



**School of Management
Blekinge Institute of Technology**

**The Impact of internet banking service quality on customer satisfaction in the
banking sector of Ghana**

By

Richard Selassie Bebli

Supervisor: Dr. Marie Aurell

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ABSTRACT

The development of information and communication technology (ICT) in Sub-Saharan Africa over the last two decades is drastically altering the way business is done in Sub-Saharan Africa in general and Ghana in particular. The banking sector is no exception to this revolution. In spite of the increasing adoption of internet banking and its relevance towards customer satisfaction in the Ghanaian banking industry, very little empirical investigation or research has been conducted in understanding factors of internet banking service quality that lead to customer satisfaction. This study thus aims to fill the gap in the literature by focusing on the impact of internet banking service quality on customer satisfaction in the banking sector of Ghana. The theoretical perspective of customer satisfaction indicates that the higher the level of service offered the higher the satisfaction associated with product or services being offered. The measure of the services is usually found in the service quality measure or the SERVQUAL and SERVPERF.

The study draws on customer satisfaction using the service quality dimension or the SERVQUAL and SERVPERF models originated by Parasuraman et al., (1988), Cronin and Taylor (1992). The study makes use of mainly qualitative research approach although the quantitative research approaches were partially used for the study. The use of the above approaches meant that both primary and secondary data sources were extensively relied on. The study makes use of a 5 point Likert scale with “1” being strongly agreed and “5” being strongly disagreed. The study applied the Spearman ranked correlation, the chi square (χ^2) and regression analyses to evaluate the hypothesised relationships.

The findings indicated that speed of delivery, ease of use, Reliability, pleasure, control and privacy were all positively correlated and significant at 1% level. Additionally the regression analysis also indicated that with the exception of pleasure and control all the variables were significant at 5% levels. Finally, based on the findings of this study, it was recommended that there is the need to educate majority of the banking population on internet banking.

Key words: Service quality and customer satisfaction.

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ABBREVEIATIONS AND ACRONYMS

ATMs	Automated Teller Machines
CS	Customer Satisfaction
ERP	Economic Recovery Programme
FINSAP	Financial Sector Reform Programme
FIs	Financial Institutions
ICT	Information and Communication Technology
IMF	International Monetary Fund
ISSER	Institute of Statistical Social and Economic research
TAM	Technology Acceptance Model
SAP	Structural Adjustment Program
SPSS	Statistical Package for Social Science

CHAPTER ONE

INTRODUCTION

1.0 Background

The development of information and communication technology (ICT) in Sub-Saharan Africa over the last two decades is drastically altering the way businesses are operated in Sub-Saharan Africa in general and Ghana in particular. The introduction of ICT has also led to the fast growth and development of the service sector, making the sector one of the leading worldwide. Added to this is the introduction of electronic commerce popularly referred to as e-commerce which is thought to hold the promise of a new commercial revolution by offering an inexpensive and direct way to exchange information and to sell or buy products and services (Abor, 2005). This technological innovation has also brought in a level playing field for businesses by eliminating geographical, regulatory, and industrial barriers (Zafar, Zaheer, Saleem-ur-Rahman and Kashif ur Rehman, 2011). In the words of Balachandher, Santha, Norhazlin, and Rajendra (2001), this revolution in the market place has set in motion a revolution in the banking sector for the provision of a payment system that is compatible with the demands of the electronic marketplace. According to Awad (2000) there are four electronic commerce activities internet users perform. These activities require a banking relationship and are: shopping, banking, investing, and online electronic payment for Internet services. The enormous increase of the internet is changing the way businesses interact with consumers as most businesses are now conducted using the internet. Online banking according to Daniel (1999) is therefore defined as the provision of information or services by a bank to its customers over the internet.

To realise the contributions of internet-banking to the growth of a country, Nupur (2010) noted that there was the need for the increase in internet access, development of new online banking features, growth of household internet usage, and the development of a good legal and regulatory framework. The advent of electronic banking in general and internet banking in particular has led to the development of service quality (SERVQUAL) dimensions to measure the extent of customers' satisfaction. SERVQUAL developed by Zeithaml (1988) is one of the more widely used instruments for assessing customer satisfaction. The extensive use of the SERVQUAL instrument since the rise in the usage of internet according to Mols (2000) is because internet based home banking might bring a radical change in the way banks maintain their relationships with their customers.

Ghana can boost to be one of the best performing financial sectors in sub-Saharan Africa and the banking sector is the nucleus around which the financial sector revolves. In Ghana, until the year 2003, internet banking was not very common. After 2003 when most banks were made universal banks, internet banking became very common and easily assessable to all who subscribe to the service. There are minimal researches on internet banking on the Ghanaian banking sector as compared to other electronic banking innovations.

Additionally, most studies conducted look at electronic banking (Suganthi, Balachandher, and Balachandran, 2001), particularly with reference to the rationales and benefits of Automatied Teller Machines (ATMs), customer loyalty and service quality. Nevertheless, comprehensive research investigating the relative importance of factors influencing the adoption of internet banking and other customer preferences, particularly for the case of Ghana has never been carried out to the best of knowledge of the researcher. This is why the researcher is interested in conducting a study to assess the impact of internet banking service quality on customer satisfaction in the banking sector of Ghana.

1.1 Problem Discussion

The Ghanaian banking sector after the liberalisation has operated in a relatively stable environment, however, with the advent of Internet banking, the industry is characterized by dramatically aggressive competition. These competitions have made banks in Ghana adopt new technologies such as internet banking to make the banking process faster and easier whilst satisfying the needs of the customers. The argument has been that most of the product and services offered by the internet banking technology does not meet customers' need and quality. Additionally, such services are skewed to only some selected affluent customers to the neglect of majority of the Ghanaian banking customers who do not have access to internet, computers and even electricity. Others posited that the cost of acquiring the internet facility, computers and even the security of internet banking transactions are very high or expensive for the average Ghanaian bank customer hence internet banking does not really satisfy the Ghanaian bank customer in any way. According to the above, therefore income and educational level of customers plays an important role in the adoption of internet banking facilities.

Furthermore, most of the internet banking services provided by the banks in Ghana is usually unreliable with most customers unaware of the content of the internet banking services offered by

their bank. Most of the product and services offered by internet banking is not accessible in all part of Ghana especially in the typical rural areas where access to electricity or alternative sources of energy is a problem. Additionally, with the high illiteracy rate among the Ghanaian populace the use of the internet is left in the hands of individuals who have gotten some level of education or can read and write. This therefore means that education plays a crucial role in determining the usage and satisfaction level of customers who subscribe to internet banking services. Additionally, as majority of the illiterate are the aged, it means that the aged would be left out when it come to the adoption of internet banking.

Despite these challenges, there is an increasing adoption of internet banking in Ghana by the Ghana banks. In spite of the increasing adoption of internet banking and its relevance towards customer satisfaction in the Ghanaian banking industry, very little empirical investigation or research has been conducted in understanding factors of internet banking service quality that lead to customer satisfaction. This study therefore tries to fill this empirical gap in research by conducting a study on impact of internet banking service quality on customer satisfaction in the banking sector of Ghana

1.2 Study Objective and purpose

This study thus aims to fill the gap in the literature by focusing on the impact of internet banking service quality on customer satisfaction in the banking sector of Ghana. Ghana provides a good case study as it is one of the fastest growing developing economies in Africa in particular and the World in general. The banking sector plays a major role as a facilitator of business transaction and also in foreign currency inflow to the economy. Specifically this thesis aims at achieving the following with the aim of answering the research question:

- To determine the role of demographic variables when it comes to the use of internet banking.
- To identifying the major service quality dimensions that satisfy customers in internet banking.
- To identify the correlation between service quality of internet banking and customer satisfaction.
- To make comparative analysis of customer satisfaction in public and private banks in the usage of internet banking.

1.3 Academic Motivation

Firstly, a careful study of the available literature from an academic point of view indicates that there is a wide gap in literature in the Ghanaian context due to the novelty of the internet banking. Though there have been researches on Internet banking most of these researches have focused on developed countries (Aldas-Manzano et al., 2011; Garrone & Colombo, 1999; Eriksson & Nilsson, 2007; Ozdemir & Trott, 2008) hence the importance of this research. This means that a study of this nature is deemed very important for not only academics but also players in the banking industry.

Secondly, the dimension of service quality and customer satisfaction which has been introduced by the researcher makes this study very important as most literature on internet banking do not look at both concepts together, only a little research has been done in this area. Putting the two concepts together and researching on them makes this research study very necessary as well as important.

The Impact of internet banking service quality on customer satisfaction in the banking sector of Ghana will therefore be examined in this study. The narrowing of the study to look at Public Bank and Private Bank dichotomy is also very important. This two dichotomy will help the researcher and regulators understand which bank satisfies its customers most and why or what are the key reasons why these banks are able to satisfy their customers. It will be further narrowed to only a selected bank that have internet banking services in place.

Research Question

- What are the major factors affecting customers' satisfaction with internet banking in Ghana?

1.5 Research Hypothesis

The following hypotheses will be tested in our research:

H₁(null) **Service quality** using internet banking does not impact customer satisfaction

H₁(alt) **Service quality** using internet banking does impact customer satisfaction.

H₂(null)- The six dimensions of **online service quality** (*speed of delivery, reliability, ease of use, enjoyment, control and privacy*) does not lead to customer satisfaction with internet banking.

H₂(alt)- The six dimensions of **online service quality** (*speed of delivery, reliability, ease of use, enjoyment, control and privacy*) lead to customer satisfaction with internet banking.

H₃(null) -Overall customer satisfaction using **internet banking quality services** does not differ base on demographic characteristics.

H₃(alt) -Overall customers satisfaction using **internet banking quality services** differ based on demographic characteristics.

1.6 De-limitation

The study is limited to internet banking an aspect of electronic banking and customer satisfaction in Ghana. The choosing of internet banking for this study is because internet banking is an emerging banking activity which is being operated by majority of the banks in the country. Additionally, the internet is now well accessible by all literate Ghana who have multi-purpose phones and e-mail addresses; hence the study is limited to such people. Although the study is for the whole Ghanaian banking sector only a selected few will be use for this study. The main reason for this selection is because only fewer customers in the Ghanaian banking industry use and have internet facilities. The study is specifically limited to only internet banking customers of the various banks in the country. Additionally, only customers from the head offices of the various branches are used for this study.

1.7 Thesis' structure

This thesis is divided into six chapters. The first chapter dealt with the introduction to the study, background of the study, problem discussion, the research question, research hypothesis as well as the de-limitation of the study and the organisation of the study or the thesis structure. Chapter two is devoted to the history of the banking sector in Ghana. The chapter is also divided into three main sections that this the banking sector before independence; the sector between independence and the pre-reform sector of the 1980s; and the post-reform era till date. Chapter three presents the theoretical and the empirical literature on which this study is based or built. Chapter three looks at the issues of service quality, customer satisfaction and as well as the demographic variable and how

they impact service quality and customer satisfaction. Chapter four is the research methodology or method. In chapter four the research instrument, design, sampling and sampling techniques as well as data analysis are extensively discussed. Chapter five is the empirical findings of the study and the discussion of the findings by linking the findings of this study with the literature sampled. The study ends at chapter six by presenting the conclusion and implication of the study as well as the policy recommendations.

CHAPTER TWO

FINANCIAL SECTOR IN GHANA

2.0 Introduction

This chapter is a build up of the previous chapter. The chapter concentrates on the Ghanaian financial sector, specifically, the banking industry which is of interest to this study. The chapter is organised into three main sections, these are the pre-independence Ghanaian banking industry, the post independence banking industry to the pre-liberalisation of the banking sector or the pre-reform of the banking sector and the final section is on the post-liberalisation or reform in the banking industry. The division of the banking industry into these sections is because each section is characterised by peculiar banking institutional structures and activities.

2.1 Pre-Independence Banking Industry

In the late 19th century, British West Africa witnessed the setting up of the first banking institution. The Bank of British West Africa helped in the introduction of modern banking activities into countries in West Africa who were UK colonies. The Bank of British West Africa was opened in 1894 and was backed by the London-run African Banking Corporation. Two (2) years later in 1896, the bank of British West Africa opened a branch in Accra, Ghana then known as the Gold Coast and became the only bank or formal financial institution operating in the country. The bank also operated as the Central Bank in the Gold Coast. Its main duty then was to help in the distribution of silver coins, of which it was the sole supplier (Fry, 1976). Another objective of establishing the British Bank of West Africa was to provide banking service for British trading enterprises and the British Colonial Administration. Despite the above stated objectives, the British bank of West Africa also attracted the patronage of some indigenous African customers (Mensah, 1997). After its initial establishment, the bank went through series of changes and expansion in the Gold Coast. To expand therefore, it opened a new branch in Sekondi Takoradi in 1902 and later an agency in Obuasi in 1905, which was later upgraded to the status of a bank branch in 1905. A year after the upgrading of its branch in Obuasi, the Bank of British West Africa opened another branch in Kumasi. The reason for such rapid expansion was because it wanted to be the dominant commercial bank in the main business centres in the Gold Coast.

The Bank of British West Africa by 1918 had become very successful, inviting another foreign bank, the Colonial Bank to establish in the Gold Coast. The Colonial Bank merged with the Anglo-

Egyptian Bank, the National Bank of South Africa and Barclays Bank under the leadership and name of Barclays Bank (Vidal L Buckle & Co, 1999). The Barclays Bank introduced fierce competition between itself and the Bank of British West Africa in the Gold Coast. Between the late 1920's and early 1950's, banking activities in the Gold Coast was provided by these two foreign owned banks. The Bank of British West Africa also functioned as the bank of issue for the Colonial Government (Vidal L Buckle & Co, 1999). In 1953, the Bank of England established the Bank of the Gold Coast (BCG) with the help of Alfred Engleston (formerly of the Bank of British West Africa) as the main banking institution in the country and oversaw issues of currency, business and personal banking (Fry, 1976). In 1957, the British Bank of West Africa was changed to the Bank of West Africa. Later on the Bank of Gold Coast was divided into two that is the Bank of Ghana. The Bank of Ghana was in-charge of issuing currency and later become the Central Bank. The second half became known as the Ghana commercial Bank (GCB). The GCB developed into the largest commercial bank with a monopoly on the accounts of public corporations. The Ghana Commercial Bank (GCB) was set up in 1953 to improve the access to credit of indigenous businesses and farmers. In addition to the above, the Colonial Post Office Savings Bank gave a fierce competition to the three banks operating in the country by mobilizing deposits from the rural areas.

2.2 The Post Independence Banking Industry to the Pre-Liberalisation of the Banking Sector

After independence on 6th March, 1957, Alfred Engleston was appointed the first governor of the Bank of Ghana. In July 1958 the Bank of Ghana issued the first National currency (cedis) to replace the then West African Currency. The Ghana Commercial Bank took up the responsibility as the government banker and was in-charge of the financial activities of most government agencies and department and public corporation. The Ghana Commercial Bank became the third Bank operating in the country and also a strong competitor of the two foreign banks that were already operating in the country. It open branches in major commercial towns and villages as well as in place where the foreign banks were reluctant to open branches.

Additionally, in 1957 by a popular vote, more banks were established in the country. Between 1957 and 1965 more banks had been established than the pre-independence era. Some of these established banks include Investment Banking Institution an Investment Bank; the Agricultural Development Bank for the development of Agriculture; the Merchant Bank for merchant banking; and the Social Security Bank to encourage savings. The post-independence banking sector was characterized by

extensive government control. The dominance of the government in these periods was because the Ghana economy was closed and centrally planned. The banking sector ownership was dominated by public ownership as almost all the banks set up between the early 1950s and the late 1980s were wholly or majority owned by the public sector (Gockel, 1995). Aside this the Ghana Government between that same period also acquired minority shares in the two expatriate banks operating in the country in the mid 1970s. According to Gockel (1995), the establishment of the government own commercial and development banks were because of two reasons. These reasons are the belief that the operational focus of the foreign commercial banks, in particular their lending policies, was too narrow, thus depriving large sections of the economy of access to credit, and, second, the contention that sectors important for development, such as industry and agriculture, required specialised financial institutions (FIs) to supply their financing needs (Brownbridge and Gockel, 1998). By the late 1980s, Ghana Commercial Bank had become the largest commercial bank in Ghana with about 36% of total bank deposits.

Although Ghana Commercial Bank as a bank performed well in the early eras, the whole Ghanaian economy went through some economic difficulties which led to several coup d'état and changes in government from 1966 to 1981. This persistent economics crisis continues until 1983, when with the assistance of the International Monetary Fund (IMF) the structural adjustment program (SAP) and the Economic Recovery Programme (ERP) were introduced.

2.3 Post-Liberalisation or Reform in the Banking Industry

Series of reforms were carried out in the Ghanaian economy but the financial sector reform programme was started in 1988 and acronym FINSAP. The FINSAP programme was implemented in two (2) phases, that is FINSAP I and FINSAP II. FINSAP I was the restructuring of the financial system which was carried out by the World Bank and the Ghana Government with the help of International Development Agency (IDA). The main aims of the programme was to undertake the restructuring of financially distressed banks; to enhance the soundness of the banking system through an improved regulatory and supervisory framework; and to improve the mobilization and allocation of financial resources – including the development of money and capital markets. In 1989, the FINSAP II was implemented. The FINSAP II had the objective of reducing state shareholding in Ghanaian banks; continuing the bank restructuring programme which was launched under FINSAP I; intensifying the recovery of non-performing loans by Non Performing Assets Recovery Trust

(NPART); and enhancing the effectiveness of a broad range of non-bank financial institutions (Mensah, 1997). The SAP and ERP programme led to the enactment of a new Banking Law in 1989. This made it possible for qualified incorporation to file applications for licences to operate as banking institutions. Some of these new banks that were licensed to operate as banks were Meridien (Biao) Trust Bank, Cal Merchant Bank, Allied and Metropolitan and Ecobank.

Additionally, non-banking financial institutions were licensed under the financial Institutions (Non-Banking) Law 1993 (P.N.D.C.L. 328). These non-banking financial institutions operated as discount companies, finance houses, building societies, or leasing and hire-purchase companies. After the general elections in 1992, and as part of the ERP and SAP programs, the Ghana Commercial Bank was diversified likewise the Social Security Bank. Traditionally, banks in Ghana were segmented into merchant, commercial (retail), and development banks. Merchant banks were restricted to corporate clients, the commercial and development banks were limited to commercial and development activities. To unify these various banking activities the idea of Universal Banking (Bank of Ghana, 2004) was introduced in Ghana in 2003. Universal banking in the Ghanaian context is defined by Hinson (2004) as: “The business of accepting deposits and other repayable funds from the public, lending, investments in financial securities and money transmission services, the issuance and administration of means of payment, including credit cards, travellers’ cheques and bank drafts; the issuance of guarantees and commitments trading for own account or for account of customers in money market instruments, foreign exchange or transferable securities, provision of advice on capital structure, acquisitions and mergers; portfolio management and advice; safe custody of valuables; electronic banking and any other services that the Bank of Ghana may determine”. A legal requirement for a bank to be issued with a universal banking license in Ghana is a minimum paid-up capital of seventy billion Ghana cedis. Universal banking is supposed to relax restrictions and provide equal market opportunities for banks and maintain fair competition. The list of all the banks in Ghana and their ownership structure is presented in table 2.1 below

Table 2.1: Banks in Ghana

Name of Bank	Number of Branches	Ownership	Current Banking Licence
Barclays Bank of Ghana Ltd	120	Non- Ghanaian	Universal
Merchant Bank (Ghana) Ltd	16	Ghanaian	Universal
Ecobank Ghana Limited	53	Non- Ghanaian	Universal
Ghana Commercial Bank Ltd	153	Ghanaian	Universal
National Investment Bank Ltd	27	Ghanaian	Universal
Standard Chartered Bank Ghana Ltd	32	Non- Ghanaian	Universal
SG-SSB Bank Limited	36	Non- Ghanaian	Universal
The Trust Bank Limited	17	Ghanaian	Universal
Agricultural Development Bank Ltd	88	Ghanaian	Universal
Bank of Africa	19	Non- Ghanaian	Universal
Prudential Bank Limited	15	Ghanaian	Universal
Fidelity Bank Limited	31	Ghanaian	Universal
Zenith Bank Limited	24	Non- Ghanaian	Universal
Stanbic Bank (Ghana) Limited	23	Non- Ghanaian	Universal
Unibank Ghana Limited	17	Ghanaian	Universal
Access Bank Ghana Limited	38	Non- Ghanaian	Universal
HFC Bank Ghana Limited	24	Ghanaian	Universal
First Atlantic Merchant Bank Ltd	6	Ghanaian	Universal
International Commercial Bank Ltd	12	Ghanaian	Universal
Guaranty Trust Bank Limited	22	Non- Ghanaian	Universal
CAL Bank Limited	15	Ghanaian	Universal
United Bank for Africa (Gh) Ltd	26	Non- Ghanaian	Universal
Bank of Baroda Ghana Ltd	3	Non- Ghanaian	Universal
BSIC	11	Non- Ghanaian	Universal
UT Bank Limited	27	Non- Ghanaian	Universal

Source: Authors computation, 2012

The Bank of Ghana classifies the financial and banking sector under the headings of the licenses offered to the Bank. These Banks are classified into: Class I Banking licence-Universal banking; Class II license- Universal and off-shore banking, General Banking-both Universal and Universal and off-shore banking and ARB APEX Bank. (Bank of Ghana, Annual report, 2007).

The Ghanaian economy according to an article in the Daily Graphic, dated 19th December, 2006 has seen a remarkable growth, well capitalised, very liquid, profitable and has recorded a strong asset

growth. In fact the report further indicates that the total banking system assets at the end of October 2006 were ₵48,353.0 billion, an annual growth of 35.5 per cent, as against 16.6 per cent as of the end of October 2005 (Daily Graphic, December 19, 2006). The main reason for this strong and positive growth is because of the attainment of micro and macro-economic stability, political stability and the government's desire to make Ghana the "financial hub" of the Sub-region (Daily Graphic, December 19, 2006). By the end of 2006, twenty-three (23) banks were licensed to operate and as country the end of 2010, twenty-nine (29) banks were operating in the country. Aside the above commercial bank, the financial sector is composed of several non-banking financial institutions, saving and loan financial companies and about 123 ARB Apex bank which operate under the Rural Community Banks.

In Ghana, the early 2000's saw an increase use of technology. The earliest form of technologies used in the 1970 was office automation devices such as telephones, telex and facsimile (Abor, 2003). As competition intensified in the 1980s as a results of liberalisation of the banking sector personal computer (PC) were extensively used for back-office operations. Further advancement in computer technology saw the banks networking their branches and operations thereby making the one-branch philosophy a reality (Abor, 2003). The automated teller machines (ATMs) were first introduced in 1995 by The Trust Bank. ATM according to Abor is "Arguably, the most revolutionary electronic innovation in this country and the world over....." When it comes to electronic cards, the Social Security Bank (now Socete Generale SSB) was the first bank to introduce it in May 1997 with its 'Sika Card'. In addition to the above, some banks started to offer PC banking services to their corporate clients and later to their individual clients. The World Wide Web (WWW) was later introduced by the various banks to their various customers. The current banking industry is made up of several IT innovations; these innovations include telephone banking, internet banking and SMS banking.

CHAPTER THREE

LITERATURE REVIEW

3.0 Introduction

This chapter builds on the previous two chapters by looking at both the theoretical and empirical literature relevant to the study. This chapter outlines the relevant literature on customer satisfaction and the conceptualization of service quality in the context of banking more specifically internet banking and customer satisfaction. The conceptualization of the key terms served as a framework within which this study was conducted.

3.1 Theoretical Framework

3.1.1 Customer and Customer Satisfaction

According to the classification by Jones and Sasser (1995), customers can be grouped into four (4), these are “Apostles”, “Hostages”, “Mercenaries” and “Terrorists”. An “Apostle” is a high satisfied and high loyalty customer. Such as customer due to their loyalty and satisfaction are willing to recommend the product or service to others whilst “Hostages” are lowly satisfied but high loyal customers because they have fewer choices or alternatives. “Mercenaries” are those customers who are interested in changing their supplier in order to obtain lower prices although they are high satisfied. Such customers are said to be highly satisfied but lowly loyal. “Terrorists” on the other hand are lowly satisfied and lowly loyal and uses alternative suppliers to express their dissatisfaction with their initial supplier. In this study the researcher is interested in the two extreme, that is, apostle and terrorist hence the interest in the term customer satisfaction. The interest in the two groups is because the researcher is interested in knowing the dimension of the services that makes such individuals or customers either highly satisfied or not satisfied at all.

As a term, customer satisfaction (CS) has received numerous attention and interest among scholars and practitioners alike because of its role as an important variable of business strategy in this very competitive market (Lovelock and Wirtz, 2007). Since the early 1960’s to date several researches have been conducted on customer satisfaction by different researchers. Infact in the words of Parker and Mathews “customer satisfaction has been fundamental to the marketing concept for over three decades” (Parker and Mathews, 2001). In 1962 for instance, Sprowls and Asimow built a customer

behaviour model and indicated that repeat purchasing of a commodity was as a result of customer's being satisfied with the product on offer. Still in the 1960's, Cardozo's (1965) used a laboratory experimental study to posit that customer satisfaction with a particular product was determined by their tireless effort to obtain the product in question as well as the expectation of the customers about the product. In the 1970s, Anderson (1973) as well as Olshavask and Miller (1972) investigate customer satisfaction based on the expectation and perceived product performance. In terms of definition of the concept, customer satisfaction has been traditionally defined as "an evaluative judgment prior to making a choice, about any particular purchase decision" (Oliver, 1980). Pairot (2008) also defined Customer's satisfaction as the company's ability to fulfill the business, emotional, and psychological needs of its customers. In that same definition Pairot (2008) acknowledged that customers usually have varied levels of satisfaction since they have different attitudes and experiences as perceived from the company.

According to Churchill and Surprenant (1982), customer satisfaction can be defined as a "disconfirmation paradigm" since it is a result of confirmation/disconfirmation of expectation that evaluates a product's performance with its expectation and desire. Customer satisfaction is therefore an attitude or a rating made by the customer by comparing their pre-purchase expectation to their subjective perceptions of actual performance (Oliver, 1980). "Satisfaction is a person's feeling of pleasure or disappointment resulting from comparing a product's performance (outcome) in relation to his or her expectation" (Kotler & Keller, 2006 p. 144). Bank customer satisfaction is regarded as banks fully meeting the customers' expectation (Bloemer, Ruyter, and Peeters, 1998) and also said to be a feeling or attitude formed by bank customers after service, which expressly connects the various purchasing behaviour (Jamal and Naser, 2002).

Customer satisfaction is seen to be a state of mind that customers have about a company when their expectations have been met or exceeded over the lifetime of the product or service (Kevin Cacioppo, 1995 and Kumbhar, 2010). In this regard therefore satisfaction is built over a period of time within the product life cycle. Satisfaction therefore appears to be between pre-exposure and post-exposure of attitudinal components (Oliver, 1980) and serves as a link between the various stages of consumer buying behavior (Jamal and Nasser, 2002).

The conceptualisation of customer satisfaction according to Boulding et al. (1993) is transaction specific while in contrast Anderson, Fornell and Lehmann, (1994) conceptualize customer satisfaction as a cumulative consumption experience. Contrasting the two views transaction specific

conceptualization sees customer satisfaction as an evaluative judgement following a specific buying process (Hunt 1977; Oliver 1977, 1980, 1993) and cumulative customer satisfaction, emphasis more on the total evaluation based on total consumption over time (Johnson and Fornell, 1991; Fornell, 1992). Taking a different dimension or view from the above, Lenka, Suar et al. (2009, p. 50) identified 'customers' satisfaction as a combination of their cognitive and affective response to service encounters'.

In the writings of Johnson and Gustafsson (2000, p. 63), the two authors indicated that service 'attributes provide customers with benefits and the benefits derive overall satisfaction'. From the above therefore it implies the higher the benefits derived from a product by customers, the higher the satisfaction level. From the above it can be seen that the accurate definition and measure of customers satisfaction that fit every situation is very difficult and in the words of Oliver (1997), "everyone knows what (satisfaction) is until asked to give a definition. Then it seems, nobody knows".

3.1.2 Empirical study on satisfaction and internet Banking

As noted by Sweeny and Morrison (2004) many innovations have recently modified the way banking activities are carried out owing to novel forms of distribution of financial services. Among such innovation is the use of online services in banking, usually referred to as internet banking. Online transaction according to Ho and Wu (1999) has five causal factors that affect customer satisfaction. Accordingly, these determinants are logistic support, technical characteristics, features of information, presentation of home page and product personality (Ho and Wu, 1999).

The use of internet banking has been rejected or ignored by most customers because of the perceived worried or problems associated with technology-based service delivery systems as most lack confidence that it can be used to addresses challenges that arises (Walker, 2002).

Taking the African continent as well as developing countries into consideration Wungwanitchakorn (2002) indicated that internet banking is still at its growth stage since fewer bank customers accustomed to the use of electronic channels to manage their financial affairs hence the low adoption internet banking. Additionally, Wungwanitchakorn (2002) indicated the dissatisfaction with the electronic or internet banking is because of the high failure rates of most of the innovative products and services introduced.

Additionally, Boateng and Molla (2006) indicated that the operational constraints of internet banking is associated with the customer location, the need to maintain customer satisfaction and the capabilities of the Bank's main software to act as an influential factors in motivating the decision to enter electronic banking services and consequently influencing the usage experience and thus affecting the level of satisfaction (Boateng and Molla, 2006).

As posited by Qureshi et al. (2008), the perceived satisfaction associated with internet banking has made some customers shift from traditional banking. The main argument for such shift is the perceived usefulness, perceived ease of use, security and privacy provided by internet banking.

Casaló et al. (2008) indicated that increasing levels of website usability might lead to increasing levels of consumer's affective and commitment to the website which would have a direct, positive and significant effect on its usage as well as on satisfaction. This will lead to an increase in the use of internet banking when it was introduced in the banking.

In an exploratory study by Malhotra and Singh (2010) for the Indian economy on internet banking, it was found out that the private and foreign Internet banks have performed well in offering a wider range and more advanced services of Internet banking in comparison with public sector banks. This led the private and foreign firms being able to satisfy their customers more than their local counterparts in the public sector.

3.1.3 Service Quality

Research on “quality” in the goods sector has been in existence long before it started in the service sector (Gummesson, 1991). All the same, the meaning of quality in the goods sector is inadequate for its application into the service sector due to the fundamental difference between the two terms (Parasuraman, Zeithaml, and Berry, 1985). Parasuraman, Zeithaml, and Berry (1985, pp. 42) posit that service quality is ‘performance based’ rather than object oriented, therefore “precise manufacturing specifications concerning uniform quality can rarely be set”. Tapiero (1996) also indicates that the definition of the term quality differ from author to author and it is usually based on the person making the definition, the measures applied and the context within which it is considered.

Service quality is an important contemporary issue in service management and marketing (Clottey and Collier, 2008). Banking is seen as a service that captures all the characteristics of service (Chakrabarty, 2006). Notwithstanding this, literatures sampled from the 1980’s and 1990’s have

examined service quality from two points of view. Researchers like Carman (1990), Garvin (1983), Parasuraman et al. (1985, 1988) have defined and measured service quality by looking at its attributes contrary to Bitner and Hubbert (1994), Iacobucci, Grayson, and Ostrom (1994), Oliver (1993), and Parasuraman, Zeithaml, and Berry (1994) who examined the application of services to conceptualize the relationship between service quality and customer satisfaction. Donnelly et al (1995) also defines service quality as the degree of excellence or superiority that an organization's product possesses and further argues that it is influenced by three service quality dimensions. These three dimensions are customer service, service knowledge and service infrastructure and technology.

Just like customer satisfaction, service quality is equally difficult to measure elusive and an abstract construct (Carman 1990). In support of the above statements, while Shostack (1977) looked at the intangibility of service that is rendered or experienced, Parasuraman et al. (1985) argues that service quality goes beyond outcomes and involves the delivery process. Based upon available literatures sampled, service quality shares some similarities with customer satisfaction, although the two are not the same (Cronin and Taylor, 1992; Parasuraman et al., 1985). This according to Clemes et al has led to the combination of service quality and customer satisfaction literature as the basis service quality theory (Clemes et al., 2007).

Service Quality and Internet Banking

Situating service quality and customer satisfaction within the internet banking domain introduces a whole perspective to finding answers to the research question of finding the major factors that affects customer satisfaction with internet banking in Ghana. The quality of service provided by the use of internet in the banking sector has generated a lot of debate over the years. Minjoon and Shao-han (2001) in their work defined three categories of Internet banking service quality which will be discussed under Attribute of Internet Banking in the next section and will form the basis of finding the major factors that affect customer satisfaction with internet banking. Ibrahim, Joseph and Ibeh (2006) noted that the challenging financial service environment increased the pressure on banks pushing them to adopt alternate channels in order to serve customers better. Research in the area of service quality has primarily focused on satisfying customer expectation. Importance Performance Analysis (IPA) uses the way customers perceive the importance of factors that affects quality as well as performance with the aim of improving performance. Broderick and Vanchirapornpuk (2002) on internet banking service quality noted that management implication is within the service interface and managing increased customer role. Adding to this, Broderick and Vanchirapornpuk (2003) noted

again that a feature of customer interaction is not confined to internet banking transactions but also involves many other interfaces working in consonance with each other to impact on customer perception.

3.1.4 Attribute of Internet Banking

Thulani et al (2009), Yibin (2003) and Diniz (1998) identify three functional level/kinds of internet banking that are currently employed in the market place and these are: Informational, Communicative and Transactional. In their research work title “key determinants of Internet banking service quality” Minjoon and Shao-han (2001) wrote extensively on the attribute of Internet banking service quality. Minjoon and Shao-han (2001) identified 3 theoretical categories of Internet banking service quality:

1. Banking service product quality
2. Customer banking service quality
3. Online systems quality

These three broad categories have seventeen attributes which are useful no note when assessing Internet banking service quality (Minjoon & Shaohan, 2001). Those attributes are presented in table 1.

Table 3.1: Attributes of Internet banking service quality

Banking service product quality (1 dimension)	
1. Product variety/diverse features	
Product range	
Product features	
Customer banking service quality (10 dimensions)	
2. Reliability	7. Access
Correct service	Availability to help
Keep service promise	ATM
Accurate records	Phone access
Keep promise as advertised	E-mail access

Account access when abroad

3. Responsiveness

Prompt service

Quickly solve problems

Convenient service

4. Competence

Ability to solve problems

Knowledge to answer questions

5. Courtesy

Address complaints friendly

Consistently courteous

6. Credibility

Confidence in the bank's service

Good reputation

8. Communication

Clear answer

Informing customer of important information

Availability of status of transactions

9. Understanding the customer

Personal attention

10. Collaboration

External collaboration

Internal collaboration

11. Continuous improvement

Continuous improvement on online systems

Continuous improvement on banking products

Continuous improvement on customer services

Online system quality (6 dimensions)

12. Contents

Information on products and services online

Other information that customer needs

3. Accuracy

Accurate online transactions

Errors in interface

15. Timeliness

Up-to-date information

16. Aesthetics

Attractiveness of the Web site

17. Security

Privacy

14. Ease of use

Compatibility

User friendly

Easy login

Speed of responses

Accessibility of the web site

Functions that customers need

Easy navigation

Source: Minjoon and Shao-han, 2001**3.1.5 Determinant of Online Service Quality in the banking sector**

The best service quality is very important in banking today. Johnston (1997) noted that to particularly appraise and advance customer perceived service quality, it's significant to identify the determinants of service quality. Inferring from available literature, six service quality dimensions has been identified for this study (Zethaml et al., 2002). These determinants used for this study are speed of delivery, ease of use, reliability, enjoyment, privacy and security and control over the service.

3.1.5.1 Speed of Delivery/ Responsiveness

Customers are particularly interested in the speed with which a service is offered or delivered (The Wall Street Journal, 1990b; Bateson, 1985; Silpakit and Fisk, 1985). In addition, most researches have indicated that in most cases, customers overrate the processing time of a service (Hornik, 1984). Base on the above Lovelock and Young (1979) posited that on certain occasion customers has a strong liking to carry out the service by themselves. This penchant is particularly justified by the willingness of the customers to up the speed of delivery. An additional justification could come from the suggestion of Maister (1985) who posited that unoccupied time is comprehended as longer than occupied time. Also, Maister (1985) resolved that slow service delivery has a negative effect on individuals "overall perceptions of the service quality". So, if individuals are expecting a rapid service delivery, it is probable that they will assess the service more positively (Dabholkar, 1996). Similarly, Langeard et al. (1981) discovered also that time was a significant factor for individuals in

using a new service or technology. And in the same way, Ledingham (1984) discovered that time savings were essential to individuals who use electronic banking and shopping (Dabholkar, 1996).

3.1.5.2 Reliability

It involves two concepts, dependability and uniformity in performance. Reliability also means honouring the commitments in areas such as billing accuracy, proper record maintenance and delivering the service within acceptable time limit (Saha and Zhao, 2005). It also “refers to the correct technical functioning of a self-services technology and the accuracy of service delivery” (Weijters et al., 2005, p. 9). Many authors have detected that reliability is significant in the determination of service quality (Bagozzi, 1990; Davis et al., 1992; Parasuraman et al., 1988; Zeithaml & Bitner, 2000). In addition, Van Gorder (1990) posited that reliability is the most crucial characteristics for customers in the evaluation of service quality. Zeithaml and Bitner (2000) advised that customers should be specifically influenced by the reliability of new technology because they might be associated with risks such as the technology malfunctioning (Shamdasani et al., 2008). Parasuraman et al. (1988) also considered reliability of the service as a important factor of service quality. Furthermore Van Gorder also discovered that reliability is the most crucial determinant of service quality (Van Gorder, 1990). Research on the use of computers or technologies which share similar characteristics also affect performance (or dependability) as it is an important attribute (Davis et al., 1989; Bagozzi, 1990; Davis et al., 1992). Finally, Dabholkar (1996) in his study revealed that reliability and accuracy are appropriate measure for assessing service that has to do with technology.

3.1.5.3 Ease of Use

Davis (1986) indicated that the Technology Acceptance Model (TAM) shows the power of ease of use in technology adoption. Specifically, Davis defined ease of use as “*the degree to which a person believes that using a particular service would be free of effort*” (Davis, 1989, p. 320). Langeard et al. (1981) also indicated that in choosing between different options of service delivery, customers take into account the effort involved in using the service. Later, Davis et al. (1989) and Bagozzi (1990) discovered that effort and complexity were related and included in the “ease of use” attribute. For both authors, ease of use is also a relevant attribute to individuals that use computer or similar technologies. Additionally, Guriting (2006) examined the determinant to use internet banking in

Malaysia Borneo. He found out that *“the perceived ease of use and perceived usefulness factors are considered to be fundamental in determining the acceptance and use of various information technologies”*

Dabholkar (1996) put forward that most persons are concerned about ease of use in order to save effort but also to reduce social risk. Szymanski and Hise (2000) posited that “convenience” is similar to the attribute “ease of use” (Dabholkar & Bagozzi, 2002). In the views of the authors, convenience looks to be an essential factor of satisfaction with internet banking.

3.1.5.4 Enjoyment

“Enjoyment refers to the extent to which the activity of using technology is perceived to provide reinforcement in its own right, apart from any performance consequences that may be anticipated” (Weijters et al., 2005, p. 8). Langeard et al. (1981) also considered this attributes and discovered that some individuals take pleasure in playing with machines hence have a like for self-service technologies. Davis et al. (1992) also discovered that individuals assess more positively the fun generated in using such services. Dabholkar (1996) discovered that customers are more likely to use a self-service technology if they think it would be pleasant (Shamdasani et al., 2008). Finally, Holbrook et al. (1984) showed the fun or enjoyment features of computer software, and Holbrook and Hirschman (1982) revealed that the newness characteristics encourage individuals to try new technologies.

3.1.5.5 Privacy and security

This is made up of the guarantee that the record showing banking activities and security of account information is not shared (Yang and Fang 2004; Saha and Zhao, 2005). Security is another essential determinant in the decision of consumers to use Internet banking. Strong issues on security are a common concern to individuals hence their unwillingness to use internet banking (Madu, 2002). The ABF (1997) study indicated that security concerns kept both consumers and bankers away from internet banking whilst the Walls report (1997) also indicated that unless security is improved, more households would be willing to conduct their transactions over the Internet. O’Connel (1997) study also indicated that in Australia security concerns were shown to be the major cause of the slow growth of Internet banking in the country whilst Polatoglu and Ekin (2001) also indicated that risk in

terms of financial, physical and social characteristics was the main cause of slow growth of internet banking usage.

Roboff and Charles (1998) in their study found out that most individuals had faint knowledge and understanding of online banking security risks though they know of the risks. A further finding shows that individuals are aware that their bank will protect their privacy hence their strong confidence in their bank but have a weak confidence in technology use for online banking. Trout (1999) stated in the findings that security issues are the major factor preventing customers from using the Internet for financial transactions. The study further concludes by indicating that customers do not see the benefit of using the internet for commerce and that an educational campaign would be needed to make new internet offering successfully (Trout, 1999). Finally, Cunningham (2003) indicated that one of the most important future challenges facing individuals or customers of a bank is the fear of higher risks associated with using the Web for banking and financial transaction.

3.1.5.6 Control

Control is defined as *“the amount of leverage that a customer feels he/she has over the process or outcome”* (Dabholkar, 1996, p. 35). Additionally, Langeard et al. (1981) discovered that control is important to individuals or customers who use self-service technologies such as internet banking. Furthermore, Bateson (1985) and Bowen (1986) suggested that persons like self-service technologies because of the feel of control than the monetary savings. Guiry (1992) indicated that control is important to individuals in any kinds of service technologies. In a qualitative research by Dabholkar (1996) to identify attributes of service quality, control was the only dimension not identified. Dabholkar (1996) indicated that the reason for this result is because it is difficult to articulate its attribute. Despite this, Dabholkar (1996) posited that control is expected to be essential for evaluating the quality of self-service technologies. Moreover, Glass and Singer (1972) and Langer (1975) indicated that if *“a person’s belief that he/she has (or will have) control, even in the absence of real control, will result in benefits similar to those associated with real”* (Dabholkar, 1996, p. 35). Furthering the argument, Bateson and Hui (1987) indicated that a rise in the control of service had a positive influence in the perception of service value to the customer (Dabholkar, 1996). Finally, Lee and Allaway (2002) exhibited that an enhanced perceived control significantly contribute to the adoption of the technology (Shamdasani et al., 2008).

Table 3.2: Attributes of self-service technologies quality and supporting literature

Attributes	Supporting literature
Speed of delivery	<ul style="list-style-type: none"> • Lovelock & Young (1979), • Maister (1985), • Langeard et al. (1981), • Ledingham (1984), • Dabholkar (1996).
Ease of use	<ul style="list-style-type: none"> • Davis (1986), • Langeard et al. (1981), • Davis et al. (1989), • Bagozzi (1990), • Szymanski and Hise (2000), • Dabholkar & Bagozzi (2002), • Dabholkar (1996), • Shamdasani et al. (2008).
Reliability	<ul style="list-style-type: none"> • Bagozzi (1990), • Davis et al. (1989, 1992), • Parasuraman et al. (1988), • Zeithaml & Bitner (2000), • Van Gorder (1990), • Evans and Brown (1988), • Shamdasani et al. (2008), • Dabholkar (1996).
Enjoyment	<ul style="list-style-type: none"> • Weijters et al. (2005), • Langeard et al. (1981), • Davis et al. (1992), • Dabholkar (1996), • Shamdasani et al. (2008), • Holbrook et al. (1984), • Holbrook and Hirschman (1982).
<ul style="list-style-type: none"> • Control 	<ul style="list-style-type: none"> • Langeard et al. (1981), • Bateson (1985), • Bowen (1986), • Guiry (1992), • Dabholkar (1996), • Shamdasani et al. (2008), • Lee and Allaway (2002), • Bateson and Hui (1987), • Glass and Singer (1972), • Langer (1975).

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Source: Adapted from Marine (2011)

3.1.6 Relationship between Service Quality and Customer Satisfaction

In the word of Spreng and Mackoy (1996) service quality and customer satisfaction are the two essential concepts that are at the crux of the marketing theory and practice. The importance of service quality and customer satisfaction is shown by the depth of theoretical and empirical studies on the two concepts in recent times.

According to Parasuraman et al (1985), there is an established strong relationship between quality of service and customer satisfaction since a perceived higher level of service quality results in increased customer satisfaction and a lower level of service quality results in a dissatisfied customer (Jain and Gupta, 2004 and Kumbhar 2011).

As also indicated by Parasuraman, Zeithaml and Berry (1988) in their empirical work and using the if clauses, they argue that “if the expected quality of service and actual perceived performance is equal or near equal the customers can be satisfy, while a negative discrepancy between perceptions and expectations or ‘performance-gap’ lead to customer dissatisfaction, and positive discrepancy leads to consumer delight”. The relationship between expectation, perceived service quality and customers satisfaction have been investigated in a number of researches (Zeithaml, et al, 1996).

As posited by Delvin (1995), the quality of services derived from a banking activity influences it usage hence since customers have less time to visiting a bank and therefore want a higher degree of convenience and accessibility. This attributes has led to customers being satisfied thus their adoption of Internet banking. Additionally, Delvin (1995) argues that perceived usefulness, ease of use, reliability, responsiveness, security, and continuous improvement (Liao and Cheung, 2008) has led to the adoption of internet banking. Liao and Cheung (2002) found in their study that individual expectations with reference to accuracy, security, network speed, user-friendliness, and user involvement and convenience were the most important quality attributes in the perceived usefulness of Internet-based e-retail banking.

3.1.7 Estimated Model

The basic objective of this study is to investigate the impact of internet banking service quality on customer satisfaction. The research model for this research is given in Figure 1. The independent variables taken into account in the explanation of service quality are the six identified characteristics. We hypothesize that all those attributes have a positive impact on the perceived quality of the service.

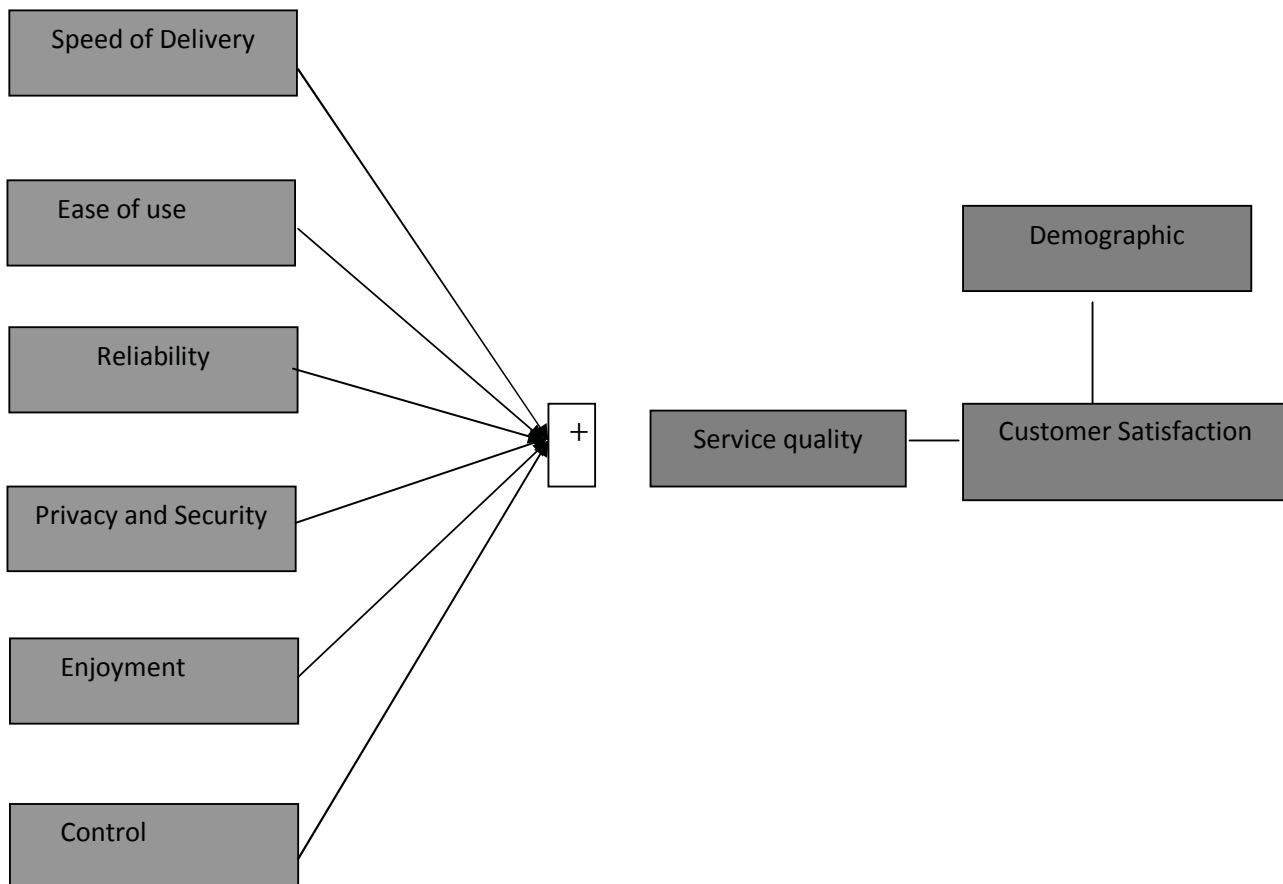


Figure 1: Structured Model

From the above model two multiple regression models are estimated. The models that are estimated are presented below:

(1) Service quality =

$$\beta_0 + \beta_1 \text{speed of delivery} + \beta_2 \text{ease of use} + \beta_3 \text{reliability} + \beta_4 \text{enjoyment} \\ + \beta_5 \text{privacy} + \beta_6 \text{control} + \varepsilon_t$$

(2) Satisfaction = $\alpha_0 + \alpha_1 \text{service quality} + \alpha_2 \text{demographic}$

3.2 Research Gap

The literature review indicates that several researches have been conducted on banking but very limited researches have been conducted on internet banking especially linking service quality to customer satisfaction with internet banking. In Ghana, there are no direct researches in the area of service quality and customer satisfaction with internet banking. This research therefore seeks to fill the research gap created in academia.

CHAPTER FOUR

RESEARCH METHODOLOGY

4.1 Introduction

This chapter outlines the research design and the research methodology used to answer the research questions and test the two hypotheses regarding service quality measurements leading to customer satisfaction in internet banking. The chapter also discusses how the sample was derived, the sample size, the research instrument, data collection procedures, the data analysis tools and the ethical considerations.

4.2 Research Purpose

Usually researches are grouped into three (Yin, 2003) base on the purpose of the research or the research problems and objectives. These three categorisations are exploratory, descriptive and explanatory. Notwithstanding these categorizations a given research study can have more than one of these purposes (Saunders et al, 2000; Babbie, 2004). From the research problems, questions and objectives this study will mainly make use of descriptive and explorative research. Descriptive research is used to find information about the present status of a phenomenon to describe “what exist” with respect to variables or conditions in a situation (Yin, 2003). Additionally, it offers the number of times an event occurs, or the frequency and also helps in statistical calculation such as determining the average of occurrences or central tendencies (Yin, 1994). A key limitation to descriptive research is that it does not lend itself the calculation of causal relationship. This is where explanatory research comes in. Explanatory research helps establish the relationship between independent and dependents variables. It is used when there are no clear understanding about the type of models to use and in what quantities as well as in what relations (Zikmund, 1994).

4.3 Research Approach

In research there are two basic approaches, these are qualitative and quantitative. The quantitative research approach makes use of statistics and numbers which are mostly presented in figures whiles qualitative approach relies on describing an event with the use of words. According to Yin (1994), a research approach chosen should be done according to the research questions in that particular

situation since each approach has its own merit and demerit and how empirical data is collected and analysed. Additionally, the degree of focus on either contemporary or historical event as well as the type of questions asked should be the main basis on which a research approach should be chosen. In conducting this study a comparison of both quantitative and qualitative research approaches was made and the quantitative research approach was used for the study.

4.4 Research Design

Sekaran (2003) indicated that after identifying the variables in developing the conceptual framework, the subsequent step is to design the research in a way that the data can be collected and analyzed. According to Malholtra (2004), research design is a framework or blueprint for conducting marketing research project. It provides details of the necessary procedures for obtaining the information needed to structure and to solve marketing research problems. This study will make use of a descriptive research design. The use of this design is to enable the researcher ascertain and describe the characteristics of the variables of interest (Sekaran, 2003).

4.5 Sampling techniques and Sample size

Internet banking is at an evolutionary stage finding person who use such service was quiet difficult hence convenience sampling method was therefore used for data collection. Convenience sampling is a non-probability sampling technique where subjects are selected because of their convenient accessibility and proximity to the researcher (Black, 1999). Convenience sampling is very easy to carry out and requires relative little cost and time to carry out. The sample size used for this study is one hundred and ten respondents who were banking customers of five (5) banks in Ghana. This sample size meant that 22 customers were conveniently selected from each of the five (5) banks. The five (5) used for the study are Ecobank Ghana Limited, Barclays Bank Ghana Limited, Standard Chartered, Guarantee Trust Bank and Ghana Commercial Bank.

4.6 Research Instrument

The main research instrument used for this study was the questionnaire. The questionnaire used for the study was divided broadly into two sections. These are the demographic section and the characteristics of service quality section. Under the demographic section variables such as age of the respondent, gender, income level, marital status and highest educational level was asked. The section

on service quality was also sub-divided into six sub section. The six subsections were also group into the various dimension of service quality outlined in the conceptual framework. These subsections are speed of delivery, ease of use, reliability, control, enjoyment and privacy and control. The six subsections used a five point Likert Scale where respondents were asked to indicate the extent to which they agree/disagree with various statements. The Five-Point Likert's scale having the ratings of "strongly disagree" (1) and "strongly agree" (5) were used.

4.7 Data Collection Procedures

A self-administered, structured questionnaire (Appendix A) was used to gather data from respondents to the study (Cooper and Schindler 2006; Malhotra and Birks, 2007). The researcher first sought permission from the Branch Manager of all the five (5) banks used for the study. The permission was to allow their premises to be used for this study. Each respondent to the study was made to fill a questionnaire after a brief introduction and objective of the study has been explained. The research questionnaires were distributed in front of the five banks during business hours.

4.8 Pilot study

A pilot test was conducted using thirty internet banking customers. These customers were from three banks, that is the Ghana Commercial bank, UBA and Guarantee Trust (GT) bank. Respondents to the pilot test were asked to recognize any ambiguity or potential source of error either in the format or wordings of the questions. Additionally, research Assistants from the Institute of Statistical Social and Economic research (ISSER) then appraised all the items for their face validity and reliability. The Instrument was later refined by altering a few items based on their feedback.

4.9 Data analysis

The data gathered from the field which through the questionnaires administered were recorded and coded into Statistical Package for Social Science (SPSS) software version 16. In analysing the data gathered from the field (questionnaire), frequencies, means, and reliability were primarily calculated using SPSS, and content validity of the questionnaire was established by reviewing existing literature. The data was analysed using two statistical techniques. These techniques are multiple regression analysis, and analysis of variance. The use of multiple regression analysis was to help test

the conceptual framework or model, while the analysis of variance was used to help compare the results with the customers' demographic characteristics.

4.10 Reliability Analysis (Cronbach's Alpha)

The reliability analysis is used to establish both the consistency and stability of the research instrument. Consistency shows how well the research instrument measures the model and the conceptual framework. Cronbach's alpha is a coefficient that indicates how well the items in a set are positively correlated to one another. A test is considered reliable if the same results are gotten repeatedly. Cronbach's alpha is computed in terms of the average intercorrelations among the items measuring the concept. The closer the Cronbach's alpha is to 1, the higher the internal consistency reliability of the research instrument.

4.11 Validity

Validity as used in research refers to the degree to which the outcome of a study accurately reflects the variable which is being measured or which the researcher is attempting to measure. According to Eriksson and Wiedersheim-Paul (1997, p. 38), validity is defined as: "The ability of a scale or measuring instrument to measure what is intended to be measured". Validity is therefore concerned with the success rate at which the study measures what the research sets out to measure. There are various types of validity (Hardy and Byrman, 2004) used in research studies but for the purpose of this study the face validity was used. This is because the study has been proven through thorough pre-testing, rewording and re-evaluation of the instrument used (Hardy and Byrman, 2004).

4.12 Ethical Consideration

The study was conducted using some ethical considerations. Each respondent to the study was first informed about the purpose and objective of the study and the questionnaires to be administered. After explaining the objective of the study, respondents were assured of anonymity and confidentiality before being administered with the questionnaire.

CHAPTER FIVE

ANALYSIS OF RESULTS AND DISCUSSION

5.0 Introduction

This chapter involves the analysis of the data gathered from the questionnaires administered to the respondents to the study. The respondents of the study are customers of the five (5) banks selected. The chapter begins with the demographic profile of respondents as well as the measure of the various service quality measures and the testing of the various hypotheses and model used for the study. To help with the analysis, bar charts, pie charts, tables, graphs showing trends and percentages were used to present data.

5.1 Data Analysis

In all one hundred and ten (110) questionnaires were administered to five banks. In each bank twenty-two (22) customers were conveniently selected from each of the five (5) banks. Table 5.1 shows a summary of the questionnaires administered to each category of respondent and the response rate.

Table 5.1: Percentage Distribution of Respondents

	Administered	Returned/ Completed	Percentage %
Ghana Commercial Bank	22	20	90.9
Ecobank Ghana Limited	22	18	81.8
Barclay Ghana Limited	22	21	95.5
Standard Chartered	22	19	86.4
Guarantee Trust Bank	22	17	77.3
Total	110	95	86.4

Source: Field Study

The above table indicates that 95 out of the 110 questionnaires were successfully completed and returned. This means that 86.4% of the respondents successfully completed and returned the questionnaire. This percentage was deemed adequate for the analysis to continue.

5.2 Demographic Profile

The categorisation of the 95 respondents showed that, 49 representing 51.6% were males and 46 representing 48.4% were females. The age statistics indicated that the least age groups were those above 69 which was represented 2.1% of the respondents sampled for the study. Additionally, the highest age groups from the study were those between 30-49 years. These age groups were made up of 59 respondents which represented 62.1% of the respondents. The highest age group was followed by those between 16-29 years and 50-69 years old. This age group represents 22.1% and 13.7% of the respondents respectively. Furthermore, the marital status of respondents shows that 27 have never been married, 52 were married, 10 were separated and 6 were widow(er). Percentage wise 28.4% were never married, 54.7% were married, 10.5% were separated and 6.3% were widow(er). In terms of education, none of the respondent was without any formal education. The most represented educational levels were those with a Bachelor degree which was made up of 59 respondents or 62.1% of the respondents. This was followed by 19 respondents representing 20% who were with a senior secondary school certificate and 15 respondents representing 15.8% who were with a Masters degree. The least represented educational level were those with basic education who were 2 in number or 2.1% of the respondents. As indicated in figure 2 below, 23 of the respondents or 24.2% of the respondents earned between GHc 251-500; 22 or 23.2% earned between GHc501-GHc750; 15 respondents or 15.8% earned between GHc751-1000 and GHc101-GHc250 respectively; 11 respondents or 11.6% of the respondents earned less GHc100; and 9 respondents or 9.5% earned above GHc1001.

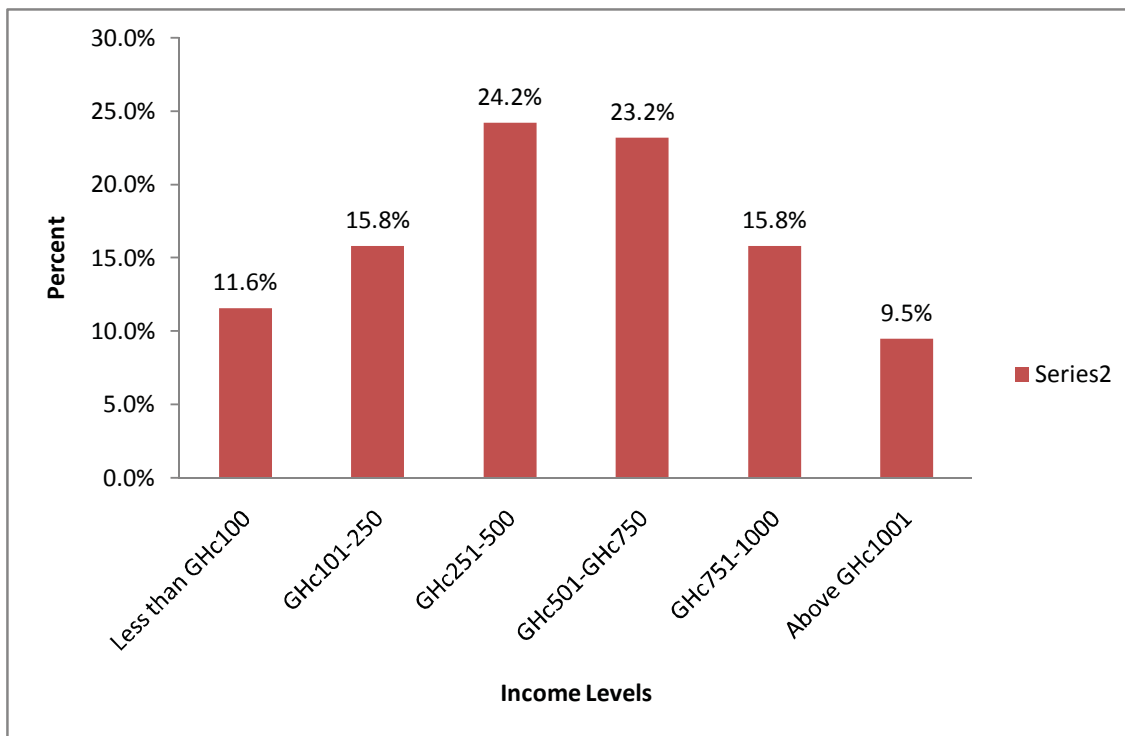


Figure 2: Income level of respondents

In terms of length of usage of the internet banking facility, 55.8% (53 respondents) indicated that they have been using the facility for the between 1-3 years, this was followed by 25.3% (24 respondents) who indicated that they have been using the facility for less than a year. In addition to the above, 12.6% (12 respondents) indicated that they have been using internet banking for the past 4-6 years and 6.3% (6 respondents) indicated that they been using the facility for more than 6 years. Finally, 31 (32.6%) of the respondents indicated that they have been using internet banking thrice a month; 25 (26.3%) indicated that they have been using internet banking twice a month; 21 (22.1%) have using internet banking once in a month; 15 (15.8%) have been using internet banking four times in a month and only 3 (3.2%) have been using internet banking five or more times in a month. Appendix B also shows all details of the demographic profile of the respondent to the study.

5.3 Cronbach's Alpha Test of Reliability

As indicated in chapter four, to ensure that there is internal reliability of the model used, the Cronbach's Alpha Test of Reliability was performed. The various dimensions of services quality

used for this study were tested. The results of the test show that each dimension was internally consistent. The table below shows the results of the test performed.

Table 5.2 Cronbach's Alpha Scores

Dimensions	Cronbach's Alpha Score (α)	Average Variance Extracted (AVE)
Speed of Delivery	0.80	0.54
Ease of use	0.78	0.48
Reliability	0.62	0.36
Pleasure	0.69	0.41
Control	0.63	0.38
Privacy	0.62	0.36
Satisfaction	0.56	0.30

The Cronbach Alpha score ranges from 0 to 1. A Cronbach Alpha score greater than 0.7 show high internal reliability of the scaled item (Nunnally and Bernstein, 1994). In spite of this argument Garson (2002) indicated that the cut off point for the Cronbach Alpha should be between 0.8 and 0.6 (Garson, 2002). Additionally, the Cronbach Alpha increases when the number of items in the scale is increased which means that the Cronbach Alpha score decreased (Garson, 2002). From table 5.2 above speed of delivery and ease of use were both above 0.7, meaning that they are highly reliable. Additionally, reliability, pleasure, privacy and control were also found to be above the 0.60 score recommended by Garson (2002). The test done also shows that decreasing any of the dimensions that have two or more variable lead to a decrease in the Cronbach Alpha score.

Additionally, the value of AVE of speed of delivery was more than 0.5 for only one of the dimensions hence fulfilled the standard prescribed by researchers like Pavlou and Gefen (2004) and Rodriguez et al., (2007). The rest of the dimension of service quality met the minimum recommendation of between 0.30 and 0.40 bench mark set by Diamantopoulos and Siguaw (2000).

5.3 Hypothesis Testing

This part of the study tested the various hypotheses of this study. In testing the hypotheses the Pearson correlation was extensively used. Additionally the model for this study was tested using a

simple linear regression model. Most of the variables tested were presented using tables and charts. The use of table and charts enabled for a clearer understanding and also gave it a pictorial view.

5.3.1 Service Quality positively Correlate Customer Satisfaction with Internet Banking

The Spearman correlation was used to test the correlation between service quality and customer satisfaction with internet banking. The results of the Spearman correlation is presented in table 5.3 below

Table 5.3: Spearman Correlation between Service Quality Dimensions and Customer Satisfaction

	Overall Satisfaction (<i>r</i>)	Significance (2-tailed)
1. Overall satisfaction	1.000	-
2. Speed of delivery	0.519**	0.00012
3. Ease of use	0.547**	0.00006
4. Reliability	0.573**	0.00032
5. Pleasure	0.208*	0.05
6. Control	0.324**	0.00007
7. Privacy	0.626**	0.00001

Inferring from the SPSS version 15.0 manual the use of multiple correlation test is important if the researchers was interested in assessing the relation between multiple independent variable and one dependent variable. To carry out the multiple regression the spearman's rho non-parametric correlation test was performed. The result of the Spearman ranked hypothesis showed that all the dimension of service quality used for this study was significance with the overall satisfaction. The result further indicated that apart from pleasure or enjoyment which was significant at 5% significance level all the other dimensions were significant at 1% significant level. Therefore, the null hypothesis is accepted and the alternative hypothesis is rejected.

5.3.2 The six dimensions of service quality (*speed of delivery, reliability, ease of use, enjoyment, control and privacy*) lead to customer satisfaction with internet banking

The table below gives the results of the regression ran to assess the impact of service quality dimension on customer satisfaction with internet banking. The regression was estimated using customer satisfaction as the dependents variable whilst speed of delivery, reliability, ease of use, enjoyment, control and privacy were independent variables.

Table 5.4: Regression Results of the model estimated

Variable	t-statistics	Co-efficient (β)	Mean of subsample	SE
Speed of Delivery	4.36	0.19	0.190	0.04
Ease of use	0.55	0.02	0.04	0.03
Reliability	3.04	0.15	0.16	0.05
Pleasure	1.42	0.07	0.08	0.06
Control	4.33	0.25	0.25	0.06
Privacy	11.67	0.42	0.42	0.04

The R^2 value for the model of Customer Satisfaction with internet banking was 0.66 which indicates that the service quality dimension variables (*speed of delivery, reliability, ease of use, enjoyment, control and privacy*) explained or accounted for 66% of the variation in the dependent variable.

The statistical testing of the conceptual model as presented in the table above shows the general acceptance of the hypothesis that service quality (*speed of delivery, reliability, ease of use, enjoyment, control and privacy*) lead to customer satisfaction with internet banking. The result shows that the first variable “speed of delivery” has a positive effect on Customer Satisfaction. The t-statistic was 4.36 and the coefficient was 0.19 and this relationship is significant at 5% level.

The second dimension of service quality (ease of use) had a positive effect on Customer Satisfaction. The t-statistic for *ease of use* was 0.55 while the regression coefficient was 0.02 and this relationship was significant at 1% significance level. The second hypothesis also is true for the estimated mode.

Additionally, there was a positive effect of Reliability on Customer Satisfaction at 0.05 significance level. This level was achieved with a t-statistic of 3.04 and a regression coefficient of 0.15. This

finding also support the conceptual model estimated and the hypothesis stated in chapter one of this study. Further supporting the model is Pleasure another dimension of service quality. There was a positive effect of pleasure on Customer Satisfaction. The value of the statistics shows that the t-statistic as 1.42 and the coefficient was 0.07. This relationship was significant at 5% significance level.

The study also shows a positive effect of the Control variable on Customer Satisfaction with a regression coefficient of 0.25 and a t-statistic of 4.33. The variable was also significant at 5% significant level.

Finally, Privacy was also significant at 1% or 0.01 and recorded a positive effect on Customer Satisfaction with a t-statistic of 11.69 and coefficient of 0.42. This means that the hypothesis that service quality (*speed of delivery, reliability, ease of use, enjoyment, control and privacy*) lead to customer satisfaction with internet banking should be accepted and not rejected.

5.3.3 Overall customer satisfaction in internet banking services does not differ base on demographic characteristics.

As indicated in the literature review most literature show that gender, age, education and level of income of individual's have an effect on their satisfaction with internet banking services. The study therefore tested the hypothesis to examine the impact of the demographics and customer satisfaction with internet banking services using the the *Kruskal-Wallis Chi Square tests (non parametric test)*. The result of the Kruskal-Wallis Chi Square tests is presented in table 5.5 below.

Table 5.5 Demographics and Overall Customer Satisfaction

	N	<i>calculated value χ^2</i>	<i>Table value χ^2</i>	df	sign.
1. Gender	95	7.15	12.59	6	0.307
2. Age	95	12.24	9.48	4	0.016
3. Education	95	14.17	9.49	4	0.015
4. Level of Income	95	0.22	3.84	1	0.462

Asymptotic significances are displayed. The significance level is .05.

The Kruskal-Wallis test was performed using overall satisfaction as the dependent variable and gender, age, education and income level as independent variables. The Kruskal-Wallis test indicates that large table value of χ^2 (Chi-Square) lead to rejection of the null hypothesis whilst small or less table value lead to the acceptance of the null hypotheses (Kruskal-Wallis, 1952). Chi-Square values of level of income shows that the calculated value for Chi-square (χ^2) was 0.22, with a degree of freedom (df) being equal to one (1) and significance level (sig) of 0.462 or 46.2%. This therefore led to the acceptance of the null hypothesis that level of income led to the overall satisfaction of with internet banking.

Additionally, gender had a calculated χ^2 of 7.15, a degree of freedom of 6 and was significant at 0.307 or 30.7%. The finding also led to the acceptance of the null hypothesis that gender significantly influences the level of customer satisfaction with internet banking.

The independent variable Age has a Chi-Square value of 12.24, a degree of freedom of 4 and a significance level of 0.016 or 1.6%. This led to the rejection of the null hypothesis that age does not influence the satisfaction level of customers in internet banking. Finally, in terms of education, the independent variable had a Chi-Square of (χ^2) of 14.165, the degree of freedom (df) was 4 and it had a significant level of 0.015 or 1.5%. This means that the null hypothesis that education does not lead to the customer satisfaction with internet banking should be rejected.

5.4 Discussion

The finding of this study shows that there was a positive significant relationship between all the variables of service quality and overall customer satisfaction. The finding for the sampled banks in Ghana confirms the empirical work of Parasuraman et al (1985). The reason for such findings was

because customers of the various banks viewed internet banking as a mean of avoiding long queues at the banking hall and a solution to driving through the numerous traffic of the city of Accra just to move to a commercial bank for a banking transaction. The issue of time as discussed in the literature by Ledingham (1984) shows that time savings were essential to individuals who used electronic banking and shopping. .

Additionally, the finding of this study goes in line with that of by Parasuraman, Zeithaml and Berry (1988). In their empirical work they argue that “if the expected quality of service and actual perceived performance is equal or near equal the customers can be satisfy, while a negative discrepancy between perceptions and expectations or ‘performance-gap’ lead to customer dissatisfaction, and positive discrepancy leads to consumer delight”. This study found that customer of the various bank sampled viewed service quality to be equal to performance hence they were very satisfied with the services offered. This led to the results recorded in the study.

Furthering the discussion, the regression result of this study showed a positive relationship between all the service quality variable and customer satisfaction. This confirms the model used for the study. The model indicates that there is a positive relationship between satisfaction and service quality. The degree of significance varied from variable to variable. The results show that with the exception of control and pleasure, all the other variables were significant at 5% significance level. The reason for this result was because customers of internet banking were of the indicated that they did not have control over internet banking activities. The control findings of this study runs contrarily to that of Bateson (1985) and Bowen (1986) who indicated that persons like self-service technologies because of the feel of control than the monetary savings. Since customers or individuals were thought of using the services because of other variables or dimension of service quality. The findings does not come as a surprise as authors like Dabholkar (1996) have indicated the perceive difficulty of defining the control variable makes it quiet troublesome to articulate its attribute hence its findings.

The issue of pleasure or enjoyment is also very important since it recorded an insignificant result. A further probe into this findings shows that customers were not interested in the fun aspect of internet banking but rather were interested in the utility that comes with internet baking hence the recorded results. This finding contradicts the findings by Davis et al. (1992) who stated that individuals assess more positively the fun generated by internet banking.

CHAPTER SIX

CONCLUSION AND RECOMMENDATIONS

6.1 Introduction

Chapter six which is the final chapter is the conclusion and recommendation of this study. The chapter provides a summary and implication of the main findings of this study as presented in chapter five. This is then followed by the limitation of the findings of this study to the bank, customers and the banking industry in general. The chapter ends with the recommendation for the various institutions of concerns and finally area of future research.

6.2 Summary and Implications of main findings of the study

The main findings of this study can be summarised into three main themes. These themes are the testing of the hypothesis, the analysis of the demographic data and the reliability test. The demographic analysis shows that more males use the internet banking services than their female counterparts. Additionally, when it comes to age group, the modal age of users of internet users of the banks in Ghana was 30-49 year or in their youthful age. The marital status of most of the users of internet banking activities in Ghana were married whilst educationally, majority hold a Bachelor degree from various fields of studies. In addition to the above, the most earned income of users of internet banking activities was between GHc 500 to GHc750. Most users of internet banking have been using the services for between 1-3 years and majority use the services thrice in a month.

In Cronbach Alpha test for the reliability of the data shows that ease of use and speed of delivery met the Nunnally and Bernstein's criteria of 0.7 whilst the remaining dimensions of services quality fulfilled the test prescribe by Garson (2002).

The study tested three major hypotheses. The major finding of the first hypothesis shows that all the service quality determinant customer satisfaction was positively correlated to the customer satisfaction and was significant at 0.01 significant level. The second hypothesis shows that speed of delivery, ease of use, privacy or security and reliability of services were positively related, significant at 5% and led to customer satisfaction. The third and finally hypothesis shows that age and educational level were positively related to customer satisfaction and were significant at 5%.

These two (2) demographic factors therefore influence the overall customer satisfaction of users of internet banking in Ghana.

6.3.0 What are the major factors affecting customers' satisfaction with internet banking in Ghana?

Several factors influence customer satisfaction with internet banking worldwide, but the case of Ghana is quite different. The finding of the study shows that demographic variables influenced customer satisfaction with the various internet-banking services of the banks visited. The age of the respondents influences their satisfaction with the internet banking services provided by the various banks visited. Age was significant because; the young or the youth are much more interested in using technology for their banking services. This is because the youth by their nature are usually abreast with modern technology and especially the use of internet in the banking industry. Additionally, the age range of the respondents to the study shows that majority of the respondents interviewed or administered with the questionnaire were youthful and preferred the use of the internet for banking purposes rather than the elderly who were mostly not abreast with technology most especially the internet facilities provided by the various banks concerned. In addition to the above, the educational level of respondents influences their choice of product offered by the banks involved in the study. That was the finding of the study as education of the respondents influenced their adoption of internet banking. Literacy was a major factor, since for an individual to use the internet facilities provided by their banks there was a need for patrons to understand what was written. Since all respondents or patrons of this study are literate, internet banking played a major role in their usage of internet banking services.

6.3.1 The effect of service quality on customer satisfaction through the use of internet banking in Ghana; Relevant Findings:

The research question was whether the quality of the services offered by the banks which participated in the study affects the satisfaction customers derived from internet banking? The speed of delivery, reliability, ease of use, enjoyment, control and privacy all influence the satisfaction customers have with the internet banking services provided by the various banks visited. Once the speed of delivery is very fast or is gone in good time. Unlike the traditional banking practiced in Ghana where customers had to walk to the bank for every transaction, internet banking afforded the opportunity to offer quick banking activities without necessarily walking into the

banking hall. Thus, the speed of delivery in the banking sector is faster compared to the traditional banking activities. Additionally, unlike the traditional banking services where customers do not have the opportunity to walk into the banking hall on Saturdays and Sunday; internet banking is more reliable since clients can perform transactions without necessarily going to the banking hall. The services offered by the banks, which use internet banking, have reliable banking services than those that do not have these services.

Ease of using banking services was one area, which was very important to the respondents of the study. Internet banking users who were participants to the study were interested in using the services because it was very easy to use. Respondents can use it anywhere and at any time since they do not have to walk into the banking hall. Banking services can be done anywhere. The only challenge is that most of the users of internet banking services in Ghana are literate who are abreast with technology and the usage of the internet. This implies that those who are illiterate cannot use internet-banking services for their daily activities. The illiterate could not easily use internet-banking services hence they were satisfied with the services provided by their bank. The key concern was the control and privacy. Although the customers of the various banks sampled were quite satisfied with the control and privacy of the banking services, some were very skeptical with the internet banking services. The issue of safety of their internet-banking password was the ease to which some unauthorized person can use their password systems without them knowing. From all indicators, all participants of the study are very happy and satisfied with the internet-banking services provided by their bank.

6.4 Limitations of study

The main limitation encountered in the study was inadequate sample. The sample used for the study was not sufficient hence making generalisation of the findings very difficult to make. To make a healthy generalisation from this study, it is important to calculate an appropriate sample size which is representative of this study and which is adequate enough to make healthy generalisation. Furthermore, instead of using customers of all the banks sampled only a selected few were used for this study, this can affect the results of the study. Another limitation faced by the researcher was the time and resource constraint. These two constraints affected the way in which the research was conducted. The time constraints affected the choosing of the sample size as well as the quality and

quantity of the research work. Notwithstanding, the limitations presented above the research has contributed tremendously on the literature on customers sat we believe our research has contributed to the existing literature on customer satisfaction with the service quality of internet banking some selected financial institutions in Ghana. A crucial limitation of this study is the reluctant and refusal of some sampled respondents to respond to the questionnaires administered to them. The final limitation to this study is that most of the respondents have either little or no knowledge on the internet banking service and how such service worked.

6.5 Recommendation of the study

This study has important implication for both academics and Managers of the various banks visited. Given the insignificant valued obtained on the control and enjoyment of the use of internet banking services of the various banks it is essentially recommended that banks take a critical look at those variables since they can affect the profitability and the switching intent of the customers.

It is also recommended that banks invest in understanding the needs of customers of internet banking and try as much as possible to meet their various needs associated with the services provided by internet banking.

There is the need to educate majority of the banking population on internet banking. This was because most of the customers administered with the questionnaires rejected or refused to answer the questionnaire because they did not know of the services nor had minimal education of internet banking services.

6.6 Area for future research

Although this study has been expensive as possible there is the need the other dimensions of services quality associated with internet banking and assess its impact of customer satisfaction. This will enables strength the generalization of the findings to the Ghanaian economy. This study was limited to customer satisfaction and service quality, but there is a need for further researchers to examine the effect of customer satisfaction or dissatisfaction on the switching cost of banks offering internet banking or the switching intent of customers of these banks. Finally, further studies should research into the relationship between the heterogeneity of the various customers of internet banking and issues of electronic payment such as funds transfer, security and bills payment.

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APPENDICE

APPENDIX A

Research Questionnaire

I am an MBA student from Blekinge Institute of Technology, Sweden. As part of my studies, I am carrying out a research on the Impact of internet banking service quality on customer satisfaction in the banking sector of Ghana. I will be very happy if you will please answer the following questions **as candidly as you can**. It takes only 10-15 minutes. Please be assured that the responses you give are for academic purposes only.

Richard Selassie Bebli

Section A: Demographic Data

1. **Age:** a. 16-29 () b. 30-49 () c. 50-69 () d. above 69 years ()
2. **Gender** a. Male () b. Female ()
3. **Marital Status** a. Never Married () b. Married () c. Separated () d. Widow(er) ()
4. **Education Level** a. No formal education () b. Basic Education () c. Secondary () d. Bachelor () e. Masters ()
5. **Income Level** a. less than GHc100 () b. GHc 101-250 () c. GHc 251-500 () d. GHc 501-GHc 750 () e. GHc 751-GHc 1000 () f. Above GHc 1000 ()
6. **Length of internet banking usage** a. Less than a year () b. between 1-3 years () c. between 4-6 years () d. More than 6 years ()
7. **Frequency of internet banking transaction** a. once per month () b. twice per month () c. thrice per month () d. four times per month () e. 5 times per month () f. More than 5 times per month ()

Speed of Delivery

Comment on a scale from 1 (strongly disagree) to 5 (Strongly" agree)

8. The use of Internet banking makes my transactions very fast 1 () 2 () 3 () 4 () 5 ()
9. The use of "Internet banking time saving 1 () 2 () 3 () 4 () 5 ()

Ease of use

Comment on a scale from 1 (strongly disagree) to 5 (Strongly" agree)

10. Internet banking is complicated to use 1 () 2 () 3 () 4 () 5 ()
11. The wording of Internet banking unclear 1 () 2 () 3 () 4 () 5 ()
12. Internet banking does not demands a lot of effort 1 () 2 () 3 () 4 () 5 ()

Reliability

Comment on a scale from 1 (strongly disagree) to 5 (Strongly" agree)

13. The use of Internet banking can lead to errors in transactions 1 () 2 () 3 () 4 () 5 ()
14. The use of internet banking is not reliable 1 () 2 () 3 () 4 () 5 ()

Pleasure

Comment on a scale from 1 (strongly disagree) to 5 (Strongly" agree)

15. Internet banking is nice to use 1 () 2 () 3 () 4 () 5 ()
16. The use of internet banking is fun 1 () 2 () 3 () 4 () 5 ()
17. Internet banking is interesting to use 1 () 2 () 3 () 4 () 5 ()

Control

Comment on a scale from 1 (strongly disagree) to 5 (Strongly" agree)

18. The use of Internet banking means transaction will be made as I wish 1 () 2 () 3 ()
4 () 5 ()
19. The use of Internet banking gives me control over my transaction 1 () 2 () 3 ()
4 () 5 ()

Quality of service

Comment on a scale from 1 (strongly disagree) to 5 (Strongly" agree)

20. The level of quality of service I receive through the Internet banking is high 1 () 2 ()
3 () 4 () 5 ()
21. The quality of service I receive through the Internet banking is excellent 1 () 2 () 3
() 4 () 5 ()

Satisfaction

22. My expectations before the use of Internet banking have been met with this current
experience 1 () 2 () 3 () 4 () 5 ()
23. I find the internet banking application quite pleasant 1 () 2 () 3 () 4 () 5 ()
24. I am completely satisfied with the internet banking application 1 () 2 () 3 () 4 ()
5 ()

APPENDIX B

Summary of the demographic variables

AGE	Frequency	Percent
16-29	21	22.1%
30-49	59	62.1%
50-69	13	13.7%
Above 69	2	2.1%
Total	95	100.0%
Gender		
Male	49	51.6%
Female	46	48.4%
Total	95	100.0%
Marital Status		
Never married	27	28.4%
Married	52	54.7%
Separate	10	10.5%
Widow (er)	6	6.3%
Total	95	100.0%
Educational level		
No formal education	0	0.0%
Basic education	2	2.1%
Secondary	19	20.0%
Bachelor	59	62.1%
Masters	15	15.8%
	95	100.0%
Income Level		
Less than GHc100	11	11.6%
GHc101-250	15	15.8%
GHc251-500	23	24.2%
GHc501-GHc750	22	23.2%
GHc751-1000	15	15.8%
Above GHc1001	9	9.5%
Total	95	100.0%

APPENDIX C

Length of using internet banking and transaction per month

Length of internet banking years	Frequency	Percent
Less than a year	24	25.3%
1-3 years	53	55.8%
4-6 years	12	12.6%
More than 6 years	6	6.3%
Total	95	100.0%

Transaction per month		
once	21	22.1%
Twice	25	26.3%
thrice	31	32.6%
Four	15	15.8%
five	3	3.2%
Total	95	100.0%
