FACTORS INFLUENCING THE USAGE OF ELECTRONIC BANKING IN UGANDA'S COMMERCIAL BANKS: A CASE STUDY OF STANBIC BANK UGANDA LIMITED

By

Justine Sewali Mwami

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DECLARATION

I, Justine Sewali Mwami, hereby declare that this dissertation is a result of my own effort and has never been submitted for any award in any other university.

Signature:…… ……..

Date

APPROVAL

This is to certify that this work has been done under our supervision and submitted for examination with our approval.

Signature: ……. ……

Supervisor Date

Dr. Benon C. Basheka

Signature: …… ……..

Mrs Prossy Oluka Nagitta Date

DEDICATION

I dedicate this work to my family, the Mwamis, for their encouragement, desire for hard work and success dictated that I had to go to school and more so for further education. My heartfelt gratitude goes to my mother, husband and children who provided a lot of support and encouragement and for their continued inspiration and moral support in my career development.

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ACRONYMS

ATMs	: Automated Teller Machines
DV	: Dependent variable
EFT	: Electronic Funds Transfer
ICT	: Information and Communication Technology
ICTs	: Information and Communication Technologies
IS	: Information Systems
ISAR	: Internet Standards Assessment Report
IT	: Information Technology
IV	: Independent variable
NPSS	: National Payment System Secretariat
RTGS	: Real Time Gross Transfer System
SAQs	: Self-administered questionnaires
TAM	: Technology Acceptance Model
TOE	: Technology Organizational Environment
TRA	: Theory of Reasoned Action
TV	: Television
U.S.	: United States
U.S.A	: United States of America
UNIS	: Uganda National Inter Bank Settlement

ABSTRACT

This study assessed the factors that influence the usage of electronic banking in commercial banks in Uganda with a focus on Stanbic Bank in Kampala. The following objectives guided this study: To assess the influence of environmental factors on the usage of E-banking at Stanbic Bank, Kampala, the influence of organizational factors on usage of E -banking at Stanbic Bank, Kampala and the influence of attitudinal factors on usage of E- banking at Stanbic Bank, Kampala. The study adopted a correlational study design using both quantitative and qualitative approaches. In this study, the sample size was 170 and the response was 152 (89% response rate). The analysis consisted of descriptive statistics, which included frequencies and percentages and inferential statistics, which included correlation and coefficient of determination. The study established that there was a very strong positive correlation between independent variables (environmental factors, organizational factors and attitudinal factors) and dependent variable (usage of e-banking). However, after controlling the moderating variable (political support), the strength independent variables (environmental factors, organizational factors and attitudinal factors) and dependent variable (usage of e-banking) was reduced but remained significant. Thus, it was concluded that environmental factors, organizational factors and attitudinal factors positively affect usage of e-banking. It was recommended that Stanbic Bank should take into consideration the environmental factors, organizational factors and attitudinal factors to improve usage of e-banking.

CHAPTER ONE

INTRODUCTION

1.0 Introduction

This study assessed the factors that influence the usage of Electronic banking in commercial banks in Uganda with emphasis on Stanbic Bank in Kampala. In this study, the factors were conceived as the independent variables while the usage of electronic banking was the dependent variables. The factors examined were environmental, organizational and attitudinal (perceptional). Usage of electronic banking focused on perceived relative advantage, perceived organizational performance, perceived customer/organizational relationship and perceived ease of use. This chapter presents the background to the study, statement of the problem, objectives and research questions, hypotheses, the scope of the study, the conceptual framework, scope, significance of the study, justification and the operational definition of terms and concepts.

1.1 Background to the Study

1.1.1 Historical background

Historically, electronic banking (e-banking) was first conceptualized in the mid-1970s and it gained prominence in 1985 (Peterson, 1996). Some banks offered customers electronic banking in 1985. Its growth was further compounded by the lack of internet, and associated costs of online banking. The internet explosion in the late-1990s made people more comfortable with making transactions over the web. Despite the dot-com crash, e-banking grew alongside the Internet (Peterson, 1996). While financial institutions took steps to implement e-banking services in the mid-1990s, many consumers have been hesitant to conduct monetary transactions over the web. It took widespread adoption of electronic commerce, based on trailblazing companies such as America Online, Amazon.com and eBay, to make the idea of paying for items online widespread. By 2000,

80 percent of United States of America (U.S.A) banks offered e-banking. However, customer use was at a slow pace. At Bank of America, for example, it took 10 years to acquire 2 million e-banking customers. However, a significant cultural change took place after the Y2K scare ended.

In 2001, the Bank of America became the first bank to attract 3 million online banking customers, more than 20 percent of its customer base (IWS, 2006). In comparison, larger national institutions, such as Citigroup claimed 2.2 million online relationships globally, while J.P. Morgan Chase Bank estimated it had more than 750,000 online banking customers. Wells Fargo had 2.5 million online banking customers, including small businesses. Online customers proved more loyal and profitable than regular customers. In October 2001, Bank of America customers executed a record 3.1 million electronic bill payments, totaling more than $1 billion. In 2009, a report by Gartner Group estimated that 47 percent of U.S. adults and 30 percent in the United Kingdom bank online (ISAR, 2006).

Global internet access exceeded 1094 million people in December 2006 (IWS, 2006), offering new markets for internet-based services such as e-banking. Internet is technology that spreads faster than any other technology - the use of Internet is estimated to double in every hundred days. Since the new millennium, e-banking has experienced explosive growth in many countries and has transformed traditional banking practice. By offering e-banking services, traditional financial institutions seek to lower operational costs, improve consumer banking services, retain consumers and expand share of customer

In the last five years, financial analysts have assessed financial services websites as laggards behind other industries in overall innovation (Bruno-Britz, 2006). The Internet

Standards Assessment Report (ISAR) which shows that e-banking sites currently score low in the categories of innovation and use of technology (ISAR, 2006) compared to other retail websites confirms this trend. Current financial analysis indicates that bank customers "are most satisfied if they themselves are allowed to state where, when, and how they do their banking" (Silva, 2005). Survey results and industry research concludes that banks need to spend time and increase investments in improving connections with customers and differentiating the customer experience is getting the attention of many banks (Eckenrode, 2006). Financial analysts suggest, "banks can learn a thing or two from many non-bank industries that are exhibiting innovation in the way that they deal with self-service options for their customers" (Silva, 2005).

Currently, in Sub-Saharan Africa, there are a number of issues hampering the acceptance of Internet-based money management. These include customer satisfaction with existing service channels, security concerns, and a perceived lack of utility in the Internet channel (Metcalfe, 2001). For newcomers to the Internet, issues such as security and privacy concerns are still the greatest barriers to entry. According to Procter, (2001) banking organizations have a big role to play in helping to make their customers feel safe on the Internet. Another issue facing e-banking customers is that they perceive the Internet channel to lack functionality. Financial service providers appear to have, so far, failed to communicate a clear value proposition to customers. Most consumers reported that they do not use Internet-based financial services nor expect to use them in the near future (Goldstuck, 2001). Financial institutions thus face a challenge in demonstrating that using the internet as a service channel will be worthwhile and functionality will be delivered.

1.1.2 Theoretical background

Abrahamson (1991) advocates for using multiple perspectives in innovation research by arguing that under the condition of uncertainty, 'fashion' model, based on institutional theory of innovation, better suits with innovation research than 'rationalistic goal oriented' model. The underlying notion of rationalistic goal oriented or efficient theory is that the individuals make choice regarding usage of an innovation based on goals and technical consideration. Inclusion of more than one theoretical perspective enriches the depth and breadth of innovation research (Wolfe, 1994).

In this study, the researcher used Four Dominants Technology Usage Model. Out of these, Technology Acceptance Model (TAM) (Davis, 1985) and Technology Organizational Environment (TOE) framework (Tornatzky & Fleischer, 1990) are known as rationalistic goal oriented models whereas Institutional Intervention Theory (King et al., 1994) and Institutional Theory (DiMaggio & Powell, 1983) are the dominant institutional theories in technology usage. In order to study, usage of general technology innovations, Technology-Organization-Environment (TOE) framework was developed by Tornatzky and Fleischer (1990). TOE framework identified three aspects, technological context, organizational context, and environmental context, which influence technology usage by firms' (Tornatzky & Fleischer, 1990). Thus, as a generic theory of technology diffusion, the TOE framework can be used for studying any kind of information systems (IS) innovation research (Zhu et al., 2003) including e-banking. The TOE framework has been used extensively in various IS usage empirical works.

Technology Acceptance Model (Davis, 1985) has been the foundation of many technology usage and diffusion research and it is rooted in the Theory of Reasoned Action (TRA). As per TAM, the two important independent variables of actual use of

technology are *Perceived ease of use*, defined as 'the degree to which a person believes that using a particular system would be free of effort' and *Perceived usefulness,* defined as 'the degree to which a person believes that using a particular system would enhance his or her performance. TAM was developed to explain and predict particular IT usages. However, many researchers have used this particular model in studying usage of various IS technologies.

In the usage of an innovation, influence and regulatory actions are important (King *et al*., 1994). They provide a list of institutions in their seminal paper and claim that potential institutional action may take two dimensions and draw a model in line with that. Institutions can exert pressure through influence and regulatory power and 'Supply push' and 'Demand pull' forces lay down the context for those actions to take place (King *et al*., 1994). Both 'Supply push and 'Demand pull' are required for innovation usage. Supply push innovation comes from the supplier of innovation and demand pull generates from the users to enjoy the innovation. This theory has been used in many technology usage studies like e-banking usage (Scupola, 2003) and EDI usage (Dansgaard & Lyytinnen, 2001).

Institutional theory asserts that in societies where organizations work are guided by both rational rules and activities as originations are treated as system (Waber, 1946). DiMaggio and Powell (1983) and Scott (2001) claim that three types of institutional pressures-coercive, normative and mimetic, determine the technology usage by individuals and firms. *Coercive pressure* is exerted by organizations or other bodies on social actors to adopt the prescribed attitudes, behaviors, and practice as the later have resource dependency to the former. At organization level, coercive pressure may come from resource dominant organizations and regulatory bodies (Teo *et al*., 2003). Shi et al.

(2008) mentioned that coercive pressure significantly influences the attitude and intention to use e-banking. Normative pressure occurs when an organization voluntarily, but unconsciously imitate the attitude, behaviors and practices of other organizations. Although this imitation is not pushed by large actors, however, social actors who have not adopted innovation may feel discomfort when peers who they admire have adopted the same (DiMaggio & Powell, 1983). Shi et al. (2008) have found the significant influence of normative pressure on e-banking usage. Finally, mimetic pressures are directly associated with both voluntary and conscious imitation or copying of the practices and behaviors of competitors or successful and high status actors (DiMaggio & Powell, 1983).

Since the TOE framework, TAM, Institutional Theory and Institutional Intervention Theory have strong theoretical bases, proven empirical supports, and applicability to wide range of IS innovation, the study has adopted all these theories as underpinning theory for the research. This is because these theories throw light on the environmental, organizational and attitudinal factors that influence e-banking in commercial banks.

1.1.3 Conceptual background

As far as this study was concerned, the key concepts were the factors (as independent variables) and usage (as the dependent variables). The factors were looked at from three dimensions namely the environmental factors, organizational factors and attitudinal factors. Each of these factors were carefully conceptualized into different indicators as reflected in the conceptual framework. These indicators were derived from extensive review of literature.

The term electronic banking is almost generic in its nature and therefore it is mostly used without any further explanation or definition. Electronic banking includes several

traditional services like telephone banking, credit cards, debit cards, ATMs. The more recent additions are e-banking, mobile banking and digital TV banking. Electronic banking is also known as electronic funds transfer (EFT) and is simply the use of electronic means to transfer funds directly from one account to another. e-banking services are crucial for long-term survival of banks in the world of e-banking (Burnham, 1996).

Burnham (1996) also found that the majority of banks with Web sites spent less than US$ 25,000 to create a Web presence, and less than US$ 25,000 a year maintaining it. He suggested that even if these figures will rise as banks began to offer e-banking services, they would still be less costly than the traditional way of banking. From the consumers' perspective, e-banking provides a very convenient and influential approach to manage one's finances as it is easily accessible 24 hours a day, and seven days a week. Besides, the information is current. For corporate customers, sophisticated cash management packages offered through e-banking provide them with up to the minute information, allowing for timely funds management decisions (Kalakota & Whinston, 1996).

"Usage" according to web definitions is defined as the act of using, manner or amount of using. According to Wang and Tang (2003), the determinants of usage of electronic banking are clearly laid out. Daniel (1999) described electronic banking as the provision of banking services to customers through internet technology. He indicated that banks have the choice to offer their banking services through various electronic distribution channel technologies such as internet technology and video Banking technology. Wang *et al* (2003) commented on the usage of electronic Banking and claims that in the 1990's, banking was under utilized as business organizations used it only to market their products and services.

Thornton and white (2001), who examined customer orientation and usage of financial distribution channels in the Australian Financial Industry, found that more recently, most financial Institutions, faced with competitive pressure after the introduction deregulation in 1983, have rethought strategies to take full advantage of internet Technology. Tan and Teo (2000) note that the challenge to expand and maintain banking market share has influenced many banks to invest more in making better use of the internet. Jasimuddin (2001) also commented on the usage of electronic banking and indicated that the majority of Saudi banks had taken advantage of internet technology to establish web sites but few offered Electronic Banking services. He suggested that if Saudi Arabian industry wished to be successful in the global economy, it would be necessary to integrate internet technology into its banking strategy.

1.1.4 Contextual background

In Uganda today, e-banking is getting recognition and there is evidence that technology changes are being accepted. Way back in 1998, Bank of Uganda formed a dedicated unit, The National Payment System Secretariat (NPSS) to guide transition from traditional ledger banking to e-banking. The accomplished projects include, the Electronic cheque clearing system, allowing commercial banks to influence electronic payments and the Uganda National Inter Bank Settlement (UNIS) system, a real time gross transfer system (RTGS) that handles large payments. It is however clearly apparent from the amounts of money and type of players involved that electronic payments systems only serve the needs.

Uganda National Inter Bank Settlement (UNIS) system is a real time gross transfer (RTGS) system which handles large payments. It is clearly apparent from the amount of

money and type of players involved that current electronic payment systems not only serve the needs of the banked minority but also the majority of the people still lack a viable electronic payment system that can accommodate low transaction volumes at low cost, but still provide the required convenient, security and speed. Mobile phone payments can help address this gap adequately.

In Uganda today, just about anything can be done online with the remaining possibilities burgeoning by the day. The potential of the internet is ostensibly infinite and the banking industry decided it was not going to be left in the lurch. First of all, online banking boasts noteworthy expedience and pragmatism. When one uses online banking, checking account details, scheduling payments and dealing with deposits can be done with a mere few clicks of the mouse. When one has upcoming payments due, scheduling multiple installments in advance can be easily managed online. Stanbic Bank Uganda has made banking convenient to its clients by installing Auto Banks to enable clients manage financial affairs at their finger tips. Auto Bank cards give one the flexibility to do banking without visiting a branch. One can do banking 4 hours a day, 7 days a week at any Auto Bank throughout Uganda. Another customized product that Stanbic Bank Uganda offers is “New Business Online” Which product allows clients access their banking portfolio from any Internet connection anywhere in the world and allows one to monitor cash flow situation at all times.

In 2003, Stanbic Bank introduced e-banking in form of electronic Visa cards and went a step further by introducing SMS and internet banking methods, which clients can conduct in the comfort of their homes (Abaasa, 2007) in an effort to offer real time transactions to clients.

Despite the advantages e-banking offers, evidence from Stanbic bank records suggests that majority of clients still prefer to transact business in banking halls, as opposed to e-banking services. For example, in 2003, when e-banking services were introduced, 30% number of clients had used those services compared to 70% who use banking hall services. In 2005, 38% clients were using e-banking compared to 62% who were transacting in banking halls. By 2010, small rises of up to 45% of clients were using e-banking; a percentage far below the target set by the bank of 85% (Stanbic Bank Uganda, 2009). Although the statistics show that the e-banking usage in Stanbic Bank is growing, the trend is slow and therefore leaves a lot to be desired. In an attempt to deeply scrutinize this scenario, the researcher made a one week preliminary observational study. It was observed that there were very long queues in the banking hall and delays in attending to clients of over 30 minutes. This led to grumbling and discontent of clients. Others were seen leaving the queues and quitting the banking hall.

1.2 Statement of the Problem

e-banking brings about improved customer service delivery by providing real time response to client querries and is easy in transactions (Thornton & white, 2001). Stanbic bank has web based technologies costing (justify cost against the benefit of these software) all aimed at improving service delivery to the customers and these include Electronic Funds Transfer (EFT), introduced electronic Visa cards (Khisa, 2011). According to the Stanbic Bank, Uganda communications manager, online or electronic banking is convenient as it allows one to perform transactions 24 hours, seven days a week. He said that Stanbic Bank, for instance has over 202 ATM centers that can be accessed anywhere in the country at anytime including on public holidays (Khisa, 2011). Despite these, usage of the installed web based services (e-banking) is still a nightmare. Since the introduction of e-banking in Stanbic Bank Uganda Limited, only 45% of clients

were using e-banking; a percentage far below the target set by the bank of 85% (Stanbic Bank Uganda Report, 2009). If this trend continues, then inefficiencies and delays will impact negatively on the customer satisfaction leading to persistent grumbling discontentment and loss of bank clientele. Thus, this study investigated the factors, which affected the usage of e-banking services using Stanbic Bank in Kampala as a case study.

1.3 General Objective of the Study

The general objective of the study was to assess the factors that influence the usage of electronic banking in Uganda with a focus on Stanbic Bank, Kampala

1.4 Specific Objectives

The following objectives guided this study

1. To assess the influence of environmental factors on the usage of e-Banking at Stanbic Bank, Kampala
2. To assess the influence of organizational factors on usage of e-banking at Stanbic Bank, Kampala
3. To assess the influence of attitudinal factors on usage of e-banking at Stanbic Bank, Kampala

1.5 Research Questions

The study answered the following research questions

1. What is the influence of environmental factors on the usage of e-Banking at Stanbic Bank, Kampala?
2. What is the influence of organizational factors on usage of e-banking at Stanbic Bank, Kampala?

3. What is the influence of attitudinal factors on usage of e-banking at Stanbic Bank, Kampala?

1.6 Hypothesis of the Study

The study tested the following hypotheses

1. Favorable environmental factors positively influence the usage of e-Banking at at Stanbic Bank, Kampala.
2. Favorable organizational factors positively influence the usage of e-banking at at Stanbic Bank, Kampala.
3. Favorable attitudinal factors positively influence the usage of e-banking at at Stanbic Bank, Kampala.

1.7 Conceptual Framework

Various concepts that have an impact on the usage of E- banking in commercial banks in Uganda are identified and developed in a conceptual framework. The conceptual framework explains how the various variables in the study interrelate and this helps the research to quickly identify the proposed relationships (Mugenda & Mugenda 1999). Figure 1below illustrates the relationship diagrammatically

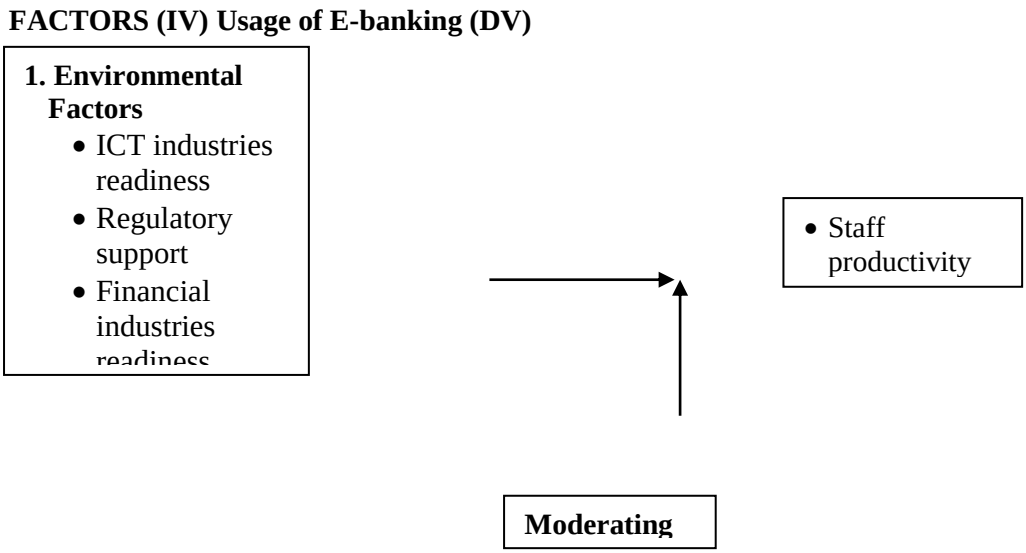

Figure 1: ***Conceptual framework showing the factors that influence the usage of electronic banking***
Sources: Tan & Teo, (2000).

According to the conceptual framework, the environmental, organizational and attitudinal factors are the independent variables broken down into three specific dimensions. This breakdown helped the research in establishing orderliness and give the study a deeper analysis.

Usage of electronic banking was a dependent variable, which formed the interest of the study as the influence of the independent variables manifested on this dependent variable. With a positive influence of the IV on the DV, the researcher conceptualized that there would be positive staff productivity, real time service delivery and banking hall decongestion. Political support was conceptualized to strongly influence the diffusion of the internet investments in modern ICTs.

1.8 Significance of the Study

The results of this study are expected to be of value to the following:

Policy Makers: The study assessed the influence of he various policies e.g. policies that govern security, the risk management principles which ensures that e-Banking risks are recognized, addressed and managed by banking institutions in a prudent manner according to the fundamental characteristics and challenges of e-banking services. Policies also ensure that while existing risk management policies remain applicable to e-banking activities, such policies must be tailored, adopted and in some cases expanded to address the specific risk management challenges created by the characteristics of e-banking

Researchers: The issues and recommendations raise in this study may lead to involvement of various researchers in generating more knowledge from various perspectives. The findings of this study may form a basis for further research to those interested promoting consistent use of electronic Banking in financial institutions.

Managers/ Administrators: The success of usage of electronic banking rests on the role of managers in the usage process. The more positive the perception of managers towards new technologies, the more quickly the usage is adopted. On the financial and technical resource aspect, managers play a major role and are principle facilitators during implementation.

1.9 Justification of the Study

The study analyzed the factors that influence the usage of Electronic Banking. This study may enable build a model that will guide financial institutions, in terms of beefing up security procedures and policies that guide the electronic banking users. Commercial Banks may be able to stay competitive through productivity gains, transaction cost reduction and customer service improvement. Intense competition amongst commercial

banks and from foreign owned banks has also led to major commercial banks being actively engaged in e-banking initiatives. This further explains the need for me to research on the various organizational-environmental frameworks used to analyze factors that influence usage of electronic banking. The findings from this study may further complement the existing knowledge to guide readers to better understand the usage of electronic banking in Stanbic bank.

1.10 Scope of the Study

The scope of the study had three dimensions mainly the geographical area, content of the study and time frame that will be covered during this study.

1.10.1 Geographical scope

The area of study covered the metro - Kampala Stanbic bank branches namely: Corporate branch, IPS branch, City Branch and Forest Mall Branch.

1.10.2 Content scope

The study analyzed the factors that influence the usage of Electronic Banking and these factors were dissected into three major dimensions namely Environmental, Organizational and Attitudinal. These variables were studied in detail as indicated in the conceptual framework. Each of these dimensions was further broken down to show several indicators, which were also investigated to enable me come up with viable and successful answers to the various research questions.

1.10.3 Time scope

The study covered e-banking usage trend of 3 years, beginning 2008 to 2010. This was the time when e-banking awareness campaigns were put in place to ensure decongestion of the banking hall and hence improve in client service delivery.

1.11 Operational Definition of Key Terms

Influence: This was defined as the effect of the fluctuation in the value of an independent variable (such as organization factors) on the value of a dependent variable (usage of e-banking).

Environmental factors: These were factors outside the organization that influenced usage of e-banking.

Organizational factors: Organization factors were defined more narrowly as the durable social relationships through which the organization (or more exactly, its representatives, leaders or owners) controlled other members' behavior to realize the organization's objectives.

Attitudinal factors: Attitudinal factors were defined as the intentions/behaviors of people towards e-banking (Held et al., 1999).

Usage of E-banking: E-banking were broadly defined as the use of the Internet to buy, sell, or support products and services in the banking sector. Usage was the acceptance and continued use of a product, service or idea.

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

This chapter provides the relevant literature in the field that the researcher selected for research. The chapter is divided into two sections including detail overview of prior research and research model for this study. It is presented under themes related to the study objectives.

2.1 The Influence of Environmental Factors on the Usage of E-Banking

2.1.1 ICT industries readiness and usage of e-banking

ICT infrastructure includes telecommunication network, Internet connectivity, availability of computer, and other hardware and software. Technological environment, both electronic and telecommunication, where a particular firm operates have influence on ICT usage (Dholakia & Kshetri, 2004). Shortage of information technology infrastructures act as barriers for sustaining growth of online commerce (Chircu & Kauffman, 2000).

In the same light, Zhu *et al* (2003) mentioned that, organizational readiness, which includes infrastructure, relevant systems, and technical skills play an important role in usage of e-banking. Although, the definition of organizational readiness differs in literature, it is agreed that organizational readiness have strong influence on Banks' technologies usage (Zhu et al., 2004). Organizational capabilities also determines an organization's readiness to adopt ICT and may take several forms including human capital, IT literacy, and slack resources.

Yap et al., (1992) mention that banks are regarded as 'poor' in human, financial and material resources and that this hinders them to adopt ICTs. Hence, Banks with more IT

experience and IT in use are more likely to adopt IS innovation. Technological readiness of Banks is important for e-banking usage (Zhu et al., 2006) and it includes not only physical assets, but also human resources are complementary to physical asset (Mata et al., 1995; Iacovou et al., 1995). Due to importance of human, IT and capital in determining technology usage in any organization, it is included organizational capabilities as one of the factors in e-banking usage by Banks. Hence, it is concluded that e-banking usage by Banks depends on ICTs industries' readiness.

2.1.2 Perceived regulatory support and usage of e-banking

Rotchanakitumnuai and Speece (2003) found that legal support for online banking for safeguarding customers is most important. Customers hesitate to use the e-banking services if there are inadequate laws on it (Larpsiri et al., 2002). Thomas et al. (1998) mentioned that who will bear the liability if financial loss occurs is another concern as sometimes it is hard to recognize the location of online service providers. Banks often transfer the risk to users of their services by signing agreement and that may hinders customers to use this services (Attaran, 2000). In developing countries, regulatory environment is more critical than developed countries in usage of innovation (Zhu et al., 2004, 2006). Due to the importance of regulatory support in e-banking usage, this construct was included in the conceptual model.

2.1.3 Financial institutions readiness and usage of e-banking

E-banking offers benefit for banks as well their customers. E-banking is described as 'wallet sharing' for both financial institutions and Banks (Sato & Hawkins, 2001). If any banks have online channel for providing banking services, and as building these online channel requires huge amount of investment, therefore, bank certainly would ask their customers to use online channel. Zhu et al. (2003) mentioned that lack of trading partner

readiness is significant usage inhibitor. Trading partner readiness encourages small firms to adopt ICT and e-banking (McCole & Ramsey, 2005) and same expected to apply in e-banking usage by Banks.

2.1.4 Pressure from institutions and usage of e-banking

Institution is a social structure that has attended a high degree of reliance (Scott, 2001). King et al. (1994) provides a list of institutions including government, governmental institutes, development agencies, educational institutes, business association. Pressure may emerge due to competition and as well as from regulation. Institutions can exert pressure to Banks to adopt e-banking through many ways including enacting laws, providing training, subsidy, and knowledge deployment. Institutional pressure can be coercive, normative and mimetic (DiMaggio & Powell, 1983). Financial institutions can also influence banks regarding use of their online channel for banking as it is benefited for both of them. Hence, this research includes pressure from institutions as a construct in the usage framework

In technology diffusion, the role of institutional involvement has been described and acknowledged in various literatures (Andersen et al., 2003). King et al (1994) advises that six types of institutional intervention can stimulate IT usage by firms. These are knowledge building, knowledge deployment, subsidy, mobilization, standard setting and innovation directives. Institutions can thus influence in several ways in IT usage, like through enacting rules and regulations or through creating demand for innovative product and processes (Montealegre, 1999). Damsgaard and Lyytinen (2001) notes that institutional involvement is imperative in the technology usage and such institution contains governmental agencies, national and global standardization organizations, local government, and non-profit organization like industry association. Andersen et al (2003)

also acknowledged the role of information infrastructure (telecommunication, wireless and Internet infrastructure, technology acceptance) and roles of government and private sectors in technology usage.

Shi et al. (2008) studied usage of e-banking from consumers' perspectives and found that normative and coercive pressure significantly influence the attitude and intention to adopt of Internet banking. Wang and Cheung (2004) found that coercive pressure have influence on travel agencies' usage of e-business. Online banking allows both Banks and financial institutions to lower transaction cost and save time to Banks and creates more business and ensure better customer relationship management to financial institutions (Han, 2008). Therefore, pressure may come from banks to Banks to adopt online financial services.

Perceived risk can also cause Customer to reject new e-banking services. Perceived risk is related to reliability and system failure. Customers are also worried that technology-based service delivery systems will not work as expected, and lack confidence that problems can be solved quickly (Walker, 2002). Westland (2002) found that transaction risk occurs when online markets fail to assure that service will be delivered with adequate quality. Frequently, slow response time after the Internet interaction leads to a delay of service delivery and causes customers to be unsure that the transaction was completed (Jun & Cai, 2001).

According to Zeithaml *et al*., (2002), privacy is one of the important elements of system trust. It means that the customer data not to be shared and misused by the organization. According to (Jun & Cai, 2001) security is the main dimensions in e-banking service quality. Reputation is important, as distrust of the service provider is a related factor

(Jarvenpaa, 1999). Reputation can be defined as the extent to which customers believe a supplier or service provider is honest and concerned about its customers (Doney, 1997). Firms must have experience in business functions, policy, and support personnel to build reputations as competent technology-based service providers to their customers. For banks, reputation is one of the major issue that affect customer usage of new technology-based service delivery (Aladwani, 2001). Reputation depends on policy promises to customers, including privacy policy, as most customers do not like their personal information revealed in an inappropriate manner or misused by others over the Internet (Turban *et al*, 2002). Customers who adopt electronic financial services are more likely to perceive problems related to loss of privacy, as the Internet seemingly allows other people to access their information easily (Jones, 2000). Customers do not always believe privacy policies will keep customer information confident (Cunningham, 2003).

2.2 The Influence of Organizational Factors on Usage of E-Banking

Based on existing literature, this research identified that among many, three organizational factors have more influence on e-banking usage by banks. These are reviewed in the following subsections.

2.2.1 Perceived benefits and usage of e-banking

Numerous literature states that perceived benefit is a key reason for technology usage. Benefits e-banking to Banks includes lower administrative cost (Quayle, 2002), increased internal efficiency (Hawkins & Prencipe, 2000), improved relationship with business partners, improve competitiveness (Fraser *et al*., 2000); improve quality of information (Kaplan & Sawhney, 2000). Mehrtens *et al* (2001) ranked perceived benefits as main factors for small firms' Internet usage. E-banking provides benefits to Banks like 24/7 access to bank account, fund transfer and bill payment. E-banking also widens scope of

financing from both local and global players (UNCTAD, 2001). Therefore, we can conclude that perceived benefits is one of the main factors for e-banking usage by banks.

'Perceived risk is the consumer's subjective expectation of suffering a loss in pursuit of a desired outcome' (Wang *et al*., 2003). Perceived risk is multi-dimensional in nature and captures performance, physical, financial, psychological, social loss and time and therefore, difficult to capture objectively (Pavlou, 2001).

Akinci *et al*. (2004) found that lack of confidence, security, reliability and privacy issues are main concerns of online banking customers. The components of online security are trust, confidence, reliability, risk on online transactions and reputation of online financial service providers. Security issues arise due to disruption of the operating system, or interrupted supply of the internet. In case of web based transactions trust on service providers as well as on the system are important (Lee & Turban, 2001). Wang et al., (2003) found the perceived credibility is most determining factors in e-banking usage. Perceived credibility is impersonal in nature, and captures reputation, information and economic reasoning (Ba & Pavlou, 2002). It reflects consumers' perception regarding the online transaction's security and trust issues (Wang et al., 2003). Thus, this study adopted perceived credibility as a construct in the usage of e-banking.

2.2.2 Security and usage of e-banking

Strong concern about security is one common issue related to unwillingness to use e-banking services (Madu, 2002). Security violation can lead to various problems such as destruction of operating systems, or disruption of information access (Min & Galle, 1999). Most customers are not satisfied with the infrastructure of Web security systems (Black, 2000). In e-banking, security is one of the most important future challenges,

because customers fear higher risk in using the Web for financial transactions (Cunningham, 2003). Australian banks have an excellent record concerning security of customer information. Research indicates that Internet users are very much concerned about privacy issues including transparency, collection, use and disclosure of their personal information. This concern primarily relates to authentication. The banking and finance industries report the highest incidence of misuse being 57 percent, which is directly related to these industries having one of the highest dependencies on computers in the workplace (Hutchinson, 2000). The Citibank breach of security six years ago is still extensively recalled in banking and security circles, since it is one of the few successful electronic bank frauds on record (Barlotta, 1999). The incident exposes hackers who penetrated Citibank's security system and progressively wired money to banks around the world. When the crime was discovered in September 1994, $10 million was gone. All but $400,000 was eventually recovered.

2.2.3 Perceived credibility and usage of e-banking

Perceived credibility is about reliability, which involves consistency of performance and dependability. It means that the firm performs the service right the first time. It also means the firm honors its promises. Especially it involves accuracy in billing and information, keeping records correctly, performing the service at the designated time (Zeithaml *et al*., 2002, McKinney *et al*., 2002). Reliability is associated with the technical functioning of the e-banking site, particularly the extent to which it is available and functioning properly.

Perceived credibility also concerns responsiveness, which means willingness to help customers and provide prompt service. It involves timeliness of services that means - mailing a transaction slip immediately, calling the customer back quickly and giving

prompt service (Parasuraman *et al*., 1985). It basically refer to the speed of the company's response to the customers, and measures the ability of e-tailers to provide appropriate information to customers when a problem occurs, have mechanisms for handling returns, and provide online guarantees (Zethaml *et al*, 2002). Personalized service is related to the empathy refers to the caring, individualized attention the firm provides its customers (Parasuraman *et al*., 1985).

2.2.4 Trust of the system and usage of e-banking

Trust is basically a willingness to rely on an exchange partner in whom one has confidence. Thus trust as an expectation of ability to perform, reliability, and intentionality of a partner, and proposed that trust has to be viewed as a behavioral intention or behavior that reflects dependence on the other partner (Hunt, 1994). Turban et al (2002) in his theory mentioned that customers frequently do not trust E banking for three reasons: Security of the system, Reliability, worries about the reliability (perceived risk) of Internet services, Responsiveness and Distrust of service providers. From a customer perspective the issue of trust can be ensured by having the following trust elements embedded within the trust model (Chellappa, 2001): Protection can be defined as the process through which customers are satisfied that their personal information is sufficiently preserved by the entity collecting the information. The inherent lack of implicit identity verification that can be linked with an electronic transaction means that a spurious Web site could easily be created. When relating with Internet banks customers may make the mistake in the domain name, 'www.stanbicbank.net' instead of 'www.stanbicbank.com' or may misspell Stanbic bank with a "k" instead of an "c" as in Stanbic Bank (Chellappa & Pavlou, 2001).

According to Sulliva, (2000), there have been many instances of sites that have gained advantage from such typographical errors. In this sense the consumer wants verification that the accuracy of the domain name can be ascertained, proving that they are transacting with the actual Internet bank. Authentication is defined as the process through which an Internet merchant can be established via a trusted third party that guarantees that the merchant is indeed who they say they are. Non-repudiation mechanisms to ensure that the client (customer) can be certain they are communicating with the genuine server (bank) or vice versa, such that neither of the communicating parties can later falsely deny that the transaction took place.

According to Zeithaml *et al*., (2002), privacy is one of the important elements of system trust. It means that the customer data not to be shared and misused by the organization. According to (Jun & Cai, 2001) security is the main dimensions in e-banking service quality. Customers who adopt electronic financial services are more likely to perceive problems related to loss of privacy, as the Internet seemingly allows other people to access their information easily (Jones, 2000). Customers do not always believe privacy policies will keep customer information confident (Cunningham, 2003).

2.3 Influence of Attitudinal Factors on Usage of E-Banking

Curran et al. (2003) reported the important role of attitudes related to the situation in which the IT is used. Global attitudes based on experiences with a wide range of related technologies, attitudes towards employees and global attitudes towards the service firm may be relevant attitudes complementing direct knowledge of a specific IT. Furthermore, customers may have to abandon their current behaviors and adopt new ones (Falk, Schepers, Hammerschmidt & Grossenbacher, 2005). Thus using the IT depends to a great extent on the individual sense of personal capacity or capability to engage with these

service systems (Walker & Johnson, 2006), individual innovativeness (Yi, Fiedler & Park, 2006) and updating mechanisms regarding the use of technology (Kim & Malhotra, 2005).

2.3.1 Perceived usefulness and usage of e-banking

Perceived usefulness refers to "the degree to which a person believes that using a particular system would enhance his or her job performance"(Mathieson, 1991). The perceived usefulness was found to affect adoption of and intention to continue using retail banking services in a number of studies (Al-Sukkar & Hasan, 2005; Cheung, 2001; Kamel & Hassan, 2003; Kolodinsky & Hogarth, 2001; Kolodinsky, et al., 2004; Ravi, Carr & Sagar, 2007; Vatanasombut, Lgbaria, Stylianou & Rodger, 2008). One important study by Davis (1989) believed that perceived usefulness fundamental determinants of use acceptance. It was found that perceived usefulness was affected by the level of customer trust (Eriksson et al., 2005). Pikkarainen et al. (in AL-Ghamdi, 2009) found that perceived usefulness of online banking was the most influential factors in explaining the use of online banking. The more customers believe that a particular website is trustworthiness, the more they may believe that the website is usefulness and many benefits can be obtained.

2.3.2 Perceived ease of use and usage of e-banking

Perceived ease of use refers to "the degree to which a person believes that using a particular system would be free of effort" (Mathieson, 1991). The appearance of a web site, ease of navigation and customer-oriented interface attract a positive customer response, but difficulties with navigation and links can deter online customers (Harridge-March, 2006). Ease of use seems to be one of important to use internet banking, which may be related to customer apprehension about the efforts required to learn to use internet

banking and customer interest in new services provided by internet banking (Erikssonet *et al*., 2005). The effect of perceived ease of use on adoption of and intention to continue using retail banking services was supported in a number of studies (Al-Sukkar & Hasan, 2005; Cheung, 2001; Kamel & Hassan, 2003; Kolodinsky & Hogarth, 2001; Kolodinsky *et al*., 2004; Ravi *et al*., 2007; Vatanasombut *et al*., 2008).

2.3.3 Perceived risk and usage of e-banking

Perceived risk is a major factor affecting intentions to adopt or to continue using a good or a service. Using retail banking services such as the internet entails some risks. Perceived risk in the field of e-banking can be defined as: "the potential for loss in the pursuit of a desired outcome of using e-banking services" (Feathermanand, 2002). The use of electronic banking involves many types of risk. These include financial risk, performance risk, physical risk, social risk, psychological risk, and time risk (Ho & Ng, 1994; Gan, Clemes, Limsombunchaiand Weng, 2006). The perception of the relatively high risk associated with performing financial transactions over the internet may actually hinder internet banking usage (Kamel & Hassan, 2003). The effect of perceived risk on usage processes in the context of retail banking was highly supported (Alagheband, 2006; Eriksson, Kerem & Nilsson, 2008; Jaruwachirathanakul & Fink, 2005; Kolodinsky *et al*., 2004; Lin, 2008; Vatanasombut *et al*., 2008).

2.4 Summary of Literature Review

The researcher developed a conceptual framework of e-banking usage by commercial banks by integrating all the pertinent parameters under three factors: Organizational, environmental and political support. Based on the reviewed theories, extensive literature review the study develops an integrated model that captures both individual goal oriented

behaviors of firms and institutional forces of technology diffusion. It is expected that the model would better explain e-banking usage behavior of Stanbic Bank.

Environmental factors included ICT industries readiness, regulatory support, financial industry readiness, and institutional pressure. Organizational factors included perceived benefits, security, perceived credibility and trust in the systems. Attitudinal factors included perceived usefulness, perceived easy use and perceived risk.

The Technology Acceptance Model (Davis, 1989), TOE framework (Tornatzky & Fleischer, 1990), Institutional Theory (DiMaggio & Powell, 1983), Institutional Intervention Theory (King et al., 1994) are all developed for technology usage. Theories have some limitations; as per Technology Usage Model the technology usage of firm depends upon perceived usefulness and perceived ease of use. Beside these two factors, there might be other factors that explain technology usage. Thus, TAM is known as partial model of technology usage. TOE framework is also too generic and does not specifically address banking sector. Both institutional theories are important in explaining technology usage in developing countries as institutional roles are found to be dominant in these countries. However, they ignore the impact of organizational factors in technology usage.

CHAPTER THREE

METHODOLOGY

3.0 Introduction

This chapter presents the methodology of the study. It comprises the research design, study population, sample size and selection, sampling techniques and procedure, data collection, data analysis and measurement of variables.

3.1 Research Design

The study adopted a correlational case study design. It helped to determine if there was a relationship between the independent and dependent variables. Rippy (2003) argues that a correlation study can provide for the degree and direction of relationships. Mayer and Frantz (2004) also argue that the goal of correlational research is to find out whether one or more variables can be related to other variables. Correlational research allows us to find out what variables may be related. The study adopted both quantitative and qualitative approaches. This was intended to increases in-depth understanding of the phenomenon under investigation as well as confirmation of completeness for instruments used (Amin, 2005).

3.2 Study Population

According to the Human Resource Manual (2010), the total population was 240. This included 8 Managers, 20 Information Technology officers, 5 Marketing and communications officers, 14 Corporate and investment banking officers, 20 Personal and business banking officers, 8 Operations officers, 15 Customer care representatives and approximately 150 clients per day.

3.3 Sample Size and Selection

3.3.1 Sample size

This was arrived at by using the Krejcie and Morgan (1970) Table for Determining Sample Size from a Given Population". In this study, 152 out of out of 170 respondents (89%) participated in the study. The break down of population and sample size is shown in the following table.

Table 1: Population, sample size and sampling techniques

Category	Population	Sample	Sampling technique
1. Managers (key informants)	8	8	Purposive sampling
2. Information Technology officers	20	19	Snow ball sampling
3. Marketing and communications officers	5	5	Snow ball sampling
4. Corporate and investment banking officers	14	13	Snow ball sampling
5. Personal and business banking officers	20	19	Snow ball sampling
6. Operations officers	8	8	Snow ball sampling
7. Customer care representatives	15	14	Snow ball sampling
8. Clients	80	66	Convenient sampling
Total	170	152	

Source: Human Resource Manual (2010) and Krejcie Morgan (1970) Sample Size Determination Table

The study selected all managers (8), 19 of the 20 information technology officers, all marketing and communication officers (5), 13 of the 14 corporate and investment banking officers, 19 of the 20 personal and business banking officers, all operations officer (8), 14 of the 15 customer care representatives and 66 of the 80 clients.

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3.3.2 Sampling methods

Using purposive sampling technique, the researcher selected key respondents (managers) that were thought to have the required information with respect to the objectives of the study. As noted by Serakan (2003), a sample is selected based on experience and knowledge of the group. Primary respondents included employees in Information

Technology (IT), Marketing, Corporate and Investment banking, Personal and Business banking, Operations department and Customer service representatives by virtue of their designation and experience. Using snowball sampling, the researcher requested key informants to name the other respondents who were contacted to give better understanding of aspects of interest in this study. Convenient sampling was used to select clients given that these were found in the banking hall transacting business with the bank.

3.4 Methods of Data Collection

Two types of data collection methods were used in the study. These included quantitative and qualitative data collection methods. The quantitative and qualitative data collection methods mainly constituted survey method and face-to-face interviews, which are briefly explained in the following subsections:

3.4.1 Questionnaire survey method

Self-administered questionnaires (SAQs) were used to collect quantitative data from the low cadre staff at Stanbic Bank Uganda Ltd and customers. SAQs were used for these category of respondents to save on time because their number was too big to interview and because they could read and write in English and thus fill in the questionnaires by themselves without any assistance.

3.4.2 Face-to-face interviews

Face-to-face interviews were used to collect data from managers because they enabled the researcher to establish rapport with these categories of respondents and therefore gain their cooperation. They also allowed the researcher to clarify ambiguous questions and obtain in-depth information through probing.

3.4.3 Document analysis

Document analysis, such as banks' policy, annual reports, strategic planning, journals and magazines helped better understanding of the research findings. The data collected from these sources were within the bank industry, e-banking concept and technology used as distribution channels in the financial industry. For example, Stanbic banks' public relation department was approached by telephone calls and personal visit at the branch in order to obtain relevant data from the information packages which contain banks' publications and services brochures.

3.5 Data Collection Instruments

Three instruments were used in collecting data. These were questionnaires, semi-structured interviews and document analysis as explained in the following sub sections.

3.5.1 Self-administered questionnaires

Stroh (2000) states that a questionnaire is used to explore majority of people's views. Hence, it was used to gain general picture of factors affecting usage of internet banking services. Statistically, it is believed that large sample size of questionnaires is designed for unbiased statistical results which can be implied for the whole population. The data for this study was collected through 152 self-administered questionnaires completed by the other selected staff from different departments of Stanbic Bank Kampala.

3.5.2 Semi-structured interview guide

The semi-structured face-to-face interview guide was designed to solicit qualitative data from key respondents. It helped the researcher obtain in-depth information through probing (Eyles, 1989). It was used to verify, enhance, and fill in the data collected from the survey. In this research, eight (8) managers of Stanbic banks were interviewed

independently. They were selected based on their working experiences and the level of involvement in internet banking projects in Stanbic Bank. The interviews were conducted in a semi-structure format that allowed respondents to express their own viewpoints (Flick, 2002). Respondents were guided by a list of interview topics about key factors determined the usage of e-banking. This purpose was to gain the respondents' opinion about them.

3.5.3 Document analysis guide

This involved a list of expected articles, annual reports, journals banks' publications, services brochures and magazines with information pertaining to this study. This list was presented to bank officials to help search for the documents.

3.6 Validity and Reliability

In order to reduce the possibility of getting incorrect answers, attention needs to be paid to validity and reliability (Saunders *et al*., 2003).

3.6.1 Validity

For the instruments to yield relevant and correct data, they were given to two experts conversant with the study area to comment on the ambiguity, difficulty and relevancy of questions to ensure construct, content and face validity. A content validity ratio (CVR) was then be computed.

Table 2: Validity of instrument

Rater	Relevant	Not relevant	Total
Rater 1	48	18	66
Rater 2	49	17	66
Total	97	35	132

CVI = No. of items considered relevant by 2 raters = 97/132 ≈ .73
Total no. of items rated by 2 raters

Since it was 0.73 above 0.6 the recommended by Nunnally (1967) cited by Kent (2001), the questionnaire was considered suitable for collecting data.

3.6.2 Reliability

In order to ensure the degree to which questionnaires produced consistent results if used under the same conditions, they were pilot tested on 20 respondents in another bank and the results subjected to Cronbach's alpha reliability as shown in the following table.

Table 3: Validity of instrument

Variable	Alpha	No. of items
Environmental factors	.905	18
Organizational factors	.921	19
Attitudinal factors	.605	3
Political support	645	3
Usage of e-banking	893	23

Source: Field

The Cronbach's Alpha coefficient for the variables in questionnaire were above 0.6 the recommended by Nunnally (1967) cited by Kent (2001), and thus the questionnaire was considered reliable for collecting data.

3.7 Procedure of Data Collection

A letter of authorization from UMI was provided to authorities in Stanbic Bank as a request for permission to conduct the study. A covering letter accompanied the data collection instruments explaining the purpose of the study. Once permission to conduct the study was given, the questionnaires were distributed directly to staff at Stanbic Bank for filling and were collected once they were completed. The data collected was for analysis. A covering letter was also used to provide access to the interview processes, which were done on appointment.

3.8 Data Analysis

3.8.1 Quantitative data analysis

The analysis mainly consisted of descriptive statistics (frequencies and percentages) and inferential statistics (Spearman rank order correlation and regression). The frequencies and percentages were used to determine the respondents' views on the study variables. Spearman rank order correlation and coefficient of determination was used to test the hypotheses. The correlation coefficient (r) was used to determine the strength of the relationship between the variables. The sign of the correlation coefficient (+ or -) was used to determine the direction of the relationship between the variables. The coefficient of determination was to determine the effect of independent variable on the dependent variable. The significance of the correlation coefficient (p) was used to test the hypothesis/determine the confidence in the findings. The regression coefficient (R) determined the linear relationship between indicators of independent variables and indicators of the dependent variable. This was then squared to determine how much variance in the indicators of the dependent variable is caused by the indicators of the independent variables.

3.8.2 Qualitative data analysis

Content analysis was used to edit qualitative data and reorganize it into meaningful shorter sentences. Themes, categories and patterns were identified. The recurrent themes, which merged in relation to each guiding question from the interviews, were presented in the results, with selected direct quotations from participants offered as illustrations and the data was evaluated and analyzed to determine the adequacy of the information, credibility, usefulness, consistency and validation or non-validation of hypotheses.

3.9 Measurement of Variables

The questionnaire were accompanied with an ordinal measurement, which categorized and ranked the variables. Thus, a Likert scale was used to collect opinion data on the study variables using the five scales: 5 = strongly agree; 4 = agree; 3 = undecided; 2 = disagree; 1 = strongly disagree.

CHAPTER FOUR

PRESENTATION, ANALYSIS AND INTERPRETATION OF RESULTS

4.0 Introduction

This chapter presents, analyzes and interprets the results. It is divided into four major sections. The first section presents the respondents background information. The second section presents the influence of environmental factors on the usage of e-banking. The third section presents the influence of organizational factors on the usage of e-banking and the fourth section presents the influence of attitudinal factors on the usage of e-banking.

4.1 Response Rate

In this study, the sample was 170 respondents but the response was 152 respondents. Thus, the response rate was approximately 89%, which was above the recommended two-thirds (67%) response rate for any researcher to start analyzing data from the field (Amin, 2005).

4.2 Respondents Background Information

This focused on respondents' gender, age, education, occupation, income, period associated with the bank, perceptions about the bank business and relationship with the bank. Findings are presented in the following table.

Table 4: Findings about respondents' gender

Gender	Frequency	Percent
Female	60	39
Male	92	61
Total	152	100

Source: Field

Findings show that more males respondents (61%) participated in the study compared to 39% of female respondents. This is attributed to the fact that male are dominant in the workplaces and it is expected that when a study is conducted out in these places, one is likely to have more male participants compared to female participants. Thus, the findings were not gender biased.

Table 5: Findings about respondents' age

Age	Frequency	Percent
20-30 years old	76	50
30-40 years old	38	25
40-50 years old	19	13
Older than 50 years old	19	13
Total	152	100

Source: Field

Findings show that most respondents (50%) who participated in the study were aged 20-30 years followed those aged 30-40 years. This is attributed to the fact that usually these were people who were working and were in that stage where they had started transacting with the bank. Thus, the implication of these findings is that all the respondents who participated in the study were in position to provide information on some of the issues sought to investigate. Thus, the findings can be relied on.

Table 6: Findings about respondents' education

Education	Frequency	Percent
Tertiary institution	44	29
Bachelor degree	97	64
Master or more	11	7
Total	152	100

Source: Field

Findings show that most respondents (64%) who participated in the study had a bachelor level of education. This is attributed to the fact that the people associated with bank activities are usually those who have attained at least a first degree. Thus, it is argued in

this study that the people who participated in the study were educated and understood what they were asked about. Thus, the findings can be relied on.

Table 7: Findings about respondents' occupation

Occupation	Frequency	Percent
Business	31	20
Student	11	7
Government employee	50	33
Private sector employee	50	33
Other	10	7
Total	152	100

Source: Field

Findings show that most respondents (33%) who participated in the study were government and private sector employees, followed by business people. This is attributed to the fact that these were people associated with bank activities given that they were working. Thus, this shows that they were in position to provide some information about issues the study sought to investigate.

Table 8: Findings about respondents' income

Income	Frequency	Percent
Between 200,000-400,000 Shs per month	31	20
Between 400,000-600,000 Shs per month	31	20
Between 600,000-800,000 Shs per month	45	30
Between 800,000-1,000,000 Shs per month	30	20
More than 1,000,000 Shs per month	15	10
Total	152	100

Source: Field

Findings show that a big proportion of respondents (70%) who participated in the study earned between 400,000 – 1,000,000 Shs per month. Thus, given that these people earned that amount of money, they were in position to transact with the back and thus, become knowledgeable about the issues the study sought to investigate. Thus, the findings can be relied on.

Table 9: Findings about respondents' period associated with the bank

Period of holding an account with Stanbic Bank	Frequency	Percent
Less than 5 years	54	36
5-10 years	54	36
11-15 years	22	14
15-20 years	11	7
More than 20 years	11	7
Total	152	100

Source: Field

Findings show that most respondents (64%) who participated in the study had held a bank account with Stanbic Bank for five years and more. Thus, it is argued in this study that the people who participated in the study had been doing business with the bank for quite some time to allow them be knowledgeable with issues this study sought to investigate.

Table 10: Findings about respondents' perceptions about the bank business

Respondent's description of Stanbic Bank business	Frequency	Percent
Very poor	28	18
Poor	28	18
Fair	41	27
Good	28	18
Very good	27	18
Total	152	100

Source: Field

Findings show that almost an equal proportion of respondents described Stanbic Bank's business negatively (26%), fairly (27%) and positively (26%). This shows that Stanbic Bank's business was not going on very well. The Bank's business also includes electronic services. This implies that even these services were likely to be poor.

Table 11: Findings about respondents' perceptions about the relationship with the bank

Respondent's description of relationship with Stanbic Bank	Frequency	Percent
Very poor	12	8
Poor	34	22
Fair	48	32
Good	46	30
Very good	12	8
Total	152	100

Source: Field

Findings show that almost an equal proportion of respondents described the relationship with Stanbic Bank negatively (30%), fairly (32%) and positively (38%). This shows that the relationship with Stanbic Bank was good for approximately a third of the bank clients, fair for a third of the bank's clients and poor for about a third of the bank's clients. Thus, generally it can be concluded the relationship of most of the bank's clients and the bank was not good.

4.2 Research Question One: Influence of Environmental Factors on the Usage of E-Banking

Before testing the first hypothesis, descriptive results (frequencies and percentages) relating to environmental factors, usage of e-banking and political support were presented, analyzed and interpreted.

4.2.1 Descriptive results about environmental factors

Respondents were requested to respond to 18 items about environmental factors as shown in Table 12. They were requested to indicate their response using a five-point Likert scale: "Strongly disagree", "Disagree", "Not sure", "Agree", and "Strongly agree". The items are presented in the first column of Table 12 and the proportion of respondents to the responses on each of the items is presented in form of frequencies and percentages in columns 2 to 6. The last column presents the total number and percentage of respondents

on each of the items. The analysis and interpretation of the findings about environmental factors follows the presentation of findings in Table 12 (For detailed results showing frequencies and percentage see Appendix D).

Table 12: Findings about environmental factors

A. CT industries readiness	**SD**	**D**	**NS**	**A**	**SA**
1. ICT sector is able to monitor, store & retrieve electronic transmissions between the bank and its customers	24%	38%	13%	24%	1%
2. ICT sector has reasonable control and update of content and capabilities in a timely manner	1%	47%	3%	35%	13%
3. The type of environment the e-banking site operate in is conducive	8%	24%	31%	29%	8%
B. Regulatory support					
4. The board is fully informed of the risks involved with e-banking and they understand those risks	25%	1%	13%	48%	13%
5. Customers are fully informed of the risks involved with e-banking and they understand those risks	6%	1%	12%	46%	35%
6. e-banking system follows government laws and regulations on ICT and finance	3%	48%	13%	36%	1%
7. The bank has legal counsel on matters relating to e-banking	26%	36%	14%	23%	1%
8. The bank has e-banking insurance policy	3%	48%	3%	35%	12%
9. The bank has pending lawsuits/contingent liabilities relating to electronic banking activities	11%	22%	30%	29%	9%
C. Financial industries readiness					
10. Bank has an e-banking committee	9%	24%	30%	30%	7%
11. The bank has access, ownership and control of customer data and other confidential information.	25%	36%	13%	25%	1%
12. The bank periodically reviews the e-banking contingency plan and procedures	3%	49%	1%	35%	12%
13. The bank explains to customers their full package of e-banking activities	11%	21%	31%	30%	7%
D. Institutional pressure					
14. Banks not offering Internet banking will lose customers to other banks	27%	1%	13%	47%	12%
15. e-banking training is provided to other officers and employees of the bank	23%	38%	15%	23%	1%
16. The bank provides incentives for obtaining and retaining key IT personnel	1%	47%	5%	36%	13%
17. The bank has a target market or trade area for the e-banking services	9%	23%	32%	28%	9%
18. Our industry is pressuring us to adopt E-banking	25%	38%	14%	24%	0%

Key: SD = Strongly disagree, D = Disagree, NS = Not sure, A = Agree, SA = Strongly agree
Source: Field

To analyze the findings, respondents who strongly disagreed and those who disagreed were combined into one category of respondents who “opposed” the items. In addition,

respondents who strongly agreed and those who agreed were combined into another category of respondents who "concurred" with the items. Thus, three categories of respondents were compared, that is "respondents who opposed the items", "respondents who were not sure about the items" and "respondents who concurred with the items". Interpretation was then drawn from the comparisons of the three categories as shown in the following paragraph.

Most respondents concurred to three items (4, 5 and 14) about environmental factors in e-banking. For example, findings show that fewer respondents (26%) opposed that the board was fully informed of the risks involved with e-banking and understood those risks compared to 61% who concurred while 13% were not sure. In addition, fewer respondents (7%) opposed that customers were fully informed of the risks involved with e-banking and understood those risks compared to 81% who concurred while 12% were not sure. Lastly, fewer respondents (28%) opposed that banks not offering Internet banking would lose customers to other banks compared to 59% who concurred while 13% were not sure. This shows that both the board and customers were fully informed of the risks involved with e-banking and understood those risks and banks not offering Internet banking lost customers to other banks. The implications of these findings are that these were favorable environmental factors in e-banking.

Most respondents were opposed to eight items (1, 6, 7, 8, 11, 12, 15 and 18) about environmental factors in e-banking. Most respondents (62%) opposed that ICT sector was able to monitor, store and retrieve electronic transmissions between the bank and its customers compared to 25% who concurred while 13% were not sure. Most respondents (51%) opposed that e-banking system followed government laws and regulations on ICT and finance compared to 37% who concurred while 13% were not sure. Most respondents

(51%) opposed that the bank had legal counsel on matters relating to e-banking compared to 24% who concurred while 14% were not sure. Most respondents (51%) opposed that the bank had e-banking insurance policy compared to 47% who concurred while 3% were not sure. Most respondents (61%) opposed that the bank had access, ownership and control of customer data and other confidential information compared to 26% who concurred while 13% were not sure. Most respondents (52%) opposed that the bank periodically reviewed the e-banking contingency plan and procedures compared to 47% who concurred while 1% were not sure. Most respondents (61%) opposed that e-banking training was provided to other officers and employees of the bank compared to 24% who concurred while 14% were not sure. Most respondents (61%) opposed that their industry was pressuring them to adopt E-banking compared to 24% who concurred while 14% were not sure. These findings imply that the ICT sector was unable to monitor, store and retrieve electronic transmissions between the bank and its customers, e-banking system did not follow government laws and regulations on ICT and finance, the bank had no legal counsel on matters relating to e-banking, the bank had no e-banking insurance policy, the bank had no access, ownership and control of customer data and other confidential information, the bank did not periodically review the e-banking contingency plan and procedures, e-banking training was not provided to other officers and employees of the bank and their industry was not pressuring them to adopt e-banking. The implications of these findings are that these were unfavorable environmental factors in e-banking.

Almost an equal proportion of respondents were opposed to, not sure of and concurred to five items (9, 10, 3, 13 and 17) about environmental factors in e-banking. For example, approximately a third (33%) of the respondents opposed that the bank had pending lawsuits/contingent liabilities relating to electronic banking activities compared to 33%

who were not sure and 38% who concurred. Approximately a third (33%) of the respondents opposed that the bank has an e-banking committee compared to 30% who were not sure and 37% who concurred. Approximately a third (32%) of the respondents opposed that the type of environment does the e-banking site operate in was conducive compared to 31% who were not sure and 37% who concurred. Approximately a third (32%) of the respondents opposed that the bank explained to customers their full package of e-banking activities compared to 31% who were not sure and 37% who concurred. Approximately a third (32%) of the respondents opposed that the bank had a target market or trade area for the e-banking services compared to 32% who were not sure and 37% who concurred. The implications of these findings are that these were fairly favorable environmental factors in e-banking.

Interview findings revealed that there some remote regions characterized with a small proportion of people who are educate and understand how to use e-banking. The interviewees raised many questions about the compatibility and integration of current banking programs with the e-banking systems in their bank. The following quote, from a bank manager, gives a clear view of this:

> *The integration of our e-banking systems with the banking systems has been a difficult task. It requires employees that are more skilled, it is really difficult to achieve coordination and integration between them.*

This compatibility issue is also most noticeable in the following quotation from another bank manager:

> *The innovation is not yet compatible with existing workflows, practices or habits; we feel that even with the use of some e-banking systems, our daily banking operations became more difficult than in the past.*

System complexity was identified during the interview as a significant issue for the usage of e-banking. All interviewees indicated that e-banking systems was a complex and difficult innovation for some people. As a bank manager indicated that:

> *I think, the perceived complexity in using e-banking systems is a key barrier to adoption of e-banking projects.*

Implicitly, these comments signal the likely rejection of any new technology that is complicated to use. Unfortunately, it was most evident from the interviews with those responsible for actually using the technology and delivering the anticipated improved banking services, that it was not perceived as being user-friendly, and some interviewees complained that the use of e-banking technology in their bank was difficult for some people.

The general deduction from the findings is that some aspects of ICT industrial readiness, regulatory support, financial industrial readiness and institution pressure that were indicators of environmental factors in this study were favorable while other aspects were unfavorable or fair favorable.

4.2.2 Descriptive results about usage of e-banking

Respondents responded to 23 items about usage of e-banking by indicating their agreement using a five-point Likert scale. The items are presented in the first column of Table 13 and the proportion of respondents to the responses on each of the items is presented in form of frequencies and percentages in columns 2 to 6. The last column presents the total number and percentage of respondents on each of the items. The analysis and interpretation of the findings follows the presentation of findings in Table 13 (For detailed results showing frequencies and percentage see Appendix E).

Table 13: Findings about usage of e-banking

A. Perceived Relative Advantage	SD	D	NS	A	SA
1. There is a clearly known way to do e-banking tasks I normally encounter	25%	0%	13%	50%	13%
2. I can rely on established practices to do e-banking tasks I normally encounter	0%	0%	13%	50%	38%
3. I can accomplish my banking tasks more quickly using e-banking	0%	50%	13%	38%	0%
4. I can accomplish my banking tasks more easily using e-banking	13%	38%	13%	38%	0%
5. E-banking enhances my effectiveness in utilizing banking services	25%	38%	13%	25%	0%
6. E-banking enhances my efficiency in utilizing banking services	0%	50%	0%	38%	13%
B. Perceived Organizational Performance					
7. E-banking enables me to customize the presentation of information on a bank's Web site according to my personal needs	8%	22%	32%	30%	8%
8. E-banking enables me to customize the content of information on a bank's Web site according to my personal needs	0%	63%	0%	38%	0%
9. E-banking enables a bank to personalize service/product offerings to me after learning my banking behaviors and preferences	25%	0%	0%	63%	13%
10. E-banking has improved my job performance	0%	38%	25%	25%	13%
11. Using E-banking in my job would increase my productivity	25%	0%	13%	50%	13%
12. E-banking enhances my effectiveness on the job	0%	0%	13%	50%	38%
13. E-banking makes it easier to do my job	0%	50%	13%	38%	0%
C. Perceived Customer / Organizational Relationship					
14. e-banking reduces customer's loyalty	13%	38%	13%	38%	0%
15. e-banking reduces customer-banker relationship	25%	38%	13%	25%	0%
16. e-banking reduces customer's trust in the bank	0%	50%	0%	38%	13%
17. I intend to continue using this bank's e-banking services	8%	22%	32%	30%	8%
18. Access to accounts 24 x 7 is important to the customers	0%	63%	0%	38%	0%
D. Perceived Ease of Use					
19. Learning to use e-banking is easy for me	25%	0%	0%	63%	13%
20. I find it easy to use E-banking to accomplish my banking tasks	0%	38%	25%	25%	13%
21. Overall, I believe E-banking is easy to use	25%	0%	13%	50%	13%
22. Using e-banking, the bank can provide one-stop services to me	0%	0%	13%	50%	38%
23. Using e-banking, the bank can provide expanded services to me	0%	50%	13%	38%	0%

Key: SD = Strongly disagree, D = Disagree, NS = Not sure, A = Agree, SA = Strongly agree

Source: Field

Most respondents concurred to eight items (1, 2, 9, 11, 12, 19, 21 and 22) about usage of e-banking. For example, fewer respondents (25%) opposed that there was a clearly known way to do e-banking tasks they normally encountered compared to 63% who concurred while 13% were not sure. No respondents (0%) opposed that they could rely on established practices to do e-banking tasks they normally encountered compared to 88%

who concurred while 13% were not sure. Fewer respondents (25%) opposed that e-banking enabled a bank to personalize service/product offerings to them after learning their banking behaviors and preferences compared to 76% who concurred while 0% were not sure. Fewer respondents (25%) opposed that using e-banking in their job would increase their productivity compared to 63% who concurred while 13% were not sure. No respondents (0%) opposed that e-banking enhanced their effectiveness on the job compared to 88% who concurred while 13% were not sure. Fewer respondents (25%) opposed that learning to use e-banking was easy for me compared to 76% who concurred while 0% were not sure. Fewer respondents (25%) opposed that overall, they believed e-banking was easy to use compared to 63% who concurred while 13% were not sure. No respondents (0%) opposed that using e-banking, the bank could provide one-stop services to me compared to 88% who concurred while 13% were not sure.

These findings show the following: There was a clearly known way for individuals to do e-banking tasks they normally encountered, individuals could rely on established practices to do e-banking tasks they normally encountered, e-banking enabled a bank to personalize service/product offerings to individuals after learning their banking behaviors and preferences, using e-banking in individuals' job would increase their productivity, e-banking enhanced individuals' effectiveness on the job, learning to use e-banking was easy for individuals, individuals believed e-banking was easy to use, and using e-banking, the bank could provide one-stop services to me individuals. These findings indicate instances of more usage of e-banking.

Most respondents were opposed to nine items (3, 4, 5, 8, 13, 14, 15, 18 and 23) about usage of e-banking. For example, most respondents (50%) opposed that they could accomplish their banking tasks more quickly using e-banking compared to 38% who

concurred while 13% were not sure. Most respondents (51%) opposed that they could accomplish their banking tasks more easily using e-banking compared to 38% who concurred while 13% were not sure. Most respondents (63%) opposed that e-banking enhanced their effectiveness in utilizing banking services compared to 25% who concurred while 13% were not sure. Most respondents (63%) opposed that e-banking enabled them to customize the content of information on a bank's Web site according to their personal needs compared to 38% who concurred while 0% were not sure. Most respondents (50%) opposed that e-banking made it easier to do their job compared to 38% who concurred while 13% were not sure. Most respondents (51%) opposed that e-banking reduced customer's loyalty compared to 38% who concurred while 13% were not sure. Most respondents (63%) opposed that e-banking reduced customer-banker relationship compared to 25% who concurred while 13% were not sure. Most respondents (63%) opposed that access to accounts 24 x 7 was important to the customers compared to 38% who concurred while 0% were not sure. Most respondents (50%) opposed that using e-banking, the bank could provide expanded services to them compared to 38% who concurred while 13% were not sure.

The following are the implications of these findings. Individuals could not accomplish their banking tasks more quickly or easily using e-banking, e-banking did not enhance their effectiveness in utilizing banking services, e-banking did not enable them to customize the content of information on a bank's Web site according to their personal needs, e-banking did not make it easier to do their job, e-banking did not reduce customer's loyalty e-banking did not reduce customer-banker relationship, access to accounts 24 x 7 was not important to the customers, and using e-banking, the bank could not provide expanded services to individuals. These findings indicate instances of less usage of e-banking.

Almost an equal proportion of respondents were opposed to, not sure of and concurred to six items (6, 7, 10, 16, 17, and 20) about environmental factors in e-banking. For example, half of the respondents (50%) opposed that e-banking enhances their efficiency in utilizing banking services compared 50% who concurred. Approximately a third of the respondents (30%) opposed that e-banking enables them to customize the presentation of information on a bank's Web site according to their personal needs compared 38% who concurred while 32% were not sure. Approximately a third of the respondents (38%) opposed that e-banking had improved their job performance compared 38% who concurred while 25% were not sure. Half of the respondents (50%) opposed that e-banking reduced customer's trust in the bank compared 50% who concurred Approximately a third of the respondents (30%) opposed that they intended to continue using this bank's e-banking services compared 38% who concurred while 32% were not sure. Approximately a third of the respondents (38%) opposed that they found it easy to use E-banking to accomplish their banking tasks compared 38% who concurred while 25% were not sure. These findings indicate instances of fair usage of e-banking.

Generally these findings show that some aspects of perceived relative advantage, perceived organizational performance, perceived customer / organizational relationship, and perceived ease of use, which were indicators of usage of e-banking were good, while others were poor or fair.

4.2.3 Descriptive results about political support

Respondents were requested to respond to 3 items about political support as shown in Table 14. They were requested to indicate their response using a five-point Likert scale: “Strongly disagree”, “Disagree”, “Not sure”, “Agree”, and “Strongly agree”. The items

are presented in the first column of Table 14 and the proportion of respondents to the responses on each of the items is presented in form of frequencies and percentages in columns 2 to 6. The last column presents the total number and percentage of respondents on each of the items. The analysis and interpretation of the findings about political support follows the presentation of findings in Table 14 (For detailed results showing frequencies and percentage see Appendix F).

Table 14: Findings about political support

Items about political support	SD	D	NS	A	SA
1. Political factors are important in our decision to adopt E-banking	0%	63%	0%	38%	0%
2. Our bank was pressured by the government to adopt E-banking	25%	0%	0%	63%	13%
3. Government provides support for e-banking in banks	0%	38%	25%	25%	13%

Key: SD = Strongly disagree, D = Disagree, NS = Not sure, A = Agree, SA = Strongly agree
Source: Field

Most respondents were opposed to two items (1 and 2) about political support. It is shown that few respondents (63%) opposed that political factors were important in their decision to adopt E-banking compared to 37% who concurred while 0% were not sure. In addition, fewer respondents (76%) opposed that their bank was pressured by the government to adopt e-banking compared to 24% who concurred while 0% were not sure. An almost equal proportion of respondents were opposed to, not sure of and concurred to one item (3) about political support. It is shown that 38% of the respondents opposed that government provided support for e-banking in banks compared to 38% who concurred while 25% were not sure. These findings show that in some instances, there was political support in e-banking while in other instances it was not.

Having presented and interpreted the descriptive findings about environmental factors, usage of e-banking and political support, the first hypothesis was tested. Findings are presented in the following sub section.

4.2.4 Testing first hypothesis

The first hypothesis stated, "There *is an association between environmental factors and the usage of E-Banking in commercial Banks in Uganda*". Spearman rank order correlation coefficient (*rho*) was used to determine the strength of the relationship between environmental factors and the usage of E-Banking. The Spearman rank order correlation was used because the scale (that is strongly disagree, disagree, not sure, agree and strongly agree) that accompanied the questionnaire was ordinal. It is recommended that with an ordinal scale, Spearman rank order correlation is suitable for determining relationships because it does not involve means and standard deviations, which are meaningless with ordinal data. The sign of the coefficient (positive or negative sign) was used to determine the change in direction in the relationship between environmental factors and the usage of E-Banking. The coefficient of determination was used to determine the influence of environmental factors on the usage of E-Banking. The significance of the coefficient (p) was used to test the findings by comparing p to the critical significance level at (0.05). Table 12 presents the test results.

Table 15: Correlation between environmental factors and usage of e-banking

	Environmental factors	
	Before control political support	After control political support
Usage of e-banking	*rho* = .825 rho^2 = .681 p = .001 n = 152	*rho* = .604 rho^2 = .365 p = .001 df = 149

Source: Field

Findings show that before controlling the moderating variable (political support), there was a very strong positive correlation (r = .825) between environmental factors and usage of e-banking. Since the correlation does not indicate cause effect in terms of the percentage variance in the dependent variable caused by the independent variable, a

coefficient of determination (rho^2 = .681), which is a square of the correlation coefficient was computed. The coefficient of determination was expressed into percentage to determine the effect of environmental factors on usage of e-banking. This revealed that environmental factors accounted for 68.1% of variance in usage of e-banking. These findings were subjected to a test of significance (p) and it is shown that the significance of the correlation (p = .001) is less than the recommended critical significance at 0.05. Thus, then the relationship was significant. Because of this, the hypothesis "There *is an association between environmental factors and the usage of E-Banking in commercial Banks in Uganda*" was accepted. This implies that environmental factors influenced usage of e-banking. The very strong correlation implied that a change in environmental factors was related to a very big change in usage of e-banking. The positive nature of the correlation implied that the change in environmental factors and usage of e-banking was in the same direction whereby favorable environmental factors were related to more usage of e-banking and vice versa.

After controlling the moderating variable (political support), the strength of relationship between environmental factors and usage of e-banking reduced (r = .604) but remained significant (p = .001). The coefficient of determination (rho^2 = .365) shows that this time, environmental factors accounted for 36.5% of variance in usage of e-banking, which is a lower percentage compared to when moderating variable (political support) is not controlled.

4.3 Research Question Two: Influence of Organizational Factors on the Usage of E-Banking

Before testing the second hypothesis, descriptive results (frequencies and percentages) relating to organizational factors were presented, analyzed and interpreted. Findings are presented in the following subsection.

4.3.1 Descriptive results about organizational factors

Respondents were requested to respond to 19 items about organizational factors as shown in Table 16. They were requested to indicate their response using a five-point Likert scale: “Strongly disagree”, “Disagree”, “Not sure”, “Agree”, and “Strongly agree”. The items are presented in the first column of Table 16 and the proportion of respondents to the responses on each of the items is presented in form of frequencies and percentages in columns 2 to 6. The last column presents the total number and percentage of respondents on each of the items. The analysis and interpretation of the findings about organizational factors follows the presentation of findings in Table 16 (For detailed results showing frequencies and percentage see Appendix G).

Table 16: Findings about organizational factors

A. Perceived benefits	**SD**	**D**	**NS**	**A**	**SA**
1. In my opinion, it is desirable to use Internet banking	3%	48%	0%	36%	14%
2. I think it is good for me to use Internet banking	25%	36%	14%	24%	1%
3. Overall, my attitude toward e-banking is favorable	4%	49%	1%	35%	11%
B. Security					
4. Security measures are in place to prevent the web site information from being altered	11%	22%	30%	30%	9%
5. Security precautions on the part of the service provider for the bank are in place	3%	38%	23%	24%	12%
6. The bank has an intrusion detection system is in place	26%	36%	13%	24%	2%
7. Controls are in place to prevent hackers from accessing the system	2%	49%	2%	36%	12%
8. Controls are in place for prevention of line tapping	9%	22%	30%	30%	10%
9. Controls are in place to discover intrusion attacks	13%	36%	13%	36%	1%
10. Bank management keeps up-to-date on addressing newly disclosed security threats to the computer operating system and application software	24%	37%	15%	24%	1%
C. Perceived credibility					
11. There is liability for data and confidential treatment of information	24%	38%	14%	24%	1%
12. The bank offers reasonable assurances for continuation of service through back up arrangements in the event of a problem situation	2%	47%	2%	37%	13%
13. There are procedures to notify the bank of any unauthorized alteration and malicious attacks	13%	22%	28%	28%	9%
14. There is regular back up of web site information	26%	2%	2%	59%	12%
15. There are procedures in place for operating system updates	3%	36%	25%	24%	13%
D. Trust of the system					
16. I can use E-banking at any time of the day	25%	37%	14%	23%	1%
17. I can use E-banking anywhere in the world	3%	47%	1%	36%	13%
18. E-banking provide adequate personal security for customers	9%	24%	30%	30%	7%
19. Employees have access to customer passwords	14%	35%	13%	38%	1%

Key: SD = Strongly disagree, D = Disagree, NS = Not sure, A = Agree, SA = Strongly agree
Source: Field

Most respondents concurred to one item (14) about organizational factors in e-banking. Findings show that fewer respondents (28%) opposed that there was regular back up of web site information compared to 70% who concurred while 2% were not sure. This shows that in most cases, there was regular back up of web site information, which was a favorable organizational factor in e-banking.

Most respondents were opposed to nine items (2, 3, 6, 7, 9, 10, 11, 16 and 19) about organizational factors in e-banking. It is shown that most respondents (61%) opposed that

they thought it was good for them to use Internet banking compared to 25% who concurred while 14% were not sure. Most respondents (53%) opposed that their attitude toward e-banking was favorable compared to 46% who concurred while 1% were not sure. Most respondents (41%) opposed that there were security precautions on the part of the service provider for the bank compared to 36% who concurred while 23% were not sure.

Furthermore, findings show that most respondents (62%) opposed that the bank had an intrusion detection system in place compared to 26% who concurred while 13% were not sure. Most respondents (49%) opposed that the bank discovered intrusion attacks compared to 37% who concurred while 13% were not sure. Most respondents (61%) opposed that the bank management kept up-to-date on addressing newly disclosed security threats to the computer operating system and application software compared to 25% who concurred while 15% were not sure. Most respondents (62%) opposed that the bank had an intrusion detection system in place compared to 26% who concurred while 24% were not sure. Most respondents (62%) opposed that there was liability for data and confidential treatment of information compared to 25% who concurred while 14% were not sure. Most respondents (62%) opposed that they could use e-banking at any time of a day compared to 24% who concurred while 14% were not sure. Most respondents (49%) opposed that employees had access to customer passwords compared to 39% who concurred while 13% were not sure.

Thus, the following is deduced from the above findings. Individuals did think it was good for them to use Internet banking, their attitude toward e-banking was not favorable, the bank had no intrusion detection system in place, the bank did not discover intrusions, the bank management did not keep up-to-date on addressing newly disclosed security threats

to the computer operating system and application software, there was no liability for data and confidential treatment of information, individual could not use e-banking at any time of a day. The implications of these findings are that these were unfavorable organizational factors in e-banking.

Lastly, almost an equal proportion of respondents were opposed to, not sure of and concurred to nine items (1, 4, 5, 8, 12, 13, 15, 17 and 18) about organizational factors in e-banking. Findings show that half of the respondents (50%) opposed that it was desirable to use Internet banking compared to 50% who concurred. Approximately half of the respondents (51%) opposed that there was prevention of hackers from accessing the system compared to 48% who concurred while 2% were not sure. Approximately half of the respondents (48%) opposed that the bank offered reasonable assurances for continuation of service through back up arrangements in the event of a problem situation compared to 50% who concurred while 2% were not sure. Approximately a third of the respondents (39%) opposed that there were procedures in place for operating system updates compared to 37% who concurred while 25% were not sure. Approximately a third of the respondents (33%) opposed that security measures were in place to prevent the web site information from being altered compared to 39% who concurred while 30% were not sure. Approximately a third of the respondents (30%) opposed that there were prevention of line tapping compared to 40% who concurred while 30% were not sure. Thus, these findings suggest that these were fairly favorable organizational factors in e-banking.

Interview findings revealed that usage of e-banking has been compromised by limited Internet penetration. Some respondents interviewed for the study underlined that low readiness of the telecommunications infrastructure explains the lower usage of e-banking.

Interviewees identified that a lack of appropriate IT infrastructure is the constraint preventing e-banking usage. This was raised by many interviewees as a crucial problem deterring usage of e-banking. The interviews revealed that despite the many plans to enhance the country's ICT infrastructure, many participants stated that it is still deficient and integration between banks is poor. Thus, the technological infrastructure is not up to the level required to support the use of banking technologies, and the comments from a a Stanbic Bank Manager confirm this:

> *Our telecommunication infrastructure is still old and unreliable to meet the requirement of e-banking system, therefore, without suitable telecommunication systems, e-banking technology is very difficult to achieve.*

With regard to the lack of key resources, identified as the next obstacle to usage of e-banking technology, comments were made that essentially related to country's stage of development, which revealed a lack of local expertise in e-banking technologies. As a bank manager mentioned:

> *Our country lacks the expertise in many modern technologies, which makes our organizations depend fully on expensive foreign expertise, which creates financial loads on banks.*

Interviews further revealed that security measures are not up to the standard required in the banking industry and that and the flaws in the system need to be overcome. This was clearly expressed, as seen in the response provided by a manager who said:

> *Ensuring security and confidentiality are the fundamental prerequisites before any banking activity involving sensitive information can take place. Security and data confidentiality issues are the key issues in the usage of any technology based*

services in our bank, thus we are still not confident with the technology systems as we feel that transactions conducted electronically are open to hackers and viruses,

The following general deduction is made from the findings. It is shown that some aspects of perceived benefits, security, perceived credibility and trust of the system that were in this study indicators of organizational factors were favorable while others were unfavorable and others were fairly favorable.

Having presented and interpreted the descriptive findings about organizational factors, the second hypothesis was tested. Findings are presented in the following sub section.

4.3.2 Testing second hypothesis

The second hypothesis stated, "*There is an association between organizational factors influence the usage of E- banking in commercial banks in Uganda*". Spearman rank order correlation coefficient (*rho*) was used to determine the strength of the relationship between organizational factors and the usage of E-Banking. The sign of the coefficient (positive or negative sign) was used to determine the change in direction in the relationship between organizational factors and the usage of E-Banking. The coefficient of determination was used to determine the influence of organizational factors on the usage of E-Banking. The significance of the coefficient (p) was used to test the findings by comparing p to the critical significance level at (0.05). Table 14 presents the test results.

Table 17: Correlation between organizational factors and usage of e-banking

	Organizational factors	
	Before control political support	After control political support
Usage of e-banking	*rho* = .733 rho^2 = .537 p = .001 n = 152	*rho* = .342 rho^2 = .115 p = .001 df = 149

Source: Field

Findings show that before controlling the moderating variable (political support), there was a strong positive correlation (r = .733) between organizational factors and usage of e-banking. Since the correlation does not indicate cause effect in terms of the percentage variance in the dependent variable caused by the independent variable, a coefficient of determination (rho^2 = .537), which is a square of the correlation coefficient was computed. The coefficient of determination was expressed into percentage to determine the effect of organizational factors on usage of e-banking. This revealed that organizational factors accounted for 53.7% of variance in usage of e-banking. These findings were subjected to a test of significance (p) and it is shown that the significance of the correlation (p = .001) is less than the recommended critical significance at 0.05. Thus, then the relationship was significant. Because of this, the hypothesis "There *is an association between organizational factors and the usage of E-Banking in commercial Banks in Uganda*" was accepted. This implies that organizational factors influenced usage of e-banking. The strong correlation implied that a change in organizational factors was related to a big change in usage of e-banking. The positive nature of the correlation implied that the change in organizational factors and usage of e-banking was in the same direction whereby favorable organizational factors were related to more usage of e-banking and vice versa.

After controlling the moderating variable (political support), the strength of relationship between organizational factors and usage of e-banking reduced (r = .342) but remained

significant (p = .001). The coefficient of determination (rho^2 = .115) shows that this time, organizational factors accounted for 11.5% of variance in usage of e-banking, which is a lower percentage compared to when moderating variable (political support) is not controlled.

4.4 Research Question Three: Influence of Attitudinal Factors on the Usage of E-Banking

Before testing the second hypothesis, descriptive results (frequencies and percentages) relating to attitudinal factors were presented, analyzed and interpreted. Findings are presented in the following subsection.

4.4.1 Descriptive results about attitudinal factors

Respondents were requested to respond to 19 items about attitudinal factors as shown in Table 18. They were requested to indicate their response using a five-point Likert scale: “Strongly disagree”, “Disagree”, “Not sure”, “Agree”, and “Strongly agree”. The items are presented in the first column of Table 18 and the proportion of respondents to the responses on each of the items is presented in form of frequencies and percentages in columns 2 to 6. The last column presents the total number and percentage of respondents on each of the items. The analysis and interpretation of the findings about attitudinal factors follows the presentation of findings in Table 18 (For detailed results showing frequencies and percentage see Appendix H).

Table 18: Findings about attitudinal factors

Items about attitudinal factors	SD	D	NS	A	SA
1. Using the electronic banking system has been useful to me	25%	38%	13%	25%	0%
2. Using the electronic banking system has been easy to me	0%	50%	0%	38%	13%
3. I do not see any risk in using the electronic banking system	8%	22%	32%	30%	8%

Key: SD = Strongly disagree, D = Disagree, NS = Not sure, A = Agree, SA = Strongly agree
Source: Field

Most respondents opposed one item (1) about attitudinal factors in e-banking. Findings show that most respondents (63%) opposed that using the electronic banking system had been useful to them compared to 24% who concurred while 13% were not sure. Thus, these findings suggest that using the electronic banking system had not been useful to them and this show this was an unfavorable organizational factor in e-banking.

In addition, it is shown that almost an equal proportion of respondents were oppose to, not sure of and concurred to two items (2 and 3) about attitudinal factors in e-banking. Findings show that half of the respondents (50%) opposed that using the electronic banking system had been easy to them compared to 50% who concurred. Furthermore, approximately a third of the respondents (30%) opposed that they did not see any risk in using the electronic banking system compared to 38% who concurred while 32% were not sure. It can be deduced that were fairly favorable attitudinal factors in e-banking.

Interview revealed that the lack of reliability and the problems in reliability also promoted concerns about security affecting the usage of e-banking. Most interviewees expressed great anxiety about security issues such as potential fraudulent activities and errors in conducting customer transactions. As a bank manger said:

> *The main concern that is associated with the use of banking technologies is perceived security of the new banking technology, thus if this perception is*

overcome then we see no reason why our banks cannot an increase in the number of people using e-banking.

The issues of confidentiality and privacy of bank customer financial information were considered to be of extreme importance, and were emphasized by many interviewees. As one bank manager said:

We are still uncertain about to what extent the modern banking technologies are safe to use because in recent years we have received many complaints from our customers with regard to their financial affairs, they do not trust us to keep their financial records on a computer where most of the employees can have access.

Having presented and interpreted the descriptive findings about attitudinal factors, the second hypothesis was tested. Findings are presented in the following sub section.

4.4.2 Testing third hypothesis

The second hypothesis stated, "*There is an association between attitudinal factors influence the usage of E- banking in commercial banks in Uganda*". Spearman rank order correlation coefficient (*rho*) was used to determine the strength of the relationship between attitudinal factors and the usage of E-Banking. The sign of the coefficient (positive or negative sign) was used to determine the change in direction in the relationship between attitudinal factors and the usage of E-Banking. The coefficient of determination was used to determine the influence of attitudinal factors on the usage of E-Banking. The significance of the coefficient (p) was used to test the findings by comparing p to the critical significance level at (0.05). Table 16 presents the test results.

Table 19: Correlation between attitudinal factors and usage of e-banking

	Environmental factors	
	Before control political support	After control political support
Usage of e-banking	*rho* = .747 rho^2 = .558 p = .001 n = 152	*rho* = .354 rho^2 = .125 p = .001 df = 149

Source: Field

Findings show that before controlling the moderating variable (political support), there was a strong positive correlation (r = .747) between attitudinal factors and usage of e-banking. Since the correlation does not indicate cause effect in terms of the percentage variance in the dependent variable caused by the independent variable, a coefficient of determination (rho^2 = .558), which is a square of the correlation coefficient was computed. The coefficient of determination was expressed into percentage to determine the effect of attitudinal factors on usage of e-banking. This revealed that attitudinal factors accounted for 55.8% of variance in usage of e-banking. These findings were subjected to a test of significance (p) and it is shown that the significance of the correlation (p = .001) is less than the recommended critical significance at 0.05. Thus, then the relationship was significant. Because of this, the hypothesis "There *is an association between attitudinal factors and the usage of E-Banking in commercial Banks in Uganda*" was accepted. This implies that attitudinal factors influenced usage of e-banking. The strong correlation implied that a change in attitudinal factors was related to a big change in usage of e-banking. The positive nature of the correlation implied that the change in attitudinal factors and usage of e-banking was in the same direction whereby favorable attitudinal factors were related to more usage of e-banking and vice versa.

After controlling the moderating variable (political support), the strength of relationship between attitudinal factors and usage of e-banking reduced (r = .354) but remained significant (p = .001). The coefficient of determination (rho^2 = .125) shows that this time,

attitudinal factors accounted for 12.5% of variance in usage of e-banking, which is a lower percentage compared to when moderating variable (political support) is not controlled.

CHAPTER FIVE

SUMMARY, DISCUSSION, CONCLUSIONS AND RECOMMENDATIONS

4.0 Introduction

This chapter presents the discussion, conclusions and recommendations. It divided into three sections. The first section presents the discussion. The second section presents the conclusions. The third section presents the recommendations.

5.1 Summary of Findings

51.1 Influence of Environmental Factors on the Usage of E-Banking

The study established that before controlling the moderating variable (political support), there was a very strong positive relationship between environmental factors and usage of e-banking, whereby favorable environmental factors were related to more usage of e-banking and vice versa. Environmental factors accounted for 68.1% of variance in usage of e-banking, which was a very big change in usage of e-banking. After controlling the moderating variable (political support), the strength of relationship between environmental factors and usage of e-banking reduced but remained significant and this time, environmental factors accounted for 36.5% of variance in usage of e-banking, which was a lower percentage compared to when moderating variable (political support) was not controlled.

5.1.2 Influence of Organizational Factors on the Usage of E-Banking

The study showed that organizational factors play an important role in the usage of e-banking. The empirical evidence supports what the literature affirms: organizational factors influences the usage of e-banking. This is because findings revealed that before controlling the moderating variable (political support), there was a strong positive relationship between organizational factors and usage of e-banking, n whereby favorable

organizational factors were related to more usage of e-banking and vice versa. Organizational factors accounted for 53.7% of variance in usage of e-banking, which a big change in usage of e-banking. After controlling the moderating variable (political support), the strength of relationship between organizational factors and usage of e-banking reduced but remained significant. Organizational factors accounted for 11.5% of variance in usage of e-banking, which is a lower percentage compared to when moderating variable (political support) is not controlled.

5.1.3 Influence of Attitudinal Factors on the Usage of E-Banking

Findings revealed that before controlling the moderating variable (political support), there was a strong positive relationship between attitudinal factors and usage of e-banking, whereby favorable attitudinal factors were related to more usage of e-banking and vice versa. Attitudinal factors accounted for 55.8% of variance in usage of e-banking, which was a big change in usage of e-banking. After controlling the moderating variable (political support), the strength of relationship between attitudinal factors and usage of e-banking reduced but remained significant Attitudinal factors accounted for 12.5% of variance in usage of e-banking, which is a lower percentage compared to when moderating variable (political support) is not controlled.

5.2 Discussion of Findings

5.2.1 Influence of Environmental Factors on the Usage of E-Banking

The findings of this study that environmental factors at Stanbic Bank Uganda Ltd affected usage of e-banking support Dholakia and Kshetri (2004), Chircu & Kauffman (2000), Zhu and Kraemer (2005), Thomas et al. (1998) to mention a few who emphasized the importance of environmental factors such as the technological readiness and legal support

in ICT usage. Like these researchers, this study shows that environmental factors play an important role in the usage of e-banking.

In particular, this study established that some aspects of ICT industrial readiness, regulatory support, financial industrial readiness and institution pressure that were indicators of environmental factors in this study were favorable while other aspects were unfavorable or fairly favorable. Thus, given the positive nature of the relationship between environmental factors and usage of e-banking, the following is deduced in this study. Aspects of environmental factors (ICT industrial readiness, regulatory support, financial industrial readiness and institution pressure) that were favorable were associated with more usage of e-banking. Aspects of environmental factors (ICT industrial readiness, regulatory support, financial industrial readiness and institution pressure) that were unfavorable were associated with low usage of e-banking. Lastly, aspects of environmental factors (ICT industrial readiness, regulatory support, financial industrial readiness and institution pressure) that were fairly favorable were associated with moderate usage of e-banking.

The findings of this study support Chircu and Kauffman (2000) who observed that shortage of information technology infrastructures act as barriers for sustaining growth of online commerce. Like Zhu and Kraemer (2005), Zhu et al. (2006), Mata et al. (1995), Rotchanakitumnuai and Speece (2003), Larpsiri et al. (2002), Sato and Hawkins (2001), Zhu et al. (2003), McCole and Ramsey (2005), DiMaggio and Powell (1983) and Iacovou et al. (1995), the findings of this study show that ICT industrial readiness, regulatory support, financial industrial readiness and institution pressure play an important role in usage of e-banking. These academicians/researchers provided literature about various

ways in which environmental factors either enhanced or compromised usage of e-banking.

5.2.2 Influence of Organizational Factors on the Usage of E-Banking

This study's finding that organizational factors at Stanbic Bank Uganda Ltd affected usage of e-banking support literature which shows studies that got almost similar findings or academicians who held the view that a positive association between organizational factors and usage of e-banking existed. For example, findings of this study support Quayle (2002), Hawkins and Prencipe (2000), Fraser et al. (2000), Kaplan & Sawhney (2000) and Mehrtens et al (2001). These people emphasized an association between aspects organizational factors and usage of e-banking.

The study established that some aspects of perceived benefits, security, perceived credibility and trust of the system that were in this study indicators of organizational factors were favorable while others were unfavorable and others were fairly favorable. Thus, given the positive nature of the relationship between organizational factors and usage of e-banking, the following is deduced in this study. Aspects of organizational factors (perceived benefits, security, perceived credibility and trust of the system) that were favorable were associated with more usage of e-banking. Aspects of organizational factors (perceived benefits, security, perceived credibility and trust of the system) that were unfavorable were associated with low usage of e-banking. Lastly, aspects of organizational factors (perceived benefits, security, perceived credibility and trust of the system) that were fairly favorable were associated with moderate usage of e-banking.

Thus, like other researchers/authors, such as Kaplan and Sawhney (2000), Mehrtens et al (2001) and UNCTAD (2001), the findings of this study show the importance

organizational factors (perceived benefits, security, perceived credibility and trust of the system) in usage of e-banking. Findings of this study support Akinci et al. (2004) who found that lack of confidence, security, reliability and privacy issues are main concerns of online banking customers. They also support Wang et al., (2003) who found that the perceived credibility is a determining factor in e-banking usage. The findings of this study concur with Mehrtens et al (2001) ranked perceived benefits as factors in Internet usage, given that internet usage is among the element of e-banking. In addition, the findings of this study support Min and Galle (1999) who observed that security violation can lead to various problems in electronic usage.

5.2.3 Influence of Attitudinal Factors on the Usage of E-Banking

In this study, it was established that attitudinal factors influenced the usage of e-banking. This finding supports Curran et al. (2003) who reported the important role of attitudes related to the situation in which the IT is used. Thus, the finding of this study shows that using the e-banking depends to a great extent on the individual's attitudes.

Particularly, the study established that using the electronic banking system had not been useful to people and this showed that this was an unfavorable attitudinal factor in e-banking. In addition, it was found out that for some people using the electronic banking system had been easy to them while other it had not and some people did not see any risk in using the electronic banking system while other did.

These findings support Curran et al. (2003) who reported the important role of attitudes related to the situation in which the IT is used. These finding support researchers (e.g., Al-Sukkar and Hasan, 2005; Cheung, 2001;Kamel and Hassan, 2003; Kolodinsky and Hogarth,2001; Kolodinsky, et al., 2004; Ravi, Carr and Sagar,2007; and Vatanasombut,

Lgbaria, Stylianou andRodger, 2008) who established that perceived usefulness was found to affect adoption of and intention to continue using retail banking services in a number of studies. The findings of the study support Davis (1989) who believed that perceived usefulness was among the fundamental determinants of use acceptance electronics. Furthermore, the findings of this study concur with Pikkarainen et al. (in AL-Ghamdi, 2009) who found that perceived usefulness of online banking was the most influential factors in explaining the use of online banking.

5.3 Conclusions

5.3.1 Environmental factors and usage of e-banking

Like studies in the literature, this study confirmed that environmental factors affect usage of e-banking. Thus, This is because the study established that environmental factors accounted for 68.1% of variance in usage of e-banking, which was a very big change in usage of e-banking. After controlling the moderating variable (political support), environmental factors accounted for 36.5% of variance in usage of e-banking, which was a lower percentage compared to when moderating variable (political support) was not controlled. In particular, the study revealed ICT industries readiness, regulatory support, financial industries readiness and institutional pressure affect usage of e-banking.

5.3.2 Organizational factors and usage of e-banking

The study showed that organizational factors play an important role in the usage of e-banking. The empirical evidence supports what the literature affirms: organizational factors influences the usage of e-banking. This is because findings revealed that organizational accounted for 53.7% of variance in usage of e-banking, which a big change in usage of e-banking. After controlling the moderating variable (political support), organizational factors accounted for 11.5% of variance in usage of e-banking,

which is a lower percentage compared to when moderating variable (political support) is not controlled. This study specifically showed that perceived benefits, security, perceived credibility and trust of the system affect usage of e-banking.

5.3.1 Attitudinal factors and usage of e-banking

The effect of attitudinal factors on usage of e-banking was confirmed in this study. This shows shows that behavior intentions such as usage of e-banking are informed by one's attitudes, which reflects perceptions of internal and external constraints on behavior. Findings of this study show that attitudes reflect motives for an individual to engage in a certain behavior such as e-banking. The attitudinal factors that affected usage of e-banking in this study were perceived usefulness, perceived use and perceived risk.

5.4 Recommendations

5.4.1 Environmental factors and usage of e-banking

The following are recommended in this study. Stanbic Bank should take into consideration the environmental factors by ensuring ICT industrial readiness, regulatory support, financial industrial readiness and reducing institution pressure to improve usage of e-banking. Ensuring ICT industrial readiness can achieve this through the Stanbic Bank's ICT sector monitoring, storing & retrieving electronic transmissions between the bank and its customers and controlling and updating of content and capabilities in a timely manner. Ensuring regulatory support can be achieved by Stanbic Bank's e-banking system following government laws and regulations on ICT and finance, the bank soliciting legal counsel on matters relating to e-banking and putting in place an e-banking insurance policy. Ensuring financial industrial readiness can be achieved by the bank having access, ownership and control of customer data and other confidential information and periodically reviewing the e-banking contingency plan and procedures. Reducing

institution pressure can be achieved through providing e-banking training employees of the bank and incentives for obtaining and retaining key IT personnel

5.4.2 Organizational factors and usage of e-banking

Stanbic Bank should also take into consideration the organizational factors by ensuring people benefit from its services and that there is security in its e-business transaction, including credibility in its e-business transaction and trust in its e-business transaction. In addition, employees should be sensitized about e-banking through workshops and seminars in order to positively change their perceptions about e-banking, security precautions on the part of the service provider for the bank should be in place, an intrusion detection system should be in place, hackers should be prevented from accessing the system and any intrusion attacks should be discovered. Lastly, bank management should keeps up-to-date on addressing newly disclosed security threats to the computer operating system and application software, and the bank should offer reasonable assurances for continuation of service through back up arrangements in the event of a problem situation.

5.4.3 Attitudinal factors and usage of e-banking

Lastly, Stanbic Bank should also take into consideration the attitudinal factors using the electronic banking system is useful and ease to people. This can be achieved through conducting sensitization among the people on the use of e-banking including the associated risks and benefits.

REFERENCES

Abaasa, F (2007). Views from Fiona: Banking in Uganda Gone High Tech. UGPulse.com.

Abrahamson, I. (1991). The theory of planned behavior: Some unresolved issues. Organizational Behavior Human Decision Processes 50(2): 179-211.

Akinci, S., et al. (2004). Adoption of Internet Banking among sophisticated consumer segments in an advanced developed countries. International Journal of Bank Marketing 22(3): 212-32.

Aladwani, J. C. (2001). Cross-Country Technology Diffusion: A Case of Computers. *The American Economic Review, 91*(2): 328-335

Alagheband, P. (2006). Adoption of E-Banking services by Iranian Customers. Master Thesis. Lulea University of Technology. Retrieved January, 2011 from http://epubl.ltu.se/1653-0187/2006/49/LTU-PB-EX-0649-SE.pdf

AL-Ghamdi, A. (2009). Investigating Factors Affecting Customers of Using Internet Banking. Comparison study between Saudi Arabia and the UK. Brunel Business School, Doctoral Symposium, May 23 & 24, 2009.

Al-Sukkar, A. & Hasan, H. (2005). Toward a Modelfor: The Acceptance of Internet Banking in Developing Countries, *Information Technology for Development* (11:4), pp. 381- 398.

Amin, M. (2005). *Social science Research*; Conception, Methodology and Analysis. Kampala, Makerere Univesrity printing press.

Andersen, K.V., et. al., (2003). Governance Initiatives Creating a Demand Drive E-Commerce Approach: The Case of Denmark. *The Information Society*. Denmark. *The Information Society 17*(3): 195-210.

Attaran, A. (2000) *Interactive television in European banking: a report*. Boston: Celent.

Ba, S. & Pavlou, P. A. (2002). Evidence of the effect of trust building technology in electronic markets: price premiums and buyer behavior. *MIS Quarterly 26*(3): 243-268.

Barlotta, J. (1999). Banks on guard against hackers. *Business Today, Boston Herald*, pp.31

Black, H. (2000). What Determines Turkish customers' acceptance of internet banking? *International Journal of Bank Marketing 26*(5): 353-370.

Bruno-Britz, M. (2006). Lock down Banking Future: New spins on existing technology will improve security, customer service, and business processes this year. InformationWeek. Retrieved from: http://www.informationweek.com/security/showArticle.jhtml?articleID =170436

Burnham, T. (1996). Adoption of internet banking: An empirical study in Hong Kong. *Decision Support Systems 42*: 1558-1572.

Chellappa, R. K. & Pavlou, R (2001). *Personalization versus Privacy: The Flip Sides of the Same Coin.* Working Paper, ebizlab, Marshall School of Business, USC (2001), Los Angeles

Chellappa, T. (2001). *Attitudinal Aators towards E-Commerc in Taiwan.* University of California, Irvine, Irvine, CA

Cheung, C. S. (2001). Understanding Adoption and Continual Usage Behavior towards Internet Banking Services in Hong Kong. Master Thesis. Lingnan University. Retrieved October, 2011 fromhttp://www.library.ln.edu.hk/ethesis/chansc_011208 .pdf

Chircu, A. M. & Kauffman, R. J. (2000). Limits to value in electronic commerce-related IT investments. *Journal of Management Information Systems 17*(2): 59-80.

Cunningham, J. B. (2003). The diffusion of E-banking among Singapore consumers. *International Journal of Bank Marketing, Vol. 21* No.1, pp.16-28

Curran, J. M , Meuter M. L. & Suprenant C. F. (2003). Intentions To Use Self-Service Technologies: A Confluence of Multiple Attitudes, *Journal of Service Research* (5: 3), February 2003, pp. 209-224.

Damsgaard, J. & Lyytinen, K. (2001). The Role of Intermediating Institutions in Diffusion of Electronic

Daniel, G. (1999). Data Interchange: How industry associations in the grocery sector intervened in Hong Kong, Finland and

Davis, F. (1985). *A technology acceptance model for empirically testing new end user information systems: theory and results.* Unpublished Doctoral dissertation, MIT Sloan School of Management, Cambridge, MA

Davis, F. D. (1989) Perceived usefulness, perceived ease of use, and user acceptanceof information technology. MIS Quarterly, VOL.13, NO.3, 319-340.

Dholakia, R. R. & Kshetri, N. (2004). Factors Impacting the Adoption of the Internet among SMEs. *Small Business Economics, 23*: 311-322.

DiMaggio, P. J. & W. W. Powell (1983). The iron cage revisited: Institutional isomorphism and collective rationality in organizational fields. *American Sociological Review, 48*: 147-160.

Doney, P.M., & Cannon, J.P. (1997). An examination of the nature of trust in buyer-seller relationship. *Journal of Marketing, Vol. 61* No.April, pp.35-51

Eckenrode, J. P. (2001). Impacts of Liberalization and Economic Integration on Mexico's Computer Sector. *Information Society, 17*(2): 119-132

Eriksson, K., Kerem, K. & Nilsson, D. (2005). Customer acceptance of internet banking in *Estonia International Journal of Bank Marketing,* VOL.23,NO.2, 200-216.

Eriksson, K., Kerem, K., & Nilsson, D. (2008). The Adoption of Commercial Innovations in The Former Central and Eastern European Markets: The Case of Internet Banking, *The International Journal of Bank Marketing* (26:3), pp. 154- 169.

Eyles, J. (1989). *Qualitative method*. Oxford: Blackwell. pp. 380-382.

Falk, T., Schepers, J., Hammerschmidt, M.,& Grossenbacher, S. (2005). Should I Stay or Should I Go–The Role of Status Quo for Using New Self-Service Technologies Retrieved 20011, from http://ssrn.com/abstract=962242

Featherman, M. S., & Pavlou, P. A. (2002). Predicting E-Services Adoption: A Perceived Risk Facets Perspective, Eighth Americas Conference on Information Systems, pp.1034- 1046.

Flick, A. F. (2002). Barriers to global E-banking: A cross-country study of Hong-Kong and Finland. *Journal of organizational computing and Electronic Commerce, Vol. 10* pp 23-48

Fraser, J., N. Fraser, et al. (2000). The strategic challenge of electronic commerce. *Supply Chain Management: An International Journal 5*(1): 7-14.

Gan, C., Clemes, M., Limsombunchai, V., & Weng, A. (2006). A Logit Analysis of Electronic Bankingin New Zealand," International Journal of BankMarketing (24:6), pp. 360- 383.

Goldstuck, A. (2001). Special Report: Online banking in South Africa. (Available at http://www.mediatoolbox.co.za Accessed 8th December 2010

Han, L. (2008). Bricks vs. clicks: entrepreneurial online banking behavior and relationship banking. *International Journal of Entrepreneurial Behavior & Research 14*(1): 47-60.

Harridge-March, S. (2006) Can the building of trust overcome consumer perceived risk online? *Marketing Intelligence & Planning*, VOL.24, NO.7,746-761.

Hawkins, R. & Prencipe, A. (2000). Business-to-Business E-Commerce in the UK: A Synpaper of Sector Reports Commissioned by the Department of Trade and Industry. DTI, London.

Ho, S. S., & Ng, V. T. (1994). Customers' Risk Perceptions of Electronic Payment Systems, *International Journal of Bank Marketing* (12:8), pp. 26- 38.

Human Resource Manual (2010).

Hunt**,** D. (1994). *Global Transformations: Politics, Economics and Culture.* Stanford, CA: Stanford University Press

Hutchinson, D. (2000). *A framework of authentication for Internet banking.* School of Computing and Mathematics, Deakin University, Geelong., thesis (honours),

Iacovou, C. L., I. Benbasat, et al. (1995). Electronic data interchange and small organizations: Adoption and impact of Technology. *MIS Quarterly 19*(4): 465-485.

Internet Standards Assessment Report (ISAR, 2006). Industry Benchmarks for Successful Web Site Development Based on a Decade of Web Award Judging by The Web Marketing Association. (2006). Web Marketing Association. http://www.webaward.org/isar _ report.asp

Internet World Stats (IWS), (2006). Internet usage and population in Global. www.internetworldstats.com

Jaruwachirathanakul, B., & Fink, D. (2005). Internet Banking Adoption Strategies for a DevelopingCountry: The Case of Thailand, *Internet Research* (15:3), pp. 295-311.

Jarvenpaa, S.L., Tractinsky, N., & Saarinen, L. (1999). Consumer trust in an Internet store: a cross- cultural validation. *Journal of Computer-Mediated Communication, 5*(2).

Jasimuddin**,** P. S. (2001). B2B e-Commerce in emerging economies: China. *Journal of Strategic Information Systems 10*: 335-355.

Jones, S., Wilikens, M., Morris, P., & Masera, M. (2000). Trust requirements in e-business: a conceptual framework for understanding the needs and concerns of different stakeholders. *Communications of the ACM, 43*(12); pp.81-7.

Jun, M., & Cai, S. (2001), "The key determinants of E-banking service quality: A content analysis. *International Journal of Bank Marketing, 19*(7), pp.276-91

Kalakota, R., & Whinston, A. (1996). Electronic commerce: building blocks of new business opportunity. *Journal of Organizational Computing and Electronic Commerce, 6*(1); pp. 1-10

Kamel, S., & Hassan, A. (2003). Assessing the Introduction of Electronic Banking in Egypt Using the Technology Acceptance Model, in *Annals of Cases on Information Technology*, M. Kosrow-Pour (Ed.), Idea Group Publishing, 2003, pp. 1- 25.

Kaplan, F & Sawhney, T. J. (2000). Modular Production Networks: A New American Model of Industrial Organization. *Industrial and Corporate Change*, *11*(3): 451-496.

Kent, H. (2001). Reliability and validity of instruments *Introduction to Research Methods*, 4th ed. London: McGraw Hill.

Khalifa, M. & Davison, R. M. (2006). SME Adoption of IT: The Case of Electronic Trading Systems. *IEEE Transactions on Engineering Management, 53*(2): 275-284.

Khisa, I. (2011). Uganda: Electronic Banking Comes of Age, The Monitor. Isaac Khisa 7 February 2011. Rerieved 2nd August 2011 from ttp://allafrica.com

Kim, S.S., & Malhotra, N. 2005). A Longitudinal Model of Continued IS Use: An Integrative View ofFour Mechanisms Underlying Post adoption Phenomena," Management Science (51:5), May2005, pp. 741, 755.

King, J., V. & Gurbaxani, et al. (1994). Institutional Factors in Information Technology Innovation. *Information Systems Research, 5(2):* 139-169.

Kolodinsky, J. M., & Hogarth, J. M. (2001). The Adoption of Electronic Banking Technologies by American Consumers, *Consumer Interests Annual* (47), 2001, pp. 1- 9.

Kolodinsky, J. M., Hogarth, J. M., & Hilgert, M. (2004). The Adoption of Electronic Banking Technologies by US Consumers, *The International Journal of Bank Marketing* (22:4),March 2004, pp.238- 259.

Krejcie, R. V. & Morgan, D. W. (1970). Determining Sample Size for Research Activities. *Educational and Psychological Measurement, 30*(1), 607 - 610.

Larpsiri, R., S. (2002). *Impact of Internet Banking on Thai Consumer Perception*. Presented at Conference on Marketing Communication Strategies in Changing Global Environment, Hong Kong.

Lee, M. K. O. & E. Turban (2001). A trust model for consumer Internet shopping. International *Journal of Electronic Commerce 6*(1): 75-91.

Lin, W. (2008). Construction of On-Line Consumer Behavior Models: A Comparative Study of Industries in Taiwan, *International Journal of Commerce and Management* (18:2), 2008, pp. 123-149.

Madu, A. A. (2002). Dimension of e-quality. *International Journal of Quality and Reliability Management, 19*(3), pp. 246-58

Mata, H. et al., (1995). The Adoption of Direct Banking Services. *Journal of Marketing Management, 13*(8), p.791-881

Mathieson, K. (1991). Predicting User Intentions: Comparing the Technology Acceptance Model with the Theory of Planned Behavior, *Information Systems Research* (2:3), 1991, pp. 173- 191.

Mayer, F. S., & Frantz, C. M. (2004). The connectedness to nature scale: A measure of individuals' feeling in community with nature. *Journal of Environmental Psychology, 24,* 503-515

McCole, P. & E. Ramsey (2005). A profile of adopters and non-adopters of eCommerce in SME professional service firms. *Australasian Marketing Journal 13*(1): 36-48.

McKinney, V., Yoon, K., & Zahedi, F.M., (2002). The Measurement of Web-Customer Satisfaction: An expectation and Disconfirmation Approach. *Information System Research, 13*(3), pp.296-315

Mehrtens, J., P. B. Cragg, et al. (2001). A Model of Internet Adoption by SMEs. *Information & Management, 39*: 165-176.

Metcalfe, B. (2001). Strategic and Emerging Issues in South African Banking. *PriceWaterhouseCoopers Research Survey 6*, May.

Miles, M. & Huberman, A. M. (1994). *Qualitative Data Analysis: an expanded sourcebook*, (2nd ed) London, Sage

Min, H., Galle, W.P. (1999). E-banking usage in business-to-business purchasing. *International Journal of Operations & Production Management, 19*(9), pp.909-21

Montealegre, A. (1999). E-commerce adoption in developing countries: a model and instrument. *Information & Management 42*: 877-899.

Parasuraman, A., Zeithaml, V.A., & Berry, L.L, (1985). A conceptual model of service quality and its implications for future research. *Journal of Marketing, Vol. 49.*

Pavlou, P. A. (2001). Consumer intentions to adopt electronic commerce-incorporating trust and risk in the technology acceptance model. Proceedings of Diffusion Interest Group in Information Technology Conference (DIGIT2001) New Orleans, LA.

Peterson, M. (1996). *Belief, Attitude, Intention and Behavior: An Introduction to Theory and Research.* Boston, Ma: Addison Wesley.

Procter, A. (2001), The diffusion of E-bankingand money among Singapore consumers. *International Journal of Bank Marketing, 2* (1), pp. 16-28

Quayle, M. (2002). E-commerce: The Challenge for UK SMEs in the 21st Century. *International Journal of Operations and Production Management, 22*(10): 1148-1161.

Ravi, V., Carr, M., & Sagar, N. V. 2007). Profilingof Internet Banking Users in India Using IntelligentTechniques, *Journal of Services Research* (7:1), April-September 2007, pp. 61- 73.

Rippy, M. (2003). Modeling consumer risk reduction preferences from perceived loss data. *Journal of Consumer Marketing 15*(4): 669-685.

Rotchanakitumnuai, S. & Speece, M. (2003). Barriers to Internet banking adoption: a qualitative study among corporate customers in Thailand. *International Journal of Bank Marketing 21*(6/7): 321-23.

Sato, S. & Hawkins, J. (2001). Electronic finance: an overview of the issues. *BIS Papers 7:* 1-12.

Saunders, M., Lewis, N.K., & Thornhill, A, (2003), *Research methods for Business Students,* 2nd ed., Prenice Hall, England.

Scott, W. R. (2001). *Institutions and Organizations.* Thousand Oaks, CA 2nd Edn.

Scupola, A. (2003). The adoption of Internet commerce by SMEs in the south of Italy: an environmental, technological and Organizational perspective. *Journal of Global Information Technology Management 6*(1): 52-71.

Sekaran, V. (2003). *Research Methods for business*.(4th ed.) New York, Hermitage publishing.

Shi, C-F, Jason Dk, & Kenneth, L., & Kraemer. (2008). *Determinants of IT Spending at the Country Level.* University of California, Irvine

Silva, N. (2005). *Customer Self-Service and Retail Banking in the US: Rising Expectations, Challenges, Opportunities.* The Tower Group. February 2006. Ref#: V46:19NR

Stanbic Bank Uganda Ltd (2009). Annual report and financial statements for the year ended 31st December 2009

Stroh, M. (2000) 'Qualitative interviewing' *in* Burton, D. (ed) *Research Training for Social Scientists: A Handbook for Postgraduate Researchers*. London: Sage Publications.

Sulliva, J. M. (2000). Adoption of internet banking: proposition and implementation of an integrated methodology approach. *Journal of Bank Marketing 25*(2): 72-88.

Tan, G. C. & Teo, I. (2000). Development of an instrument to measure the perceptions of adoption an information technology. *Information Systems Research 2*(3): 173-191.

Teo, M. et al. (2003). The New Economy: Facts, Impacts and Policies. *Information Economics and Policy*, *14*: 133-144

Thomas, D. S., K. A. Forcht, et al. (1998). Legal considerations of Internet use-issues to be addressed. *Internet Research: Electronic Networking Applications and Policy 8*(1): 70-4.

Thornton, E. M. & White, H. (2001). *Diffusion of Innovations.* 3rd ed. Free Press, New York Times 4.

Tornatzky, L. G. & Fleischer, M. (1990). *The Processes of Technological Innovation*. Lexington Books, Lexington, Massachusetts, Toronto: 152-154.

Turban, E., Lee, J., King, D., Chung, H.M. (2002), Electronic Commerce: A Managerial Perspective, Prentice-Hall, Englewood Cliffs. NJ

UNCTAD, B. P. (2001). *Improving Competitiveness of SMEs in Developing Countries: Role of Finance, including E-Finance to Enhance Enterprise Development:* A Paper Presented in Expert Group Meeting, Geneva 22-24: 1-19.

Vatanasombut, B., Lgbaria, M., Stylianou, A.,& Rodgers, W. (2008). Information System Continuance Intention of Web Based Applications Customers: The Case of Online Banking, *Information and Management* (45:7), November 2008, pp. 419- 428.

Waber, M. (1946). *Communications in Innovation.* New York: Free Press.

Walker, M. (2002). *Information technology for sales competitiveness: perception on sales reps in Singapore.* Proceedings of the 2000 Asian Forum for Business Education Conference: Reform and Accountability, Chiang Rai, Thailand.

Walker, R. H., & Johnson, L.W. (2006). WhyConsumers Use and Do Not Use Technology-Enabled Services, *The Journal of Services Marketing* (20: 2), 2006, pp. 125-135.

Wang, S. & W. Cheung (2004). E-Business adoption by travel agencies: Prime candidates for mobile e-business. *International Journal of Electronic Commerce 8*(3): 43-63.

Wang, Y. S., Wang, Y. M. (2003). Determinants of user acceptance of Internet Banking: An empirical study. *International Journal of Service Industry Management 14*(5): 501-519.

Westland, C (2002). Community Level Socio-Economic Impacts of Electronic Commerce. *Journal of Computer Mediated Communication 5*(2)

Wolfe, C, (1994). Electronic Commerce and the Local Merchant: Opportunities for Synergy between Physical and Web Presence. *Electronic Markets, 9*(2).

Yap, C. S., Soh, C. P. (1992). Information Systems success factors in small business. *International Journal of Management Science 19*(5): 6.

Yi, M.Y., Fiedler, K. D., & Park, J. S. (2006). Understanding The Role of Individual Innovativeness in The Acceptance of IT-Based Innovations: Comparative

Analyses of Models and Measures, *Decision Sciences* (37: 3), August 2006,pp. 393- 426.

Zeithaml, V.A., Parasuraman, A., & Malhotra, A., (2002). Service quality delivery through web sites: a critical review of extant knowledge *Journal of academy of marketing science*, 30(4).

Zhu, K., K. Kraemer, et al. (2003). Electronic business adoption by European firms: a cross-country assessment of the facilitators and inhibitors. *European Journal of Information System 12*: 251-268.

Zhu, K., K. L, et al. (2006). The Process of Innovation Assimilation by Firms in Different Countries: A Technology Diffusion Perspective on E-Business. *Management Science, 52*(10): 155-157

Zhu, K., K. L. & Kraemer, et al. (2004). Information technology payoff in e-business environments: An international perspective on value creation of e-business in the financial services industry. *Journal of Management Information Systems 21*(1): 17-54.

APPENDICES

Appendix A: Table for Determining Sample Size from a Given Population

N	S	N	S	N	S	N	S	N	S
10	10	100	80	280	162	800	260	2800	338
15	14	110	86	290	165	850	265	3000	341
20	19	120	92	300	169	900	269	3500	246
25	24	130	97	320	175	950	274	4000	351
30	28	140	103	340	181	1000	278	4500	351
35	32	150	108	360	186	1100	285	5000	357
40	36	160	113	380	181	1200	291	6000	361
45	40	180	118	400	196	1300	297	7000	364
50	44	190	123	420	201	1400	302	8000	367
55	48	200	127	440	205	1500	306	9000	368
60	52	210	132	460	210	1600	310	10000	373
65	56	220	136	480	214	1700	313	15000	375
70	59	230	140	500	217	1800	317	20000	377
75	63	240	144	550	225	1900	320	30000	379
80	66	250	148	600	234	2000	322	40000	380
85	70	260	152	650	242	2200	327	50000	381
90	73	270	155	700	248	2400	331	75000	382
95	76	270	159	750	256	2600	335	100000	384

Note: "N" is **size**

"S" is **sample size**.

Appendix B: Questionnaire for Customers

Dear Respondent,

The following questionnaire is for my Master's thesis entitled, "Factors influencing the adoption and usage of E-banking in Stanbic Bank, Kampala". Thanks in advance for your cooperation and valuable time that you are dedicating.

Respondent Background Personal information

1. Gender a. Female ☐ b. Male ☐

2. Age

a. Less than 20 years old ☐ b. 20-30 years old ☐ c. 30-40 years ☐ old ☐

d. 40-50 years old e. Older than 50 years old

3. Education

a. None ☐ b. Primary ☐ c. Secondary school ☐

d. Tertiary institution ☐ e. Bachelor degree ☐ f. Master or more ☐

4. Occupation

a. peasant ☐ b. Business ☐ c. Student ☐

d. government employee ☐ e. private sector employee ☐ f. Other ☐ specify)

5. Income

a. less than 200,000 Shs per month ☐ b. between 200,000-400,000 Shs per month ☐

c. between 400,000-600,000 Shs per month ☐ d. between 600,000-800,000 Shs per month ☐

e. between 800,000-1,000,000 Shs per month ☐ f. More than 1,000,000 Shs per month

6. How many years you have held an account with Stanbic Bank? ----------

7. How can you describe Stanbic bank business? ----------

8. How can you describe your relationship with Stanbic bank? ----------

SECTION B: Environmental Factors

A. ICT industries readiness					
1. ICT sector able to monitor, store & retrieve electronic transmissions (including messages and data) between the bank and its customers	1	2	3	4	5
2. ICT sector has reasonable control and update of content and capabilities in a timely manner	1	2	3	4	5
3. The type of environment does the e-banking site operate in is conducive	1	2	3	4	5

B. Regulatory support	1	2	3	4	5
1. Board fully informed of the risks involved with e-banking and do they understand those risks	1	2	3	4	5
2. Customers fully informed of the risks involved with e-banking and do they understand those risks	1	2	3	4	5
3. e-banking system follows government laws and regulations on ICT and finance	1	2	3	4	5
4. The bank has legal counsel on matters relating to e-banking	1	2	3	4	5
5. The bank has e-banking insurance policy	1	2	3	4	5
6. The bank has pending lawsuits/contingent liabilities relating to electronic banking activities	1	2	3	4	5
C. Financial industries readiness	1	2	3	4	5
1. Bank has an e-banking committee	1	2	3	4	5
2. The bank has access, ownership and control of customer data and other confidential information.	1	2	3	4	5
3. The bank periodically reviews the e-banking contingency plan and procedures	1	2	3	4	5
4. The bank explains to customers their full package of e-banking activities	1	2	3	4	5
D. Institutional pressure	1	2	3	4	5
1. Banks not offering Internet banking will lose customers to other banks	1	2	3	4	5
2. e-banking training is provided to other officers and employees of the bank	1	2	3	4	5
3. The bank provides incentives for obtaining and retaining key IT personnel	1	2	3	4	5
4. the bank has a target market or trade area for the e-banking services	1	2	3	4	5
5. Our industry is pressuring us to adopt E-banking	1	2	3	4	5

SECTION C: Organizational Factors

A. Perceived benefits					
1. In my opinion, it is desirable to use Internet banking	1	2	3	4	5
2. I think it is good for me to use Internet banking	1	2	3	4	5
3. Overall, my attitude toward e-banking is favorable	1	2	3	4	5
B. Security					
1. Security measures are in place to prevent the web site information from being altered	1	2	3	4	5
2. Security precautions on the part of the service provider for the	1	2	3	4	5

bank					
3. The bank has an intrusion detection system in place	1	2	3	4	5
4. Are controls or procedures in place for any of the following?					
a. Prevention of hackers from accessing the system	1	2	3	4	5
b. Prevention of line tapping	1	2	3	4	5
c. Discovered intrusion attacks	1	2	3	4	5
5. Bank management keeps up-to-date on addressing newly disclosed security threats to the computer operating system and application software	1	2	3	4	5
C. Perceived credibility					
1. There is liability for data and confidential treatment of information	1	2	3	4	5
2. The bank offers reasonable assurances for continuation of service through back up arrangements in the event of a problem situation	1	2	3	4	5
3. There are procedures to notify the bank of any unauthorized alteration and malicious attacks	1	2	3	4	5
4. There is regular back up of web site information	1	2	3	4	5
5. There are procedures in place for operating system updates	1	2	3	4	5
D. Trust of the system					
1. I can use E-banking at any time of a day	1	2	3	4	5
2. I can use E-banking at anywhere in the world	1	2	3	4	5
3. E-banking provide adequate personal security for customers	1	2	3	4	5
4. Employees have access to customer passwords	1	2	3	4	5

SECTION D: Attitudinal Factors

A. Internalization					

1. Top management is enthusiastic about the adoption of E-banking	1	2	3	4	5
2. Global competition is a factor in our decision to adopt E-banking	1	2	3	4	5
B. Dependable Service	1	2	3	4	5
1. I have a traditional bank account with the same bank	1	2	3	4	5
2. The brand name of the bank	1	2	3	4	5
3. The excellent service offered by this bank	1	2	3	4	5

SECTION E: Political Support

Political support					
1. Political factors are important in our decision to adopt E-banking	1	2	3	4	5
2. Our bank was pressured by the government to adopt E-banking	1	2	3	4	5
3. Government provides support for e-banking in banks	1	2	3	4	5

SECTION F: Adoption and usage of E-banking-DV)

A. Perceived Relative Advantage					
1. There is a clearly known way to do e-banking tasks I normally encounter	1	2	3	4	5
2. I can rely on established practices to do e-banking tasks I normally encounter	1	2	3	4	5
3. I can accomplish my banking tasks more quickly using e-banking	1	2	3	4	5
4. I can accomplish my banking tasks more easily using e-banking	1	2	3	4	5
5. E-banking enhances my effectiveness in utilizing banking services	1	2	3	4	5
6. E-banking enhances my efficiency in utilizing banking services	1	2	3	4	5
B. Perceived Organizational Performance	1	2	3	4	5
1. E-banking enables me to customize the presentation of information on a bank's Web site according to my personal needs	1	2	3	4	5
2. E-banking enables me to customize the content of information on a	1	2	3	4	5

bank's Web site according to my personal needs					
3. E-banking enables a bank to personalize service/product offerings to me after learning my banking behaviors and preferences	1	2	3	4	5
4. E-banking has improved my job performance	1	2	3	4	5
5. Using E-banking in my job would increase my productivity	1	2	3	4	5
6. E-banking enhances my effectiveness on the job	1	2	3	4	5
7. E-banking makes it easier to do my job	1	2	3	4	5
C. Perceived Customer / Organizational Relationship	1	2	3	4	5
1. e-banking reduces customer's loyalty	1	2	3	4	5
2. e-banking reduces customer-banker relationship	1	2	3	4	5
3. e-banking reduces customer's trust in the bank	1	2	3	4	5
4. I intend to continue using this bank's e-banking services	1	2	3	4	5
5. Access to accounts 24 x 7 is important to the customers	1	2	3	4	5
D. Perceived Ease of Use	1	2	3	4	5
1. Learning to use e-banking is easy for me	1	2	3	4	5
2. I find it easy to use E-banking to accomplish my banking tasks	1	2	3	4	5
3. Overall, I believe E-banking is easy to use	1	2	3	4	5
4. Using e-banking, the bank can provide one-stop services to me	1	2	3	4	5
5. Using e-banking, the bank can provide expanded services to me	1	2	3	4	5

Thank you for completing this survey. I recognize that your time is limited and value your participation.

Appendix C: Interview Guide for Employees and Managers

1. Age a. 20-30 b. 31-40 c. 41-50 d. <50
2. Gender a. Male b. Female
3. Years in present position----------
4. Years with Stanbic Bank----------
5. What is your department responsibility? ----------
6. What is your responsibility in Stanbic Bank or relevant department? ----------
7. Who is responsible for maintaining (updating and/or changing information) the bank's web site?
8. Does the bank have an Electronic Banking Committee (or something similar)?
9. What was your reasoning for offering e-banking and/or any other electronic banking services?
10. How did you choose which vendor to use?
11. What was the initial set-up cost?
12. Was testing done with employees before offering to customers?
13. What factors influence the adoption and usage of e-banking in Stanbic Bank?
14. How has e-banking improved your productivity as a bank?
15. What challenges faced with the use of e-banking?
16. What feedback do you receive from customers that use any of the electronic delivery channels?
17. What are your general impressions of e-banking?
18. For what purposes is e-banking used by the customers in Stanbic Bank?
19. Is e-banking training provided to other officers and employees of the bank?
20. Did the bank do a cost analysis specifically on e-banking?
21. Does the bank have procedures in place for when there is an interruption in service of e-banking for the customer (contingency plan)?
22. How many customers are signed up for e-banking and/or bill payment?
23. What type of environment does the Internet banking site operate in? Is it competitive?

Thank you for completing this survey. I recognize that your time is limited and value your participation.

Appendix D: Findings about environmental factors

	Strongly disagree	Disagree	Not sure	Agree	Strongly agree	Total
ICT sector able to monitor, store & retrieve electronic transmissions (including messages and data) between the bank and its customers	37 (24%)	57 (38%)	19 (13%)	37 (24%)	2 (1%)	152 (100%)
ICT sector has reasonable control and update of content and capabilities in a timely manner	2 (1%)	72 (47%)	5 (3%)	53 (35%)	20 (13%)	152 (100%)
The type of environment does the e-banking site operate in is conducive	12 (8%)	37 (24%)	47 (31%)	44 (29%)	12 (8%)	152 (100%)
Board fully informed of the risks involved with e-banking and do they understand those risks	38 (25%)	2 (1%)	20 (13%)	73 (48%)	19 (13%)	152 (100%)
Customers fully informed of the risks involved with e-banking and do they understand those risks	9 (6%)	2 (1%)	18 (12%)	70 (46%)	53 (35%)	152 (100%)
e-banking system follows government laws and regulations on ICT and finance	4 (3%)	73 (48%)	20 (13%)	54 (36%)	1 (1%)	152 (100%)
The bank has legal counsel on matters relating to e-banking	39 (26%)	54 (36%)	22 (14%)	35 (23%)	2 (1%)	152 (100%)
The bank has e-banking insurance policy	4 (3%)	73 (48%)	4 (3%)	53 (35%)	18 (12%)	152 (100%)
The bank has pending lawsuits/contingent liabilities relating to electronic banking activities	16 (11%)	34 (22%)	45 (30%)	44 (29%)	13 (9%)	152 (100%)
Bank has an e-banking committee	13 (9%)	36 (24%)	46 (30%)	46 (30%)	11 (7%)	152 (100%)
The bank has access, ownership and control of customer data and other confidential information.	38 (25%)	54 (36%)	20 (13%)	38 (25%)	2 (1%)	152 (100%)
The bank periodically reviews the e-banking contingency plan and procedures	4 (3%)	75 (49%)	2 (1%)	53 (35%)	18 (12%)	152 (100%)
The bank explains to customers their full package of e-banking activities	16 (11%)	32 (21%)	47 (31%)	46 (30%)	11 (7%)	152 (100%)
Banks not offering Internet banking will lose customers to other banks	41 (27%)	2 (1%)	20 (13%)	71 (47%)	18 (12%)	152 (100%)
e-banking training is provided to other officers and employees of the bank	35 (23%)	58 (38%)	23 (15%)	35 (23%)	1 (1%)	152 (100%)
The bank provides incentives for obtaining and retaining key IT personnel	1 (1%)	71 (47%)	7 (5%)	54 (36%)	19 (13%)	152 (100%)
the bank has a target market or trade area for the e-banking services	14 (9%)	35 (23%)	48 (32%)	42 (28%)	13 (9%)	152 (100%)
Our industry is pressuring us to adopt E-banking	38 (25%)	57 (38%)	21 (14%)	36 (24%)	0 (0%)	152 (100%)

Appendix E: Findings about usage of e-banking

	Strongly disagree	Disagree	Not sure	Agree	Strongly agree	Total
There is a clearly known way to do e-banking tasks I normally encounter	38 (25%)	0 (0%)	19 (13%)	76 (50%)	19 (13%)	152 (100%)
I can rely on established practices to do e-banking tasks I normally encounter	0 (0%)	0 (0%)	19 (13%)	76 (50%)	57 (38%)	152 (100%)
I can accomplish my banking tasks more quickly using e-banking	0 (0%)	76 (50%)	19 (13%)	57 (38%)	0 (0%)	152 (100%)
I can accomplish my banking tasks more easily using e-banking	19 (13%)	57 (38%)	19 (13%)	57 (38%)	0 (0%)	152 (100%)
E-banking enhances my effectiveness in utilizing banking services	38 (25%)	57 (38%)	19 (13%)	38 (25%)	0 (0%)	152 (100%)
E-banking enhances my efficiency in utilizing banking services	0 (0%)	76 (50%)	0 (0%)	57 (38%)	19 (13%)	152 (100%)
E-banking enables me to customize the presentation of information on a bank's Web site according to my personal needs	12 (8%)	34 (22%)	48 (32%)	46 (30%)	12 (8%)	152 (100%)
E-banking enables me to customize the content of information on a bank's Web site according to my personal needs	0 (0%)	95 (63%)	0 (0%)	57 (38%)	0 (0%)	152 (100%)
E-banking enables a bank to personalize service/product offerings to me after learning my banking behaviors and preferences	38 (25%)	0 (0%)	0 (0%)	95 (63%)	19 (13%)	152 (100%)
E-banking has improved my job performance	0 (0%)	57 (38%)	38 (25%)	38 (25%)	19 (13%)	152 (100%)
Using E-banking in my job would increase my productivity	38 (25%)	0 (0%)	19 (13%)	76 (50%)	19 (13%)	152 (100%)
E-banking enhances my effectiveness on the job	0 (0%)	0 (0%)	19 (13%)	76 (50%)	57 (38%)	152 (100%)
E-banking makes it easier to do my job	0 (0%)	76 (50%)	19 (13%)	57 (38%)	0 (0%)	152 (100%)
e-banking reduces customer's loyalty	19 (13%)	57 (38%)	19 (13%)	57 (38%)	0 (0%)	152 (100%)
e-banking reduces customer-banker relationship	38 (25%)	57 (38%)	19 (13%)	38 (25%)	0 (0%)	152 (100%)
e-banking reduces customer's trust in the bank	0 (0%)	76 (50%)	0 (0%)	57 (38%)	19 (13%)	152 (100%)
I intend to continue using this bank's e-banking services	12 (8%)	34 (22%)	48 (32%)	46 (30%)	12 (8%)	152 (100%)
Access to accounts 24 x 7 is important to the customers	0 (0%)	95 (63%)	0 (0%)	57 (38%)	0 (0%)	152 (100%)
Learning to use e-banking is easy for me	38 (25%)	0 (0%)	0 (0%)	95 (63%)	19 (13%)	152 (100%)
I find it easy to use E-banking to accomplish my banking tasks	0 (0%)	57 (38%)	38 (25%)	38 (25%)	19 (13%)	152 (100%)
Overall, I believe E-banking is easy to use	38 (25%)	0 (0%)	19 (13%)	76 (50%)	19 (13%)	152 (100%)
Using e-banking, the bank can provide one-stop services to me	0 (0%)	0 (0%)	19 (13%)	76 (50%)	57 (38%)	152 (100%)
Using e-banking, the bank can provide expanded services to me	0 (0%)	76 (50%)	19 (13%)	57 (38%)	0 (0%)	152 (100%)

Appendix F: Findings about political support

	Strongly disagree	Disagree	Not sure	Agree	Strongly agree	Total
Political factors are important in our decision to adopt E-banking	0 (0%)	95 (63%)	0 (0%)	57 (38%)	0 (0%)	152 (100%)
Our bank was pressured by the government to adopt E-banking	38 (25%)	0 (0%)	0 (0%)	95 (63%)	19 (13%)	152 (100%)
Government provides support for e-banking in banks	0 (0%)	57 (38%)	38 (25%)	38 (25%)	19 (13%)	152 (100%)

Appendix G: Findings about organizational factors

	Strongly disagree	Disagree	Not sure	Agree	Strongly agree	Total
In my opinion, it is desirable to use Internet banking	4 (3%)	73 (48%)	0 (0%)	54 (36%)	21 (14%)	152 (100%)
I think it is good for me to use Internet banking	38 (25%)	54 (36%)	21 (14%)	37 (24%)	2 (1%)	152 (100%)
Overall, my attitude toward e-banking is favorable	6 (4%)	74 (49%)	2 (1%)	53 (35%)	17 (11%)	152 (100%)
Security measures are in place to prevent the web site information from being altered	16 (11%)	33 (22%)	45 (30%)	45 (30%)	13 (9%)	152 (100%)
Security precautions on the part of the service provider for the bank	5 (3%)	57 (38%)	35 (23%)	37 (24%)	18 (12%)	152 (100%)
The bank has an intrusion detection system in place	40 (26%)	54 (36%)	19 (13%)	36 (24%)	3 (2%)	152 (100%)
Prevention of hackers from accessing the system	3 (2%)	74 (49%)	3 (2%)	54 (36%)	18 (12%)	152 (100%)
Prevention of line tapping	13 (9%)	33 (22%)	46 (30%)	45 (30%)	15 (10%)	152 (100%)
Discovered intrusion attacks	20 (13%)	55 (36%)	20 (13%)	55 (36%)	2 (1%)	152 (100%)
Bank management keeps up-to-date on addressing newly disclosed security threats to the computer operating system and application software	36 (24%)	56 (37%)	23 (15%)	36 (24%)	1 (1%)	152 (100%)
There is liability for data and confidential treatment of information	36 (24%)	58 (38%)	21 (14%)	36 (24%)	1 (1%)	152 (100%)
The bank offers reasonable assurances for continuation of service through back up arrangements in the event of a problem situation	3 (2%)	71 (47%)	3 (2%)	56 (37%)	19 (13%)	152 (100%)
There are procedures to notify the bank of any unauthorized alteration and malicious attacks	20 (13%)	33 (22%)	43 (28%)	43 (28%)	13 (9%)	152 (100%)
There is regular back up of web site information	39 (26%)	3 (2%)	3 (2%)	89 (59%)	18 (12%)	152 (100%)
There are procedures in place for operating system updates	5 (3%)	54 (36%)	38 (25%)	36 (24%)	19 (13%)	152 (100%)
I can use E-banking at any time of a day	38 (25%)	56 (37%)	22 (14%)	35 (23%)	1 (1%)	152 (100%)
I can use E-banking at anywhere in the world	5 (3%)	72 (47%)	2 (1%)	54 (36%)	19 (13%)	152 (100%)
E-banking provide adequate personal security for customers	13 (9%)	36 (24%)	46 (30%)	46 (30%)	11 (7%)	152 (100%)
Employees have access to customer passwords	21 (14%)	53 (35%)	19 (13%)	57 (38%)	2 (1%)	152 (100%)

Appendix H: Findings about attitudinal factors

	Strongly disagree	Disagree	Not sure	Agree	Strongly agree	Total
Using the electronic banking system has been useful to me	38 (25%)	57 (38%)	19 (13%)	38 (25%)	0 (0%)	152 (100%)
Using the electronic banking system has been easy to me	0 (0%)	76 (50%)	0 (0%)	57 (38%)	19 (13%)	152 (100%)
I do not see any risk in using the electronic banking system	12 (8%)	34 (22%)	48 (32%)	46 (30%)	12 (8%)	152 (100%)