reduces, and in some cases eliminates personal contact points within an organization. It has therefore become necessary for banks to acknowledge that their growth to a large extent is dependent on their relationship with their customers, and to continue to strengthen that relationship.

2.4 Conclusion

To conclude, from a review of research carried out in textbooks, internet and other sources, much has been reviewed on information technology, traditional banking system and the concept electronic banking.



CHAPTER THREE

METHODOLOGY

3.0 Introduction

The selected institutions were ADB, SG-SSB and BARCLAYS BANK which are financial institutions with a great representation in the eastern region. They are part of the first five banks with wide customer base in the region and beyond .Their operations stems way back even beyond the early seventy's with their core business of offering various financial services advices to both retail and corporate customer.

3.1 Source of data

Primary and secondary data were used in this research .The primary data was collected from customers of all the three banks through administrating of questionnaire. Questionnaire used was semi-structured with both closed-ended and open-ended questions.

Secondary data was collected from books, articles, journal publications and the internet sources of related materials. The study was guided by both qualitative and quantitative research methodologies.

The methodology adopted involved the conduct of interviews and/or interrogation; preparation of a number of questionnaires and their administration. The questionnaires were designed to ascertain customers' perceptions on the effect of IT innovations or electronic delivery channels on the banking services in Ghana. The responses were measured with a five-point Likert-type rating scale, where Strongly Agree (SA) = 4; Agree (A) = 3; Strongly Disagree (SD) = 2; Disagree (D) = 1; and Neutral (N) = 0.

3.2 Study Population

Since the research was about the, impact of electronic banking transaction in Ghana, the population of interest was based on the financial sector. The target populations are customers and workers of banks in the eastern region and the study populations were ADB, SG-SSB and BARCLAY BANKS.

3.3 Sample procedure

The sample size was drawn from three Banks. The banks were sampled on the basis that they offer at least one form of electronic channel product. In all three (3) out of a total of ten (10) banks in the Eastern Region were identified. The researcher also interviewed banking IT executives, customer service managers and couple of the customer facing staff in the sampled banks to ascertain the form of IT innovation introduced by their respective banks. A ‘grab sampling’ technique was used to select the customers from the banks. In all 255 customers and 45 bank officials were selected across the region. These officials were selected based on the positions as IT officials or customer service manager and certain key managers. The customers on the other hand belong to the retail segment of the bank that uses theses services day in and out. Please how many banking officials and customer did you select and how you selected did. This is the second time I have ask this question

3.4 Instrumentation

Questionnaires and interviews were used to collect data from the respondents. The questionnaire contained both open and close ended questions. Some identified old customers were interviewed .This was because they have been banking with these banks since the days

of manual banking and will therefore be in position to bring out the real effect of electronic banking on customer service and satisfaction.

The reason why questionnaire was used is because it is the people are educated and can provide the needed information and helps in recognizing consistency of response.

3.5 Data Collection Procedure

In order to gather information about the background of the various respondents, their experience as customer service managers, the challenges they face with the introduction of electronic banking and how they address these problems. This was meant to ensure that the data collected are accurate

3.6 Data Analysis

The study was designed to investigate the effect of electronic banking transactions in the Banking Industry. Both quantitative and descriptive techniques were used. For the quantitative design, the responses from the respondents and the data from secondary sources were presented in tables for easy analysis.

The data collected were analyzed using statistical tools. Simple averages, percentages and descriptive methods were used in the analysis. The data was analyzed in line with the literature hence many references were made to the issues in chapter two of the research work. A total of 300 questionnaires were sent out. But 257 responses were received, representing a response rate of 85.7%. In order to ascertain perceptions of banking customers with respect to the effect of technological innovation on banking services, descriptive statistics were employed in the presentation and analysis of results.

CHAPTER FOUR

DATA COLLECTION METHOD/ SOURCES OF DATA ANALYSIS AND DISCUSSION

4.0 Introduction

This chapter analyses the data collected from the field. Specifically from the customers of the three banks namely Agricultural Development Bank, SG – SSB and Barclays Bank Ghana in the eastern region.

Table 1: Electronic Delivery Channels Utilized by Banks in Ghana

Banks	ATM	Telephone Banking	PC-Banking	Internet Banking	Branch Network	EFTPoS
Agricultural Development Bank-Koforidua	a	r	a	a	a	a
Barclays Bank -Koforidua	a	r	a	a	a	a
SG-SSB-Koforidua	a	r	a	r	a	r
Agricultural Development Bank-Nkawkaw	r	r	a	r	a	a
Barclays Bank-Nkawkaw	a	r	a	a	a	a
SG-SSB-Nkawkaw	a	r	a	r	a	r
Agricultural Development Bank-Oda	a	r	a	r	a	a
Barclays Bank -Oda	a	r	a	a	a	a
SG-SSB-Oda	a	r	a	r	a	r

a means does provide service why are some small and others capital consistency

r means does not provide service

An analysis of the types of electronic delivery channels utilized by banks in Ghana is presented in Table 1. The focus of the analysis is on the six main delivery channels identified in literature namely ATMs, Telephone Banking, PC-Banking, Internet Banking, Branch

Network and EFTPoS. The information was basically from personal interviews with Bank Executives and IT Executives in the respective banks. As indicated in Table 1, it was found that ATMs and Branch Networks are the most popular electronic banking delivery channels in Ghana. These are followed by PC banking, EFTPoS and Telephone banking. Internet banking is by only three branches.

Table 2: Use of IT Innovations

Responses	Frequency	Percentage
Yes	205	79.8
No	52	20.2
Total	257	100

The results, as indicated in table 2 show that, 79.8% representing 205 out of a total of 257 respondents use one form of electronic delivery system or the other. This indicates that bank customers to a large extent patronize electronic products offered by the banks in the region

.Table 3: Type of IT Innovations Used by Customers

Electronic Delivery Channel	Frequency	Percentage
ATMS	151	58.8
Telephone Banking	65	25.3
PC Banking	28	10.9
EFTPos	8	3.1
Others	5	1.9
Total	257	100

With respect to the type of electronic based product used by customers, ATMs appear to be the most widely accepted and highly used electronic delivery tool indicating 58.8% of the total respondents. This is followed by telephone banking representing 25.3% and PC banking bank 10.9%. Electronic Funds Transfer Point of Sales, though, an earlier form of IT innovation, seems to be the least used electronic delivery channel by bank customers. Since ATMs are the widely accepted and highly utilized delivery channel, it is important at this point to ascertain the frequency of it usage among bank customers. This is shown in table 4.

Table 4: Frequency of ATM Usage

Number of Usage per Month	Frequency	Percentage
Once	34	13.0
Twice	36	14.2
Thrice	55	21.4
Four or more	132	51.4
Total	257	100

Table 4 shows results on the frequency of ATM usage among bank customers. The results show that customers frequently used the ATMs for bank transactions such as cash transfers, checking account balance and printing mini statements. 132, representing 51.4% of respondents who use ATMs indicated that, they visit ATM points about four or more times in a month. However, 13%, 14.2% and 21.4% of respondents pointed out that, they visit ATM points once, twice and thrice respectively every month.

Table 5: Frequency of Bank Visits

Number of Visits per Month	Frequency	Percentage
Never	5	1.9
Once	63	24.6
Twice	69	26.7
Thrice or more	120	46.8
Total	257	100

The frequency of customers' bank visits is shown in table 5. Out of the total of 257 respondents, 120 representing 46.8% mentioned that, they visit their banks three or more time every month. The results indicate that customers of banking services in Ghana still find it useful to visit their bank branches regularly every month to transact some banking business such as detailed bank statement requests, loan application, foreign funds transfer, deposits etc. for which the ATMs cannot be used.

What is SD, D, N, A, SA,

SD- STRONGLY DISSAGREE, D-DISSAGREE, N-NEUTRAL, A-AGRESS AND SA-STRONLY AGREE

Table 6: Response to Customers' Requirements

Response	Frequency	Percentage	Mean
SD	3	1.2	
D	4	1.6	
N	20	7.8	
A	111	43.1	
SA	119	46.3	
Total	257	100	3.19

Table 6 shows the responses of customers' requirements with respect to how fast enquiries about their accounts can be made. Out of a total of 257 responses, 89.4% agreed that IT Innovation makes enquiry about the state of their accounts faster whiles 2.8% representing 34 respondents disagreed. A mean of 3.19 confirms that IT Innovation makes enquiry about the state of accounts faster.

Table 7: Time involved in bank transactions

Response	Frequency	Percentage	Mean
SD	4	1.5	
D	4	1.7	
N	21	8.3	
A	110	42.7	
SA	118	45.8	
Total	257	100	3.16

The responses of customers as shown in Table 7 confirm that Technological Innovation reduces the time involved in bank transactions. Out of 257 respondents, 228 representing 88.5% agreed that the time involved in transacting business with their banks can be reduced significantly with IT. A total of 8 respondents representing 3.2% however disagreed with this view. A mean of 3.16 confirms the perception of customers that IT reduces the time spent at the bank in order to transact business.

Table 8: Effect on service delivery

Response	Frequency	Percentage	Mean
SD	2	0.6	
D	9	3.5	
N	40	15.5	
A	129	50.4	
SA	7	30.0	
Total	257	100	2.79

Table 8 above gives the responses of customers about the effect of Technological Innovation on service delivery. About 206 representing 80.4% of the customers who responded agreed that IT Innovations ensures efficient service delivery. The number of respondents who however disagreed were 11 representing only 4.1%. 15.5% of respondents out of 257 held a neutral view. A mean of 2.79 shows that IT Innovation enables banks to deliver efficient services to their customers.

Table 9: Effect on quality of product and services

Response	Frequency	Percentage	Mean
SD	2	0.9	
D	5	1.8	
N	33	12.7	
A	129	50.4	
SA	88	34.1	
Total	1,210	100	2.92

From the table 9 above, majority of the customers generally agreed that the quality of the products and services of banks have be improved with IT Innovation. Almost 217 signifying 84.5% of respondents agreed that IT Innovation improves the quality of bank products and services whiles 34 (2.7%) of those who responded disagreed with this position. The mean of 2.95 confirmed that IT Innovation improves the quality of products and services offered by banks.

Table 10: General customer satisfaction

Response	Frequency	Percentage	Mean
SD	3	1.1	
D	10	3.8	
N	43	16.9	
A	131	51.0	
SA	70	27.2	
Total	257	100	2.71

From table 10, out of a total of 257 respondents, 78.2% agreed that IT Innovation provides adequate responses to their inquiries of products/services information, as against 4.9% who disagreed. This is reflected by the mean of 2.71 which confirms that, IT Innovation provides adequate responses to customer's inquiries.

Table 11: Customers' patronage

Response	Frequency	Percentage	Mean
SD	4	1.4	
D	8	3.1	
N	56	21.7	
A	118	45.8	
SA	72	28.0	
Total	257	100	2.57

The willingness of customers to continue saving with their banks is shown in the Table 11 above. 190 respondents representing 73.8% of the customers agreed that they will continue to save with their banks. They also believe that IT Innovation attracts customers to their banks. However, nearly 4.5% of the total respondents of 257 disagreed. 21.7% neither agreed nor disagreed with this assertion. A mean of 2.57 shows that, most of the respondents, appear to be satisfied with the services and products offered by their respective banks and so will continue to save with the banks.

Table 12: Effect on transaction cost

Response	Frequency	Percentage	Mean
SD	11	4.1	
D	35	13.8	
N	67	26.0	
A	86	33.6	
SA	58	22.5	
Total	257	100	2.23

The results as shown in table 12, confirm the fact that, the advent of IT Innovation has lead to increased bank charges. Even though 17.9% of the 257 respondents disagreed with this assertion, 56.1% agreed that IT Innovation has resulted in increased bank charges. This fact is reflected by the mean of 2.23. The mean value of 2.23 shows that bank charges have increased as a result of increased investments in IT Innovations.

Table 13: Effect on bank productivity

Response	Frequency	Percentage	Mean
SD	2	0.7	
D	10	3.9	
N	44	17.0	
A	136	53.0	
SA	65	25.4	
Total	257	100	2.69

Table 13, shows the responses of customers with respect to the impact of IT Innovation on bank productivity. A total of 201 respondents representing 78.4% agreed that IT Innovation increases bank productivity 4.6% respondents however did not agree that IT Innovation increases bank productivity. The mean value of 2.69 shows that bank productivity can be increased with the introduction new electronic channels.

Table 14: Effect on Bank growth

Response	Frequency	Percentage	Mean
SD	2	0.7	
D	5	2.0	
N	24	9.2	
A	107	41.8	
SA	119	46.3	
Total	257	100	3.15

The response of customers with respect to the impact of IT Innovation on the growth of their banks is shown in the Table 14 above. About 226 customers representing 88.1% agreed that IT Innovation has made a positive impact on the growth of their banks as against 33 customers representing 2.7% of the valid responses who disagreed. A mean value of 3.15 shows that technological innovation has a positive impact on the growth of banking in the region.

Table 15: Importance of Human tellers to bank customers

Response	Frequency	Percentage	Mean
SD	81	31.5	
D	95	36.8	
N	36	14.2	
A	26	10.0	
SA	19	7.4	
Total	257	100	1.65

Customers' responses about the importance of human tellers to banking operations are shown in table 15. Out of the total sample respondents of 257, 176 signifying 68.3% of customers disagreed with the assertion that human tellers are no longer important whiles 45 representing 17.4% of respondents held the view that, human tellers are important. The mean of 1.65 confirms the fact that human tellers are still considered important in banking, even in the face of increased investment in IT innovation and electronic delivery systems. This is an indication that bank customers in Ghana still highly value the importance of the personal touch in banking services.

Both primary and secondary data was used by the researchers. Information from the primary source, collect data from the field survey which involve the use of questionnaire and personal interviews for the purpose of the work.

Secondary source of data were obtained from journal and books. Also the internet played a significant role providing secondary data but the topic of the study is a new area of study and now developing as many individuals are not writing on the topic.

4.1 RESEARCH INSTRUMENT

The researchers made use of questionnaire and interview in gathering of data in order to achieve the objectives of the study. The questionnaire was used to enable researchers to reach out the expected number of people. The questions consisted of both open and close-ended questions.

4.2 ADMINISTRATION OF RESEARCH INSTRUMENTS

Based on the required information needed, the researchers interviewed respondents through face-to-face interaction. The questionnaires designed were administered personally to respondents and were retrieved by the same mode after one week to provide necessary feedback to be analyzed.

4.3 DATA ANALYSIS TECHNIQUES

Data collected was analyzed using a blend of narrative and statistical tools. Frequently tables and pie charts were employed in the presentation of the analyzed data.

The data collected from the field indicates that , high percentages of the respondent accept the fact that the introduction of electronic banking has improve almost all the areas of operations talking about product and the quality of service ,productivity , cost of operations

and many more has gone up. Hence electronic banking can be said to have had a positive impact of both customers of these banks in the region and the banks as well.

KNUST



CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATION

5.0 Introduction

Banking in Ghana has gone through many changes in their service delivery with the aim of improving the quality of service being provided to the customers. . With advancement in technology various banks networked their branches and operations thereby making the one branch philosophy a reality. These changes are made to make Ghana and its banking sectors a preferred information and communication technology and electronic data processing destination. Innovations in information processing, telecommunications, and related technologies – known collectively as “information technology” (IT) – are often credited with helping fuel strong growth in the many economies (Coombs *et al*, 1987).

This chapter looks at the summary and the conclusions of the findings of the research work. It also features the recommendations from the researcher on how to ensure an effective internal control in the company under review.

5.1 Summary of findings

Findings from the research shows that the introduction of information technology into banking operations in Ghana has not improved the quality of service being rendered to its customers alone, but also reduced the cost of hiring of personnel to carry out certain parts of its operations as well in order to reduce their cost and maximize profit as well. Also customers were aware of most the electronic banking products being offered by the various banks in the region. Most of them were satisfied but still expecting more from the banks as well.

5.2 Conclusion

The study has revealed that the use of CCTV cameras especially on the Automated Teller Machines (ATMs), passwords and SMS alerts are some of the supplementary security features used in addition to the Personal Identification Number (PIN) codes given to customers. The study further revealed that the most commonly used e – banking service channel is the ATMs, followed by the e – zwich with the least being telephone banking. The study also deduced that the reliability of the banks' network is not the best to the expectation of the customers. It came out that aside the numerous benefits enjoyed from the use of the e – banking services; it also came along with its own attended problems.

In addition, a finding which is contrary to the belief that the use of these e – services comes with a higher cost, it was clear from the study that the charges on the services are really affordable with some being virtually free was found. Reduction in the time spent in the banking hall coupled with the improvement in the services rendered by the bank as a result of the introduction of the services are some of the benefits reaped by the banks.

5.3 Recommendation

In order for e – banking to have a positive impact in the Ghanaian banking industry and create customer satisfaction, the following recommendation are made:

- Routine maintenance and possible replacement to e – facilities other related equipment to prevent system disruptions
- Banks must work their way through to earn the trust of their customers as customers' decisions to adopt e – banking is based on trust.

- Staffs should be given regular training on how to provide customers with further better quality service
- Banks must ensure that they install more Automated Teller Machines (ATMs) at so many convenient places to bring e – banking to a further doorstep of their customers.
- Banks must ensure that they have a stable network system and if possible adopt the best and fasters network system for their operations with customers.



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**KWAME NKRUMAH UNIVERSITY OF SCIENCE AND
TECHNOLOGY
INSTITUTE OF DISTANCE LEARNING**

QUESTIONNAIRE FOR MANAGEMENT

This questionnaire is designed to be used for research on the “The impact of Electronic Banking Transaction in Ghana”. The respondent is assured that the information provided will be used for an academic exercise only and data collected shall be treated confidentially.

Please tick (✓) and make a brief comment where necessary.

1. What year did you start your operation in E-banking? Please specify

.....

2. What is the customer base of the bank currently? Please specify

.....

3. What are the reasons for introduction of electronic banking in your bank? Please specify.

.....

4. Have the bank achieve the purpose of introducing e-banking?

a. Yes ()

b. No ()

5. If yes please specify how you achieve the purpose.

.....

.....

6. Which of the following electronic banking services do you provide?

a. ATM ()

b. E- zwich ()

c. I-banking ()

d. Telephone banking ()

- e. Personal computer banking ()
- f. Electronic funds transfer at point of sales (EFTPoS) ()
7. How many ATMs outlets do you have in Koforidua to serve customers?
- a. One ()
- b. Two ()
- c. Three ()
- d. Four ()
8. Do you have enough technicians to manage these services?
- a. Yes ()
- b. No ()
9. Do you monitor the devices?
- a. Yes ()
- b. No ()
10. How is the monitoring done? Please specify
.....
11. Do you encounter problems with the various e-banking services you provide?
- a. Yes ()
- b. No ()
12. If yes, please
specify.....
13. Do you receive complaints from customers on electronic banking systems?
- a. Yes ()

b. No ()

14. What kind of complaints do you receive? Please specify

.....

15. How often do you get such complaints?

a. Frequent ()

b. Frequently ()

c. Not frequent ()

16. Do you act on such complaints?

a. Yes ()

b. No ()

17. How long does it take you to act on the complaints?

a. Immediately ()

b. 1-4 weeks ()

c. 5-8 weeks ()

d. 9-12 weeks ()

18. Do you educate customers how to access the service?

a. Yes ()

b. No ()

19. What kind of education is given for easy accessibility?

a. One on one ()

b. Group ()

Any other, please

specify.....

20. Do you have security features on the device to prevent fraud?

a. Yes ()

b. No ()

21. If yes what other security features do you installed on the devices apart from PIN codes, please specify.

22. Has electronic banking brought any improvement in service delivery to the bank?

a. Yes ()

b. No ()

23. If yes, please specify.

.....
.....



THANK YOU

APPENDIX B

KWAME NKRUMAH UNIVERSITY OF SCIENCE AND TECHNOLOGY INSTITUTE OF DISTANCE LEARNING

QUESTIONNAIRE FOR CUSTOMERS

This questionnaire is designed to be used for research on the “The impact of Electronic Banking Transaction in Ghana”. The respondent is assured that the information provided will be used for an academic exercise only and data collected shall be treated confidentially.

Please tick (✓) and make a brief comment where necessary.

1. Gender.
 - a. Male ()
 - b. Female ()

2. Please age.
 - a. 18-25 years ()
 - b. 26-35 years ()
 - c. 36-45 years ()
 - d. 46 above ()

3. Educational background
 - a. O level ()
 - b. A level ()
 - c. HND/DBS ()
 - d. 1st Degree ()
 - e. 2nd Degree ()
 - f. Professional ()

4. What type of account do you have with this bank? (Please tick as many as possible)

a. Current ()

b. Saving ()

c. Fixed deposit ()

d. Other please specify.....

5. How long have you been with this bank?

a. 1-5 years ()

b. 6-10 years ()

c. 11-15 years ()

d. 16-20 years ()

e. Above 21 ()

6. On the average, how many hours do you spend in the bank when transacting business through the traditional method?

a. Less than an hour ()

b. 1-2 hours ()

c. 3-4 hours ()

d. Above 5 hours ()

7. Does your bank use e-banking delivery channels in providing services to its customers?

a. Yes ()

b. No ()

8. The quality of services and products has improved with the use of electronic delivery channels?

- a. Strongly agree ()
- b. Agree ()
- c. Neutral ()
- d. Disagree ()
- e. Strongly disagree ()

9. With the use of electronic banking delivery channels I am satisfied with services provided by my bank.

- a. Strongly agree ()
- b. Agree ()
- c. Neutral ()
- d. Disagree ()
- e. Strongly disagree ()

10. Electronic banking has reduced time involved in bank transaction.

- a. Strongly agree ()
- b. Agree ()
- c. Neutral ()
- d. Disagree ()
- e. Strongly disagree ()

11. Which of the following E-banking services do you use most often?

- a. ATMs ()
- b. E- zwich ()
- c. I-banking ()

- d. Telephone banking ()
- e. Mobile banking (SMS) ()
- f. Personal computer banking ()
- g. Electronic funds transfer at point of sales (EFTPoS) ()
- h. Other ()

12. Have you been educated on how to access the service?

- a. Yes ()
- b. No ()

13. If yes, what was the method of education?

- a. One on one ()
- b. Group ()

Any other, please specify

14. Do you find problems using these services?

- a. Yes ()
- b. No ()

15. If yes, which of the following problems do you frequently encounter? Please you can tick as many as possible.

- a. Shortage of cash ()
- b. Network failure ()
- c. Breakdown ()
- d. Unable to access on weekends ()

16. Do you encounter network failure?

- a. Yes
- b. No

17. Do you notify authorities on such problems?

a. Yes ()

b. No ()

18. If yes, what is the form of notification?

a. Personal oral reporting ()

b. Written notification ()

c. Using suggestion box ()

19. How long does it take them to respond to your notification?

a. Immediately ()

b. 1-4 weeks ()

c. 5-8 weeks ()

d. 9-12 weeks ()

20. How will you rate the following e-banking services on accessibility, reliability and convenient? The criteria for rating are five (5) to one (1), where 1 is the lowest and 5 is the highest.

ELECTRONIC SERVICES/RATING	Accessibility	Reliability	Convenience
ATMs			
E-zwich			
I-banking			
Telephone banking			
Personal computer banking			
Electronic funds transfer at point of sales (EFTPoS)			

21. Are the charges on the e-banking services affordable?

a. Yes ()

b. No ()

22. Have you even been defrauded using these services?

a. Yes ()

b. No ()

23. Do you know whether the bank has any supplementary security features for you apart from PIN codes?

a. Yes ()

b. No ()

24. If you answered yes to the above question, please mention the security features.

.....

25. How do you think the bank can improve on the following e-banking services?

a. ATMs

.....

b. E-zwich

.....

c. I-banking

.....

d. Telephone banking

.....

e. Personal computer banking

.....

f. Electronic funds transfer at point of sales (EFTPoS)

.....

.....

THANK YOU