

# “Internet banking: an initial look at Ghanaian Bank Consumer Perceptions”

<b>AUTHORS</b>	Atsede Woldie Robert Hinson Habib Iddrisu Richard Boateng
<b>ARTICLE INFO</b>	Atsede Woldie, Robert Hinson, Habib Iddrisu and Richard Boateng (2008). Internet banking: an initial look at Ghanaian Bank Consumer Perceptions. <i>Banks and Bank Systems</i> , 3(3)
<b>RELEASED ON</b>	Thursday, 27 November 2008
<b>JOURNAL</b>	"Banks and Bank Systems"
<b>FOUNDER</b>	LLC “Consulting Publishing Company “Business Perspectives”



NUMBER OF REFERENCES

0



NUMBER OF FIGURES

0



NUMBER OF TABLES

0

© The author(s) 2025. This publication is an open access article.

Atsede Woldie (United Kingdom), Robert Hinson (Ghana), Habib Iddrisu (United Kingdom), Richard Boateng (United Kingdom)

## Internet banking: an initial look at Ghanaian bank consumer perceptions

### Abstract

Internet banking is a tool in the service delivery arsenal for banks. This study focuses on client-bank relationship and on how Internet adoption may improve the qualitative relationship between banks and firms in Ghana and the business they serve. The study adopted a triangulation approach in meeting its objectives. A sample of 180 companies was sampled from the manufacturing, commerce, and services sectors of the economy. The findings of the study were mainly reported by means of descriptive statistics. The research findings indicate that Internet banking services are at their infant stage. Of the respondents, 68% had heard about Internet banking while 33% have never heard about it. 55% of the respondents said security concerns were the major barrier to the adoption of Internet banking. 55.6% of the firms that responded were not connected to the Internet while 44.4% were. Majority of the interviewees said they would still visit the bank even if their company adopts Internet banking. Access to their account balance and understanding customer needs are the most important factors for facilitating a good bank client relationship for firms in Ghana and their banks. Banks in Ghana need to start considering the introduction of Internet strategies in the development of customer relationship management (CRM) programs, which will ultimately increase the customer lifetime value of their clients. The present paper is one of the first Internet banking studies from a West African context on the usefulness of Internet banking technologies to bank clients.

**Keywords:** internet banking, Ghana, service quality, consumer perceptions, Internet adoption.

**JEL Classification:** G21.

### Introduction

Over the last decade, the Ghanaian government has made a serious effort to pursue a 'knowledge-based economy' agenda to make Ghana a preferred information and communication technology (ICT) destination. The use of the Internet in Ghana has also seen significant increases since the liberalization of the telecommunication industry in 1990s. The country had 18.1 Internet users per 1,000 people in 2005 as compared to 1 Internet user in 1999 (ITU, 2007). The number of PC ownership doubled to 52 owners per 1,000 people between 1999 and 2005. A National ICT for Accelerated Development policy was introduced in 2003 with the objective of engineering an ICT-led socio-economic development process. The impact of these initiatives is evident in the November 2005 edition of African Business. The article on the Ghana profile page, entitled "Cake is bigger but the slices are smaller", claimed interestingly "Ghana has the most developed IT sector in West Africa". For a country which hitherto could clearly be described as sitting at the disadvantaged end of the global digital divide, it becomes important to ascertain how ICT is affecting the Ghanaian banking business, which also tends to contribute substantially to Ghana's service sector revenues (ISSER, 2005).

Electronic banking (e-banking) has been purported by academic and practitioner oriented literature as one of the means in which ICTs can and is impact-

ing the banking sector (Gurau, 2002; Bradley and Stewart, 2003; Shih and Fang, 2004; Boateng and Molla, 2006). The phenomenon, e-banking, as used in this paper, refers to the deployment of banking services and products over electronic and communication networks directly to customers (Singh and Malhotra, 2004). These electronic and communication networks include Automated Teller Machines (ATMs), direct dial-up connections, private and public networks, the Internet, televisions, mobile devices and telephones. In terms of service sophistication, e-banking services range from *information-push* – mono-directional – services where customers receive information about the bank, its products and services, to *information-download* – bi-directional – services where customers can download (or ask in case of telephone-banking) account information and forms to *full-transaction* – multi-directional – services where customers can perform most banking transactions (such as transfer between accounts, bill payment, third party payment, card and loan applications, etc.) electronically (Boateng and Molla, 2006; Singh and Malhotra, 2004). With the promise of the Internet, its application as the electronic and communication medium or channel for offering transactional banking services – Internet banking – offers the potential for improving the quality and timeliness of response from banks, facilitating self-service and service customization, and improving customer communication and relationship (Gurau, 2002).

Research relating to e-banking has been conducted in a multiplicity of contexts. E-banking research has been conducted in Europe (Daniel, 1999; Kardaras

and Papathanassiou, 2001; Gurau, 2002; Karjaluo, Mattila and Pento, 2002; Ibbotson and Moran, 2003; Karjaluo, 2002; Jayawardhena and Foley, 2000), Asia (Laforet and Li, 2005; Hway-Boon and Yu, 2003; Jaruwachirathanakul and Fink, 2005; Lu, Liu, Jing and Huang, 2005; Shih and Fang, 2004), and Australia (Sathye, 1999). Research relating to the adoption of the Internet and other ICTs in banking has been discussed from the theoretical (Rollason, 1989; Prendergast, 1993; Zekos, 1999; Jayawardhena and Foley, 2000; Krumm, 1998) and empirical (Daniel, 1999; Rexha, Kingshott and Aw, 2003; Kardaras and Papathanassiou, 2001; Wan, Luk and Chaw, 2005; Laforet and Li, 2005; Gurau, 2002; Hway-Boon and Ming Yu, 2003; Sathye 1999; Mols, Bukh and Nielsen, 1999; Karjaluo, Mattila and Pento, 2002; Jaruwachirathanakul and Fink, 2005; Ibbotson and Moran, 2003; Bradley and Stewart, 2002; Bradley and Stewart, 2003; Pikkarainen, Pikkarainen, Karjaluo, and Pahlila, 2004; Karjaluo, 2002; Shih and Fang, 2004; Mattila, Karjaluo and Pento, 2003) perspectives.

The focus on Africa, and West Africa for that matter, in relation to electronic banking has been almost non-existent. A notable study by Boateng and Molla (2006) analyzed the use of the Internet in developing e-banking capabilities in Ghanaian banks. However, the study, which was based on an exploratory single case study, particularly focused on the strategies adopted by the bank in developing e-banking capabilities, and relatively failed to generate considerable insight on consumer perceptions and expectations on the bank's e-banking services and products. This paper is therefore positioned as one of the early attempts to fill this research gap, since the performance of banks in a networked economy is clearly an issue that merits scholarly attention, from a developing country context. It is also important to mention that there have been a few studies that have sought to ascertain the impact of the Internet on some industrial sectors in Ghana, but these have mainly focused on the export sector (see Hinson, 2004; Hinson, 2005; Buatsi and Hinson, 2005; Sorensen and Buatsi, 2002; Hinson and Abor, 2005) in Ghana. Internet banking issues in Ghana therefore need to be urgently addressed.

### 1. Rationale of the study

Hinson (2004) developed an SME Internet benefit model and advanced arguments that Internet has benefits for exporters. Mansel, Humphrey, Paré, and Schmitz (2004) also contend that "the Internet is becoming an important business tool". But there are barriers to realize full benefits of Internet banking

including organizational ability to utilize the technology, management attitudes, resource constraints, and knowledge issues (Chircu and Kauffman, 2000; Farhoomand, Tuunainen, and Yee, 2000). According to Chircu and Kauffman (2000), the lack of adequate information technology infrastructure remains a critical barrier in supporting the continual growth of online commerce.

Hinson (2005) again advanced arguments that small firms in Ghana need to better strategize to take advantage of the Internet. Moorman, Deshpande, and Zaltman (1993) observed that lack of customer trust in the web system could restrict the opportunities from web technology. Min and Galle (1999), Lee and Turban (2001) argue that customers often do not trust Internet technology for three reasons: security of the system, distrust of service providers, and worries about the reliability of Internet services. Concern about security is one common factor related to unwillingness to use Internet channel for commerce. Security breaches can lead to numerous problems such as destruction of operating systems, or disruption of information access (Min and Galle, 1999).

The use of the Internet in delivering banking services is pervasive in western developed contexts. Internet banking is however just beginning to blossom in West Africa and this study is therefore positioned to fulfil the following objectives:

- ◆ to evaluate Internet banking usefulness from the perspective of selected Ghanaian firms;
- ◆ to ascertain problems associated with the adoption of Internet banking from the view point of the Banking Customers in Ghana.

### 2. Banking developments in Ghana

Banking in Ghana has undergone many changes in service delivery with the aim of improving the quality of service being provided to the customers. Banks were serving their customers through the manual system, which resulted in long queues to transact the business. The other problem faced by many companies in Ghana is that, many people including companies do not accept checks as a payment method. This is because of the time and the inconveniences involved in accepting and depositing checks company accounts. For decades, the banking sector was dominated by Barclays and Standard Chartered banks. Barclays Bank (formerly known as the Colonial Bank) in February of 2006 celebrated ninety years of its operations in Ghana and Standard Chartered bank (formerly known as the Bank of British West Africa) has been operating in Ghana since 1896.

Commercial banks began to operate in Ghana in 1874. The first commercial bank to operate in Ghana was the Bank of British West Africa (BBWA) now the Standard Chartered Bank (Ghana) Limited. It was established in 1874 with only one branch in Accra. In 1917, Barclays Bank, D.C.O (now Barclays Bank of Ghana Limited) started operations mainly to finance the booming foreign trade, mainly between Ghana and Britain. These two banks were overseas branches of large international banks incorporated in Britain. They handled all the commercial banking business in the country until 1953 when the state-owned Bank of the Gold Coast (the parent bank of both the Bank of Ghana and the Ghana Commercial Bank) was inaugurated.

After Ghana attained its independence in 1957, the enactment of a legislative instrument of Parliament separated the Bank of the Gold Coast into the Bank of Ghana (the Central Bank) and the Ghana Commercial Bank (GCB). The two expatriate banks mentioned above and the GCB therefore, constituted the primary commercial banks in the country and have since dominated the commercial banking system, handling over 70% of all banking business in Ghana (Andoh, 1988). These three banks also constituted the commercial banking system before the 1970s; their main business being to finance foreign trade, while domestic lending in other sectors was minimal. Today, however, the credit distribution system has changed dramatically. The proportion of bank credit directed to the import trade sector, which averaged about 80% until 1960 have now declined to less than 30%. As of the end of December 1984, the number of branches of these three banks was two hundred and ten (210). GCB had the greatest number, one hundred and forty-nine (149), followed by Barclays bank with thirty-three (33) and Standard Chartered Bank with twenty-eight (28) branches scattered over the country.

Three other commercial banks were however, established in the 1970s. These were the National Savings and Credit Bank (NSCB), the Social Security Bank (SSB) and the Bank of Credit and Commerce (BCC). The first two were public sector banks established by Decree to satisfy the credit needs of specific sectors of the economy. Apart from the BCC, all the banks under this category engaged in commercial banking business. Until May 1975, the NSCB was known as the Post Office Savings Bank (POSB), which was the oldest organized savings institution in Ghana, dating back to 1888. The POSB however, did not grant credit facilities but only received deposits for savings. It was however, reorganized and renamed the NSCB. Afterwards, it started full commercial banking business with concentration on small borrowers in

the informal trade sector. As of the end of December 1984 (when the statistics of the three leading commercial banks were taken), the NSCB had fourteen main branches distributed across the country. In spite of the fact that its predecessor was the oldest savings institution in the country, the NSCB was still considered an infant bank trying to consolidate its position in the banking business at that time.

The Social Security Bank was officially inaugurated in 1977 and it commenced business in June that same year. The Social Security and National Insurance Trust (SSNIT) owned the bank. The SSB operated like any other bank but mainly as a workers' bank. It placed emphasis on consumer credit facilities for workers under its Consumer Credit Scheme by granting small, personal loans and hire purchase facilities to workers. It also operated development finance schemes for small-scale industrial and agricultural projects. It had forty branches in Ghana with the headquarters in Accra.

The Bank for Credit and Commerce (formerly Premier Bank Limited), was incorporated under the company code and licensed in August 1975 as a merchant bank, but later it changed to full retail banking. It had only one branch at the head office in Accra.

As of December 1984, there were twelve (12) banks in Ghana: Ghana Commercial Bank (GCB), Barclays Bank of Ghana Limited (BBG), Standard Chartered Bank Ghana Limited (SCB), Agricultural Development Bank (ADB), Social Security Bank (SSB), Merchant Bank of Ghana Limited (MBG), National Investment Bank (NIB), Cal Merchant Bank (CAL), Ecobank Ghana Limited (ECO), Bank for Housing and Construction (BHC), Bank of Credit and Commerce (BCC) and Ghana Co-operative Bank (Co-op).

From that period to December 2006, several other banks have been incorporated into the Ghanaian banking sector. These are: Prudential Bank Limited (PBL), Metropolitan and Allied Bank (METRO), First Atlantic Merchant Bank (FAMB), The Trust Bank (TTB), International Commercial Bank (ICB), Stanbic Bank, Amalgamated Bank (AMALBANK), HFC Bank, Unibank, Prestige Bank, Standard Trust Bank (STB), Guarantee Trust Bank (GTB) and Zenith Bank (ZB). Fidelity Bank has also been incorporated and began operations in last quarter of 2006. The Bank for Housing and Construction (BHC) and Ghana Co-operative Bank (Co-op) have, however, been liquidated. There have been some other changes in the sector mainly in terms of ownership. There has been a merger between the SSB and National Savings and Credit Bank which

now known as SG-SSB while GCB, SSB and NIB have been privatized (Hinson, 2005). A large number of these new banks are now owned and managed by Africans, and the sector boasts a number of highly skilled and experienced bankers. Bank branches in Ghana increased by 11.3 per cent from 309 to 344 between 2002 and 2004 with 81 new branches springing up from 2004 and 2006 indicating an increase of 23.5 per cent. The total banking system assets at the end of October 2006 were ₵48,353.0 billion, representing 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).

### 3. Internet banking in Ghana

In an attempt to catch up with global developments and improve the quality of their service delivery, some banks have allowed some form of Internet banking for their clients, to check their account balances and to transfer money from one account to another. Moody (2002) observed that online banking is the fastest growing services that banks can offer in order to gain and retain a sizeable market share, reduce transaction cost, and offer better and quicker response to market changes.

The period from the early to mid 1990s witnessed a gradual and continual application of computerized technology into banking operations by Ghanaian banks. ICT, from year 2000 onwards, has become a core strategic tool for competitive advantage and defining market segmentation as well as market share. To this end, there has been massive influx of Information and Communication technology of various forms into several banking operations. These were in the form of:

- ◆ computerization of counter processes and banking operations – all banks;
- ◆ national network of all or key branches across the country – several banks, including GCB, SCB, BBG, ECO, and more;
- ◆ introduction of Automated Teller Machines (ATMs) – by SCB, BBG, GCB, ECO, CAL, TTB, SG-SSB, ADB, and many more;
- ◆ creation of smart cards and debit cards – SCB, SG-SSB, ECO, TTB, and CAL;
- ◆ introduction of personal banking facilities (telephone banking, SMS banking and on-line virtual terminals) – SCB, CAL, SG-SSB, GCB, and ECO;
- ◆ introduction of Internet banking – SSB, STB and SCB, etc.

Comparing electronic and communication networks, the Internet is more versatile than telephone and fax, and is spreading faster due to lower costs and

delivery times. Internet offers communications on an interactive basis with one or more people, unconstrained by time or space, in a multimedia environment with sound, image, text transmission, and at relatively low and declining costs (Yakhlef, 1998). Customers of banks with Internet banking service now use the Internet for their banking needs. They can access their account in order to: check their account balances, pay bills, transfer funds, manage their accounts as well as performing an endless list of functions including accessing and printing of statements of accounts over 100-day period.

With respect to the Ghanaian context, several local and international banks in Ghana have launched electronic banking products or are intending to launch soon. Of the 23 banks, the electronic services being provided through the Internet are mainly focused on *information-push* services where customers receive information about the bank, its products and services to *information-download* where customers can download forms and bank reports. Out of the 23 banks, 20 (87 per cent) have active websites – websites which can be accessed; 2 (9 per cent) had inactive websites, the domain name existed but the websites could not be accessed (one of which was accessible as of May 10, 2006 but was found to be inactive as of May 10, 2007 and the other seem to have failed to renew their domain names); and 1 (4 per cent) did not have a website. 13 (57 per cent) of the 21 banks offered *information-push* and *information-download services* through their websites. Only 7 (30 per cent) offer Internet banking services which are largely *partial transactional services* where customers can manage their account online; check balances, print/download statements and daily rates, order pay-in and check books, transfers between internal accounts, and order bank drafts. Other transactional services like bill payments and stopping checks are yet to be fully operational for a majority of the banks, though these services are advertised on the websites. This is because some of the banks have phased the introduction of these services with respect to their resource availability and strength, knowledge of customers and readiness of corresponding institutions. For example, though utility companies allow bill payment through banks, they have not yet approved payments to be made through Internet banking services. This may also be due to their readiness to adopt Internet banking and resource availability and strength (Interview with IT Manager, ABC bank, May 9, 2006).

The 20 banks offering banking services through the Internet have been observed to be integrating this functionality with other electronic and

communication media, namely mobile and telephone. For example, United Bank for Africa (UBA) Ghana Limited has a number of electronic products in addition to Internet banking for both individual and corporate customers of the bank. For instance, Mbanking/TextMe Cash, which enables customers of the bank to keep in touch with their accounts; Telebanking, this is an interactive voice response (IVR) system, which gives step by step instruction to customers in accessing their accounts. (UBA, 2007). Zenith Bank in Ghana offers Internet and technology related products such as online stopping of check; transfer of money from one customer to another; third party money transfer; mobile (M) commerce; ATM/POS (point of sale) payment; paying utility and satellite bills via the Internet (IICD, 2007). As a way of improving its services and to bring convenience to customers, HFC Bank has also developed the following facilities: Fastxt; free salary alert; loan alert (HFC, 2007).

The provision of these e-banking services, especially Internet banking, seems to be entry strategy adopted by most of the new banks, like Zenith Bank (Ghanaian subsidiary of a Nigerian Bank), and Amalgamated Bank, which began operating in Ghana within the last decade. With the growing Internet penetration, and perhaps ICT literacy of Ghanaians, this strategy seems to target at the 'Technology Savy' market who may be ready to move from offline or traditional banking medium which is relatively time constrained (Table 1).

Table 1. The state of ICT diffusion in Ghana

	Internet penetration per 100 inhabitants		Mobile phone penetration per 100 inhabitants	
	2004	2005	2004	2005
Ghana	1.72	1.81	7.93	13.00
Africa	2.61	3.72	9.35	15.37

Source: ITU Basic ICT Statistics (2007).

However, apart from creating an online presence and providing informational push-services through a website, most of the traditional Ghanaian banks, those which existed before the reform in the early 1990s, have not relatively been able to take advantage of Internet for Internet banking services. The National Investment Bank has announced its plans to soon outdoor Internet banking that would be designed to make financial and banking transactions easier to its customers (NIB, 2007). Some banking professionals argue that the issue is much to do with strategy and target market of these banks. These traditional banks tend to be development and commercial oriented banks. Relatively, they have a nation-wide coverage and a large customer base which are primarily low-income

earners, low-skilled workers, and/or relatively less 'technology savy', having no access or limited access to computers and the Internet. With this customer composition, Internet banking tends to be rather farfetched, unsustainable and not a currently relevant service provision. Additionally, these banks may be required to do quite much upgrading of their banking infrastructure and processes, education and awareness creation to fully implement Internet banking services for existing customers (Interview with branch manager, ABC Bank, 20 May 20, 2006).

#### 4. Theoretical framework

Issues of Internet, e-commerce and e-business utilization in organizations have been discussed from a multiplicity of theoretical perspectives (Boateng and Hinson, 2007). The knowledge-based theory of the firm (Grant, 1996) has been employed in Information System (IS) research by scholars like Alavi and Leidner (2001) and also by Huseyin (2005): both articles being published by the MIS Quarterly. Dynamic capability theory championed by Barney, Eisenhardt and Teece (see Barney, 1991), Eisenhardt and Martin (2000), Teece, Pisano, and Shuen (1997) has also been utilized in e-business and Internet related research by scholars like Daniel and Wilson (2003), and Boyton (1993). Other theories that have had considerable applicability in IS and Internet related research have included the resource based view of the firm (Penrose, 1959; Barney, 1986; Wernerfelt, 1984), socio-technical theory (Bostrom and Heinen, 1977; Cherna, 1976), absorptive capacity (Cohen and Levinthal, 1990; Nonaka, 1994), social network theory (Granovetter, 1973, 1982) and SERVQUAL (Parasuraman, Berry, and Zeithaml, 1985, 1988, 1991).

In respect of SERVQUAL (service quality), it is basically an operational instrument used in measuring customer perceptions of service quality along five key dimensions: tangibles, reliability, responsiveness, assurance and empathy. Tangibility refers to the tangible aspects of an intangible service delivery, including physical facilities and staff appearance, etc. Reliability refers to the ability of the service provider to execute the delivery of the service in an accurate and dependable manner, whilst responsiveness refers to the willingness of the service provider to respond to customer needs in a timely manner. Assurance refers to the ability of the service provider to inspire trust in the customer while empathy is the extent to which the provider is able to identify the obvious and latent needs of the customer and offer caring individualized service. IS research that has utilized SERVQUAL includes work carried out by Kettinger and Lee (1994, 1995, 1997, 2005), Spiros and Sergios (2003).

With the evolution of IS research the SERVQUAL model has been modified and adapted for several types of IS and Internet adoption research. SERVQUAL has even in certain cases been modified into e-SERVQUAL (electronic service quality) and it is hypothesized that e-SERVQUAL has been developed from the Internet marketing and traditional service quality literature (Santos, 2003). E-SERVQUAL measures service in online situations. Apart from e-SERVQUAL, the traditional SERVQUAL model has also been adapted and used in the work of Vijayan and Shanmugam (2003) which focused on a study of Internet banking in Malaysia, and Ribbink, Van Riel, Liljander, and Streukens, (2004) who investigated the roles of service quality, satisfaction and trust in an e-commerce context. Poulemenaku and Tsironis (2003) have also examined the relationship between e-commerce and the management of quality.

### 5. Proposed theoretical framework

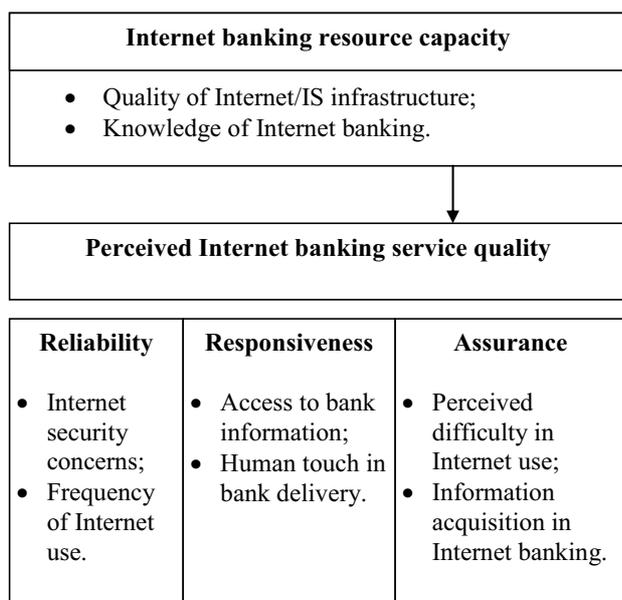


Fig. 1. Theoretical framework

For the purposes of this paper therefore, we adopt a variation of SERVQUAL which is essentially a two-tier SERVQUAL model as shown above. At one level we examine the resource pre-requisites for the adoption of Internet banking and then evaluate Internet banking perceptions along three traditional SERVQUAL model dimensions: reliability, responsiveness and assurance. We found in a pre-test of the SERVQUAL dimensions of 20 IT managers of sampled firms in the Association of Ghanaian Industries database. We discovered that reliability, responsiveness and assurance are the SERVQUAL dimensions most likely to impact the perceptions of Internet banking adoption amongst Ghanaian corporate entities.

### 6. Research methodology

Data for the study were collected from a sample of 180 Ghanaian small and medium size enterprises. The questionnaire was sent to 320 firms which are listed in the Association of Ghana Industries (AGI), an umbrella association of all Ghanaian companies. However, 180 responses were collected, representing a response rate of 56 per cent. The sector distribution of the questionnaires was as follows: manufacturing – 40 firms, commerce – 90, and services sector – 50. The distribution of the questionnaire generally reflected the distribution of the firms across these three main sectors as per the AGI database. The respondents were managers responsible for financial activities of their companies and they included accountants, chief accountants, finance managers, general managers and directors. In each firm, we ascertained from the CEO/managing director which employee of the firm was most qualified to deal with questions relating to Internet banking. In some cases, the CEOs themselves were the respondents. The main issues tackled by the data instrument included: background of respondents; Internet connectivity; knowledge of Internet banking; prerequisites of Internet banking adoption; barriers to adoption of Internet banking; perceived benefits of Internet banking; purported uses of Internet banking; frequency of Internet banking use; use of electronic banking; and combining virtual visits with brick-and-mortar bank visits.

### 7. Presentation and discussion of research findings

**7.1. Background information.** The results show that 63 (35%) of the respondents were financial controllers; 36 (20%) were managing directors; 27 (15%) were chief accountants with the remaining 54 (30%) constituting other categories of employees, namely marketing executives, accountants, and assistant accountants. Almost all the respondents who were financial controllers, chief accountants and other executives work for the companies were interviewed. However, out of the 36 managing directors who responded, 20 were 100% owners of the company they managed, 10 were part owners, and 6 were just recruited to manage the companies.

The last finding suggest that an appreciable number of businesses in Ghana are managed by their owners or part owners, which is consistent with the Bolton Committee's economic definition of small business (Bolton, 1971). In addition, the firms are managed through the medium of formal management structures and not in a personalized way. The results further indicate that as firm size increases, owners

no longer make principal decisions but devolve responsibility to managers, (Kayanula and Quartey, 2000). This is evident by the different categories of staff including accountants and marketing executives who responded to the questionnaire.

About 58 (32%) of the respondents hold a Bachelor's Degree; 27 (15%) of the respondents had a Master's degree; 18 (10%) had "A" level qualifications and 14 (8%) held PhDs, while 63 respondents (35%) had other professional qualifications from the Institute of Chartered Accountants (ICA GH), Association of Chartered Certified Accountants (ACCA), Higher National Diploma (HND) and Middle School Leaving Certificate (MSLC). This shows that there is a large number of highly qualified personnel managing the firms. This is contrary to earlier findings that there is a lack of managerial expertise in most Ghanaian managed companies. This development could be partly due to the initiative of the Ghana government to make the private sector the engine of growth by encouraging individuals to invest in private business as well as the opening of various tertiary institutions where entrepreneurship is taught as a part of the curriculum. This has made many graduates to enter the private sector to start their own business. Moreover, the special government program aimed at attracting Ghanaians abroad to return to Ghana and invest in their own business ventures has had an effect on attracting highly qualified personnel to this sector.

**7.2. Internet connectivity.** The responses indicated that 100 (55.6%) of the firms responded were not connected to the Internet while 80 representing 44.4% were. All of the 100 companies that were not connected had plans to get connected to the Internet in the immediate future. Also all the respondents appear to be familiar with the use of the Internet and this might be due to the fact that in Ghana there is an Internet café in almost every corner of the major cities, especially the most industrially populated areas in Ghana which gives Internet access to anybody desirous of accessing the Internet at a fee.

**7.3. Knowledge of Internet banking.** Internet banking is based on knowledge of Internet use. The results on Internet use by respondents show that all the respondents were computer literate. This is necessary for successful adoption of Internet banking. This suggests that Internet use in Ghana is catching on with an increasing number of industrial concerns.

Of the respondents, 120 (68%) have heard about Internet banking while 60 representing 33% have never heard about it. The 120 respondents who had heard about Internet banking got the information by

a variety of means. 48 (40%) of them got the information through television advertisements and newspapers each. 6 (5%) and 18 (15%) of the respondents got the information about the Internet through magazines and their local bank branches respectively.

**7.4. Prerequisite of Internet banking adoption.** When the respondents were asked what they wanted their banks to do before they accessed Internet banking services, 117 (65%) of them mentioned security and safety measures while the remaining 63 (35%) indicated their desire for the banks to train both internal and external customers on the use of the system. When questioned whether there was a possibility for them to move their accounts from their current banks to other banks that offer them Internet banking, 108 (60%) of the respondents said they will not change their bank, 63 (35%) indicated they will change whilst 9 (5%) were undecided. It appears that majority of the respondents were very happy with their relationship as well as the service offerings of their current banks and technological innovation did not seem to be a huge incentive to switch banks. The fact that a considerable number of firms, 60%, were not willing to switch from their current banks tends to present a challenge for banks, particularly the new entrants, who are currently offering Internet banking services as part of its market entry strategies.

**7.5. Barriers to Internet banking adoption.** When the respondents were asked what they considered as barriers to the adoption of Internet banking, the majority said that their major concern is security. About 99 (55%) of the respondents said security concerns were the major barrier. Ghana has been noted as one of the countries where travellers have experienced credit card fraud after using their cards for payments in the country (USDS, 2006). Hence, security concerns of these firms with regards to adopting Internet banking services and online payment systems are noteworthy and can not be understated.

36 (20%) respondents also mentioned the perceived difficulty in the use of Internet banking, 36 (20%) mentioned the lack of Internet access whilst another 27 (15%) appeared not to see any clear benefits from adopting Internet banking. These barriers highlight issues of accessibility and pre-adoption knowledge of Internet banking. With 45 per cent of respondents obtaining knowledge through the public media and 15 per cent from local banks, Ghanaian banks provide or intending to providing Internet banking services have much to do with creating Internet banking awareness and going beyond that to establish understanding. An innovative

educational measures adopted by some of the banks including Zenith Bank Ghana Limited and UBA Ghana Limited are providing an online demonstration of how their Internet banking service works and the different services being provided. These banks also provide information in the form of frequently-asked questions (FAQs) on the Internet banking services. However, using the Internet to create pre-adoption knowledge is not enough. Boateng and Molla (2006) emphasize bank's leveraging other existing resources such as using physical branches and telephone banks as advisory avenues for customers requesting e-banking services or invited to use these services. The authors consider this as using a *high-touch* branch environment to educate and introduce customers to a *high-tech* e-banking environment. Combining such initiatives with promotions in public media sources – electronic and non-electronic – may facilitate the building of pre-adoption knowledge and understanding for Internet banking.

With regards to accessibility, a critical limiting factor to the access to the Internet is the investment involved. A second-hand "Internet-ready" computer costs between US\$200 to US\$300 and a monthly subscription fee of US\$60 to US\$95 for broadband DSL service at the speed of 256kps. It costs an average of US\$1.30 to browse for an hour in a cybercafé and there are only 5.2 personal computers per 1,000 inhabitants as of 2006. With daily minimum wage of about US\$2.0 (19,000 Cedis), it presupposes that Internet access is relatively expensive for the majority of Ghanaians and for firms. However, the Ghanaian government has secured a US\$30 million concessionary loan to further expand telecommunication access to every district and develop a national fibre optic communications backbone infrastructure network aimed at providing open access broadband connectivity nationwide (MOC News, February 27, 2007). This seems to be a step in a right direction to increase accessibility, and thereby impact on ICT services like Internet banking.

**7.6. Perceived benefits of Internet banking.** When the respondents were asked whether they were aware of the benefits they could derive from Internet banking, 126 (70%) of them said they were aware of the benefits of Internet banking whilst 54 (30%) did not know the benefits Internet banking offered. The respondents who appear to know the benefits of Internet banking also said they will recommend it to the company if it is made available by the bank in view of the benefits of Internet banking such as making business transactions easy and faster, saving time and cost, allowing for fast access to daily bank balances, and enhancing communication. However,

about 90% of those who were not aware of the benefits of Internet banking said they will not recommend it to their banks whilst 10% said they will nonetheless recommend it to their bank. Security concerns were the major reason cited for their decision not to recommend Internet banking to their banks.

**7.7. Purported uses of Internet banking.** The research also sought to find out what kind of transactions would be carried out by Ghanaian firms if they adopted Internet banking. About 50 (28%) of the respondents indicated that they would use Internet banking for checking their account balances, 80 (44%) for transferring money in between accounts whilst 10 (6%) of the respondents said they would use Internet banking for ordering check books and also for cancelling already issued checks. In addition, 20 (11%) each of the respondents also said, they would use the services offered by Internet banking to pay their utility bills as well as paying their suppliers.

**7.8. Frequency of Internet banking use.** Nearly 40% of the respondents indicated that they would use Internet banking everyday, whilst 44% will use it twice a week. 11.1% and 6% will use Internet banking services weekly and once a month respectively.

**7.9. Combining virtual visits with brick-and-mortar visits.** The majority of the interviewees said they would still visit the bank if their company adopts Internet banking. Out of the 93 managing directors and financial controllers responded, 80 (representing 86% of them) said they will still visit the bank even if they adopt Internet banking, whilst about 13 (14%) said they will not visit the bank if their company adopts Internet banking. The reasons they cited for visiting the banks range from check book collection, cash withdrawal, loan and facility negotiations and cash deposit activities. This confirms the findings of previous researches which have shown that Internet banking users still do visit the bank branches. Yakhlef (2001), for instance, believes that one explanation for this could be that when customers have a problem or a complicated transaction to deal with they would rather prefer a banking relationship built on human interaction and as such there will always be some need for traditional branch banking. Hofstede (1985) also considers Ghana as one of the countries with low degree of individualism. Thus Ghanaians feel more comfortable with others and want to be connected to them. In order to be comfortable with others, cultures with a rich interpersonal communication consider face to face interaction to be essential as it consists of greater intensity of socializing, more

verbal communication and greater time of communication (Bajaj and Leonard, 2004). As a result, the recommendation of creating a *high-touch* environment to introduce customers into a *high-tech* environment thus becomes emphasized.

A majority (85%) of the respondents agreed that Internet banking would make it easy for them to access their account balances, whereas about 15% disagreed with the assertion that Internet banking would make accessing account balances be much easy. The disagreement may stem from either the 30 per cent of respondents who did not know the benefits Internet banking offered or the 33 per cent who have not heard about Internet banking at all.

### Conclusion

The study sought to evaluate Internet banking usefulness from the perspective of selected Ghanaian firms as well as to ascertain the problems associated with the adoption of Internet banking from the view point of these same Ghanaian firms.

### References

1. Alavi, M., and Leidner, D. (2001). Review: Knowledge Management and Knowledge Management Systems, *MIS Quarterly*, Vol. 25, No. 1, pp. 107-136.
2. Andoh, T. (1988). Computers in Banking, *The Journal of Ghana Institute of Bankers*, No. 4.
3. Barney, J. (1991). Firm resources and sustained competitive advantage, *Journal of Management*, Vol. 17, No. 1, pp. 99-120.
4. Barney, J. (1986). Types of Competition and the Theory of Strategy: Toward an Integrative Framework, *Academic of Management Review*, Vol. 11, pp. 791-800.
5. Boateng, R., and Hinson, R. (2007). Ecommerce in LDCs: Summary Evidence and Implications, 8<sup>th</sup> International Academy of African Business and Development (IAABD) Conference, London Metropolitan University, London, UK, May 29<sup>th</sup>-June 2<sup>nd</sup> 2007.
6. Boateng, R., and Molla, A. (2006). Developing E-banking Capabilities in a Ghanaian Bank: Preliminary Lessons, *Journal of Internet Banking and Commerce*, Vol. 11, No. 2.
7. Bolton, J.E. (1971). Report of the Committee of Inquiry on Small Firms, London: HSMO.
8. Bostrom, R., and Heinen, J. (1977). MIS Problems and Failures: A Socio-Technical Perspective, *MIS Quarterly*, Vol. 1, No. 3.
9. Boynton, A. (1993). Achieving dynamic stability through information technology, *California Management Review*, Vol. 35, No. 2, pp. 58-67.
10. Bradley, L., and Stewart K. (2003). A Delphi study of Internet banking, *Marketing Intelligence and Planning*, Vol. 21, No. 6.
11. Bradley, L., and Stewart, K. (2002). A Delphi study of the drivers and inhibitors of Internet banking, *International Journal of Bank Marketing*, Vol. 20, No. 6, pp. 250-260.
12. Buatsi S., and Hinson, R. (2005). Non-traditional exporters (NTES) and the Internet in Ghana: Current Use and Internationalization Issues, Refereed Conference Proceedings, International Academy of African Business and Development (IAABD) Conference, April 2005, Dar-es-Salaam, pp. 159-170.
13. Cherns, A. (1976). The Principles of Sociotechnical Design, *Human Relations*, Vol. 2, No. 9, pp. 783-792.
14. Chircu A., and Kauffman, R. (2000). Limits to Value of Electronic commerce-Related IT Investments, *Journal of Management Information Systems*, Vol. 17, No. 2, pp. 59-80.
15. Cohen W., and Levinthal D. (1990). Absorptive capacity: a new perspective on learning and innovation, *Administrative Science Quarterly*, Vol. 35, No. 1, pp. 128-152.
16. Daniel, E. (1999). Provision of electronic banking in the UK and the Republic of Ireland, *International Journal of Bank Marketing*, Vol. 17, No. 2, pp. 72-82.
17. Daniel E., and Wilson H. (2003). The role of dynamic capabilities in e-business transformation, *European Journal of Information Systems*, Vol. 12, No. 4, pp. 282-296.
18. Daily Graphic (19 December 2006). 2006 Has Been Good – BoG Boss, Ghana: Graphic Corporation. Retrieved 10 May, 2007 from: <http://www.graphicghana.com/article.asp?artid=14942>
19. Eisenhardt, K., and Martin J. (2000). Dynamic capabilities: what are they?, *Strategic Management Journal*, Vol. 21, pp. 1105-1121.

The study revealed the willingness of Ghanaian firms to use Internet banking services if they are provided by their banks although 86% of the respondents said they would still visit their banks even if their companies adopt Internet banking. Furthermore, majority of the firms appear to be happy with the level of services provided by their banks. This could be evidence of the good relationship between the banks and their clientele. Factors influencing Internet banking adoption were identified to be: pre-adoption knowledge, Internet accessibility, security of the online service, and creation of a supporting *high-touch* or offline environment. The next level of this study would be the formulation of key hypotheses from these exploratory findings in a more comprehensive study on e-business practices of Ghanaian banks.

### Note

For the sake of confidentiality organizations interviewed are withheld and referred to as ABC bank.

20. Farhoomand, A., Tuunainen, V., and Yee, L. (2000). Barriers to Global Electronic Commerce: A Cross-Country Study of Hong-Kong and Finland, *Journal of Organizational Computing and Electronic Commerce*, Vol. 10, No. 1, pp. 23-48.
21. Granovetter M. (1973). The strength of weak ties, *The American Journal of Sociology*, Vol. 78, No. 6, pp. 1360-1380.
22. Granovetter M. (1982). The strength of weak ties: A network theory revisited, *Social Structure and Network Analysis* (P.V. Marsden and N. Lin, Eds.). Beverly Hills, CA: Sage, pp. 105-130.
23. Grant, R. (1996). Toward a Knowledge-Based Theory of the Firm, *Strategic Management Journal*, Vol. 17, pp. 109-122.
24. Gurau, C. (2002). Online banking in transition economies: the implementation and development of online banking systems in Romania, *International Journal of Bank Marketing*, Vol. 20, No. 6.
25. HFC Bank Ghana Ltd. (HFC) (2007). SMS Banking, HFC Bank Ghana Ltd. Retrieved 10<sup>th</sup> May 2007, from: <http://www.hfcbankgh.com/newsite/commercial/sms.php>
26. Hinson, R. (2004). Export and the Internet in Ghana: A Small and Medium Enterprise Exporter Benefit Model, *LBS Management Review*, Vol. 9, No. 1, pp. 46-53.
27. Hinson, R. (2005). Internet Adoption among Ghana's SME Non Traditional Exporters: Expectations, Realities and Barriers to use, *Africa Insight*, Vol. 35, No. 1, pp. 20-27.
28. Hinson, R., and Abor, J. (2005). Internationalizing SME Non-Traditional Exporters and their Internet Use Idiosyncrasies, *Perspectives on Global Development and Technology*, Vol. 4, No. 2, pp. 228-244.
29. Hofstede, G. (1985). The Interaction Between National and Organisational Value systems, *Journal of Management Studies*, Vol. 22, No. 4, pp. 347-357.
30. Hüseyin, T. (2005). Information Technology Relatedness, Knowledge Management Capability, and Performance of Multibusiness Firms, *MIS Quarterly*, Vol. 29, No. 2, June 2005, pp. 311-335.
31. Hway-Boon, O., and C. Yu (2003). Success factors in e-channels: the Malaysian banking scenario, *International Journal of Bank Marketing*, Vol. 21, No. 6/7.
32. Ibboston, P. and Moran, L. (2003). E-banking and the SME/bank relationship in Northern Ireland, *International Journal of Bank Marketing*, Vol. 21, No. 2.
33. Institute of Statistical, Social and Economic Research (ISSER) (2005). The State of The Ghanaian Economy in 2004, Institute of Statistical, Social and Economic Research, Ghana: University of Ghana, Retrieved 22<sup>nd</sup> March 2007 from: <http://www.isser.org/publications.html>
34. International Institute for Communication and Development (IICD) (2007). Ghana Cyber Series – ICT and Banking Forum, International Institute for Communication and Development, Retrieved 10<sup>th</sup> May 2007, from [http://www.iicd.org/articles/GINKS\\_CyberSeries](http://www.iicd.org/articles/GINKS_CyberSeries)
35. International Telecommunications Union (ITU) (2007). 'ICT Statistics Database', Geneva: ITU., Retrieved 22<sup>nd</sup> March 2007 from: <http://www.itu.int/ITU-D/icteye/Indicators/Indicators.aspx>
36. Jaruwachirathanakul, B., and Fink, D. (2005). Internet banking adoption strategies for a developing country: the case of Thailand, *Internet Research: Electronic Networking Applications and Policy*, Vol. 15, No. 3.
37. Jayawardhena, C., and Foley (2000). Changes in the banking sector – the case of Internet banking in the UK, *Internet Research: Electronic Networking Applications and Policy*, Vol. 10, No. 1, pp. 19-30.
38. Kardaras, S., and Papathanasiou, E. (2001). Electronic commerce opportunities for improving corporate customer support in banking in Greece, *International Journal of Bank Marketing*, Vol. 19, No. 7.
39. Karjaluoto, H. (2002). Selection criteria for a mode of bill payment: empirical investigation among finish bank customers, *International Journal of Retail and Distribution Management*, Vol. 30, No. 7.
40. Karjaluoto, H., Mattila, M. and Pentto, T. (2002). Factors underlying attitude formation towards online banking in Finland, *International Journal of Bank Marketing*, Vol. 20, No. 6.
41. Kayanula D., and Quartey P. (2000). The Policy Environment for Promoting Small and Medium-Sized Enterprises in Ghana and Malawi, Finance and Development Research Programme, Working Paper Series, Institute for Development Policy and Management, Manchester University, pp. 13.
42. Kettinger W., and Lee C. (1999). Replication of Measures in Information Systems Research: The Case of IS SERVQUAL, *Decision Sciences*, Vol. 30, No. 3, pp. 893-899.
43. Kettinger W., and Lee C. (1997). Pragmatic perspectives on the measurement of information systems service quality, *MIS Quarterly*, Vol. 21, No. 2, pp. 223-240.
44. Kettinger W., and Lee C. (1994). Perceived Service Quality and User Satisfaction with the Information Services Function, *Decision Sciences*, Vol. 25, No. 5/6, pp. 737-766.
45. Kettinger W., Lee C., and Lee S. (1995). Global Measures of Information Service Quality: A Cross-National Study, *Decision Sciences*, Vol. 26, No. 5, pp. 569-589.
46. Kettinger W., and Lee, C. (2005). Zones of tolerance: Alternative scales for measuring information systems service quality, *MIS Quarterly*, Vol. 29, No. 4, pp. 607-621.
47. Kolodinsky, M., Hogarth, M., and Hilgert, A. (2004). The adoption of electronic banking technologies by US consumers, *International Journal of Banking Marketing*, Vol. 22, No. 4.
48. Krumm, P. (1998). Consequences of modern banking on facilities and corporate real estate management, *Facilities*, Vol. 16, No. 3/4.
49. Laforet, S., and Li, X. (2005). Consumers' attitudes towards online and mobile banking in China, *International*

*Journal of Bank Marketing*, Vol. 23, No. 5.

50. Lee, M., and Turban, E. (2001). A Trust model for Consumer Internet Shopping, *International Journal of Electronic Commerce*, Vol. 6, No. 1, pp. 75-91.
51. Lu, M., Liu, C., Jing, J., and Huang, L. (2005). Internet banking: strategic responses to the accession of WTO by Chinese banks, *Industrial Management and Data Systems*, Vol. 105, No. 4.
52. Mansel, R., Humphrey, J., Paré, D., and Schmitz, H. (2004). E-Commerce for Developing Countries: Expectations and Reality, *IDS Bulletin*, Vol. 35, No. 1, pp. 31-39.
53. Mensah, S. (2004). A Review of SME Financing Schemes in Ghana, Paper Presented at the UNIDO Regional Workshop of Financing Small and Medium Scale Enterprises, Accra, Ghana, 15-16 March 2004, Ghana: SEM International Associates Limited. Retrieved 22<sup>nd</sup> March 2007, from: <http://www.semfinancial.com/publications/SME%20Financing%20Schemes%20in%20Ghana.pdf>
54. Min, H., and Galle, W. (1999). Electronic Commerce Usage in Business Purchasing, *International Journal of Operations and Production Management*, Vol. 19, No. 9, pp. 909-921.
55. Ministry of Communication (MOC) News (2007). ICT Awards to be held in May 2007, Ministry of Communication News, 27 February 2007, Retrieved 10<sup>th</sup> May 2007, from: <http://www.moc.gov.gh/modules.php?op=modload&name=News&file=article&sid=232>
56. Mols, N., Bukh P., and Nielsen, J. (1999). Distribution channel strategies in Danish retail banking, *International Journal of Retail and Distribution Management*, Vol. 27, No. 1.
57. Moody, J. (2002). Traditional banks gain edge with electronic banking, Retrieved 10<sup>th</sup> May 2007, from: [www.cendant.com/media/trends\\_information/trends\\_information.cgi/Financial+Services/59](http://www.cendant.com/media/trends_information/trends_information.cgi/Financial+Services/59)
58. Moorman, C., Deshpande, R., and Zaltman, G. (1993). Factors Affecting Trust Marketing Research Relationships, *Journal of Marketing*, Vol. 57, pp. 18-101.
59. National Investment Bank (NIB) (2007). Internet Banking, National Investment Bank, Retrieved 10<sup>th</sup> May 2007, from: <http://www.nib-ghana.com/promotion/promotion.asp?id=19>
60. Nonaka, I. (1994). A Dynamic Theory of Organizational Knowledge Creation, *Organization Science*, Vol. 5, No. 1, pp. 14-37.
61. Parasuraman, A., Berry, L., and Zeithaml, V. (1985). A Conceptual Model of Service Quality and Its Implications for Future Research, *Journal of Marketing*, Vol. 49, No. 4, pp. 41-50.
62. Parasuraman A., Berry L., Zeithaml V. (1988). SERVQUAL: A Multiple-Item Scale For Measuring Consumer Perceptions of Service Quality, *Journal of Retailing*, Vol. 64, No. 1, pp. 12-40.
63. Parasuraman A., Berry L., Zeithaml V. (1991). Refinement and Reassessment of the SERVQUAL Scale, *Journal of Retailing*, Vol. 67, No. 4, pp. 420-450.
64. Penrose, E. (1959). *The Theory of the Growth of the Firm*, New York: Wiley.
65. Pikkarainen, T., Pikkarainen, K., Karjaluoto, H. and Pahlila, S. (2004). Consumer acceptance of online banking: An extension of the technology acceptance model, *Internet Research: Electronic Networking Applications and Policy*, Vol. 4, No. 3.
66. Poullymenakou A., and Tsiornis (2003). Quality and electronic commerce: a partnership for growth, *The TQM Magazine*, Vol. 15, No. 3, pp. 137-151.
67. Prendergast, G. (1993). Self-service Technologies in Retail Banking: Current and Expected Adoption Patterns, *International Journal of Bank Marketing*, Vol. 11, No. 7.
68. Rexha, N., Kingshott, J., and Shang, A. (2003). The impact of the relational plan on adoption of electronic banking, *Journal of Services Marketing*, Vol. 17, No. 1.
69. Ribbink D., Van Riel A., Liljander V. and Streukens S. (2004). Comfort your online customers: quality, trust and loyalty on the Internet, *Managing Service Quality*, Vol. 14, No. 6, pp. 446-456.
70. Rollason, R. (1989). Managing Money Transfer, or Paying Less on Paying Out, *Managerial Auditing Journal*, Vol. 4, No. 1.
71. Santos, J. (2003). E-service quality: a model of virtual service quality dimensions, *Managing Service Quality*, Vol. 13, No. 3, pp. 233-246.
72. Sathye, M. (1999). Adoption of Internet Banking by Australian Consumers: An Empirical Investigation, *International Journal of Bank Marketing*, Vol. 17, No. 7, pp. 324-334.
73. Shih, Y., and Fang, K. (2004). The use of a decomposed theory of planned behaviour to study Internet banking in Taiwan, *Internet Research: Electronic Networking Applications and Policy*, Vol. 14, No. 3.
74. Singh, B., and Malhotra, P. (2004). Adoption of Internet banking: An empirical investigation of Indian banking Sector, *Journal of Internet Banking and Commerce*, Vol. 9, No. 2.
75. Sorensen, O.J., and Buatsi, S. (2002). Internet and Exporting: The case of Ghana, *Journal of Business and Industrial Marketing*, Vol. 17, No. 6, pp. 481-500.
76. Spiros G., and Sergios D. (2003). Assessing service quality on the Web: evidence from business-to-consumer portals, *Journal of Services Marketing*, Vol. 17, No. 5, pp. 529-548.
77. Tait, F., and Davis, R. (1989). The development and future of Home Banking, *International Journal of Banking Marketing*, Vol. 7, No. 2.
78. Teece, D.J., Pisano, G., Shuen, A. (1997). Dynamic Capabilities And Strategic Management, *Strategic Management Journal*, Vol. 18, No. 7, pp. 509-533.

79. United Bank for Africa (UBA) Ghana Limited (2007). U-Direct Internet Banking, United Bank for Africa (UBA) Ghana Limited. Retrieved 10<sup>th</sup> May 2007, from: <https://ubadirectghana.com/>
80. U.S. Department of State (USDS) (2006). Ghana, Consular Information Sheet, U.S. Department of State (USDS), Bureau of Consular Affairs, Washington, DC 20520. Retrieved 12 June, 2006 from: [http://travel.state.gov/travel/cis\\_pa\\_tw/cis/cis\\_1124.html](http://travel.state.gov/travel/cis_pa_tw/cis/cis_1124.html)
81. Vijayan, P., and Shanmugan B. (2003). Service Quality Evaluation of Internet Banking In Malaysia, *Journal of Internet Banking and Commerce*, Vol. 8, No. 1.
82. Wan, W., Luk, C. and Chow, C. (2005). Customers adoptions of banking channels in Hong Kong, *International Journal of Bank Marketing*, Vol. 23, No. 2.
83. Wernerfelt, B. (1984). A resource-based view of the firm, *Strategic Management Journal*, Vol. 5, pp. 171-180.
84. World Economic Forum's (WEF). Global Information Technology Report (GITR) (2003/2004), The Global Information Technology Report, Retrieved 22<sup>nd</sup> March 2007, from: <http://www.weforum.org/en/initiatives/gcp/Global%20Information%20Technology%20Report/index.htm>
85. World Economic Forum's (WEF) Global Information Technology Report (GITR) (2005/2006), The Global Information Technology Report, Retrieved 22<sup>nd</sup> March 2007, from: <http://www.weforum.org/en/initiatives/gcp/Global%20Information%20Technology%20Report/index.htm>
86. Yakhlef, A. (1998). The Internet as a New Locus for Value Creation, *Management Decision*, Vol. 36, No. 9 pp. 610-614.
87. Yakhlef, A. (2001). Does the Internet compete with or complement bricks-and-mortar bank branches? *International Journal of Retail and Distribution Management*, Vol. 29, No. 6/7, pp. 274-283.
88. Zekos, G. (1999). EDI and the contractual role of computerised (electronic) bills of lading, *Managerial Law*, Vol. 41, No. 6.