

An Analysis Of Electronic Banking Acceptability In Ghana

Matthew Asare FCCA, Samuel Effah ACCA,

Finance Department, University of Mines and Technology, Tarkwa, Ghana; (1st Affiliation)
Finance Department, University of Mines and Technology, Tarkwa, Ghana (2nd Affiliation)
Email: asare553@hotmail.com; samueleffah2013@hotmail.com

ABSTRACT: Electronic banking has changed the way banking is conducted across the globe and Ghana is no exception. Over the years banks have designed and rolled out many different electronic banking products and services in the Ghanaian landscape. In this study an attempt is made to critically examine how customers have accepted and adopted electronic banking products and services. The study was conducted using three banks namely Fidelity Bank, Zenith Bank and Access Bank. Data was collected from the administration of open ended and closed ended questionnaires. Additional data was also collected through interviews conducted with 150 customers and 50 staff of the banking institutions. A purposive and simple sampling technique was used to select the case study banks, customers and staff who participated in the study. Results of the study revealed that the factors which influence electronic banking include; ease of identification, ease of use, usefulness and interactivity. It also emerged that age, education and regular power supply contribute to electronic banking acceptability in Ghana. The successful adoption and acceptance of electronic banking is limited by challenges including; security concerns, high illiteracy rate, limited number of people with internet connection, unreliability and slow internet connection. Despite the challenges electronic banking will undoubtedly continue to offer new delivery channels for banking services now and in the future.

Keywords: Electronic-business, electronic commerce, electronic banking, customer acceptance and customer adoptability

1 INTRODUCTION

Electronic banking is revolutionising the way banking is conducted across the globe and Ghana is no exception. Over the last three decades banks in Ghana have designed and rolled out many different electronic banking products and services in the Ghanaian banking landscape. The implementation of these products and services require investments in information technology by the service providers. To succeed in such investments, bank customers must see the value in the technology else, they are unlikely to use it much. The more customers accept the technology driven products and services, the more willing they would be to make changes in their practices and actually use the products and services. As a result of technology and globalization customers have become more sophisticated in their demand for quality and their choice of products and services. The decision by customers to choose a particular product or service is influenced by certain factors which also determine customers' requirements. To achieve competitive advantage banks must design and deploy electronic banking products and services which would meet customers' requirements. The factors which affect acceptance and adoption of electronic banking could be behavioural, psychological or simply due to ignorance or the lack of education. Electronic banking users' attitudes towards the acceptance of a new information system have a critical impact on the successful information system adoption (Davies, 1989). The more accepting of a new information system the users are, the more willing they are to make changes in their practice and use their time and effort to actually start using the new information system (Succi and Walter, 1999). It is therefore important for banks to be aware of the factors which influence the acceptance and adoption of electronic banking so that efforts could be made to design and implement products and services that customers will accept and use them. Electronic banking offers variety and convenience to customers. Despite the benefits of electronic banking, the acceptability rate in Ghana is very low. It is therefore a matter of interest to investigate the factors that drive customers to conduct business online.

2. Problem Statement

The world is increasingly becoming a global village as a result of technological advancement and Globalization and banking has had its fair share of this. The industry is gradually moving away from the traditional brick and mortar mode of operation to an electronic system of banking. Electronic banking offers banks a new frontier of opportunities and challenges which further augment competition in a global banking world. Banking institutions in Ghana have embraced the concept of electronic banking and thus making huge investments to take advantage of the opportunities it offers. In the last few years many countries have promulgated many different regulations to address the complexities and novelty brought about by electronic banking. As part of measure to promote electronic banking in Ghana, the Bank of Ghana issued guidelines for branchless banking in 2008, (BOG, 2008). This forms part of the broader strategy to create an enabling regulatory environment to promote electronic banking or branchless banking as used by the Bank of Ghana. In 2008 Ghana passed laws in the area of electronic transactions and communications to deal with electronic transfer. There is substantial evidence to suggest that electronic banking has been embraced by financial institutions and regulatory bodies in Ghana, however customer acceptability is deemed low. It is therefore important to ascertain and understand the factors that drive the adoption and acceptability of electronic banking in Ghana. This study seeks to examine the militating factors which affect customer acceptability and adoption of electronic banking in Ghana. The study will also examine the nature of electronic banking products and services offered by banks in Ghana and the factors that would influence customer acceptance of these products and services.

3. Objectives of the study

The aim of the study is primarily to examine the existing level of acceptance and adoption of electronic banking by customers in Ghana. The study seeks to:

1. Identify the factors which influence the acceptance and adoption of electronic banking products and services in Ghana.

2. Identify the products and services that are delivered through electronic banking in Ghana
3. Ascertain the problems associated with electronic banking in Ghana

4. Research Questions

The study seeks to provide answers to the following research questions

1. What factors contribute to successful acceptance and adoption of electronic banking in Ghana?
2. What electronic banking products and services are offered in Ghana?
3. What problems are associated with electronic banking from the perspective of both the customer and the bank?

5. Literature Review

According to Windrum and Berranger (2002), E-Business is the integration of the internet and related ICTs into the business organization. Schneider (2001) also defines e-business as business activities conducted using electronic data transmission technologies such as those used in the internet and the World Wide Web. Electronic commerce refers generally to all forms of transaction relating to commercial activities including both organizations and individuals that are based upon the processing and transmission of digitized data including text, sound and visual images. There is a thin line between electronic business and electronic commerce. The different terms are used to illustrate different perspectives and emphases of different people in different organizations and business sectors. According to Van Hoeck (2001), "E-Business is widely understood as business conducted through the internet, not only including buying and selling products, but further extended for also serving customers in collaboration with business partners". Electronic banking can be defined as the deployment of banking services and products over electronic and communication networks 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. It can also be said to be the automated delivery of new and traditional banking products and services directly to customers through electronic, interactive communication channels. The definition of electronic banking varies amongst researchers partially because electronic banking refers to several types of services through which bank customers can request information and carry out most retail services using computer, television or mobile phone, Daniel, (1999); Sathye, (1999). Salehi and Zhila, (2008), describe electronic banking as an electronic connection between bank and customer in order to prepare, manage and control financial transactions. Electronic banking includes the systems that enable financial institution customers, individuals or businesses, to access accounts, transact business, or obtain information on financial products and services through a public or private network. While some literature restricts the use of the term to internet banking (Daniel, 1999), elsewhere the term is limited to retail banking (Aladwani, 2001) or both retail and corporate banking (Simpson, 2002). The most common definition for electronic banking, and the one used in this study is the one given by the Basel Committee Report on Banking Supervision (1998), "Electronic banking refers to the provision of retail and small

value banking products and services through electronic channels. Such products and services can include deposit-taking, lending account, account management, the provision of financial advice, electronic bill payment, and the provision of other electronic payment products and services such as electronic money". Kurnia et al, (2010), identified perceived benefits, firm size, top management support, availability of financial and human resource, competitive pressure and strong governmental support as the key drivers to electronic banking in China. The researchers also identified customer reluctance due to security concern, limited infrastructure, immature legal framework, high uncertainty and lack of trust as barriers to electronic banking in China. A research by Geetha and Malarvizhi identified security and trust, familiarity and innovation as the factors which influence electronic banking acceptance among customers in India. In a research conducted in 2002 by Mattila, Karjaluoto and Pento titled Internet Banking Adoption factors in Finland, the researchers found that prior technology experience, personal banking experience, reference group influence and security concerns are significant factors which affect internet banking in Finland. They also identified that demographic characteristic of customers also affected the adoption of internet banking in Finland.

6. Significance of the study

Literature available to the reach of this study indicates that there are only a few research works carried out on electronic banking adoption in Ghana. Notable research in this area is the one carried out by Boateng and Molla (2006) which analyzed the use of the internet in developing Electronic banking capabilities in Ghanaian Banks. The study by Boateng and Molla (2006) was based on an exploratory single case study, particularly focused on the strategies adopted by the bank in developing e-banking capabilities. This failed to generate considerable insight into customer's expectations on the bank's e-banking products and services. This study is therefore designed to attempt to fill the gap. The factors which influence the acceptance and adoption of electronic banking in Ghana are therefore an issue which needs to be addressed urgently. It is expected that the findings of this study will help bankers to understand the requirements of customers so that appropriate mechanism can be put in place to design and implement products and services that will meet the requirements of customers. Moreover the results can also help policy makers in fashioning out good policies that will promote technological development in Ghana to facilitate the deployment of electronic banking in the country. It will enable Policy makers to design and implement strategies to deal with data security concerns and electronic banking regulation.

7. Methodology

Both primary and secondary data were gathered for the research. Primary data was collected through interviews and questionnaires administered to customers and bank officials. In all a total of 105 respondents participated in the survey. This was made up of 90 customers and 15 staff drawn from the Tarkwa branches of 3 different banks which were Ecobank, Zenith Bank and Fidelity Bank. The banks were selected because they are well known and have locations across the Country. Moreover they offered electronic banking products and services. Customers who had operated their accounts for more than one year were selected for the survey. The

researchers were of the view that operating an account for one year or more was good ground for one to be conversant with the products and services the bank offers. Such customers would also be better placed to identify the factors which influenced their choice of products and services. The researchers visited the banking halls of the case study banks for six weeks in 2014 and customers who had visited the banks to transact business were randomly selected to participate in the study. A combination of open ended and closed ended questionnaires were used for the study. Secondary data were collected from related literature, publications and reports from banks to help in the triangulation. The data collected were analysed using Statistical Package for Social Sciences (SPSS) version 21.

8. Discussion of Findings

8.1 Customer acceptance and adoption of e-banking

The study gathered that customers in Ghana used four factors to evaluate e-banking products and services. These were ease of identification, ease of use, usefulness and interactivity. Ease of identification includes connectivity and ability of identification and is used to measure how easy it is to access information and identify functions on web sites of service providers. 78% of the respondents mentioned identification as a factor which influenced their choice of a product or services. Ease of use refers to how easy it is to use the functions to achieve the goal of customers. Results from the study showed that 67% of the respondents identified ease of use as a critical factor in the choice of e-banking products and services. Usefulness also refers to how helpful an application is to customers in accomplishing their intended purposes. 62% of the respondents mentioned usefulness as the factor which affects their choice of e-banking products and service. Interactivity is concerned with how the web sites interact with customers and 56% identified it as the factor affecting their selection of e-banking services. The study revealed that availability of ICT facilities like computers and internet facility affected the acceptance and use of e-banking services. The study showed that 70% of the respondents mentioned that they could not accept electronic banking because they do not own a computer or have internet access. The unavailability of internet connectivity in most parts of the country also affects the choice of e-banking products and services. It must however be mentioned that in recent times the proliferation of smart phones is increasing internet availability to many citizens across the country and this has the potential to increase the acceptance and adoption rate for e-banking products and services. The cost of acquisition and maintenance of the ICT facilities is also a hindrance. The research also examined the characteristics of respondents who would accept e-banking products and services and interesting scenarios emerged. The educational level of respondents emerged as one of the factors that affect their ability to interact with the technology driven products and services. For example all instructions on Automated Teller Machines (ATMs) in Ghana are in English whiles Ghanaians are more comfortable with their local dialects hence once ability to read in English affected their ability to interact with the machines. 48% of the respondents identified their inability to read and write as a hindrance in accepting e-banking products and services. The study also revealed that age was a critical factor which determined the acceptability and adoption

of e-banking products. Most of the respondents who showed interest in e-banking products and services were youth between the age brackets of (20-45 years). They constituted 85% of the respondents whiles the aged (50-65 years) who showed interest in e-banking products and services constituted 15% of the respondents. The youth, literate and middle class customers were found to be more inclined to accept electronic banking products and services than the aged, illiterate and the poor customers. Another factor which emerged prominently was the identification of the inconsistency in the supply of electricity power as a critical factor affecting successful electronic banking adoption in Ghana. In Ghana light outs is a common feature and this has the potential of causing financial loss to both banks and customers. In the last three years banks have had to depend on generators to supply power for their operations due to the erratic power supply popularly called 'dumsor' facing Ghanaian populace. Security or the risk associated with it is a factor which affects any new innovation. Even in developed economies where electronic banking has long been established, one of the most important factors slowing down the progress of this new innovation is the customers' concern for security of financial transactions over the internet. Customers in Ghana are curious to find out how the banks would generally deal with internet fraud. Will the burden of proof be on the customer or the banks would be willing to settle the issue upfront and investigate the problem later. Reluctance to change is also another factor that affects adoption because the existing mode of service delivery fulfills the customers' needs adequately. In Ghana the single most widely means of transacting banking business is the brick and mortar branch network. For customers to change their present ways of operating and to take up new technology, it must fulfill a special need.

8.2 Electronic Banking Products and Services offered in Ghana

An examination of bank reports and documents revealed that Electronic banking products and services mostly provided by banks in Ghana include ATM, Telephone banking, internet banking, SMS Alerts, Email, Mobile banking and Branch Networking. This was also confirmed by customers who were interviewed. A major advance in electronic banking in Ghana was the introduction of ATMs. The aim was to reduce over the counter workload of the human tellers however this benefit of the ATM is yet to be felt in Ghana fully because long queues are still seen in many banks across the country. The study also revealed that mobile money is a phenomenon which is fast catching up with customers in Ghana. This is thriving on the back heel of the large number of mobile phone users in Ghana. Currently MTN, Airtel and Tigo telecommunication companies are partnering Universal Merchant Bank, Ecobank, GCB Bank, and Rural banks in rolling out this facility to customers.

8.3 Problems encountered in electronic banking

The implementation and functioning of electronic banking services in Ghana is limited by a number of challenges. The research captured the challenges in electronic banking in Ghana as follows: Ability to adapt global technologies to local requirements; the ability to create the necessary level of regulatory and institutional framework; ability to strengthen public and government support for e-banking services in

Ghana. Due to high illiteracy rate, many people do not know how to use the internet, the number of people with a personal internet connection is small and internet connections are generally slow and unreliable.

9. Conclusion

Electronic banking has fundamentally changed the business of banking by scaling borders and bringing about new opportunities. The study found out that the factors which influence customer acceptance and adoptability were ease of identification, ease of use, usefulness and interactivity. The research revealed that ICT availability also influenced customer acceptance and adoption. It also came out education, age, constant power supply affected the choice and use of e-banking in Ghana. Electronic banking products and services offered in Ghana were identified as ATM, Telephone banking, internet banking, SMS Alerts, Email, Mobile banking and Branch Networking. Electronic banking has created many new challenges for bank management and regulatory authorities. The challenges include; how to adopt global technology to local requirements, how to create the necessary level of regulatory and institutional framework for e-banking in Ghana, ability to strengthen public and government support for e-banking, how to create the necessary IT infrastructural base to propel e-banking delivery in Ghana, how to reduce the high illiteracy rate and above all how to deal with the security concerns of customers. It is worthy of note that the challenges above are not significantly different from those identified by the report of UNCTAD (2002). Despite these challenges Electronic banking will undoubtedly continue to offer new delivery channels for banking services now and in the near future.

10. Recommendations

More education programmes should be rolled out by the banks to their customer on the uses and benefits of e-banking. The education should highlight on the user friendliness of the electronic banking products and services. It is suggested that IT Infrastructure should be developed to enhance customer acceptability and usage of e-banking. Government should pioneer the development of IT infrastructure in Ghana. Alternatively Government can partner private companies especially Telecommunication Companies in Ghana to develop IT infrastructure. Access to ICT education should be improved to reduce illiteracy rate in Ghana. Efforts should also be channeled into writing ATMs applications in Ghanaian languages to enable those who cannot read in English to access the facility. Bank's dependence on generators for alternate power means high operational cost which has the potential of affecting the survival of banks in the coming years. Banks should therefore explore alternative energy generation sources like solar and biogas technology so as to ensure constant power supply for electronic based products and services. There are many more electronic banking products which are not available in Ghana. These include credit cards, funds transfer to customers in other banks and bill payments on the internet. Efforts should be made to introduce these in Ghana. ATMs in Ghana should be designed to transfer funds between current, savings and credit card accounts, making payments to application for initial public offerings on the Ghana Stock Exchange. In order to address the connectivity issue, banks must collaborate with Telecommunication companies to ensure availability of internet connection to facilitate e-banking products and services roll out. To address

privacy and security concerns government should come up with legislation to regulate electronic banking in Ghana. On March 15, 2001, an Accra High Court delivered perhaps the first judgment on a case arising from the use of ATM in Ghana. A customer of Standard Chartered Bank Limited sued the bank for a refund of monies withdrawn from his bank account apparently through the use of a fake ATM card. The customer won the case.

References

- [1] Aladwani, A. (2001) 'Online banking: A field study of drivers, development challenges, and Expectations', *International Journal of Information Management*, 21, 2001, pp. 213-225
- [2] Bank of Ghana (2008) Branchless Banking Guideline, BG/GOV/SEC/32008/21 (www.bog.gov.gh)
- [3] Basel Committee Report on Banking Supervision, Risk management for electronic banking and electronic money activities, Switzerland: Bank of International Settlements, 1998, paper 82, May, (www.bis.org)
- [4] Boating, 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
- [5] Daniel, E. (1999), Provision of Electronic Banking in the UK and the Republic of Ireland, *International Journal of Bank Marketing*, Vol. 17, No. 2, 1999, pp 72-82
- [6] Davies, F. D. (1989), 'Perceived usefulness, perceived ease of use, and user acceptance of information technology', *MIS Quarterly*, pp.319-40
- [7] Geetha, K. T., and Malarvizhi, V. (2011) Acceptance of e-banking among customers. *Journal of Management and Science*, 2(1), 1-9
- [8] Kurnia., S. Peng, F., and Ruo, Y., L. (2010) 'Understanding the adoption of electronic banking in China', University of Melbourne
- [9] Mattila, M., Kaarjaluo, H., & Pentto, T. (2002), 'Internet banking adoption factors in Finland', University of Jyväskylä
- [10] Salehi, Mahdi; Ali, Mansouri and Zhila Azary (2008). 'Islamic Banking Practice and satisfaction: Empirical Evidence from Iran, *ACRM Journal of Business and Management Research*, Vol. 3, No. 2, 2008, pp. 35-41
- [11] Sathye, Milind (1999) 'Adoption of internet banking by Australian Consumers: An Empirical investigation', *International Journal of Bank Marketing*, Vol. 17, No. 7, 1999, pp. 324-334
- [12] Schneider, I. (2001), 'Is time running out for internet only banks?', *Bank systems & Technology*, September, p.8

- [13] Singh, B. and Malhotra, P. (2004) Adoption of internet banking: An empirical investigation of Indian banking sector. *Journal of Internet Banking and Commerce*, 9 (2)
- [14] Succi, M.J. and Walter, Z.D. (1999), "Theory of user acceptance of information technologies: an examination of health care professionals", *Proceedings of the 32nd Hawaii International Conference on system Science (HICSS)*, PP.1-7.
- [15] United Nations Conference on Trade and Development, *E-commerce and Development Report*, (2001)
- [16] Van Hoek, (2001), 'Manufacturing strategy and e-business: an exploratory study.
- [17] Windrum and Berranger (2002), 'The Adoption of e-business technologies by SMEs