ADOPTION OF E-BUSINESS IN THE BANKING INDUSTRY OF GHANA.

by

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DECLARATION

I hereby declare that this submission is my own work towards the Commonwealth Executive Masters in Business Administration 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

Ghana is a fast growing developing country and it is expected to reach middle income status by the year 2015 under the Ghana Growth and Poverty Reduction Strategy two (GPRS II). The financial services sector is growing at a very fast rate especially with the grant of universal banking licenses to major banks in the country. This well-deserved growth has created the need and driven the interests of Ghanaian banks on e- business. E-business is no longer considered as an option by Ghanaian banks but a must do to remain competitive. This study presents an assessment of the adoption of e-business in the Ghanaian banking sector. Indeed, the emergence of foreign banks into the industry whose established business models are centered on e-business has caused some banks to explore the opportunities in e-business models to be competitive.

Six banks were chosen as sample out of a total of 28 registered banks by the Bank of Ghana (BOG) as at May 2011. The 28 banks were grouped into two based on ownership, three banks were chosen from each group. The six sample banks represent 21% of the entire banks population in Ghana which gives a good picture of the study. Manager responsible for e-business were interviewed in each of the selected banks.

The study showed that e-business is relatively new among Ghanaian banks compared to other developed nations such the Unites States of America. Various reasons account for the adoption of e-business among banks in Ghana. These includes to gain competitive advantage and as a responds to the market conditions. Benefits derived from the adopting e-business include increase in productivity, lower cost, speed & efficiency,

facilitation of new products, improves customer services. Barriers faced by the banks in adopting e-business are preference for established business models, cost, security, enabling factors and qualified personnel. The researcher recommends that banks provide adequate training to staff before introducing e-business products; this will help resolve the problem of unskilled personnel

DEDICATION

This work is dedicated to my dear wife Anna Biney (Mrs.) and my beautiful daughter Karen Afua Benyiwa Biney.

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CHAPTER 1

INTRODUCTION

1.1 BACKGROUND TO THE STUDY

Internet banking has now become a global phenomenon. Almost every banking institution all over the world has embraced this technological system of banking due to the numerous benefits it brings, both to the banks themselves and their clients or customers notable among them are convenience and time-saving in doing transactions.

The Internet is now being considered as a strategic weapon and will revolutionize the way banks operate, deliver, and compete against one another, especially when competitive advantages of traditional branch networks are eroding rapidly.

Today, the Internet can facilitate quick and efficient movement of information among trading partners at a greatly reduced cost, business via the internet or electronic commerce (E-Commerce) has become one of the principal means of doing business.

1.1 1. DEFINITION Of E-COMMERCE

The term "e-Business" has a very broad application and means different things to different people. Furthermore, its relation with e-commerce is at the source of many disagreements. (Melão, 2008) Some authors view e-Business as the evolution of e-commerce from the buying and selling over the Internet, and argue that the former is a subset of the latter.(Turban et al., 2006). Others defend that, although related, they are distinct concepts (Laudon and Traver, 2008). Others use both terms interchangeably to mean the same thing (Schneider, 2002). (Kalakota and Robinson, 2000) proposed a definition of e-business that clearly stresses the difference between e-commerce and e-business. More precisely they assume that "e-business is not just about e-commerce transactions or about buying and selling over the Web; it is the overall strategy of redefining old business models, with the aid of technology, to maximize customer value and profits". Kalakota and Robinson's definition is of great importance because it describes e-business as an essential business-reengineering factor that can promote company's growth.

In the World Trade Organization (WTO) Work Programme, E-Commerce is understood to mean the production, distribution, marketing, sale or delivery of goods and services by electronic means. Broadly defined, electronic commerce encompasses all kinds of commercial transactions that are concluded over an electronic medium or network, essentially, the Internet. Electronic Commerce is a new way of doing business.

According to Payne (2003) it is transacting or enabling the marketing, buying, and selling of goods and/or information through an electronic media, specifically the Internet Recently authors have begun to delineate more explicitly a difference between e-commerce and e-Business. E-commerce is emerging as the term used when discussing the process of transacting business over the Internet.

E-Business, on the other hand, involves the fundamental reengineering of the business model into an Internet based networked enterprise. While e-business refers to more strategic focus with an emphasis on the functions that occurs using electronic capabilities, e-commerce is a subset of an overall e- business strategy. E-commerce aims at adding revenue streams using the World Wide Web or the Internet to build and enhance relationships with clients and partners. Often, e-commerce involves the application of knowledge management systems. On the other hand, e-business involves business processes that span through the entire value chain: electronic purchasing and supply chain management, processing orders electronically, handling customer service and cooperating with business partners. E-business can be conducted using the Web, the Internet, intranets, extranets, or some combination of these.

The difference in the two terms according to most authors is the degree to which an organization transforms its business operations and practices through the use of the Internet (Hackbarth & Kettinger, 2000; Mehrtens et.al., 2001; Poon, 2000; Poon & Swatman, 1997)

Some commonly used definitions of e-Business presented by;

El Sawy (2001) "e-Business involves rethinking and redesigning business processes at both the enterprise and supply chain level to take advantage of Internet connectivity and new ways of creating value"

Earl (2000) "e-Business is about re-engineering or redesigning business processes to match customers' expectations in the new economy"

Kalakota and Robinson (2001) “e-Business is the complex fusion of business processes, enterprise applications, and organizational structure necessary to create a high performance business model”

Laudon and Traver (2008) “e-Business refers primarily to the digital enablement of transactions and processes within a firm, involving only the information systems under the control of the firm”

Papazoglou and Ribbers (2006) “e-Business can be defined as the conduct of automated business transactions by means of electronic communications networks (e.g., via the Internet and/or possibly private networks) end-to-end”

Schneider (2002) “business activities conducted using electronic data transmission technologies such as those used in the Internet and the World Wide Web”

Turban et al. (2006) “e-Business refers to a broader definition of e- commerce, not just the buying and selling of goods and services, but also servicing customers, collaborating with business partners, and conducting electronic transactions within an organization”

According to (Melão, 2008) the clear commonalities among these definitions, include the improvement of business processes and the use of ICT in intranets, extranets and the Internet to conduct business. He defines e-Business as the use of ICT as an enabler to (re)design, manage, execute, improve and control business processes both within and between organizations. Thus, front- and back-office integration and multi-channel integration become crucial in e-Business, which requires a challenging process improvement approach to support the necessary organizational, technological and social changes.

E-Business can describe companies operating in the ICT producing sectors as well as new emerging sectors and industries such as in the area of digital content. However, at a more fundamental level, the term e-Business also describes the application of information and communication technologies to business processes in all sectors of the economy to reduce costs, to improve customer value and to find new markets for products and services.

Electronic business methods enable companies to link their internal and external data processing systems more efficiently and flexibly, to work more closely with suppliers and partners, and to better satisfy the needs and expectations of their customers. E-Business refers to more strategic focus with an emphasis on the functions that occur using electronic capabilities. (Yen-Yi, 2006). In this study we will, as previously stated, use e-business to describe all electronically based exchanges of goods, services and information.

1.1.2 DIFFERENCE BETWEEN E-COMMERCE AND E-BUSINESS

Recently authors have begun to delineate more explicitly on difference between e-commerce and e-Business. The difference in the two terms according to most authors is the degree to which an organization transforms its business operations and practices through the use of the Internet.

In this study, we will use e-business to describe all electronically based exchanges of goods, services and information. According to Basu and Muylle (2007), E-Business has dramatically changed how companies' business processes are implemented and has also enhanced industry structure and shifted the balance of power between corporations and their suppliers and customers. According to them, companies in every industry have had to evaluate the opportunities and threats presented by e-Business. By thinking strategically about e- Business, managers can select technological solutions that support the company's business strategies and create value for the company and its customers.

1.1.3 RECENT DEVELOPMENT

The Internet is driving the new economy by creating unprecedented opportunities for countries, companies and individuals around the world. Today Chief Executive Officers worldwide recognize the strategic role that the Internet plays in their company's ability to survive and compete in the future (Al-Mudimigh, 2007). Indeed, currently businesses everywhere need to understand the if, when and how to use electronic commerce.

In some industries, businesses have learnt that e-business is no longer an option to consider, but a requirement for survival. The reach of the underlying information and communication technologies (ICT) making electronic commerce possible is also causing unprecedented globalization of business. Businesses in developing countries will soon be affected significantly as those elsewhere (Payne, 2003). In this respect, Kofi Annan former UN Secretary General opined that, the ability of developing countries to adopt e-business can be another opportunity for accelerated economic growth and development.

However, according to research conducted, companies and the private sector in Africa have not been active initiators of e-commerce. For example, a survey in Ghana (part of a Ghana SCAN-ICT study) ICT companies do not have Internet presence and 84% reported that they were not involved in e-commerce. (Opoku Mensah et al, 2005).

Though there are a growing number of examples of the use of ICT for electronic business (e-Business) in developing countries the effects to date are small compared to what is expected to occur (UNCTAD Report, 2002) the service industry especially the banking industry are extending their national and regional coverage to be able to provide the needed financial service. In this development it is expected that the use of the internet would facilitate the adoption of e-business in the Ghana banking industry as a means of offering fast, flexible, and cost-effective ways of doing business as well as enhance their competitiveness. This state of development will be important especially as the volume of trade increases, Ghana and other developed countries require fast transfers of monies, payments across continents, and many other services that promote growth of business.

As with most developing countries that have pursued economic and structural reforms, Ghana has been undergoing a process of financial sector restructuring and transformation as an integral part of a comprehensive strategy for some time (Acquah, 2006). According to Bawumia (2007) banks in Ghana will need to reinvent themselves in this new conducive but challenging environment. This is important because electronic transactions will continue to grow and only countries that make a move towards embracing e-Business will participate in this revenue generation (Akoh, 2001).

Banking in Ghana is one of the industries being radically transformed by ICT (Frempong, 2007). For example most banks within the main cities of Ghana now employ cutting edge technologies to roll out their products to their customers. (Bawumia, 2007).

Banks today are becoming increasingly aware of both the threat and the opportunity that the Web represents. ICT- mediated services such as automatic teller machines, electronic fund transfer, electronic smart cards, cell phone banking among others, are transforming the traditional ways of banking and providing competitive edge for banks that provide those services (Frempong, 2007). But, to be competitive in the Internet economy, companies need to harness the power of the Internet successfully (Al- Mudimigh, 2007) hence it is important to understand the benefits, barriers and challenges related to companies' adoption of e-business.

1.2 STATEMENT OF THE PROBLEM

Ghana is a fast growing developing country and it is expected to reach middle income status by the year 2015 under the Ghana Growth and Poverty Reduction Strategy two (GPRS II). The financial services sector is growing at a very fast rate especially with the grant of universal banking licenses to major banks in the country. This well-deserved growth has created the need and driven the interests of Ghanaians on Internet banking as it will help make banking transactions easier.

As businesses always need to find ways of improving its products and services deliveries it will be useful to understand and asses the adoption of e-Business and related benefit and challenges in the Ghanaian banking industry.

The purpose of this study therefore is .to describe the status of adoption of e-business in banks in Ghana as a means of identifying their special needs for enhancing the adoptions processes.

1.3 OBJECTIVES Of THE STUDY

The general objective of this study will be to present an assessment of the adoption of Internet banking in Ghana's banking sector. In order to accomplish the above general objective, the study will seek to address the following specific objectives:

- Identify the benefits of e-business to the banking industry in Ghana;
- Explore barriers to the adoption of e-business in banks in Ghana; and
- Describe the challenges encountered in the adoption of e-business

1.4 RESEARCH QUESTIONS

The research questions to be addressed by this study will be:

- What are the benefits that may be derived by Ghanaian banks in adopting e-business?

- What challenges do Ghanaian banks face in adopting e-business?
- What is the level of e-business usage or acceptance among Ghanaian bank customers?

1.5 SIGNIFICANT OF STUDY

The significance of this study can be seen in the fact that the outcome can be applied in the development of national policy framework as a guide for e-Business adoption, which is relevant to the national policy of using the banks to facilitate economic and social growth. In this respect the study will improve our understanding of the following issues as they apply in the Ghanaian situation

- Expected benefits derived by adopting e-business
- The challenges firms encounter when adopting e-business
- The level of e-business usage or acceptance among customers

1.6 SCOPE AND LIMITATION OF STUDY

In this study, we will focus on the challenges & benefits that are generally associated with the adoption of e-business in Ghana's banking industry. We will investigate some electronics products introduced by the sample banks and their extent of usage by customers. However, this study will not focus on which electronic products is the best among banks in Ghana or otherwise. Also, this research will not investigate technologies used by the various banks.

1.7 ORGANISATION OF THE THESIS

This research work is organized into five chapters:

Chapter one features introduction, definition of e-commerce, problem statement, research objectives, research questions, significant of the study and scope and limitations of the study.

Chapter two discusses relevant literature and presents a comprehensive review of previous studies conducted on Internet banking. Several important areas that will give clear meaning to this study were thoroughly reviewed in this section

Research Methodology is covered in chapter three. An essential aspect of any research is the activity of data collection, whether primary or secondary or both and the method of analysis employed that can help answer the research questions and objectives.

In chapter four of this research, we present a thorough discussion of the data collected and its analysis. Additionally, information about the six case study banks was provided. The final chapter presents the conclusions of our study and suggestions for future studies.

CHAPTER 2.

LITERATURE REVIEW

2.1 INTRODUCTION

This chapter presents a comprehensive review of previous studies conducted on e-business. Several important areas that will give clear meaning to this study will be presented in this chapter

2.1.1 INTERNET BANKING

Online banking is the fastest growing service that banks can offer in order to gain and retain new customers (Moody, 2002) .Internet banking refers to the use of the Internet as a remote delivery channel for banking services. Such services include traditional ones, such as opening a deposit account or transferring funds among different accounts, and new banking services, such as electronic bill presentment and payment (allowing customers to receive and pay bills on a bank's website) (Furst et al., 2000). Furst et al (2000) further state that banks offer Internet banking in two main ways. That is, an existing bank with physical offices can establish a website and offer Internet banking to its customers as an addition to its traditional delivery channels. A second alternative is to establish a "virtual," "branchless," or "Internet-only" bank.

According to the Internet Banking Comptroller's Handbook (1999), 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 device. Internet banking products and services can include wholesale products for corporate customers as well as retail and fiduciary products for consumers. Ultimately, the products and services obtained through Internet banking may mirror products and services offered through other bank delivery channels. Some examples of wholesale products and services include: cash management, wire transfer, automated clearinghouse (ACH) transactions, bill presentment and payment. Examples of retail and fiduciary products and services include: balance inquiry, funds transfer, downloading transaction information, bill presentment and payment, loan applications, investment activity, other value-added services.

Internet banking according to Essinger (1999) “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 a variety of banking, bill payment, and money management services 24 hours a day. For example, customers can get up-to-date balance information on deposit and loan accounts, transfer funds between accounts, and communicate with the bank by e-mail. Thus, the Internet offers banks and other service firms like insurance companies and software distributors a new distribution channel.

According to Koskosas and Paul (2004), the emergence of Internet banking has made banks re-think their IT strategies in order to remain competitive as Internet banking services are believed to be crucial for the banks’ long-term survival in the world of electronic commerce. Today, customers demand new levels of convenience and flexibility on top of powerful and easy to use financial management tools, products and services, something that traditional retail banking could not offer. Thus, Internet banking allows banks to provide these services by exploiting an extensive public network infrastructure.

Reedy et al (2000) argues that not every product is suitable for web sales. However, it seems evident that banking services would fit perfectly on the Internet. Their argument is based on the fact that there is no physical product to be delivered, there are no queues, customers can bank at their leisure, they can obtain detailed information about products and services without being hurried by customers waiting in line to speak to a consultant, "you never see the bank manager anyway", there is no compulsion to purchase investments and insurance you don't need, and there is no chance of being caught in the crossfire during a bank robbery.

2.1.2 INTERNET BANKING IN GHANA

According to the Bank of Ghana's updated list of banks (2011), there are 28 recognized and fully operational banks in Ghana. There are rural banks in Ghana which serve people in the hinterlands and are different from the traditional banks in terms of its capitalization threshold and nature of operations. These rural banks are 126 in total and they have their own central bank being the ARB Apex Bank which is also supervised by the Bank of Ghana. However, as at the time of this research, 21 out of the 28 banks were offering Internet banking services. Internet banking services provided currently in Ghana include electronic bill presentment and payment, funds transfer between a customer's own checking and savings accounts, or to another customer's account, loan applications and transactions, such as repayments of enrollments, bank statements, real time online balances and domestic wire transfer.

According to the Bank of Ghana E-zwich Report (2008), Internet banking in Ghana is facilitated by an automated clearing house system which was created during the introduction of the Ghana Interbank Payment Systems' E-zwich card introduction. The Ghana Interbank Payments and Settlements System (GHIPSS) is a company supervised by the Bank of Ghana which deals with solely the development of electronic banking through products such as E-zwich. E-zwich is the brand name for the common platform, which connects payment systems of all licensed banks and non-bank financial institutions e.g. savings and loans companies, credit unions, money transfer institutions, and rural banks in Ghana. What is significant though, about the common platform is that it provides an opportunity for financial institutions to expand without opening "brick and mortar" branches but to accept the point of sale (POS) equipment needed for the E-zwich access communication. This created an added advantage which spiraled Internet banking in Ghana across different banks at a faster rate as telephone and Internet banking services are available but their usage is limited (Bank of Ghana Annual Report, 2006).

For Internet banking to succeed in Ghana, then, there is the need for effective internal marketing to bank employees because if they are well informed and adapt to the use of Internet banking, it can have a significant influence on service quality to customers. The impact of internal marketing on the perception of service quality has been proven by Opoku et al (2009) in a research they conducted. The research was based on a survey of 32 top managers, 100 employees and 200 external customers of a major bank in Ghana to assess the impact of internal marketing on the perception of service quality. The results suggest that internal marketing can have an influence on service quality especially in relation to Internet banking.

2.2 EVOLUTION Of E-BUSINESS

E-Business probably began with electronic data interchange in the 1960s (Zwass, 1996). However, (Melão, 2008) suggests that it was only in the 1990s, primarily via the Internet, that e-Business has emerged as a core feature of many organizations. In his opinion, the hope was that e-Business would revolutionize the ways in which organizations interact with customers, employees, suppliers and partners. Some saw e-Business as part of a recipe to stay competitive in the global economy.

2.2 BENEFITS OF INTERNET BANKING

The growing use of the Internet for banking services provides obvious advantages, not only for the banks' customers but also for the banks themselves. According to Furst et al (2000), both banks and their customers stand to benefit substantially using the Internet to collect information. Customers can benefit from allowing banks to collect and integrate large amounts of personal information that help banks to tailor a wide range of products to individual demands.

Internet banking gives the customers a better overview of their banking business and enables them to handle their everyday financial transactions without having to visit their local branch. Customers who start to bank online are also proving to be more active as they engage in more banking transactions. As for the banks, the Internet enables them to make the distribution and production of their banking services more efficient. Eventually, the growing use of online banking will allow banks to replace their conventional branch offices with ones concentrating on advisory services and sales.

Internet banking helps in expediting banking transactions, reducing the cost and ensuring that you can utilize various banking services in your living room or even while travelling thousands of miles away from your home (Peterson, 2006). Jayawardhena and Foley (1998) aver that Internet banking most importantly allows banks to delegate task to customers, save the bank's time and all the expenses that would have been incurred as payments to staff employed to carry out the functions, while at the same time minimizing the errors that would have been faults of the bank.

When compared to other payment channels, electronic payment products offer many advantages both for banks and for customers. It is low-priced, not dependent on place or opening hours of banks, and moreover, it puts the customer in control (Karjaluoto, 2002). Consequently, banks have increased investments in Internet services and reduced the number of branch offices and payment automated teller machines (ATMs).

For the banks, Internet banking, besides providing value added for their customers is a means to cut costs and increase efficiency. Branch office service for such a routine action as bill payment is expensive and, compared to Internet banking, maintaining bill payment ATMs is also inefficient for the banks (Laukkanen et al., 2008).

Bradley and Stewart (2002) state that achieving competitive advantage, reducing costs, and protecting an organizations strategic position as factors that encourage the diffusion of an innovation. Also, Lee et al (2005), asserts that innovative technologies save costs, improve customer experiences at service encounters and enable effective customer relationship management for service providers.

Internet banking offers convenience to the customer. One does not have to go to the bank's branch to request a financial statement. You can download it from your online bank account, which shows you up-to-the-minute updated figures. As far as customers are concerned, their account information is available round the clock, regardless of their location. They can reschedule their future payments from their bank account while sitting thousands of miles away. They can electronically transfer money from their bank accounts or receive money in their bank accounts within seconds. You can apply for a loan without visiting the local bank branch and get one easily. You can buy or sell stocks and other securities by using your bank accounts. Even new accounts can be opened; old accounts can be closed without doing tedious paperwork. Especially with the increasing acceptability of digital signatures around the world, Internet banking has made life much easier and banking much faster and more pleasant, for customers as well as bankers (Peterson, 2006). Also, Peterson (2006) indicated that Internet banking is cost effective to the bank. According to him, thousands of customers can be dealt with at once. There is no need to have too many clerks and cashiers. The administrative work gets reduced drastically with Internet banking. Expenditures on paper slips, forms and even bank stationery have gone down, which helps raise the profit margin of the bank by a surprisingly large number.

2.3 BARRIERS TO E-BUSINESS ADOPTION

According to Windrum and Berranger (2002) it is hypothesized that many of the factors affecting the successful adoption of new technologies such as e-business are generic in nature and that the successful adoption of internet technologies in part depends on how these are used in conjunction with the other technologies and management practices that form a technology cluster . However, the most critical barrier can be ascribed to the very limited information and communication infrastructure available in most countries in Africa (Ben Akoh 2001). Reasons vary widely among sectors and countries and are most commonly related to lack of applicability to the business, preferences for established business models, (OECD, 2004).

Common barriers include: unsuitability for the type of business; enabling factors (availability of ICT skills, qualified personnel, network infrastructure); cost factors (ICT equipment and networks, software and re-organisation); security and trust factors (security and reliability of e-commerce systems, uncertainty of payment methods, legal frameworks and Intellectual Property Right); and challenges in areas of management skills, technological capabilities, productivity and competitiveness (OECD, 2004). Lack of reliable trust and redress systems and cross-country legal and regulatory differences also impede e-business adoption (OECD, 2004).

It is however important to note that barriers to e-Business adoption work differently according to organizational type and culture. Areas of training and people development need to be addressed. (Aranda-Mena and Stewart, 2005).

2.4 ADOPTION

Adoption according to Rogers and Shoemaker (1971) is the decision to use and accept an innovation in the form of a new idea, product or service and in our specific case acceptance and continued use of Internet banking. Adoption process is categorized traditionally into five categories namely:

(1) Innovators: - These are people who love risk and want to try new things, and want to be seen as the first to get to know of new ways of doing things and are always on the look - out for what is new. They do not follow the status quo, they believe change is a constant phenomenon and as Aristotle puts it, "you cannot step in the same river twice".

(2) Early Adopters: - People in this category are well respected people in the society and normally are some kind of opinion leaders in their local communities and they tend to be among the first group of people to get hold of new products or ideas.

(3) Early Majority: - These people look up to the innovators and early adopters to know how a product works before they go in for it. They mostly make their decisions based on recommendations from people who are already using the product or service and deliberate upon it a while before making a decision to adopt it.

(4) Late Majority: - These people are more skeptical and they are motivated to adopt based on peer pressure. They adopt products after the average people have done so. They normally adopt when a product or service becomes very popular and there is mass consumption.

(5) Laggards: - They take quite a long time before they adopt and they include those who never actually adopt at all. They are more traditional and tend to be very suspicious of change agents and innovations.

2.4.1 TRUST AND SECURITY AS IMPORTANT FACTORS FOR ADOPTION

The introduction of Internet banking has created highly competitive banking market environment which has in a way favoured the larger and well established banks. However, the issue of great concern is how perceived customers would trust the system and adopt it. As Internet banking helps banks in managing and understanding better their customers' attitudes towards new technology, Baraghani (2007) thinks they can be put in a better position to predict consumer behaviour or pattern. A Study by Sathye (1999) which empirically investigates the adoption of Internet banking by Australian consumers shows that security concerns and lack of awareness about Internet banking and its benefits stand out as being the obstacles to the adoption of Internet banking in Australia. Security concerns breaches trust and may affect adoption behaviour in general.

Mayer et al (1995) referred to the fundamental difference between trust and trusting behaviour as a "willingness" to assume risk and actually "assuming" risk. There is no risk taken in the willingness to be vulnerable (i.e., to trust), but there is risk in the behavioural manifestation of the willingness to be vulnerable. The adoption of Internet banking, a form of trusting behaviour, means that a consumer is “taking” risk, since he puts himself in a possibly vulnerable situation.

Granovetter (1973) defines social network theory as those informal channels of communication which are the primary means of disseminating market information when the services are difficult to evaluate. Among others, word-of-mouth (WOM) referral is known to have a strong influence on consumer behaviour. However, Stewart (1999) argued transference as a means by which initial trust in an unknown object (e.g. the Internet) may be established on which the transfer of trust/distrust can be studied based. Kim and Prabhakar (2000) developed a conceptual model that leads us to believe that trust in the electronic channel and perceived risks of e-commerce are the major determinants of the adoption behaviour. Based on the social network theory and the trust theory, determinants of trust in the electronic channel are included in the research model as demonstrated in the diagram below.

Kim and Prabhakar (2000) conducted a research on trust, the outcome show that trust in the e-channel and trust in the bank have effects on the adoption of Internet banking. They found out that by separating effects of trust from those of perceived risks, there would be a better understanding on the influences of these two variables on adoption behaviour.

Their research provides both theoretical explanations and empirical validations on the differences between adopters of Internet banking and non-adopters based on which specific recommendations on marketing strategies practitioners should expedite action on to improve the level of adoption of Internet banking, in order to provide both convenience and reduction in transaction costs.

Lee et al. (2005) asserts that for a new technology-based product or service at an early stage of diffusion, it is likely that only a small subset of consumers have adopted it. When non-adopters still comprise the majority of the target populations, describing all non-adopters as a homogeneous population may be inaccurate and inappropriate. It is important to be able to identify differences, not only between adopters and non-adopters, but also among non-adopters, the latter providing a means of identifying the consumer segments likely to be profitable in the future.

2.5 INTERNET BANKING SECURITY

According to Gerrard and Cunningham (2003), in Internet banking, security is one of the most important future challenges because customers fear higher risk in using the web for financial transactions. Guttmann (2003) argues that e-cash transactions engage a high degree of security. Neither party to the transaction, nor third parties, should be able to alter or reproduce information transferred from buyer to seller. The public must be convinced that e-cash is trustable.

Koskosas and Paul (2004), state that the use of new distribution channels such as the Internet increases the importance of security in information systems as these systems become sensitive to the environment and may leave organizations more vulnerable to system attacks. Thus, the issue of security in the context of Internet banking is an interesting candidate to investigate.

According to Hutchinson and Warren (2003), Internet users are weary about privacy issues including transparency, collection, use and disclosure of their personal information. This concern primarily relates to authentication.

The banking and finance industries report the highest incidence of misuse being 57 percent, which is directly related to these industries having one of the highest dependencies on computers in the workplace (Hutchinson, 2000) cited by Hutchinson and Warren (2003). The close relationship that exists between e-commerce and Internet banking means that an Internet banking session must satisfy the same security requirements as listed below:

(1) Identification and authentication – The ability to uniquely identify a person or entity and to prove such identity.

(2) Authorization – The ability to control the actions of a person or entity based on its identity.

(3) Confidentiality – The ability to prevent unauthorized parties from interpreting or understanding data.

(4) Integrity – The ability to assure that data have not been modified accidentally or by any unauthorized parties.

(5) Non-repudiation – The ability to prevent the denial of actions by a person or entity.

(6) Availability – The ability to provide an uninterrupted service.

(7) Privacy – The ability to prevent the unlawful or unethical use of information or data.

(8) Auditability – The ability to keep an accurate record of all transactions for reconciliation purposes.

These eight security requirements have been proposed as the basis for the e-commerce security framework (Labuschagne, 2000) cited by Hutchinson and Warren (2003). Accordingly, authentication mechanisms need to be incorporated to provide the cornerstone of authentication for the Internet banking framework. This would comprise the use of passwords, smart cards and possibly biometrics.

Also, NOIE et al (1999) cited by Hutchinson and Warren (2003), mention that the security protections offered by banks and which customers 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. Padlock 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.

Security breaches can lead to a number of problems such as destruction of operating systems, disclosure of proprietary information, and disruptions of information access and exchange (Min and Galle, 1999). As computer crimes are soaring, companies are increasingly concerned about the security of their external computer network. According to a San Francisco-based Computer Security Institute, about 75 percent of the 563 US corporations and non-profit organizations they surveyed had reported financial losses exceeding $100 million in the previous 12 months due to computer security breaches. It is also reported that 20 percent of organizations that have external computer network access have been hacked by intruders (Garner, 1995) cited by Min and Galle (1999).

Chellappa and Pavlou (2002) argue that the introduction of new information technologies has always been accompanied by security concerns and the future of electronic commerce depends on controlling information security threats, enhancing consumer security perceptions and building trust. According to a study by Business Week (2000) 61 percent of the survey respondents indicate that they would transact on the Internet if the security and privacy of their personal information could be adequately protected. Consequently, the issue of security in Internet banking is very important and should not be compromised so that the optimum benefits of the system could be achieved.

2.6 THEORETICAL FRAMEWORK

The dominant theoretical framework for analyzing Internet banking adoption behaviour has been the Extended Technology Acceptance Model developed by Davis and Venkatesh (2000); with many subsequent studies also including the additional dimension of the Trust Model developed by Kim and Prabhakar (2000).

In conducting this research, we have employed Davis and Venkatesh (2000) model which has been discussed in detail below together with the "Theory of Planned Behaviour" by Ajzen (1991) which introduces social influence in the formulation of the Extended Technology Acceptance Model.

2.7 THE THEORY OF PLANNED BEHAVIOUR

This theory was developed by Ajzen (1991) and it provides a framework to study people's attitude towards behaviour patterns. Thus, the most important determinant of a person's behaviour is intention. The individual's intention to perform a behaviour is a combination of attitude to perform the behaviour and subjective norm. This includes; behavioural belief, attitude towards the behaviour, subjective norm, normative beliefs, control beliefs, perceived behavioural control and the motivation to comply.

2.7.1 CONCEPTUAL MODEL OF THE THEORY OF PLANNED BEHAVIOUR

The theory helps us to formulate an understanding of the influences on people's behaviour which is not under their direct control, identify how and where to target strategies for a changing behaviour and explain in particular context to this work. The limitations of this theory are that it does not take into consideration demographical factors, personality issues, tenets of measurement among others. Nonetheless, it is a very important study in social psychology which serves as a basis to determining rational behaviour and permeates other areas of study.

2.7.2 TECHNOLOGY ACCEPTANCE MODEL

This theory was developed by Davis et al (1989) to give an understanding on how information system innovations are accepted or adopted by studying people's adoption behaviours. This theory was specifically tailored to the adoption of information systems, such that factors like perceived usefulness which is based on a person's "subjective probability that using a specific application system will increase his or her job performance within an organizational context" (Davis et al,) and perceived ease of use which is "the degree to which the user expects the target system to be free of effort". These two variables predict attitude towards use and serve as the basis for Behavioural Intention which leads to actual use.

2.7.3 THE EXTENDED TECHNOLOGY ACCEPTANCE MODEL

This is an extension of the Technology Acceptance Model to include social psychological influences on people's attitude to adopt based on Kelman (1958) research that changes in attitudes or behaviours as a result of social influences may be different though the resulting overt behaviour may seem to be the same. Thus in adopting certain behaviour, some psychological attachment specific to the individual may have an influence in predicting an individual's behavioural intention which leads to actual use. The Extended Technology Acceptance Model is presented below together with its hypothesized relationships which explain how the diagram connects and the form the basis for our understanding on how to apply the model:

In choosing a model for this research, the Extended Technology Acceptance Model will be considered because the Technology Acceptance Model does not include the social influence in the adoption of Internet banking.

2.8 MODELS OF IT ADOPTION

There are many theories used in IS research (Wade 2009). We are interested only in theories about technology adoption. The most used theories are the technology acceptance model (TAM) (Davis 1986; Davis 1989; Davis et al. 1989), theory of planned behaviour (TPB) (Ajzen 1985, Ajzen 1991), unified theory of acceptance and use of technology (UTAUT) (Venkatesh et al. 2003), DOI (Rogers 1995), and the TOE framework (Tornatzky and Fleischer 1990).

2.9 DOI

DOI is a theory of how, why, and at what rate new ideas and technology spread through cultures, operating at the individual and firm level. DOI theory sees innovations as being communicated through certain channels over time and within a particular social system (Rogers 1995). Individuals are seen as possessing different degrees of willingness to adopt innovations, and thus it is generally observed that the portion of the population adopting an innovation is approximately normally distributed over time (Rogers 1995). Breaking this normal distribution into segments leads to the segregation of individuals into the following five categories of individual innovativeness (from earliest to latest adopters): innovators, early adopters, early majority, late majority, laggards (Rogers 1995).

The innovation process in organizations is much more complex. It generally involves a number of individuals, perhaps including both supporters and opponents of the new idea, each of whom plays a role in the innovation-decision.

Based on DOI theory at firm level (Rogers 1995), innovativeness is related to such independent variables as individual leader characteristics, internal organizational structural characteristics, and external characteristics of the organization.

(a) Individual characteristics describes the leader attitude toward change.

(b) Internal characteristics of organizational structure includes observations according to Rogers (1995) whereby: "centralization is the degree to which power and control in a system are concentrated in the hands of a relatively few individuals"; "complexity is the degree to which an organization's members possess a relatively high level of knowledge and expertise"; "formalization is the degree to which an organization emphasizes its members' following rules and procedures"; "interconnectedness is the degree to which the units in a social system are linked by interpersonal networks"; "organizational slack is the degree to which uncommitted resources are available to an organization"; "size is the number of employees of the organization".

(c) External characteristics of organizational refers to system openness.

Individual (leader) characteristics Attitude toward change Internal characteristics of organizational structure, Centralization, Complexity, Formalization, Interconnectedness ,Organizational, slack size, Organizational, innovativeness External characteristics of the organization System openness Since the early applications of DOI to IS research, the theory has been applied and adapted in various ways.

2.9 TECHNOLOGY, ORGANIZATION, AND ENVIRONMENT CONTEXT

The TOE framework was developed in 1990 (Tornatzky and Fleischer 1990). It identifies three aspects of an enterprise's context that influence the process by which it adopts and implements a technological innovation: technological context, organizational context, and environmental context.

(a) Technological context describes both the internal and external technologies relevant to the firm. This includes current practices and equipment internal to the firm (Starbuck 1976), as well as the set of available technologies external to the firm (Thompson 1967, Khandwalla 1970, Hage 1980).

(b) Organizational context refers to descriptive measures about the organization such as scope, size, and managerial structure.

(c) Environmental context is the arena in which a firm conducts its business its industry, competitors, and dealings with the government (Tornatzky and Fleischer 1990).

External task environment Industry characteristics and market structure Technology support infrastructure Government regulation Organization Formal and informal linking Structures Communication processes Size Slack Technological innovation decision making Technology Availability Characteristics.

The TOE framework as originally presented, and later adapted in IT adoption studies, provides a useful analytical framework that can be used for studying the adoption and assimilation of different types of IT innovation. The TOE framework has a solid theoretical basis, consistent empirical support.

This framework is consistent with the DOI theory, in which Rogers (1995) emphasized individual characteristics, and both the internal and external characteristics of the organization, as drivers for organizational innovativeness. These are identical to the technology and organization context of the TOE framework, but the TOE framework also includes a new and important component, environment context. The environment context presents both constraints and opportunities for technological innovation. The TOE framework makes Rogers' innovation diffusion theory better able to explain intra-firm innovation diffusion (Hsu et al. 2006). Thus, the next Section analyses the studies that adopted TOE framework.

2.9.1 EMPIRICAL LITERATURE OF THE TOE FRAMEWORK

We thoroughly analyse the TOE framework and present an exhaustive description of studies that draw on this theory. The research discusses the relevant papers that used only the TOE framework as a theoretical model.

2.9.2 STUDIES THAT USED ONLY THE TOE FRAMEWORK

Several authors used only the TOE framework to understand different IT adoptions, such as: electronic data interchange (EDI) (Kuan and Chau 2001); open systems (Chau and Tam 1997); web site (Oliveira and Martins 2008); e-commerce (Liu 2008, Martins and Oliveira 2009, Oliveira and Martins 2009); enterprise resource planning (ERP) (Pan and Jang 2008); business to business (B2B) e-commerce (Teo et al. 2006); e-business (Zhu et al. 2003, Zhu and Kraemer 2005, Zhu et al. 2006b, Lin and Lin 2008, Oliveira and Martins 2010a); knowledge management systems (KMS) (Lee et al. 2009).

CHAPTER 3

RESEARCH METHODOLOGY

3.1 INTRODUCTION

An essential aspect of any research is the activity of data collection, whether primary or secondary or both and the method of analysis employed that can help answer the research questions and objectives.

In this chapter, the researcher has outlined and discussed the various research methods used in this study. Here, the research purpose, the research approach or design, the sampling techniques adopted, the data collection instruments employed and an overview of the methods or techniques used in data analysis have been presented.

Many writers have written extensively on research methodology. The underlying factor in most studies on research methodology is that the selection of methodology is based on the research problem and stated research questions. Methodologies cannot be true or false, only more or less useful (Silverman, 2003). Nachamias et al (1996) for instance states that methodologies are considered to be systems of explicit rules and produced, upon which research is based, and against which claims for knowledge are evaluated. Conducting any type of research should be governed by a well-defined research methodology based on scientific principles. Eldabi and others (2002) have suggested a series of steps as a research paradigm to be followed in a methodology in a research.

3.1.1 RESEARCH PURPOSE

The purpose of this thesis is to conduct an exploratory and descriptive research in order to gather as much information as possible concerning the adoption of e-Business as an option in a competitive business environment in Ghana. Specifically this will be in respect of the banking business. According to Yin (1994) exploratory research is designed to allow a researcher to just look around with respect to some phenomenon, with the aim to develop suggestive ideas. Exploratory research is often used when a problem is not well known, or the available knowledge is not absolute. The technique that is best suited for information gathering when performing an exploratory research is interview (Yin, 1994). Research has also shown that exploratory research provides suggestive ideas through reviewing information from problem area.

3.2 RESEARCH APPROACH

The research approach in this study is chosen based on the purpose and the research questions set out to be addressed. In an exploratory research such as this a qualitative approach will be adopted.

Qualitative data are characterized by the richness and fullness based on the opportunity to explore a subject. The nature of qualitative study is primarily to understand, not to explain. Qualitative research implies an emphasis on processes and meanings that are not measured in terms of quantity amount, intensity or frequency.

The main features of quantitative research approaches have been described by Miles and

Huberman (1994) as shown below.

- The aim of qualitative analysis is a complete, detailed description
- Recommended during earlier phases of research projects
- Researcher may only know roughly in advance what he/ she is looking for
- The design emerges as the study unfolds
- Researcher is the data gathering instrument
- Data is in the form of words, pictures or objects.
- Qualitative data is more "rich", time consuming, and less able to be generalized

Researcher tends to become subjectively immersed in the subject matter We are using the qualitative approach for our study because we want to have a deeper understanding of e-Business adoption and its ability to give competitive edge. By using the qualitative approach we will get the opportunity to explore our subject matter. We are seeking to understand more about e-Business adoption and its competitive nature and not to explain it.

3.3 STRATEGIES FOR RESEARCH

Yin (2003) has described five primary strategies for research in social sciences to collect empirical data. According to him, depending on the character of the research questions, to which extent the researcher has control over behavioral events and to what degree the focus is on contemporary event, the research can choose from the following:

- Experiments
- Surveys

- Analysis of Achival Records
- History
- Case Study

In this study, we used a case study approach since our research deals with "how" benefits and challenges related to e-business adoption in Ghanaian banks can be described". This is because the form of our research question is "how" Adoption of e-Business has or can help firms to stay ahead of competition in their respective environments. In this thesis we are using six banks in Ghana as case study.

3.4 BANKING IN GHANA

This section describes the banking environment in Ghana with respect to the policy and legal framework under which the banking industry in Ghana operates. The banking industry in Ghana is controlled by the Bank of Ghana acting as the central bank. The total number of registered commercial banks under the bank of Ghana numbers up to 28 as at 31st May 2011. These comprises 5 state owned banks and 23 other private or multinational banks. In addition to the 28 banks, the sector also comprises a range of non-bank financial institutions, including several community banks established to mobilize rural savings.

The past few years have seen a phenomenal growth in the Ghanaian banking sector. Ghana's financial sector according to the Bank of Ghana is well-capitalized, very liquid, profitable and recording strong asset growth. The banking sector has seen major capital injection partly because of the political stability, attainment of micro and macroeconomic stability and the government's desire to make Ghana the "financial hub" of the West African Sub-region. For instance net interest income for the industry increased by 19% from ¢2.7tn in 2004 to ¢3.2tn in 2005 (George M and Bob-Milliar, 2007). Over the five-year review period, net profit had increased by about 56%. Industry net profit after tax margin dipped from 29.64% (2001) to 23.99% (2005). Industry return on equity (ROE) has decreased steadily from a high of 43.9% in 2001 to 26.9% in 2005, while return on assets dropped from 5.7% to 3.5 percent giving an indication of the increasing competitive nature of the banking industry (Pricewater House Coopers, 2006).

The Ghanaian banking sector is now very vibrant and modern. According to former second Deputy Governor of Bank of Ghana Dr. Mahamadu Buwumia bank branches in Ghana increased by 11.3 per cent from 309 to 344 between 2002 and 2004 with 81 new branches springing up from 2004 and 2006 indicating an increase of 23.5 per cent. Most banks now employ cutting edge technologies to roll out their products to their Ghanaian customers. Banking halls are housed in ultra modern buildings, staffed with well trained men and women. Ghanaians living in the big commercial towns are now spoilt for choice. Twenty three banks are chasing the about 10 per cent of the bankable segment of the population. Nigerian banks have added to the competition and are well represented in the new banking sector in Ghana. (George M and Bob-Milliar, 2007).

Because of the very fierce but healthy competition in the banking sector, daily newspapers are adorned with catchy adverts of re-branded or new products all in an attempt to lure new customers to their products and services. Many banks in the commercial centers now work half day on Saturdays, thus making it possible for busy workers to access banking services at the weekend. (Price-water House Coopers, 2006). Recent and emerging developments suggest that cost competitiveness, customer sophistication, technology and regulatory changes will be the main drivers of change in the industry and the banks that are able to position themselves to embrace these challenges will emerge winners.

3.5 TYPE OF DATA AND DATA COLLECTION

Both primary and secondary was used in this research study. Primary data used for this work provided empirical data through, interviews, and administration of structured questionnaires. These gave specific responses to our research questions.

Secondary data information was obtained through various kinds of documents, e.g. Research reports, annual reports, books, internet and articles. Most researchers agree that qualitative research should try to use as many different sources as possible. This is on the general observation that no single source has complete advantage of all other sources (Yin, 1994; Denscombe, 1998). For instance according to Denscombe (2000) interviews are suitable when there is the need to gather detailed data and information from very few respondents, but the researcher would have to decide whether or not the study needs the type of information and if it will be possible to rely on the information these few respondents would provide the researcher with.

3.5.1 SAMPLE SELECTION

The populations of banks in Ghana were categorized into two main blocks:

i) State-owned banks, and

ii) Private-owned banks

Three banks were chosen from each category, the sample units were the managers responsible for e-business. A manager from each bank was selected from each category. This means that six managers responsible for e-business in the selected banks participated in this research. The table below shows list of the six banks selected for this research.

Table 3.1: LIST OF SAMPLE BANKS

State Owned Banks	**Private Owned Banks**
Agriculture Development Bank(ADB)	Barclays Bank Ghana Limited (BBG)
Ghana Commercial Bank (GCB)	Stanbic Bank Ghana Limited (SBG)
National Investment Banks (NIB)	Ecobank Ghana Limited (EBL)

Six banks were chosen as sample out of a total of 28 registered banks by the Bank of Ghana (BOG). The six banks represent 21% of the entire banks population in Ghana which gives a good picture of the study. Some of the sample banks have the highest number of branches. For instance Ghana Commercial Bank (GCB), Barclays Bank Ghana Ltd (BBG), Ecobank Ghana Ltd (EBG) and National Investment Banks (NIB) have the largest number of branches in Ghana. These four banks together represent a significant size of banks in Ghana in terms of number of branches. This enabled the researcher to assess the status of adoptions in Ghana among the leading banks in Ghana in terms of branch net work. Stanbic Banks Ghana Ltd (SBG) which is the sixth sample bank is the newest among the sample though it was licensed about eleven years ago. It also enables the researcher to access the situation with regards to new entrants to the banking industry.

In choosing the sample, we note the caution by Graziano and Raulin (1997) that because the samples are not perfectly representative of the population from which they are drawn, we are unlikely to be able to generalize our conclusions to the entire population.

3.6 EMPIRICAL DATA

The empirical data was mainly qualitative description given by the managers of the sampled banks. This is important to be able to evaluate and describe the adoption of e - Business application on the target banks. This data will be collected mainly through the administration of structured questionnaires.

3.7 SECONDARY DATA

This data was required to describe the environment in which the selected industry operates. The data was obtained mainly from records and reports of the industry, from the website, books articles and journals.

CHAPTER FOUR

DATA ANALYSIS

4.1 INTRODUCTION

In this chapter, we present a thorough discussion of the data collected for this study and the analysis. We also provide an overview of the six case study banks that were part of this research.

4.2 OVERVIEW OF THE GHANA'S BANKING SECTOR

Over the past ten years, Ghana has been undergoing the process of financial sector restructuring and transformation as an integral part of a comprehensive programme to ensure that the country achieves emerging market status. The recent developments in the country's banking environment with the liberalization of entry encouraged foreign banks and investors, noticeably those from Nigeria to consider the country as a good destination for their investment.

Liberalizing entry and encouraging foreign banks and investors into the financial services industry has increased competition in the banking industry as well as the introduction of strong business practices, technology, products and risk management systems. Many of the traditional local banks in Ghana responded to the competition brought by the foreign banks by rethinking their strategy, and reshaping their focus and direction in order to be attractive to customers.

In this study, six banks were chosen. Three Ghanaian owned banks; Ghana Commercial bank (GCB), Agricultural Development Bank (ADB), National Investment Bank (NIB) and three foreign banks (Ecobank Ghana Ltd (EGL), Barclays Bank Ghana Limited (BBG), Stanbic Bank Ghana (SBG). The table below gives a brief description for the six banks.

Table 4.1: Description of the Six Selected Banks

Bank	Ownership Type	Age	Target customers	Branches
Ecobank Ghana Limited	Private owned	22	Corporate, retail & SME's	44
Stanbic Bank Ghana Ltd.	Private owned	11	Corporate, retail & SME's	22
Barclays Bank Ghana Ltd.	Private owned	94	Corporate, retail & SME's	92
Agricultural Development Bank	State owned	46	Corporate, retail & SME's	52
Ghana Commercial Bank	State owned	58	Corporate, retail & SME's	141
National Investment Bank	State owned	48	Corporate, retail & SME's	29

4.3 BUSINESS ENVIRONMENT OF SAMPLE BANKS

4.3.1 ECOBANK GHANA LIMITED:

Ecobank Ghana Ltd (EBG), founded in 1989 is part of the leading independent regional banking Group in West and Central Africa serving wholesale and retail businesses. It has a network of banks covering 18 countries namely: Benin, Burkina Faso, Cameroon, Cape Verde, Central Africa, Côte d'Ivoire, Ghana, Guinea, Guinea Bissau, Liberia, Mali, Niger, Nigeria, Sao Tome, Senegal, Sierra Leone, Chad and Togo, with plans to establish presence in East and Southern Africa.

The Group has a network of over 320 branches and offices established in the last nineteen years. Ecobank Transnational Incorporated (ETI) the parent company of the Ecobank Group plays a central role in the definition and implementation of common policies and standards on the basis of a "one bank" concept across the group's network. Ecobank Ghana is supervised and regulated by the Banking Supervision Department of the Bank of Ghana (BOG), which is the Central Bank of Ghana. EBG has over 25 branches and customer service points in Ghana. Return On Equity (ROE) has consistently been over 40 percent in the last five years and Return On Assets (ROA) in the range of 40%.

Ecobank Ghana Limited, together with subsidiaries, provides merchant banking, retail banking, and investment banking products and services to wholesale and retail customers in Ghana. Its deposit products include current, savings, and deposit accounts. The company's loan portfolio comprises personal loans, car and motor loans, home mortgage loans, and business loans. Ecobank Ghana also offers cards; letters of credits and bills for collections; transfer and payments; foreign exchange; and western union services. In addition, the company offers finance leasing, automated teller machine, Internet banking, telephone banking, and Ecobank regional cards services. It serves individuals, small and medium enterprises. Major competitors include Barclays Bank, Standard Chartered Bank and Stanbic Bank.

Ecobank Ghana adopted e-business as a response to new market trends and as a competitive strategy. Some of their E-business products include Internet Banking, SMS Banking, E-statements, E-Alerts and ATMS. Ecobank Ghana agrees that turnover of the bank has increased since the adoption of e-business even though no specific margin was given to this question because of company policy.

Ecobank Ghana agrees that adopting e-business as a strategy is one of the important steps the bank has taken in its development due to the tremendous benefits e-business adoption provides. According to them their perceived benefits include convenience to customers, speed and quality of service, reduction of queues in banking halls and reduction in the total overhead cost such as reduction in employee recruitment and reduction in space for clients and customers. These are factors that pushed their drive to adopt e-business.

To stay competitive and to respond to the new market trends, Ecobank Ghana adopted e-business as one of its strategies. The bank acknowledges that there were indeed certain barriers that they needed to overcome. These barriers they perceived include ICT competencies within the firm and enabling factors such as availability of ICT skills, qualified personnel and network infrastructure.

Despite the benefits, Ecobank Ghana agreed there were challenges as they adopted e-business. According to them, the greatest challenge they perceived is cost of bandwidth, which is a great deterrent to their quest to adopt e-business.

4.3.2 STANBIC BANK GHANA LIMITED.

Stanbic Bank Ghana Limited (SBG) is part of the Standard Bank Group, one of Africa's largest banking groups, with operations across the continent of Africa and other parts of the world.

Stanbic Bank was incorporated in Ghana in 1999 to provide a comprehensive range of banking services to both corporate and retail clients. SBG's core competency is "relationship banking". Stanbic Bank currently offers the following services: Retail Banking, Wholesale Banking, Investment Banking, Treasury Products and Trade Finance. Major competitors include Barclays Bank, Standard Chartered Bank and Ecobank Ghana Ltd.

Stanbic Bank Ghana has adopted e-business over the past six years as purely a business strategy and as a responds to customer needs. Some of the e-business products include Electronic Banking (POS, ATMs Etc), Internet Banking, Mobile Banking, etc Stanbic bank agreed that turnover of the bank has increased since the adoption of e-business though no specific margin was indicated as a response to the question.

Stanbic bank Ghana agreed that adopting e-business has brought them benefits. Their perceived benefits included speed and quality of service, simplification of working process and accuracy of delivery of service.

According to Stanbic e-business enhanced business processes that gave them a boost in their customer acquisition and relationships. Stanbic Bank Ghana adopted e-business as purely a business strategy and a response to customer needs. The bank acknowledged that they needed to overcome certain barriers as they adopted e-business. Apart from barriers as conceptualized in chapter two, which the bank agreed and perceived as barriers, they did not come up with any new perceived barriers as at the time of data collection.

Even though Stanbic bank Ghana agreed that there were some challenges during their adoption of e-business, the bank did not identify any other perceived challenge apart from what has been conceptualized as challenges in chapter two.

4.3.3 BARCLAYS BANK GHANA LIMITED (BBG)

Barclays has operated in Ghana for ninety four years. It is a wholly owned subsidiary of Barclays Bank PLC. Its vision is to become the best bank for every customer, in every branch, for every product and every time.

Barclays Bank of Ghana Limited has an expansive retail and commercial banking network in the country with 92 branches and over 130 ATMs in all regional capitals and major towns. Its products and services are targeted particularly at the business and corporate, as well as retail customers. Barclays offers a wide range of commercial, Retail and Treasury products and services. It also offers local business banking product and services for Small Medium Enterprises and indigenous businesses.

The Bank of Ghana in February, 2010 named Barclays Bank of Ghana Limited the biggest foreign bank and also the largest bank in terms of capacity to handle transactions in Ghana. In June 2009, Barclays launched its Bancassurance proposition in partnership with Enterprise Life Assurance Company Limited (ELAC) to enhance their product range with insurance product such as Term, Family Funeral Plan and Education Plan for the convenience of its customers.

The Bank's Premier Banking offers tailor made solutions and one-on-one banking to its high net worth. The Premier proposition amongst others offers; dedicated banking suites, financial planning, lifestyle alliances, global access to Premier lounges (airport) etc. In addition Premier Life, a new service proposition to replace Prestige Banking has been introduced. It is targeted at customers who require convenient banking, quick and efficient service as well as a level of privacy and recognition.

The bank's sustainability programme focuses on three pillars. Banking for brighter futures; Looking after local communities and Charity begins at work. Barclays uses these key pillars to support developmental projects across Ghana. More than 80% of staff are involved in voluntary community programmes annually. Dubbed "Make a Difference Day", it is the biggest corporate voluntary activity in Ghana.

Barclays Ghana adopted e-business about 12 years ago as a business strategy and gain larger market share. Some of the E-business products are internet Banking, Automatic Teller Machine (ATM) and Ezwich.

4.3.4 AGRICULTURAL DEVELOPMENT BANK (ADB)

Agricultural Development Bank (ADB) was set up by an Act of Parliament in 1965 to promote and modernize the agricultural sector through appropriate but profitable financial inter-mediation. The Government of Ghana owns 51.83% shares while the Bank of Ghana owns 48.17% shares.

The Bank accordingly supports improved technology adoption, marketing and processing activities, equity participation in innovative ventures and activities, which impact positively on the agricultural sector.

The bank does not limit its operations to the agricultural sector alone. However, it allows for a balance in the distribution of its loanable funds between the agricultural sector and the rest of the economy.

The bank provides small and large-scale agricultural and agro-industrial financing and related export financing for agricultural products to promote agricultural development. It also carries out commercial banking activities to spread the risks (commercial, corporate, international banking and treasury management). The bank offers a range of products and special financing schemes. Agricultural Development Bank has about 50 branches around the country. ADB operates one of the fastest funds transfers around the Globe. The bank is the sole agent for Western Union Service and is linked by Satellite to the Bank

ADB adopted e-business in 1999 to respond to the changing marketing trends in the Ghana banking industry. Their e-business products include, Internet Banking, SMS Banking, E-statements, E-Alerts, ATMS and Online fee paying system (OFPS) According to ADB with the introduction of e-business the bank's turnover has increased to about GHS 1,200,000.00 as at the time of data collection.

Since the introduction of e-business, ADB has had its tremendous benefits. According to them, accuracy of delivery of service, increased growth in customer population and increased staff confidence at work are some perceived benefits they have gained since the adoption of e-business. Apart from the ATM, most of ADB's new customers sign on other e business products such as Ezwich and E-Alert.

ADB acknowledges that there have been quite a number of challenges despite the benefits. Specific challenge they perceived is the advances in technology. According to them due to the competitive nature of the industry the players attempt to out-do each other by introducing cutting edge technologies for their products and services. According to ADB, months after introducing a new service or product competitors try to introduce the same service or product with better technology.

4.3.5 GHANA COMMERCIAL BANK (GCB)

Ghana Commercial Bank Limited (GCB) is a Ghanaian-based bank founded in 1953 and is headquartered in Accra, Ghana as of July 2008; the Company had 141 branches distributed throughout the country. The Company's services include GCB XPRESS, personal loans, GCB fast international money transfer, GCB MONEYGRAM, trade services and automated teller machine (ATM) services.

Ghana Commercial Bank Limited provides banking products and services for individuals and corporate bodies in Ghana., The company's corporate banking products and services comprise current accounts, call deposit accounts, and cash management services; short and medium term credit facilities in local and foreign currencies; fixed deposits, treasury bills, negotiable certificate of deposits, and premium certificate of deposits; money transmission services, including telegraphic transfer, cash collection, and Internet banking; and international payments, foreign currency purchases, bills for collection, letters of credit, foreign exchange accounts, guarantees, pre-export finance, and post-shipment finance for importers and exporters. Ghana Commercial Bank also offers business advisory, customer service and product development, relationship management and market structuring, and business development services for small and medium sized enterprises.

Ghana Commercial Bank adopted e-business in 2006 firstly as a result of the fierce competition in the Ghana banking industry and secondly to increase their deposit. Some of the e-business products the bank has introduced include Master Card 2, CommerNet (Internet) banking and e-zwich (An electronic payment system). GCB agreed that since the introduction of e-business the bank has seen its turnover increase however, figures were not available to confirm this.

Though e-business has been adopted for just about five years, GCB agrees that they have had some benefits. According to them some perceived benefits to the bank include enhanced Public image of the bank, positive change in customers and confidence in customers' accounts. GCB acknowledged that it took them quite a while to adopt e-business due to the huge barriers they perceived stood in their way.

The bank agreed that their perceived barriers are preference for existing business models and trust factors. Ghana Commercial Bank agreed that they did encounter some challenges. Specifically they identified the increased pace in technological advancement as a perceived challenge to deal with.

4.3.6 NATIONAL INVESTMENT BANK LIMITED (NIB)

National Investment Bank Ghana Limited commonly referred to as National Investment Bank, normally abbreviated to NIB, is a commercial bank in Ghana. NIB is a medium-sized financial services provider in Ghana. As of December 2007, the total valuation of the bank's assets was approximately US$226.4 million (GHS:344.2 million), with shareholder's equity of approximately US$28.6 million (GHS:43.5 million).

The bank was established by the Government of Ghana in 1963, as a national development bank. Later, the bank was granted a commercial banking license by the Bank of Ghana, the national banking regulator. The shares of stock of the National Investment Bank are 100% owned by the Government of Ghana. The bank operates 29 networked branches across the country at May 2011.

Even though e-business has been adopted by NIB, not all branches are networked, as at May 2011, 29 branches out of 36 are networked branches. Electronic products for the bank include Automatic Teller Machines (ATMs) and Internet banking.

Major competitors are Barclays Bank, Ghana commercial Banks and Agricultural Development Banks, They compete largely with these banks expecially in terms of geographical access.

4.4 SIMILARITIES IN THE CASES

In this section of the case study analysis, data collected from the six selected banks is crossed analyzed. Cross case, analysis means analyzing data from the selected cases to look out for similarities and differences in order to draw conclusions,

The trends and status in e-business adoption among the sample banks is presented in the Table 4.2 in terms of whether e-business is adopted or not, reasons for adoption, when e-business was adopted, increase in turnover, payment of e-business products and extent of usage. Table 4.2 illustrates the adoption trends for the selected banks.

Table 4.2: Adoption Trends of Selected Banks.

Bank	Adopted	Reason for Adoption	when was e-business adopted	e-business products	Has the Bank Turnover increased	Do customers pay for e-business	What is the Extent of Patronage
Ecobank Ghana Limited	Yes	Respond to Market Trends	10 years	Internet Banking, SMS	Yes	Yes	70%
Stanbic Bank Ghana Ltd.	Yes	Business Strategy	9 years	New Business online (Nbol) internet Banking	Yes	Yes	65%
Barclays Bank Ghana Ltd.	Yes	Respond to customer needs	12 years	Internet Banking, SMS	Yes	Yes	60%
Agricultural Development Bank	Yes	Keep up with competition	9 years	e-alerts, e-statement	Yes	Yes	70%
Ghana Commercial Bank	Yes	Gain competitive advantage	5 years	master card, Ezwich	Yes	Yes	55%
National Investment Bank	Yes	Respond to market needs	9 years	Internet Banking	Yes	Yes	40%

4.5 CHARACTERISTICS OF BANKS

The characteristics of respondent banks are described in terms of age of bank, ownership and extent of national coverage and category of customers that the banks do business with.

4.5.1 NUMBER OF BRANCHES

The national coverage of the banks is based on the banks having at least one branch in the ten regions in Ghana. As such although Stanbic Ghana has 22 branches, thirty short of Agricultural Development Bank (ADB), it has 90% coverage whiles ADB has 100%. This is because Stanbic has a presence in nine regions in Ghana except the Eastern Region.

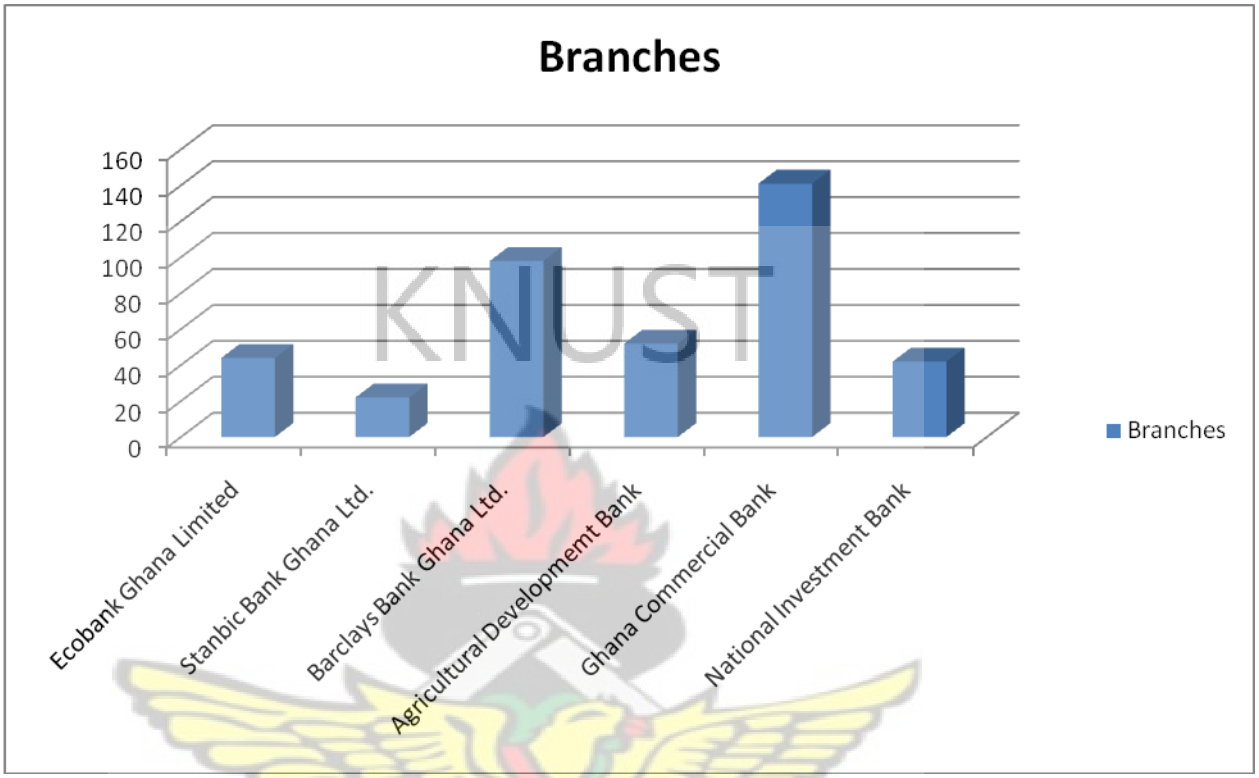
The sampled banks have been in operation in Ghana between 9 and 55 years. It is noted that the oldest bank sampled is a state owned bank. This reveals that Ghana has a long history of state owned banking. However, in recent years more private banks continue to be established as is indicated by the youngest bank that is only 9 years old in Ghana.

A premise for state-owned enterprises and banks in particular, is that political objectives take primacy over the quest for growth and development. In this "political view," politicians use state-owned banks and other enterprises "to provide employment, subsidies and other benefits. State-owned banks are particularly desirable as instruments for the distribution of political largess because their lending activities can influence all sectors of the economy and banks frequently operate large branch networks spanning all or most regions of a country.

Traditionally the state-owned banks have provided services for government employees, and state owned enterprises, putting it in the realms of retail and corporate banking. ADB has traditionally targeted its services at the 60% of Ghanaians that are into agriculture. Whiles GCB has banked mainly non-agriculture industries. Both banks networks reflect the scope of their business.

With respect to the wholly private banks, their coverage is generally below 70% with majority only present in few regional capitals as indicated in figure 4.1. The private banks have consistently started up in the city capitals targeting large and small corporations. They deliver both retail and corporate banking services, but the corporate services seems to be the determining factor for locating a branch in a regional capital. Figure 4.1 shows the number of branches by the sample banks.

Figure 4.1: Number Branches by selected banks



4.5.2 TYPES AND LOCATIONS OF CUSTOMERS

For the six banks sampled the private banks indicated that they are targeting mainly the business entities. On the contrary, the state banks indicated that their major customers are government organizations and private individuals. This pattern of distribution of major customers is also likely to affect the level and success of e- business application.

With reference to the location of customers, the private banks indicated that their customers are heavily represented in the cities, while the state banks operated evenly in the cities and urban settlements.

4.5.3 REASONS FOR USING E BUSINESS

The respondents gave several different reasons that they perceived to have influenced the banks' decision to adopt e-business strategies in their banking business. Two of the responses given by the sampled banks EBG and ADB were as a result of changing trends in the business environment while SBG and BBG indicated that it is a strategic move, while two others EBG and GCB said it is to keep up with competition. The likelihood of having a competitive edge when e-business is adopted was given by all the three state owned banks GCB, NIB and ADB).

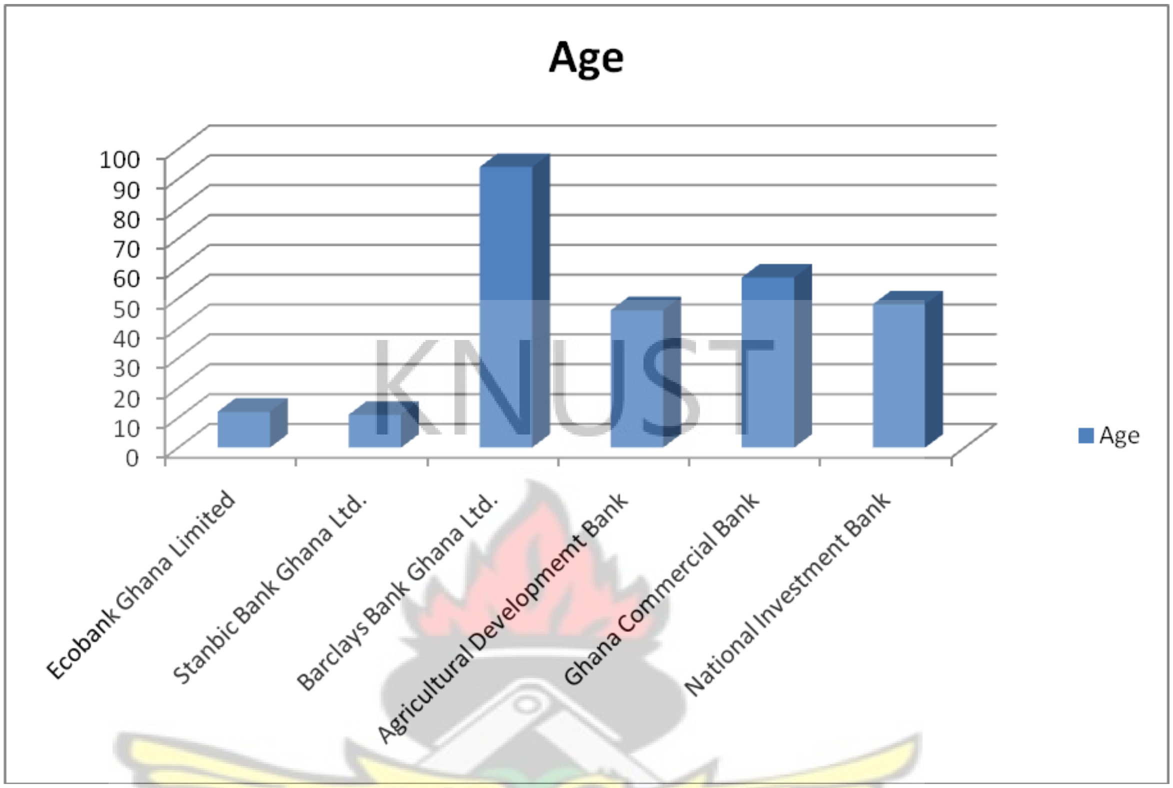
4.5.4 E-SERVICES AND PRODUCTS

Two types of electronic products were listed by all six banks as shown in Table 5.2. The banks described E-services as those business services that can be provided for a business or consumer via internet or thorough electronic means.

4.5.4 AGE OF BANKS

The year in which e-business was adopted were given by the selected banks, all the sample banks adopted e-business between the last 5 to 15 years. Though some banks have existed for the last 40 years, e-business adoption was adopted in the last decade. This shows how recent the adoption of business in the Ghanaian banks. Figure 4.2 shows how long the respective banks have been in existence in Ghana.

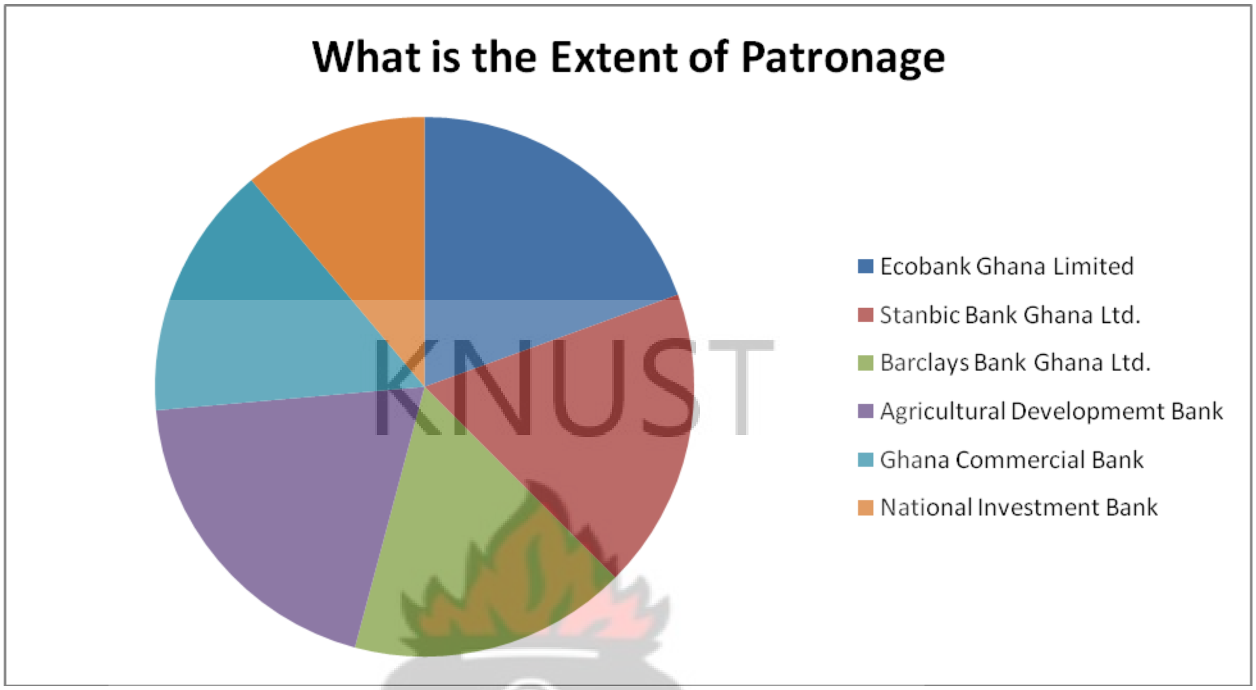
Figure 4.2: Ages of Selected Banks



4.5.5 THE EXTENT OF USAGE

The usage of E business s gives a reflection of patronage of e-business products. The percentage given is in relation to the total number of customers in the respective banks. Any customer who uses at least one of e-business products is considered as a user. Comparing the total usage of the six selected banks, Figure 4.3 shows the extent of usage of e-business products by customers of the sampled banks.

Figure 4.3 Extent of Usage of e-business Products by the Sample Banks



4.6 ANALYSIS ON BENEFIT OF E-BUSINESS ADOPTION

As indicated by Bradley and Stewart (2002) in the literature, adoption of e-business enables businesses to achieve competitive advantage, reducing costs, and protecting an organizations strategic position as factors that encourage the diffusion of an innovation. All the sampled banks indicated that they have gained some benefits since the adoption of e-business. All of them indicated that their turnover has increased. They have also expanded their geographical reach and increased their market share. E- business has facilitated the development of new business models and has improved their productivity.

All of them have noticed improvement in customer service and external and internal communications. They have also seen increment in sales and cost of doing business has reduced.

The other benefits they have all gained include growth of customer population, customer confidence in their account records and staff confidence at work improved. Again, they indicated that e-business enabled them to simplify working process, reduce queues in the banking halls and reduce total overhead cost such as acquiring more space and recruiting more employees. The table below shows summary of the benefit of selected banks.

Table 4.3: Benefits of e- business

Benefits	EBG	SBG	BBG	ADB	GCB	NIB
Lower cost of doing business	*	*	*	*	*	*
Improves communication	*	*	*	*	*	*
Improves supplier relations	*	*	*	*	*	*
Increases productivity	*	*	*	*	*	*
Aid in excellent customer service delivery.	*	*	*	*	-	*
Add value to the business and create competitive advantage	*	*	*	*	*	*
Speed and efficiency	*	*	*	*	*	*
Expands geographical reach and network operations	*	*	*	*	*	*
Facilitate developments of new products.	*	*	-	*	-	*
increases sales	*	*	*	*	*	*
Increases market share	*	*	*	*	*	*
Revenue generation	*	*	*	*	*	*
Marketing & market access	*	*	*	*	*	*

Key: * means Yes or Agreed And – means No or Not Agreed.

4.7 ANALYSIS ON BARRIERS TO E-BUSINESS ADOPTION

As has been noted in the conceptual framework in chapter three, there are indeed barriers to the adoption of e-business.

Preference for established business models and Cost factors such as costs of ICT equipment and networks, software and re-organization are perceived barriers they encountered in their quest for e-business adoption. However, contrary a study by Sathye

(1999) which empirically investigates the adoption of Internet banking by Australian consumers shows that security concerns and lack of awareness about Internet banking and its benefits stand out as being the obstacles to the adoption of e-business among Australian banks. none of the sampled banks agreed that Security and trust factors are a perceived barrier. Again only two of the banks (EBG, GCB and NIB) agreed that enabling factors such as availability of ICT skills, qualified personnel and network infrastructure are perceived barriers. Moreover, only ADB and EBG agreed that Lack of applicability to the business and ICT competencies within the firm were perceived barriers respectively.

Out of the 10 factors identified as barriers to e-business adoption 8 were supported by empirical data from the six cases (Table 5.4). This largely confirms the statement made by (OECD, 2004 in the literature which states that Common barriers include: unsuitability for the type of business; enabling factors (availability of ICT skills, qualified personnel, network infrastructure); cost factors (ICT equipment and networks, software and re-organisation); security and trust factors (security and reliability of e-commerce systems, uncertainty of payment methods, legal frameworks and Intellectual Property Right); and challenges in areas of management skills, technological capabilities, productivity and competitiveness. Lack of reliable trust and redress systems and cross-country legal and regulatory differences also impede e-business adoption. The banks agreed that despite the benefits of adopting e-business, there are several barriers that are likely to retard the rate of adoption.

Again only EBG and ADB agreed that Reluctance on the part of companies to network with other enterprise and Lack of technical and managerial skills are challenges respectively. Also, customer readiness was thought to be a perceived challenge as four of the banks namely EBG, NIB, ADB and GCB agreed that. Four banks SBG and GCB, EBG and GCB and ADB and GCB agreed that Small per-capita incomes, Cultural reluctance and Availability of information and communication infrastructure were challenges respectively. In addition to what we had perceived as challenges in the chapter on conceptualization, the sampled banks brought out other challenges they have encountered. These include Cost of Bandwidth, Advances in technology and Increased pace in technological advancement. Table 5.4 below summarizes barriers of e-business adoption. The table below shows responses by the sample banks.

Table 5.4: Barriers to E-Business

Barriers	EBG	SBG	BBG	ADB	GCB	NIB
Preference for established models e.g. use of paper work	*	*	*	*	*	*
Unsuitable for the type of business	*	*	-	*	*	*
Enabling factor such as ICT skill or qualified personnel	*	*	-	*	*	*
High cost of equipment and network software	*	-	*	*	-	*
Security And trust factors	-	-	-	-	-	-
Legal & regulatory challenges	*	*	*	*	*	-
Lack of applicability to the business	*	*	*	*	*	*
ICT competencies within the firm	-	*	*	*	-	-
Network infrastructure and internet related support services	*	*	*	*	*	*
Cross country legal and regulatory differences	*	*	-	*	*	*

Key: * means Yes or Agreed And – means No or Not Agreed.

CHAPTER 5

SUMMARY OF FINDINGS, CONCLUSION & RECOMMENDATIONS

5.1 INTRODUCTION

In this chapter, we draw conclusions and make recommendations from the study for future research, as well as make recommendations on how e-business may be integrated into the Ghanaian banking activities to ensure business growth.

5.1.1 BENEFIT OF ADOPTING E-BUSINESS

It was evidence from the study that the benefits of e-business have been experienced by our case study firms in recognition of the positive impact of e-business on: reduction of cost of doing business; volume of sales of products and services; speed and accuracy of service delivery; market share, improved productivity and customer service and; expansion of geographical reach, appear very attractive to the banks. These achievements represent a formidable force to drive the adoption of e-business by many more banks in Ghana.

In view of the enumerated benefits, responding banks have come to accept e-business as a novelty that has a great potential of improving their public image. This is because processes that need staff to handle have been electronically simplified and put online for clients to access. Though this study did not involve talking to clients, it became clear that banks perceived the adoption of e-business to produce positive change in clients' attitude as well as their own staff. This conclusion is on the observations that clients became more confident in their accounts statements and appreciative of the reduced time in transacting business; while staff exhibited noticeable changes in their confidence at work. The benefits of e-business are experienced whether or not the bank is state or private.

5.2 BARRIERS TO THE ADOPTION OF E-BUSINESS.

From our study, the prominent perceived barrier to the adoption of e-business by the respondents was security and cost factors. Fear of information leakage to the public remains a major barrier to the adoption of e-business. The emergences of foreign banks into the industry whose established business models are centered on e-business have caused some banks to explore the opportunities in the new models. However, these banks are still conservative and would always prefer established models where the alternative exists.

In a country where most hardware, software and qualified personnel are still imported to implement and support solutions such as e-business, the costs are high. Often the setup and recurring cost of maintaining these systems are prohibitive. The challenges to e-business adoption by banks in Ghana may be described as economic; technical and technological; ethical and institutional; and socio-cultural. In the economic perspective, Ghana like other developing countries in Africa has a low level of economic growth as depicted by the Low Gross Domestic Product (GDP). This economic situation poses a challenge to the banks' ability to price products and services on the local market so as to be able to recover the full cost of investment and possibly have a reasonable profit margin. Therefore, an accelerated growth of the Ghanaian economy can be seen as a necessary ingredient to increased demand for e- business products and services making it more attractive for banks to expand on their e- businesses.

Associated with the ethics is the security clients' data or record with the banks. The level of security risk associated with an e-business product or service pose different challenges to different banks. Improvements are required to ensure client confidence. Technical and managerial skills available locally for e-business are also limited. This is influencing the choice of technology. Consequently, it can become difficulty for banks to keep abreast with technological advancement as well as make improvement to meet the changing global trends. This situation is likely to be more serious with banks that appear to be averse to technological development. At institutional level the administrative structure, the nature of its bureaucratic processes and operational ethics make a significant difference in the banks outlook for adoption of e-business. This was evident between the state and private banks as the private banks appeared more vibrant in their quest for e-business adoption.

Technical equipments and other accessories supporting the e-systems are manufactured to certain specification and standards that may not necessary function optimally under the tropical Ghanaian environment. This presents a huge challenge in the absence of the technical expertise and competence to select right combination of specifications. The major concern here is that some applications that work well in developed countries cannot work in Ghana because for example the bandwidth needed to support such systems and application is simply unavailable and the cost woefully expensive. Additionally the pace of technological advancement makes products and solutions obsolete in a short time after its implementation before a new technology has to be adopted. The associated cost of switching technologies in such events is contributing to the varying degrees of e-business adoption among banks. Unfortunately, the internal economy is still not strong enough to provide quick returns for regular investments in technology and training. Again Ghana is still at the foundation stage of putting ICT infrastructure (e.g., improving its telecommunication infrastructure) such that in the near future, this would not be a perceived challenge anymore.

The banks have also taken notice of the significance of the Ghanaian socio-cultural settings on the customer acceptance of new ways of doing business. In this respect, the banks especially those operating in the urban and rural areas (where social and cultural norms are stronger) are unlikely to move faster in the adoption of e-business strategies.

Generally, the responses show that whereas knowledge of IT and e-business were apparent in some situations there were limited skill base for e-business. This situation is likely to affect the quality of service, which can then negatively impact on the customers' response to the service and eventually influence customer behavior to e-business.

In the previous chapter, it was indicated that all the six banks have adopted e-business though their reasons were not the same. The results of the responses show that the banks are more or less doing their normal business via the net.

It can be deduced that all the banks are in some manner responding to changing trends in how business is conducted. If a business wants to be effective, efficient and stay competitive, the business cannot help but to adopt technology to enhance business processes and one of such technology is e-business.

The six banks have varied reasons for adopting e-business and this stems from their peculiar corporate persona. Management of the selected banks are seeking strategies to improve productivity and efficiency. e-business was readily accepted as a strategy to make the bank abreast with the new market trend.

The analysis of the responses to the questionnaire have shown that Ghanaian banks are competing strongly for customers and to this end most banks believe that to have a competitive edge they need to improve on the way they do business and one sure approach is the adoption of e-business strategies. However, the levels of integration achieved by the banks have been influenced significantly by the customers' locations. There is higher integration in banks located in the cities and dealing mainly with business entities or government organizations than those located in the urban areas. This situation is driven by the fact that Internet facilities are more accessible to the banks and customers in the cities than customers in the urban areas. This situation also reaffirms the banks concern for technology as the most important challenge to the effective adoption of e-service in the banking industry in Ghana.

The various areas where the banks are preparing to use e-business approach includes familiar and relatively mature electronically-based products in developing markets, such as telephone banking, credit cards, ATMs, and direct deposit. It also includes electronic bill payments and products mostly in the developing stage, including stored- value cards (e.g., smart cards/smart money) and Internet-based stored value products.

5.3. CONCLUSIONS

To conclude, this study sought to understand the status of e-business adoption in the Ghanaian banking sector. Emphasis was placed on the benefits derived from adopting e-business and barriers faced by these banks in adopting e-business. The extent of usage by e-business products by customers of the respective banks was also analyzed.

The study showed that e-business is relatively new among Ghanaian banks compared to other developed nations such the Unites States of America. Various reasons account for the adoption of e-business among banks in Ghana. These includes to gain competitive advantage and as a responds to the market conditions. Benefits derived from the adopting e-business include increase in productivity, lower cost, speed & efficiency, facilitation of new products, improves customer services.

Barriers faced by the banks in adopting e-business are preference for established business models, cost, security, enabling factors and qualified personnel. The researcher recommends that banks provide adequate training to staff before introducing e-business products; this will help resolve the problem of unskilled personnel.

5.4 RECOMMENDATION

This study was only an exploratory and descriptive one to have a general over view of the status of e-business approach in the banking industry in Ghana. It is hoped that future research work might address the following:

- What are the trends and prospects for e-business in the urban and rural areas in Ghana?
- What is the status of national policy and regulations on e-banking?
- Evaluate consumer dimensionality of e-services, and how they perceived the current e-service quality and the influences on the consumer behaviour.

- Determinants of e-service quality, consumer satisfaction and behavioural intentions to advice banks on their bid to improve their competitive advantage through the adoption of e-business strategies.

REFERENCES

Acquah, P. A (2006) "Evaluating the banking system in Ghana" A Keynote Address to the Fifth Banking Awards ceremony, Accra, 6 May 2006.

Akoh, B (2001) "E-Business in the developing world, Africa and Ethiopia, June 2001, Vol 2 No. 3.

AL-Mudimigh, A. S (2007) "E- Business Strategy in an Online Banking Services: A Case Study Journal of Internet Banking and Commerce, April 2007, Vol. 12, no.1 (http://www.arraydev.com/commerce/jibc/)

Ajzen, I. (1985) From intentions to actions: A theory of planned behavior, Berlin, Springer.

Ajzen, I. (1991) The theory of planned behavior, "Organizational Behavior and Human Decision Processes", Vol. 50, pp 179-211.

Aranda- Mena, G and Stewart, P (2005) " Barriers to e-business adoption in construction international literature review" July 2005 2nd edition.

Amit Basu and Steve Muylle (2007) "How to Plan E-Business Initiative in established Companies" MIT Sloan Management Review Fall 2007.

Bawumia, M. (2007) "Banking in Ghana in the Last 50 Years-Challenges and Prospect" A Keynote Address of the Launch of Ghana Banking Awards, January 2007

Davis, F.D. (1986) A technology acceptance model for empirically testing new end-user information systems: Theory and results, Sloan School of Management, Massachusetts Institute of Technology.

Davis, F.D. (1989) Perceived usefulness, perceived ease of use, and user acceptance of information technology, "MIS Quarterly", Vol. 13, No. 3, pp 319-340.

Davis, F.D., Bagozzi, R.P. and Warshaw, P.R. (1989) User acceptance of computer-technology - a comparison of 2 theoretical-models, "Management Science", Vol. 35, No. 8, pp 982-1003.

Denscombe, M 2000: The Research Guide for Small Scale- Social Research Projects. Open University Press.Buckingham. Philadelphia.

Earl, M. (2000) "Evaluating the E-Business". Business Strategy Review, 11 (2), 33-38.

El Sawy, O. (2001) Redesigning Enterprise Processes for e-Business. McGraw-Hill, Boston.

Eldabi T., Irani T., Paul, R.J. Love P.E. D 2000: Quantitative and qualitative Decision Making Methods in Simulation Modelling. Management Decision, Vol 40 (1) P.64-73

Forster, Tim. (1998) Industrial Marketing Communication: An Empirical Investigation on the use of Marketing Communication Tools. Licentiate Thesis, Lulea University of Technology, 1998

Frempong,G (2007) "Trends in ICT Usage by Small and Medium Scale Enterprises in Ghana.

George M. & Gloria K. Bob- Milliar. (Developments in the Ghanaian Banking Sector of Ghana) ATDF Journal Volume 4, Issue 1.

Graziano, A. M. & Raulin, M. L (1997), Instructor Manual, Research Methods – A process of Inquiry, 3 rd Ed. New York: Addison- Wesley Educational Publisher Inc.

Hackbarth, G. & Kettinger W.J. (2000) Building an e-business strategy, information Systems management 17(3), 78-9

Hoffman, D.L. and Novak, T. (2000) "How to Acquire Customers on the Web," *Harvard Business Review*, May-June 2000.

Hsu, P.F., Kraemer, K.L. and Dunkle, D. (2006) Determinants of e-business use in us firms, "International Journal of Electronic Commerce", Vol. 10, No. 4, pp 9-45.

Khandwalla, P. (1970) Environment and the organization structure of firms, McGill University, Montreal, Faculty of Management.

Kalakota, R. and M. Robinson (1999), *E-Business; Roadmap for success,* Reading,MA. Addison-Wesley

Kalakota, Ravi, & Marcia Robinson (1999), e-Business: Roadmap to Success. Reading, MA: Addison-Wesley.

Laudon, K. and Traver, C. (2008) E-Commerce: Business, Technology, Society. 4th edition. Prentice Hall, Upper Saddle River, New Jersey.

Laudon, Kenneth C & Carol Guercio Traver (2003) E-Commerce: Business, technology and society. 2nd edition. Pearson Addison Wesley, Boston.

Lee, O.K., Wang, M., Lim, K.H. and Peng, Z. (2009) Knowledge management systems diffusion in chinese enterprises: A multistage approach using the technology-organization-environment framework, "Journal of Global Information Management", Vol. 17, No. 1, pp 70-84.

Li, Y.H. (2008) "An empirical investigation on the determinants of e-procurement adoption in chinese manufacturing enterprises". 2008 International Conference on Management Science & Engineering (15th), California, USA, Vols I and II, Conference Proceedings, pp 32-37.

Martins, M. and Oliveira, T. (2009) "Determinants of e-commerce adoption by small firms in portugal", Proceedings of the 3rd european conference on information management and evaluation. Gothenburg, Sweden, September, pp 328-338.

Melão, N. (2008)" E-Business, E-Business PROCESSES AND E-Business Melão, N. and Pidd, M. (2000) "A Conceptual Framework for Understanding and eBusiness Progression", Journal of Computing and Information Technology, vol. 13, No. 2, pp. 123-136.

Michael Porter, (1979) "How Competitive Forces Shape Strategy" Harvard Business Review March-April 1979.

Molla, A. Exploring the Reality of eCommerce Benefits Among Businesses in a Developing Country, University of Manchester, Precinct Centre, Manchester, 2005, UK, available at: URL: http://www.sed.manchester.ac.uk/idpm/publications/wp/di/index.htm

Naichiamas, D. Frankfort-Naichiamas, C.1996: Research Methods in the Social Sciences, 5 Ed. CA Arnold, Santa Crux

Opoku Mensah, Aida, Assefa Bahta, and Sizo Mhlanga. (2005) *E-commerce challenges in Africa: issues, constraints, opportunitiesAI SI.* Briefi ng Paper, Tunis: Economic Commission for Africa.

Opoku Mensah, Aida, Assefa Bahta, and Sizo Mhlanga. (2005) *E-commerce challenges in Africa: issues, constraints, opportunitiesAI SI.* Briefi ng Paper, Tunis: Economic Commission for Africa.

OECD (1997), Electronic Commerce, OECD Policy Brief No. 1-1997, Paris OECD.

Payne Judith E. ,E-Commerce Readiness for SMEs in Developing Countries: A Guide for Development Professionals: Produced by LearnLink Academy for Educational Development1825 Connecticut Avenue, N.W. Washington, D.C. 20009-5721, USA

PricewaterhouseCoopers in association with Ghana Association of Bankers, (2006), A report on Ghana Banking Industry.

Poon, S. & Swatman, P.M.C. (1997) Small business use of the Internet: Findings from Australian case studies. *International Marketing Review*, 14(4-5), 385-203.

Poon, S. (2000) Business environment and internet commerce benefit – a small business perspective. *European Journal of Information Systems*, 9(2), 72- 82.

Porter, M. and Millar, V.E. (1985)"How Information Gives You Competitive Advantage," *Harvard Business Review*, 63(4),, pp. 149-160.

Porter, M. Competitive Advantage, New York: Free Press, 1985. Porter, M. Competitive Strategy, New York: Free Press, 1980.

Rogers, E.M. (1995) Diffusion of innovations, Fourth Edition ed., New York, Free Press.

Scott, W.R. and Christensen, S. (1995) The institutional construction of organizations: International and longitudinal studies Thousand Oaks, CA, Sage Publications.

Silverman, David 2001. Interpret ting qualitative Data. 2nd Ed. Sage Publication Ltd. London.

Tornatzky, L. and Fleischer, M. (1990) The process of technology innovation, Lexington, MA, Lexington Books.

Turban, E., King, D., Viehland, D. and Lee, J. (2006) Electronic Commerce 2006: Commerce be an Engine for Global Growth?" *Electronic commerce and the integration of developing countries and countries with economies in transition,* International Trade, 19-23 July 1999, Geneva.

Turban, E.et al. *Electronic Commerce: A Managerial Perspective*, 2006, Prentice Hall.

UNCTAD - United Nation Conference on Trade and Development."Can Electronic Commerce be an Engine for Global Growth?" Electronic commerce and the integration of developing countries and countries with economies in transition, International Trade, 19-23 July 1999, Geneva.

Venkatesh, V., Morris, M.G., Davis, G.B. and Davis, F.D. (2003) User acceptance of information technology: Toward a unified view, "MIS Quarterly", Vol. 27, No. 3, pp. 425-478.

Yin, R.K 1994.Case Study Research: Design and Methods, applied Social Research Ed. Sage Publishing, Newbury parl CA

Yin, Robert.K. (2003) Case Study Research. Design and Method.Thousand Oals, Califonia Sage publication.

Yen-Yi H 2006. Trust Worthy Computing: Information Security and Management. IEEE International Conference on Sensor Networks, Ubiquitous, and Trustworthy Computing, 5-7 June 2006

APPENDIX

QUESTIONNAIRE

The researcher is a post graduate student of Kwame Nkrumah University of Science &Technology (KNUST) conducting a research work on the Topic ***"Adoption of E-Business by Ghanaian Banks"*** Kindly provide answers to the under listed questions relating to the topic. Please be assured that this is purely for academic purposes and your responses will be handled with utmost confidentiality.

1. **BUSINESS ENVIRONMENT AND CHARACTERISTICS.**

Bank Name	
Ownership Type	
When was the Bank established	
How many branches do you have in Ghana	
Target customers	
Major competitors	

2. E-BUSINESS ADOPTION BY THE BANK.

Has the bank adopted E- business?	
Why was E business adopted?	
How long have you been operating as an e-business entity?	
What are some of your E-business products	
Has the bank turnover increased since the adoption? Yes /No	
If yes is it due to the adoption of E-business	
Do customers pay for all E business products?	
What is the level of e-business usage or acceptance among customers?	
What is the extent of patronage for E-business products that customers have to pay to subscribe?	

3. **BARRIERS TO E- BUSINESS ADOPTION**

The following are some challenges companies face in their bid to adopt E-business, please indicate which of them applies to your bank.

Barriers	**Yes**	**No**
Preference for established models e.g. use of paper work		
Unsuitable for the type of business		
Enabling factor such as ICT skill or qualified personnel		
High cost of equipment and network software		
Security And trust factors		
Lack of applicability to the business		
ICT competencies within the firm		
Network infrastructure and internet related support services		
Cross country legal and regulatory differences		
Legal & regulatory challenges		
Others, please state:		

4. **The following are some benefits organizations derive from adopting E-business. Please indicate which of them is applicable to your bank.**

Benefits	**Yes**	**No**
Lower cost of doing business		
Improves communication		
Improves supplier relations		
Increases productivity		
Aid in excellent customer service delivery.		
Add value to the business and create competitive advantage		
Speed and efficiency		
Expands geographical reach and network operations		
increases sales		
Increases market share		
Revenue generation		
Marketing & market access		
Facilitate developments of new products.		
Others please state:		