

# Consumer Perceived Risk of Internet Banking in Kenya: A Survey of Three Selected Banks in Nairobi County

Orucho Daniel Okari

Kisii University P.O.Box 408-40200, Kisii-Kenya

**Abstract:** *The purpose of this study was to examine consumer perceived risk of internet banking and adoption in Kenya with reference to three selected banks and suggest possible solutions to enhance customer satisfaction. Objectives of this study were to; examine factors that influence adoption of internet banking in the three selected commercial financial institutions, determine the extent of use of internet banking services by customers in the three selected banks, find out challenges facing use of internet banking by customers in the selected banks and find out solutions to the challenges that hinder consumers in the use of internet banking services in the selected banks. This was a quantitative and descriptive survey of the three selected banking institutions. Data was collected using questionnaires that were distributed using lead people in the respective banks. The questionnaires were structured with both open ended and closed ended type of questions. Data was analyzed using Microsoft excel and presented using charts and tables. A total number of 150 respondents were used for this study. The study established that young adults are mostly involved in the use of internet banking services. The study established the extent of use of internet banking by customers with the majority using internet banking services for inquiries, withdrawals and deposits. The study found out challenges hindering use of internet banking services by customers as slow network connection, network failure, poorly designed websites and unavailability of services during website maintenance. In order to promote use of internet banking services, there is need for banking organizations to launch awareness campaigns to customers by alleviating fear to issues such as lack of privacy and security of customer's information through advertisements as well as promotions could be held at bank branches to offer prizes to customers who sign and use internet banking services. The rapid development of internet banking has created a competitive environment for financial institutions offering internet banking. Internet banking enables customers to perform financial transactions via the internet at any time and from anywhere and thus saving time. Banks also benefit from reduced operational cost by adopting internet banking.*

**Keywords:** Internet banking

## 1. Internet Banking

Process of using banks website that is connected to the internet to conduct financial transactions and activities such as opening an account, transfer of funds, paying bills and checking for statements.

## 2. Introduction

Internet connectivity has traversed every aspect of our society and has propagated tremendous improvements in efficiency and customer service (Sullivan & Wang, 2014). Public as well as private sectors have now turned to the use of information technology and internet as one of the means to service delivery (Pourkiaei & Ardestani, 2014). Banking organizations are shifting from traditional ways of service delivery where a bank customer needs to personally visit a banking hall to access services, to new innovative platforms such as the use of internet banking. Sullivan and Wang (2014) refer internet banking as a bank that provides a website which allows customers to execute transactions on their accounts. This implies that internet banking is the use of internet as a delivery channel to communicate instructions to and receive information from a financial institution where an account is held in order to carry out banking services such as opening account, transfer of money, balance inquiry, printing of statements and paying of bills via a banks website.

Due to the rapid growth of banking organizations, banks are searching for new solutions that will help them offer better services to existing customers as well as attract new markets. Internet technology is being utilized as a marketing tool to enhance service delivery. This implies that banks can now offer many opportunities to both customers as well as banking institutions. Internet banking offer convenience to bank customers, allowing them to use services from banks in distance and avoid hassles to go to the bank branches as well as it generates substantial cost savings to banks (Sullivan & Wang, 2014). Financial institutions in Kenya cannot ignore technological information systems since they play an important role in their operations. This is so because customers are aware of technological advancements and thus demand higher quality services. About late 2007, some Kenyan banks started implementing Internet banking as a new online service channel. As elsewhere, these banks expect that Internet banking can offer customers a variety of online services with more convenient access to information and transactions.

## 3. Statement of the Problem

The 21<sup>st</sup> century has witnessed the use of information technology increase rapidly in various countries around the globe. Advanced telecommunication and computer technology has enabled the internet to become the leading medium and innovative distribution channel for businesses (Mitchell et al., 2011). Internet banking enables customers to perform financial transactions via the internet through the website of a bank at any time, from anywhere where internet

connectivity is available (Hu & Liao, 2011). Banks also benefit from reduced operational cost by adopting internet banking. As a result, financial institutions have invested large amounts of money to improve internet banking services. Banks have sought to remain up to date by resorting to provide internet banking in order to satisfy customer's needs and desires by moving financial services from a face-to-face to a self-service driven technology (Wessels&Drennan, 2010).

Surprisingly there are many customers who have refused to use internet banking services (Koenig-Lewis et al., 2010). Security of information on the internet is the primary factor, which determines the adoption of internet banking technology (Pourkiaei&Ardestani, 2014). Several studies have examined the factors that hinder customers from utilizing internet banking as a relevant financial delivery channel in many developed countries around the world (Alsajjan& Dennis, 2010). For example in India, Pourkiaei and Ardestani (2014) conducted a research on internet banking with a view to study the satisfaction level of customers. The research report indicates that customers were not using all the services provided by banks because of different reasons such as lack of know-how regarding the method of using services, doubt about the safety and security related issues which brings fear regarding transmission of private data (Pourkiaei&Ardestani, 2014). Commercial banks in Kenya are trying to introduce internet banking systems to improve their operations and to reduce costs. Internet banking adoption in Kenya is very low despite high levels of internet access (Njuguna et al., 2012). In Kenya, little research has been conducted on the adoption and usage of internet banking and thus adoption and usage trends are unclear (Njuguna et al., 2012). Adoption of Internet banking services in developing countries is slower than anticipated (Ajam&Nor 2013). This study is anchored on the basis of slow adoption and use of internet banking by bank customers despite high levels of internet access (Internet Freedom East Africa, 2014).

### **Objectives of the Study**

Specific objectives of the study were to:

- a) Examine factors that influence adoption of internet banking in the three selected banks
- b) Determine the extent of use of internet banking services by customers in the three selected banks
- c) Find out challenges facing use of internet banking by customers in the three selected banks
- d) Find out solutions to the challenges that hinder adoption of internet banking services by customers in the three selected banks

## **4. Literature Review**

### **Adoption of Internet Banking in the Global Banking Environment**

Internet banking has experienced sporadic growth in many countries and transformed traditional banking practices. Internet banking (2015) reveals that internet banking was gaining considerable adoption in developed countries than in developing countries. Banks have considered the adoption of internet banking as a platform for improving customer experience, achieving competitive advantage and reducing

operational costs. Today, all banks in USA and most of the banks in Europe and around the world offer Internet banking (Al-Khatib, 2012). They have continually endeavoured to improve customer experience in the banking services offered through online and offline channels. In order to provide enhanced banking experience for both retail and corporate customers, banks have committed to upgrade their core banking platforms (Banking Industry, 2013). A research from CAC Bank (2010) reveals that Yemen banks have committed huge amount of money to upgrade their internet technology services. Since the introduction of internet banking in Yemen in 2002, only four banks provide internet banking services (Budde, 2011). The slow pace at which Yemen banks are taking to adopt internet banking suggests that internet banking service is still very low in Yemen (Zolait, 2011).

Indonesia and South Korea has the highest internet penetration (The International Monetary Fund, 2011). In his research, Nguyen (2011) reveals that South Korea has many online banking users than Indonesia even though Indonesia has the highest growth rate of online banking users in Southeast Asia. In Bahrain there is competitive pressure from foreign banks, which has forced local banks to reconsider the way they conduct their business. Being one of the highest levels of internet users amongst the Gulf Cooperation Council (GCC), Bahrain locals are reluctant to adopt themselves to internet banking services (Economic Development Board, 2011). In order to retain existing customers, banks will be required to evaluate carefully issues that affect customers because it will be costly to attract new customers. Internet banking is one avenue that banks can use to retain customers and attract high profits (Economic Development Board, 2011). It is thus becoming increasingly important for marketers to understand new trends in technology which can attract new as well as retain existing customers.

Organizations such as banking sector have always been in the forefront to using information technology in order to add value to its products, services and efficiency. Use of advanced technology has led to the shift from traditional banking to modern banking methods such as electronic banking (e-Banking) which started in 1990's (Kumar, 2014) and electronic commerce (e-Commerce). E-Banking started with the introduction of computers and automatic teller machines (ATMs). ATMs were introduced by Luther Simjian in 1939 and introduced in New York in 1960. However these machines were not commercially successful as according to Luther, only prostitutes and gamblers used them to avoid face-to-face dealings with bank tellers.

Currently, the most common and useful technology based banking methods are online or internet banking, mobile banking, video banking, telephone banking, ATM, and plastic money (Vijayaragavan, 2014). Internet has become one of the indispensable technology tools being used by various business organizations in the twenty-first century (Maruf et al., 2014). Significantly internet banking enables customers to conduct financial banking transactions on a secure website which can be operated by a retail, virtual bank, credit union or building society. It makes banking faster and easy. Video banking is used for conducting

banking transactions or consultations through a remote video connection. This technology was called videotext technology and provided voice response and handprint processing. It can be performed over purpose built banking transaction machines similar to Automated Teller Machines (ATM) or through bank branches enabled with video conferencing (Aldrich, 1982). Telephone banking is a bank service provided by financial institutions allowing its customers to conduct banking transactions over the telephone. Institutions which provide banking services exclusively over telephone are called Phone Banks. They use special technology to modernize the customer by providing bank and account related information over a telephone. Automatic teller machine ATMs are electronic machines, which are operated by a customer himself to deposit or to withdraw cash from bank. For using an ATM, a customer has to obtain an ATM card from his bank. The ATM card is a plastic card, which is magnetically coded. It can be easily read by the machine. Plastic money is a must need of our busy life. Today plastic money is the best alternative of the cash. It is also safer to travelling with a plastic money card than cash. Today it is very easy to carry money without having a lot of cash or gold. This is a new idea of present life-style which has made money transition so easy that anybody can carry it with him or her in a pocket (Vijayaragavan, 2014).

#### **Adoption of Internet Banking in Developing Countries**

According to Ajam and Nor (2013), Internet banking in developing countries has been slower than anticipated and that it has not been used as much as they could or should have been. In Malaysia, the rapid technological advancement and increasing consumer demands for more efficient delivery of services has provoked banks to continually make transitions towards internet banking platforms (Central Bank of Malaysia, 2011). With high number of internet subscribers, internet banking adoption rate is still low in Malaysia (Mozie et al., 2012).

There are many advantages of using internet banking as a delivery channel. Despite the benefits that come with this form of technology, many banks and consumers in some least developed and developing countries are yet to adopt and implement internet banking services (Fonchamnyo, 2013). Nigeria is one of the developing countries in Africa which has fully recognized the benefits of information technology. But reasons such as low-level trust in the security measures of internet banking is attributed to the reluctance and low adoption of internet banking in Nigeria (Adesina & Ayo, 2010). Trust is therefore a main contributing factor in electronic commerce growth (Eastlick & Lotz, 2011). In India, financial products and services have become available over the internet which has consequently become an important distribution channel for a number of banks. A study on internet users conducted by internet and mobile association of India (IAMAI, 2014) revealed that 23% of online users prefer internet banking channel compared to 53% who prefer Automatic Teller Machines (ATMs) in India. This indicates that a significant number of online users do not use internet banking. There is increasing development in the financial sector for the last 35 years in order to remain in the state of the art of information technology. Internet has traversed all sectors of our economy

to especially banks and has enhanced internet banking with tremendous success in terms of service delivery channels. Despite the fact that the internet has an ever-growing importance in the banking sector, not all financial institutions (banks) that have adopted internet banking have been successful. Musiime and Ramadhan (2011) pointed out that in Uganda, where the concept of internet banking was introduced in early 2006, adoption and implementation has either been slow in banks or among customers. In developing countries, internet banking is still in its early stages. Musiime and Ramadhan (2011) highlights that in Zimbabwe, commercial banks introduced internet banking in the past seven years. Since then, the adoption of the technology among individual customers is still very slow in these commercial banks.

#### **Impact of Internet Banking**

Customers are expected to enjoy several benefits as a result of the implementation of Internet banking. According to Intana and Chansa-ngavej (2014), bank customers, can do almost all their personal banking transactions online 24 hours a day from anywhere. All of those activities offered to customer due to timesaving and convenience is the main influence served on Internet banking. Internet banking would be beneficial in reducing transaction costs (Intana & Chansa-ngavej 2014, pp. 126). New technology helps in time saving and enables financial service providers to launch new products and services with efficiency that make it fast and convenient for customers to conduct various banking transactions (Intana & Chansa-ngavej 2014, pp. 126). Financial institutions will greatly benefit by adopting techniques that will attract more customers to adopt internet banking. Consumers will enjoy the privilege of access to far more providers of financial services (Birch & Young, 1997). As a result of a wider choice of internet bank service providers, the costs searching, negotiating and concluding deals will be lower as the comparison of products and services would be made easier over the internet (Bakos, 1991; Malone et al., 1989, Peters, 1998). Information on pricing and returns is far easier to gather (Birch & Young, 1997). Customers will also save traveling costs to bank branches and also avoid the heavy traffic jams and long queues (Chan, 2001). Customers will enjoy the benefits of conducting their banking transactions at ease because they would not be subjected to high-pressure sales tactics (Birch & Young, 1997).

Besides opportunities of internet banking, banks and financial institutions across the world face new challenges to the ways they operate, deliver services and compete with each other in the financial sector. Driven by these challenges, banks and financial institutions have implemented services delivery using internet banking (Chan & Lu, 2004). The objectives of launching internet banking include cost reduction, performance improvement, wider coverage, revenue growth, and customer convenience (Bradley & Stewart, 2002; Chau & Lai, 2003). From the customer's perspective, internet banking facilitates a convenient and effective approach to manage personal finances, as it is accessible 24 hours a day and 365 days in a year without visiting the bank and from any locations (Rotchanakitumunai & Speece, 2003).



With the continuous growth of competition in the marketplace, understanding customers has become more and more an important issue of marketing. According to the Chartered Institute of Marketing, marketing is defined as the process of management to identify, anticipate and satisfy customer requirements profitably. It shows that today's companies have moved their focuses from products and sales to customer oriented marketing (Lin, 2003). According to Hanson (2000), customer service is an organization's ability to supply their customers' wants and needs. He further explains improving customer service involves both learning what customers' needs and wants are, and developing action plans and process to give customers what they really want and need. Nowadays, customer service has been emerging as a competitive weapon for business firms to obtain competitive advantage. In addition, customer service has gained specific importance for the survival of companies. With this increased importance of customer service, it is obviously that service quality became an increased concern (Eppinette & Inman, 1997). However, due to services' four distinctive characters namely: intangibility, inseparability, heterogeneity and perish ability, service quality becomes difficult to measure and evaluate. Therefore, customers' perceptions of service quality draw major concern by both business managers and researchers (Hoffman & Bateson, 2002).

The incredible growth of the internet is changing the way corporations conduct business. The advantages of the Internet, offer a wide range of opportunities for companies to find new ways of conducting their business in order to cope with increased competition more efficiently and effectively. As a result, business practices through the internet are increasingly becoming the subject of studies evaluating the impact of internet on economic growth and business performance (Venkatraman, 2000). Most online service providers, however, have encountered substantial problems and challenges in conducting online service quality. The primary reasons for these difficulties are due to service providers' lack of experience in operations of this recent challenge and their limited understanding of online customers' usage behaviors (Mols, 2000). As a critical measure of organizational performance, service quality remains at the forefront of both the marketing literature generally and the services marketing literature specifically (Johnston, 1997). Practitioners and academics alike are keen on accurately measuring service quality in order to better understand its essential antecedents and consequences, and, ultimately, establish methods for improving quality to achieve competitive advantage and build customer satisfaction (Palmer, 1995). Since customer expectation and perception of internet service will change over time, quality will become an increasingly important issue. Therefore, understanding service quality within the delivery channel of internet becomes more and more important (Mols, 2000). The banking industry is no exception. The introduction and customer acceptance of internet-based home banking may bring a dramatic change in the way retail banks build and maintain close relationship with their customers (Jun and Cai, 2001).

Although there is a significant growth of internet users in Kenya, the number of financial transactions carried out over the internet remains very low. This trend however is the

same globally and it has been observed that potential users either do not adopt internet banking or do not use it continually after adoption. Mearian (2001) indicated that huge number of customers in USA is accessing most of the banks' websites but only a minority of customers has made online financial transactions. Gartner expressed that out of 61% online users, only 20% of consumers carries out online banking in the USA (Brown, 2001). Several studies have reported not only low adoption rate but also disparity in adoption rates among European countries. ACNielsen (2002b) found that use of internet banking is increasing in Asian countries but it is still lower than the estimations. Due to these slow adoption rates, the transformation of banking services from the traditionally known physical branches commonly referred to 'bricks and mortar' to the modern way through information and communication technology systems better known as 'clicks and mortar' is yet to be realized to the extent it was predicted (Bradley & Stewart, 2002). Customers in some countries have ranked internet banking as less important than other channels such as ATM or telephone banking (Aladwani, 2001; Rotchanakitumunai & Speece, 2003; Suganthi & Balachandran, 2001).

An understanding of the extent of the customers' adoption or utilization of internet banking services has become critical. According to Courtier and Gilpatrick (1999), banks and financial companies must survey customers' requirements on a regular basis in order to understand factors that can affect their adoption or usage of internet banking. Since the onset of internet banking in Kenya in early 2000, the number of online customers is still very low. However, there has been a notable increase as banks continue to intensify marketing and the infrastructures continues to mature (Gikandi & Bloor, 2010).

#### **Challenges facing adoption and use of internet banking services**

Internet banking is now facing great technological revolution to incorporate technologies such as mobile banking (Gikandi & Bloor, 2010). Privacy and security are perceived to be the most important issues that inhibit customers from using internet banking in Kenya (Gikandi & Bloor, 2010). It is worth noting that internet banking has been accepted in specific line of services (Internet Banking, 2015). In developing countries such as Nigeria, benefits of internet banking have been recognized. However reasons such as low-level trust in the security measures of internet banking are attributed to the reluctance and low adoption of internet banking (Adesina & Ayo, 2010). The main contributing factor in electronic commerce growth therefore is trust (Eastlick & Lotz, 2011). In Africa and UAE, there are a number of constraints related to social and infrastructure that must be taken into account when evaluating the development of online banking in Kenya (Ndubisi et al., 2004). Many Kenyan banks have the capacity to offer online banking services. However, the telecommunications infrastructure remains deficient. Second, internet penetration in rural areas is still relatively low, which may not encourage the investment required to develop online banking (Gikandi & Bloor, 2010).

## 5. Research Methodology

### Research Design

Quantitative research design and descriptive research design was used in this study. This is because the study used questionnaires to collect data from the respondents. Quantitative research design is an approach for testing objective theories by examining the relationship among variables (Creswell, 2014). These variables, in turn, can be measured typically on instruments, so that numbered data can be analyzed using statistical procedures. The study employed descriptive survey research design study because it provided numeric descriptions of the population and described events as they were (Oso & Onen, 2009).

### Sampling and Sampling Techniques

Sampling is choosing which subjects to measure in a research project (Garson, 2012). According to Orodho and Kombo (2012), a sampling technique is defined as the procedure that a researcher uses to gather things, places or people to study. Purposive sampling was used in this study through a survey of Chase bank, I&M bank and Kenya commercial bank. This is because the three selected financial institutions are leading banks in Kenya and provide internet banking services. Purposive sampling is selecting a sample on the basis of a researcher's knowledge of the population, its elements, and the nature of the researcher's aims (Babbie, 1990). In purposive sampling, individual characteristics are selected to answer necessary questions about a certain matter or product (MacNealy, 1999). The researcher is then able to select participants based on internal knowledge of said characteristic. According to Babbie (1990), this method is useful if a researcher wants to study a small subset of a larger population in which many members of the subset are easily identified but the enumeration of all is nearly impossible.

### Sample Size

A sample is a subset of a population (Lohr, 2010). A sample should be of the required size in order to have the required degree of accuracy in the results as well as to be able to identify any significant difference or association that may be present in the study population (Israel, 2009). In total 150 respondents were randomly selected from the three banks for purposes of data collection through the use of lead people. This is because quantitative and descriptive study needs hundreds of subjects to give acceptable confidence intervals (Hopkins, 2002).

**Table 3.1:** Sample Size (Researcher, 2016)

Bank	Sample Size
Chase bank	50
I&M bank	50
Kenya Commercial bank	50
TOTAL	150
%	100

### Data Collection Methods

Questionnaires were used to collect data in this study. Primary data was obtained from the questionnaires. Nordin (2009) recommends use of questionnaires because of time saving and confidentiality. The study used both closed-ended and open-ended type of questions. Questionnaires were also

used because the study was quantitative whose main purpose was to get detailed information from the respondents.

### Research Instruments

According to Creswell (2011) research instruments are the means by which primary data are collected. Research measurements are tools designed to obtain data on a topic of interest from research subjects. The researcher used questionnaires to conduct the study. The questionnaires contained both open-ended and closed-ended type of questions. The questionnaire was validated by avoiding inconsistencies that may occur through wording mistakes, and ambiguities. The questionnaire was pre-tested by two native English speakers. Sekaran and Bougie (2010) highlights that a pre-test is essential because wording problems significantly influence accuracy and that if there are errors in the questionnaire they are corrected before the actual study is carried out.

### Pilot Study

Pilot test was conducted to test validity and reliability of research instruments using Standard chartered Bank and Bank of Africa which were randomly selected. In the pilot study the respondents answered the questionnaire quite well and where there were issues, the questionnaire was corrected. The pilot study helped to redefine the questionnaire for data collection purposes.

### Validity

Validity is the accuracy and meaningfulness of inferences, which are based on the research. It is the degree to which results obtained from the analysis of the data actually represent the phenomenon under study (Bryman, 2008). In order to ascertain content and face validity, the questionnaires were presented to experts for test and measurement who matched all the items of the questionnaire with the research questions to ascertain whether the instrument actually measured what was captured on the research questions. The advice from the experts was used to construct the questionnaires to ensure that all research questions were covered.

### Reliability

Reliability describes the repeatability and consistency of a test (Venkatesh et al., 2013). To ensure reliability of the instruments the researcher conducted a pilot study in Standard Chartered bank and Bank of Africa in Nairobi city before the actual study. The main purpose of the pilot study was to check suitability and the clarity of the questions on the questionnaires, relevance of the information that was being sought, the language used and the content validity from the responses that were given.

### Data Collection Procedures

The researcher personally visited the sampled banks and made prior arrangements with the bank managers on an appropriate day and time for the distribution of questionnaires to the relationship officers. The researcher then identified five relationship officers in each of the selected banks and requested them to distribute questionnaires to their clients on his behalf. Each relationship officer was given ten questionnaires to distribute to respondents. Respondents were requested to fill

in the questionnaires. The researcher kept contact with the relationship officers and once the questionnaires were returned, the researcher picked them for data analysis.

### Data Analysis

According to Kombo and Tromp (2011), data analysis procedure includes the process of packaging the collected information, putting in order and structuring its main components in a way that the findings can be easily and effectively communicated.

Questions from the questionnaires were analyzed using Microsoft Excel 2007 and presented the findings in tables and figures. Finally data was analyzed using research objectives and research questions of the study and highlighting various thematic areas.

### Ethical Considerations

Ethical concern in the academic community is an extensive, complicated, and controversial topic that warrants deep and thoughtful discussion (Wet, 2010). To ensure that the researcher adheres to ethical considerations, the researcher undertook various measures to prevent any harm to the respondents by ensuring that the research did not have a negative effect on the respondents. Therefore the researcher asked only professional questions. The researcher used the supplied information for only study purposes. The researcher never named any respondents during the research and the subsequent report. The respondents were requested to fill the questionnaires and were not threatened or coerced to fill them. The researcher sought permission for research study from the bank management before conducting the research initiative. The researcher cited all reference that was used. Finally the researcher will avail the information at request incase a copy is needed.

## 6. Findings and Recommendations

### 6.1 Adoption and Use of Internet Banking

From this study, the factors that influence adoption and use of internet banking services are discussed in this section. Findings on education level indicate that most respondents were qualified with a diploma or degree which represented 36% and 39% respectively. Secondly, findings on gender indicated that both male and female use internet banking with majority being male with 56% and female 44%. Findings on age indicated that age is an influential factor in the use of internet banking with early to mid-aged customers being the majority who used internet banking services. A possible conclusion may be that most internet banking users are educated young to mid-aged people who find it easy to carry out banking transactions over the internet than going to the banking halls.

The findings on the usefulness of internet banking indicate that generally majority of the respondents found internet banking to be useful. Findings on ease of use of internet banking indicate that use of internet banking services is easy to use. On the attitudes towards the use of internet banking, a possible conclusion arrived is that using internet banking is a good idea. Findings on intention to use internet banking indicate that existing bank customers who use internet

banking strongly agree that they would continue using internet banking for their banking needs and for handling their banking transactions. Bank customers who did not use internet banking also expressed an interest that they would love to use internet banking in the future. A possible conclusion is that existing internet banking users as well as those who do not use internet banking services intends to use internet banking services. The findings on information security indicate majority disagrees that sending sensitive information across internet banking is secure. Thus a possible conclusion is that sending personal sensitive information over internet banking is insecure.

### 6.2 Challenges facing the use of Internet Banking

Challenges encountered when using internet banking include: slow network connection, network failure, poorly designed websites, no service during website maintenance, and forgotten password. Findings in table 4.7 below indicated that 43 of the respondents cited that slow network connection was a major problem. Other problems mentioned were; unavailability of services during website maintenance with a response mode of 13 representing 17.5%, network failure recorded a mode of 11 representing 15% and another 7 respondent's representing 10% cited poorly designed websites. Thus a possible conclusion is that the greatest problem for internet banking users is slow network connection followed by unavailability of services over internet banking during website maintenance.

**Table 4.7: Challenges of Using Internet Banking**  
(Researcher, 2016)

Challenges	Responses	%
Slow network connection	43	57.5
Network failure	11	15
Poorly designed websites	7	10
Unavailability of services during website maintenance	13	17.5
TOTAL	74	100

### Possible Solutions to the Challenges that hinder Internet Banking

Slow network connection can frustrate consumers while using internet banking. Internet service providers should adopt and use up-to-date internet infrastructure mechanisms to ensure that internet connection and network failure is reduced significantly. This can be achieved through the adoption of current optic fiber network technology. Banks should ensure that they develop quality websites. A website should always be as simple as possible to allow fast and easy interaction with the customers. Banks should offer alternative solutions to internet banking users during website maintenance.

### 6.3 Recommendations

Complexity of internet banking is a key factor that influences the adoption of internet banking. Easy to use internet banking is important for all customers. Banks should aim to make their internet banking as simple and easy to use as possible so that customers do not perceive it as being complicated or difficult to use. It provides insights for developers to design an internet banking system interface,



websites, processes, and programs and for banks to formulate strategies in offering services. Websites should be user-friendly with clear instructions for users. The use of illustrations is advised and will be embraced by all levels of users. Banks should install security features such as encryption devices, which safeguard sensitive information. Risk perceptions by potential adopters are negatively related to the adoption of internet banking. Therefore, banks providing internet banking should actively address these negative perceptions. To boost confidence and enhance the efficacy of using internet banking services, demonstrations via video presentations could be made at bank branches to showcase the user-friendliness of such services. In order to overcome consumers' negative perceptions about internet banking safety, banks should promote the positives of the service, such as convenience and cost-effectiveness, and should begin a marketing campaign that makes internet banking the new buzz word. These initiatives will help customers familiarize themselves with the bank and its internet banking services. New technology, like all things that are unfamiliar, requires initiation. This is an important criterion in helping Customers select bank that offers internet banking. There can be substantial marketing advantages for banks offering internet banking services.

Consumer fears of information security risks transacting over the internet is one of the major inhibitors to the successful implementation of internet banking. Banking institutions should ensure that their internet banking systems have an uncompromised level of security features built-in, by way of back office systems security, operational and procedural security, and transactional security. Such precautions are important in affirming consumer confidence in using the internet for internet banking activities.

### Wider Study

This study was conducted to assess consumer perceived risk of internet banking in Kenya. As such, there is still room for further investigation into the adoption and use of internet banking services. Following are some recommendations for future studies. Future studies should be carried out on non-internet users to investigate their intentions of using internet banking. In this way, a more comprehensive investigation of internet banking intentions and usage behavior can be conducted. The study on consumer perceived risk and adoption of internet banking services in Kenya can be extended to corporate customers. Comparison can then be made between individual customers and corporate customers in terms of their adoption decisions, the criteria for selecting an internet banking service, and the types of products and services perceived to be useful.

### References

- [1] Adesina A. A & Ayo C.K. (2010). *An Empirical Investigation of the Level of Users' Acceptance of E-banking in Nigeria*, Journal of Internet Banking and Commerce, 15(1)
- [2] AcNielsen. (2002b). *ACNielsen Consult Online Banking Research*. Retrieved 11/9/2015, from [www.consult.com.au](http://www.consult.com.au)
- [3] Ajam, A., and Nor K.M., (2013). *Adoption of Internet banking by Yemeni consumers: An empirical investigation*, Australian Journal of Basic and Applied Sciences, 7(2): pp. 182-189.
- [4] Aker, J. C. and Mbiti, I. M. (2010). *Mobile Phones and Economic Development in Africa*, Center for Global Development Working PaperNo. 211. Retrieved on 05/9/2015 from: <http://dx.doi.org/10.2139/ssrn.1693963>
- [5] Akinci, S., Aksoy, S., & Atilgan, E. (2004). *Adoption of Internet banking among sophisticated consumer segments in an advanced developing country*. International Journal of Bank Marketing, 22 (3): pp. 212-32.
- [6] Aladwani, A. (2001). *Online banking: a field study of drivers, development challenges and expectations*. International Journal of Information Management, 21(3), 213-225
- [7] Al-Ashban, A. & Burney, A. (2001). *Customer adoption of tele-banking technology: The case of Saudi Arabia*. International Journal of Bank Marketing, 19 (5): 191 – 201
- [8] Al-Khatib, A. M. (2012). *E-Banking Survey*. International Journal of Advanced Research in Computer Science and Software Engineering. 2(10): pp. 12-19. [www.ijarcsse.com](http://www.ijarcsse.com)
- [9] Al Qeisil, K.I., & Al-Abdallah1, G.M. (2014). *"Website Design and Usage Behaviour: An Application of the UTAUT Model for Internet Banking in UK"* International Journal of Marketing Studies; 6(1)
- [10] Alsajjan, B. & Dennis, C (2010). *Internet banking acceptance model: cross-market examination*. Journal of Business Research, 6: pp. 957-963.
- [11] Al-Somali, S. Gholami, R. & Clegg, B. (2009). *An investigation into the acceptance Of online banking in Saudi Arabia*. Technovation, 29: pp. 130–141
- [12] AlSudairi, M. (2013). *The effects of self-service web portals on online banking service quality: A theoretical model*. International Journal of Business and Management, 8 (18): pp. 121-139
- [13] Amani, M. T., Ahmadinejad & Azizi, M. J. (2011). *Adoption of internet banking by Iranian customer: an empirical investigation*. International Journal of Management Science and Information Technology. 1(1): pp. 47-64
- [14] Anyasi, F. I. and Otubu, P. A. (2009). *Mobile Phone Technology in Banking System: It's Economic Effect*, Research Journal of Information Technology, 1 (1): pp. 1-5.
- [15] Ariff, M., Min, Y., Zakuan, N., Ishak, N., & Ismail, K. (2013). *The Impact of Computer Self Efficacy and Technology Acceptance Model on Behavioural Intention in Internet Banking System*. Society of Interdisciplinary Business Research, 2 (2): p. 587-601
- [16] Auta, E. M. (2010). *E-banking in developing economy: Empirical evidence from Nigeria*. Journal of applied quantitative methods, 5(2): pp. 212-222.
- [17] Automated Teller Machines. (2010). *Arts and Entertainment Networks*, <http://www.history.com/topics/inventions/automated-teller-machines>.

- [18] Ayo, C. K., Adewoye, J. O. & Oni, A.A. (2010). The State of E-banking Implementation in Nigeria: A Post- Consolidation Review, Journal of Emerging Trends in Economics and Management Sciences, 1(1): pp. 37-45.
- [19] Babbie, Earl. (1990). *Survey Research Methods*. 2<sup>nd</sup> Ed. Belmont, California: Wadsworth Publishing Company
- [20] Bakos, J.Y. (1991). *A Strategic Analysis of Electronic Marketplaces*, MIS Quarterly, (September): pp. 295-310.
- [21] Bandura, A. (1977). *Self-efficacy: Toward a unifying theory of behavioral change*. Psychological Review, 84 (2): pp. 191-215
- [22] Bank Supervision Annual Report 2013
- [23] Banking Survey 2014
- [24] Bellis, M. (1997). *Automatic teller machines – ATM: The ATM machine of luther simjian*, About.com Inventor, accessed on 19/7.2015 at 15.25 from <http://inventors.about.com/od/astartinventions/a/atm.htm>
- [25] Berndt, A., Saunders, S., &Petzer, D. (2010). *Readiness for banking technologies in Developing Countries*. Southern African Business Review 20(3).
- [26] Birch, D. & Young, M.A. (1997). *Financial Services and the Internet- What Does Cyberspace Mean for Financial Services Industry?* Internet Research: Electronic Networking Applications and Policy, 7(2): pp. 120-128.
- [27] Bryman, A. (2008). *Social Research Methods*. (3rded.) Oxford: Oxford University Press.
- [28] Calisir F., Gumussoy C. A., and Bayram, A. (2009), *Predicting the Behavioral Intention to Use Enterprise Resource Planning Systems: An exploratory extension of the technology acceptance model*, Management Research, 32(7): pp. 597-613.
- [29] Camp L. J. (1999). *Web Security and Privacy: An American Perspective*. The Information Society: An International Journal, 15(4): pp. 249-256.
- [30] CentralBank of Kenya (2014). *Monthly Economic Review February 2014*. Central Bank of Kenya, Nairobi
- [31] Central Bank of Kenya (2011), *Annual Reports*, Central Bank of Kenya, Nairobi
- [32] Central Bank of Kenya (2009), *Bank Supervision Annual Report*, Central Bank of Kenya, Nairobi
- [33] Central Bank of Kenya. (2008). *Bank Supervision Report*. Nairobi: Central Bank of Kenya, Nairobi
- [34] Central bank of Kenya Act 2010
- [35] Central Bank of Malaysia 2011
- [36] Chan, L.M. (2001). *Is Online Banking Safe*, the Star (February), 42.
- [37] Chan, S., Cheung, & Lu, t., Ming. (2004). *Understanding Internet Banking Adoption and Use behaviour: A Hong Kong perspective*. Journal of Global Information Management, 12(3), 12-43.
- [38] Changchit, C. (2008). *Data protection and privacyissue*. Journal of Information Privacy and security. 4(3): pp. i-iii
- [39] Chase bank (2013). *Information Memorandum*. From a Relationship to a Bond
- [40] Chau, K., Y, Patrick, & Lai, S., K, Vincent. (2003). *An empirical investigation of the Determinants of user acceptance of Internet Banking*. Journal of Organizational Computing and Electronic Commerce, 13(2): pp. 123-145.
- [41] Cheah, C. M., Teo, A. C., Sim, J. J., Oon, K. H. and Tan, B. I. (2011). *Factors Affecting Malaysian Mobile Banking Adoption: An Empirical Analysis*, International Journal of Network and Mobile Technologies, 2(3): pp. 149-160
- [42] Cheung, C. S. (2000). *“Understanding adoption and continual usage behaviour towards Internet Banking service in Hong Kong”*. Unpublished M. Com dissertation. Lingnan University.
- [43] Chou, C. (2003), Incidences and correlates of Internet anxiety among high School teachers in Taiwan, Computers in Human Behavior, 19, pp.731-49
- [44] Courtier, E., & Gilpatrick, K. (1999). *Home banking Missteps?* Credit Union Management, 22(3): PP.10-12.
- [45] Communication commission of Kenya (2012). *Quarterly Sector Statistics Report*. 2<sup>nd</sup> Quarter, October-December 2011/2012
- [46] Constitutions of Kenya 2010
- [47] Creswel, W.J. (2011). *Research design; qualitative, quantitative and mixed methods approaches* (3<sup>rd</sup> ed.). California: Sage Publication.
- [48] Creswell, J. (2014). *Research Design: Qualitative, quantitative and mixed methods approaches*. Thousand Oaks: Sage
- [49] Chung, W. & Paynter, J. (2002). An evaluation of Internet banking in New Zealand. in Proceedings of 35th Hawaii Conference in System Sciences (HICSS 2002), IEEE Society Press
- [50] Davis, F. (1989). *Perceived usefulness, Perceived ease of use, and user acceptance of Information technology*. MIS Quaterly, Vol.13, pp. 319-336
- [51] Davis, F., Bagozzi, R., and Warshaw, P. (1989). *User acceptance of computer technology: A comparison of two theoretical models*. Management Science 35(8): pp. 982-1003
- [52] Davis, F. (1993). *User acceptance of information technology: Systems characteristics, User perceptions and behavioral impacts*. International Journal of Man-Machine Studies, 38 (3): pp. 475-487.
- [53] Drexelius, K. & Herzig, M., (2001). “Mobile Banking and Mobile Brokerage – Successful Applications of Mobile Business?”, International management & Consulting, 16(2): pp. 20-23.
- [54] Diffily, S (2001). *Website Maintenance*. The website manager’s handbook
- [55] Dishaw, M & Strong, D. (1999). *Extending the technology acceptance model with task-technology fit variables*. Information and Management Vol. 36, pp. 9-21
- [56] Eastlick M. A. & Lotz S. (2011). *Cognitive and Institutional Predictors of Initial Trust toward an Online Retailer*. International Journal of Retail & Distribution Management. Vol. 39 pp. 234-25
- [57] Egland, K. L., Furst, K., Nolle, D., E. and Robertson, D. (1998). *“Banking over the Internet”*, Quarterly Journal of Office of Comptroller of the Currency, 17(4)



- [58] Engel, J., Blackwell, R., &Miniard, P. (1995). *Consumer Behavior*. 8<sup>th</sup> Edition. USA: The Dryden Press
- [59] Eppinette, M. and Inman, R. A. (1997), "Expert systems and the implementation of quality customer service", *Industrial Management & Data Systems*, 97 pp. 63-69
- [60] Ernst, C.P.H., Wedel, K., & Rothlauf, F. (2014). *Students acceptance of E-Learning Technologies: Combining the Technology Acceptance Model with Didactic Circle*. Twentieth Americas Conference on Information Systems, Savannah. Retrieved from <http://wi.bwl.uni-mainz.de/Dateien/StudentsAcceptanceofE-LearningTechnologies.pdf> on 23/12/2014 at 8.30 AM
- [61] European Commission (2010). *A digital agenda for Europe*. Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions.
- [62] Eze, U.C., Yaw, L.H., Manyeki, J.K., and Har, L.C. (2011) 'Factors affecting internet banking adoption among young adults: evidence from Malaysia', *International Conference on Social Science and Humanity*, p.5, IPEDR.
- [63] Ezzi, S. W (2014). *A theoretical Model for Internet Banking: Beyond perceived usefulness and ease of use*; *Archives of Business Research*, 2(2): pp. 31-46
- [64] Farzianpour, F., Pishdar, M., Shakib, M., & Toloun, M. (2014). *Consumers' perceived risk and its effect on adoption of online banking services*. *American journal of applied sciences* 11(1): pp. 47-56
- [65] Financial Sector Deepening Kenya. (2010). *Supporting the Development of Inclusive Financial Markets in Kenya: Annual Report 2010*.
- [66] Financial Sector Deepening Kenya. (2009). *Supporting the Development of Inclusive Financial Markets in Kenya: Annual Report 2009*.
- [67] Financial Sector Deepening Kenya. (2008). *Supporting the Development of Inclusive Financial Markets in Kenya: Annual Report 2008*.
- [68] Fonchamnyo, D. C. (2013). *Customers' Perception of E-banking Adoption in Cameroon: An Empirical Assessment of an Extended TAM*. *International Journal of Economics & Finance*, 5(1)
- [69] Fox, S. (2002). "Online banking: A pew Internet project data memo". Pew Research Center. (Online). Available at: [http://www.pew-internet.org/reports\\_-\\_pdfs/pip\\_online\\_bankling.pdf](http://www.pew-internet.org/reports_-_pdfs/pip_online_bankling.pdf). Accessed on 2/9/2015
- [70] Garfinkel S. & Spatford G. (2002). *Web Security, Privacy & Commerce*. Published by O'Reilly Media, Inc.
- [71] Garlin, F. & McGuiggan, R. (2002). Exploring the sources of self-efficacy in consumer behavior. in AP - Asia Pacific Advances in Consumer Research, 5, eds. Ramizwick and Tu Ping, Valdosta, GA : Association for Consumer Research, 80-86.
- [72] Garson, D. (2012). *Sampling*. Statistical Associates Publishing. <http://www.statisticalassociates.com>
- [73] Gerrard, P., and Cunningham, J. B. (2003). "The diffusion of internet banking among Singapore consumers". *The International Journal of Banking Marketing*. (Online). Available at <http://www.proquest.umi.com/pqdweb?index>.
- [74] Gikandi, J. & Bloor, C., (2010). *Adoption and effectiveness of electronic banking in Kenya*. *Journal of Electronic Commerce Research and Applications* Vol. 9 pp. 277-282
- [75] Hanson, W. (2000). *Principles of Internet Marketing*, Cincinnati, Ohio: South-Western Ho, C.F and Wu, W.H. (1999), Antecedents of customer satisfaction on the Internet: An empirical study of online shopping, *Proceedings of the 32<sup>nd</sup> Hawaii International Conference on System Science*.
- [76] Hoffman, K. D. and Bateson, J.E.G. (2002). *Essentials of Services Marketing: Concepts, Strategies, and Cases*, 2nd Ed, Harcourt College Publishers Jedd, M. (2000) "Sizing up Home Delivery" *Logistics Management & Distribution Report*, Feb 2000. 39(2): p 51
- [77] Hopkins, W.G. (2002). *Quantitative Research Design*. Retrieved from [www.sportsci.org](http://www.sportsci.org) on 20/11/2016 at 10.51 am
- [78] Hu, Y & Liao, P. (2011). *Finding critical criteria of evaluating electronic service quality of Internet banking using fuzzy multiple-criteria*
- [79] Intana, M., & Chansa-ngavej, C. (2014). *An extended Technology Acceptance Model for Internet Banking*. *Asian Journal of management research*. 5(1): pp. 124-133
- [80] Internet Banking. 123HelpMe.com. 21 Jun 2015 retrieved from <http://www.123HelpMe.com/view.asp?id=158969>
- Internet and Mobile Association of India (IAMAI, 2014). *Scientific Research Journal of India*, volume 3(1)
- [81] I&M news 2008
- [82] I&M banking awards 2015
- [83] International Monetary Fund (IMF). (2011). *World economic outlook database*. Retrieved June 22, 2015, from <http://www.imf.org/external/pubs/ft/weo/2011/02/weodata/index.asp>
- [84] Israel, G. D. (2009). *Determining Sample Size*. Accessed on 21/6/2015 at 15.30 from <http://www.edis.ifas.ufl.edu/pdf/files/PD/PD00600.pdf>
- [85] Ivatury, G. and Mas, I. (2008). *The early Experience with Branchless Banking*, CGAP Focus Note, No. 46
- [86] Johnston, R. (1997), "Identifying the critical determinant of service quality in retail banking: importance and effect", *International Journal of bank marketing*, 15(4): pp. 111-116.
- [87] Johnson, S., Brown, G. K. and Fouillet, C. (2012). *The Search for Inclusion in Kenya's Financial Landscape: The Rift Revealed*, A Report Commissioned by FSD Kenya, March.
- [88] Jun, M. and Cai, S. (2001), "The key determinants of internet banking service quality: a content analysis", *International Journal of Bank Marketing*, 19(7): pp. 276-291.
- [89] Karjaluo, H., Mattila, M., and Pento, T. (2002). "Factors underlying attitude formation towards online banking in Finland". *The International Journal of Bank Marketing*. Vol. 20. pp. 261-273.

- [90] Kashyap, M., Sharma, K.D. (2012) "Internet Banking: Boom or Bane", GianJyoti E-Journal, Vol.1, Issue2, ISSN2250-348X, <http://www.gjimt.ac.in/wp-content/uploads/2012/12/N7.pdf> KCB Group 2014 integrated Annual Report
- [91] Kerem, K. 2001. "Adoption of electronic banking: underlying consumer Behavior and critical success factors". Unpublished dissertation. M COM. Tallinn Technical University.
- [92] Keswarwani, A., & Bisht, S. (2012). *The impact of trust and perceived risk on internet Banking adoption in India: An extension of technology acceptance model*. International Journal of Bank Marketing, 30(4): pp. 303 – 322
- [93] Khan, M. S., Mahapatra, S. & Sreekrumah, S. (2009). *Service Quality Evaluation in Internet Banking: An Empirical Study in India*. International Journal of Indian Culture and Business Management, 2(1): pp.30 – 46.
- [94] Khanifar H., Molavi Z., Jandaghi G.R., and Niya M.J.M. (2012), *Factors influencing the intendancy of e-banking: An integration of TAM & TPB with e-service quality*, Journal of Applied Sciences Research, 8(3): pp. 1842-1852.
- [95] Kim, M.J., Chung N., & Lee C. K. (2011). *The Effect of Perceived Trust on Electronic Commerce: Shopping Online for Tourism Products and Services in South Korea*. Tourism Management, 32(2): pp. 256-265.
- [96] Kinnear, T. C. and Taylor, J. R. 1991. *Marketing Research: An Applied Approach*. New York: McGraw Hill.
- [97] Koenig-Lewis, N., Palmer, A., & Moll, A. (2010). *Predicting young consumers' take up of mobile banking services*. International Journal of Banking Marketing, 28(5): pp. 410-432
- [98] Kombo, K.D. and Tromp A.L.D. (2011). *Proposal and thesis writing*. Nairobi: Pauline's Publication Africa.
- [99] Kumar, S. (2014). *Electronic Banking: An Emerging Way of Customer Services* Journal of Management Sciences. 3(4): pp. 1-4
- [100] Lee, M. C., (2009). *Factors influencing the adoption of Internet Banking: An integration Of TAM and TPB with perceived risk and perceived benefit*. Electronic Commerce Research and Applications Vol. 8: pp. 130-141
- [101] Lichtenstein, S. & Williamson, K. (2006). *Understanding consumer adoption of Internet banking: an interpretive study in the Australian banking context*. Journal of Electronic Commerce Research, 7 (2): pp. 50-66
- [102] Lin, C.C. (2003), "A critical appraisal of customer satisfaction and e-commerce", Managerial Auditing Journal, 18(3)
- [103] Lohr, S. L. (2010). *Sampling: Design and Analysis* 2<sup>nd</sup> Edition. Boston: SAS Institute Inc. [www.cengage.com](http://www.cengage.com)
- [104] MacNealy, M. S. (1999). *Strategies for Empirical Research in Writing*. New York: Longman.
- [105] Malhotra, P. & Singh, B. (2010). *An analysis of Internet Banking offering and its Determinants in India*. Internet Research, 20(1): pp. 87-106
- [106] Malone, T.W, Yates, J., & Benjamin, R.I. (1989). *The Logic of Electronic Markets*. Harvard Business Review, (May-June): pp. 166-172.
- [107] Mari, S. (2003). *Adoption of Mobile Banking in Finland*. Retrieved on 05/9/2015 from: <https://jyx.jyu.fi/dspace/handle/123456789/13203#>
- [108] Mari, S. and Minna, M. (2004). *Mobile Banking and Consumer Behavior: New Insights into the Diffusion Pattern*, Journal of Financial Services Marketing, Vol. 8, pp. 354–366.
- [109] Maruf, G. S., Rushami, Z. Y. & Aliyu, O. A. (2014). *The Mediating Effects of e-Satisfaction on the relationship between e-Banking Adoption and its Determinants: A Conceptual Framework*. Journal of Management Information System and e-Commerce. American Research Institute for Policy Development
- [110] Mas, I. and Radcliffe, D. (2011). *Mobile Payments go Viral: M-Pesa in Kenya*, The Capco Institute of Financial Transformation, No. 32, pp. 169-182
- [111] Masinge, K. (2010). *Factors Influencing the Adoption of Mobile Banking Services at the Bottom of the Pyramid in South Africa*, A Research Report submitted to the Gordon Institute of Business Science, University of Pretoria, South Africa
- [112] Maswera, T., Edwards, J., & Dawson, R. (2008). *Recommendations for E-Commerce Adoption: Information & Management* 42(7): pp. 947-964
- [113] Mearian, L. (2001). *Despite growth in online usage, banks urged not to forget their roots*, Computer World. MISC. (2004). Internet Banking. Retrieved on 5/9/2015 from [www.marketintelligence.com.au](http://www.marketintelligence.com.au)
- [114] McDaniel, C. & Gates, R. 2002. *Marketing Research*. Singapore: South-Western
- [115] Mitchell, M. E., Lebow, J. R., Uribe, R., Grathouse, H., & Shoger, W. (2011).
- [116] *Internet use, happiness, social support and introversion: A more fine grained analysis of person variables and internet activity*. Computers in Human Behavior, 27 (5): pp.1857–1861
- [117] Miranda, F. J., Cortés, R., & Barriuso, C. (2006). "Quantitative Evaluation of e-Banking Web Sites: an Empirical Study of Spanish Banks" The Electronic Journal Information Systems Evaluation, 9(2): pp. 73 – 82.
- [118] Mobile Ventures Kenya (MVK) Limited, (2012). *Using Credit to Grow Savings Results from a Mobile Pilot in Kenya*, A Report Commissioned by FSD Kenya and Consultative Group to Assist the Poor (CGAP), April Mols, N.P. (2000). "The Internet and banks' strategic distribution channel decisions", International Journal of Bank Marketing, 17(6)
- [119] Mozie, N.M et al (2012). *Perceived trustworthiness and the behavioural intention to Use internet banking service among bank users in Shah Alam*, Selangor. CIMTR 2012
- [120] Mugenda, O. M., & Mugenda, A. G., (2003), *Research Methods; Quantitative and Qualitative Approaches*, Acts Press, Nairobi, Kenya.
- [121] Musiime, A., & Rachadan, M. (2011). *Internet banking consumer adoption and customer*

- satisfaction. African Journal of marketing management, 3(10): pp. 261-269
- [122] Nasri, W. (2011). *Factors influencing the adoption of Internet banking in Tunisia*. International Journal of Business and Management. 6(8): pp. 143-160
- [123] Ndubisi, N.O., & Sinti, Q. (2004). *Consumer attitudes, system's characteristics and Internet banking adoption in Malaysia*. Management Research News, 29 (2): pp. 16-27.
- [124] Nielsen, J. (1994). Special Issue: usability laboratories. Behaviour and Information Technology, pp. 13-197
- [125] Nguyen, J. (2011). *Online banking on the rise in South East Asia*. The State of the Internet Southeast Asia. ComScore Press Release. [http://www.comscore.com/Press\\_Events/Press\\_Releases/2011/3/Online\\_Banking\\_on\\_the\\_Rise\\_in\\_Southeast\\_Asia](http://www.comscore.com/Press_Events/Press_Releases/2011/3/Online_Banking_on_the_Rise_in_Southeast_Asia)
- [126] Nimako, S., Gyamfi, N., & Wandaogou. A. (2013). Customer satisfaction with Internet banking service quality in the Ghanaian banking industry. International Journal of Scientific & Technology Research, 2 (7): pp.165-17
- [127] Njuguna, P. K., Ritho, C., Olweny, T., & Wanderi, M. P. (2012). *Internet banking in Kenya: The case of Nairobi County*. International Journal of Business and Social Science 3(18): pp. 246-252
- [128] Nordin, N., (2009), *Consumers' attitude towards counterfeit products in Malaysia*: Faculty of Business and Accountancy, University of Malaysia. MBA Thesis, Unpublished.
- [129] Odumeru, J. A. (2012). *The Acceptance of E-banking by Customers in Nigeria*. World Review of Business Research, 2(2): pp. 62-74
- [130] Orodho & Kombo (2012). *Research methodology methods and techniques*, 2nd Edition Willy Easter.
- [131] Ortega, B.H., Martinez, J.J., & Hoyos, M.M. (2007) "An Analysis of Web Navigability in Spanish Internet Banking", Journal of Internet Banking and Commerce, December 2007, 12(3)12
- [132] Oso, W.Y & Onen, D. (2009). *Writing Research Proposal and Report*. Nairobi: Sitima
- [133] Özer, G., & Yilmaz, E. (2011). *Comparison of the theory of reasoned action and the Theory of planned behavior: An application on accountants' information Technology usage*. African Journal of Business Management. 5(1): pp.50-58
- [134] Palmer, A. (1995), "The effects of gender on the development of relationships between clients and financial advisers", International Journal of Bank Marketing, 13(3)
- [135] Paradkar, S.S. (2014). *E-Commerce in the Customer Empowerment Era*. Retrieved from <http://boletines.prisadigital.com/eCommerce-in-the-Customer-Empowerment-Era.pdf> on 1/6/2015
- [136] Peters, L. (1998). *The New Interactive Media: One-to-one, But to Whom?* Marketing Intelligence & Planning, 10(1): pp. 22-30.
- [137] Paul Budde Communication Pty Ltd. (2011). *Research and Markets: Yemen –Telecoms, Mobile, Broadband and Forecasts*, 2011 Edition. Available at: [http://www.researchandmarkets.com/research/2dafcd/yemen\\_telecoms](http://www.researchandmarkets.com/research/2dafcd/yemen_telecoms)
- [138] Polatoglu, V. and Ekin, S. (2001). "An empirical investigation of the Turkish consumers' acceptance of Internet banking service". International Journal of Bank Marketing. 19(4): pp.156-166.
- [139] Porteous, D. (2007). *Making Financial Markets work for the Poor: Just how Transformational is M-Banking?* Report commissioned by FinMarkTrust, Retrieved on 05/9/2015 from: [http://www.finscope.co.za/documents/2007/transformational\\_mbanking.pdf](http://www.finscope.co.za/documents/2007/transformational_mbanking.pdf).
- [140] Porteous, D. and Neville, W. (2006). *M-Banking: A Knowledge Map*, Washington, DC: Infodev/World Bank. Retrieved on 05/9/2015 from: <http://www.infodev.org/en/publication.169.html>.
- [141] Pourkiaei, S. M., & Ardestani, S. S. V. (2014). *Internet Banking: A Way of life*. International Journal of Multidisciplinary and Current Research.
- [142] Ramseook-Munhurrun, P., & Naidoo, P. (2011). *Customer's perspective of service Quality in internet banking*. Services Marketing Quarterly 32, pp. 247-264
- [143] Raza, S., & Hanif, N. (2013). *Factors affecting Internet Banking adoption among internal and external customers: A case of Pakistan*. International Journal of electronic Finance, 7(1): pp. 82-94
- [144] Ribbink, D., Van Riel A.C.R. & Liljander V. (2004). *Comfort Your Online Customer: Quality, Trust, and Loyalty on the Internet*. Managing Service Quality, 14(6): pp. 446-456.
- [145] Riyadh, A. N., Akter, S., & Islam, N. (2009). The adoption of e-banking in developing countries: A theoretical model for SMEs. International Review of Business Research Papers, 5(6): pp. 212-230
- [146] Rogers, E.M. (1995). *Diffusion of Innovations*, 4th ed.; Free Press: New York, NY, USA
- [147] Rotchanakitumunai, S., & Speece, M. (2003). *Barriers of Internet banking adoption: a qualitative study among corporate customers in Thailand*. International journal of Bank Marketing, 21(6-7), 312-323.
- [148] Sabi, M. H. (2014). *Research Trends in the Diffusion of Internet Banking in Developing Countries*. Journal of Internet Banking and Commerce 19(2)
- [149] Sadeghi, T., & Farokhian, S. (2011). *The role of behavioural adoption in online banking Services*. Middle-East Journal of Scientific Research. 7(3): pp. 374-380
- [150] Saeednia, H., & Abdollahi, H. (2012). *Factors affecting client trust in online banking. A Case study of Saman Bank*. International Journal of Economics and Business Modelling, 3(1): pp. 149-151.
- [151] Safeena, R., Date, H., & Kammani, A. (2011). *Internet Banking adoption in an emerging Economy*. Indian customers perspective. International Arab Journal of e-technology. 2(1): pp.56-64.
- [152] Sekaran, U & Bougie, R. (2010). *Research Methods for Business: A Skill Building Approach*: John Wiley & Sons, 2010.
- [153] Saleem, Z. and Rashid, K. (2011). *Relationship Between Customer Satisfaction and Mobile Banking Adoption in Pakistan*, International Journal of Trade, Economics and Finance, 2(2): pp. 537-544.
- [154] Sathye, M. (1999). *Adoption of Internet banking by Australian consumers: An empirical investigation*.



- International Journal of Bank Marketing, 17 (7): pp. 324-334.
- [155] Singh, P. (2013). "An Exploratory Study on Internet Banking Usage in Semi -Urban Areas in India", International Journal of Scientific and Research Publications, 3(8): pp. 1-5.
- [156] Snoj, B., Korda, A., &Mumel, D. (2004). *The relationship among perceived quality, Perceived risk and perceived product value*. J of Product and Brand Management13, pp. 156-167
- [157] State of Internet Freedoms in East Africa. (2014). *An investigation into Policies and Practises Defining Internet Freedoms in East Africa*: CIPESA. Retrieved from <http://opennetafrica.org/wpcontent/uploads/researchhandpubs/State%20of%20Internet%20Freedoms%20in%20East%20Africa%202014.pdf> on 11/1/2015
- [158] Struwig, F.,and Stead, G. (2001). *Planning, designing and reporting research*. Cape Town: Pearson Education
- [159] Suganthi, & Balachandran, B. A. (2001). *Internet Banking Patronage: An Empirical Investigation of Malaysia*. Journal of Internet Banking and Commerce, 6(1).
- [160] Tung, F., Chang, S., & Chou, C. (2007). *An extension of trust and TAM model with IDT in the adoption of the electronic logistics information system in HIS in the medical industry*. International Journal of Medical Informatics, 77 (5): pp.324-35
- [161] Suki, N., &Suki, N. (2011). *Exploring the relationship between perceived usefulness Perceived ease of use, perceived enjoyment, attitude and subscribers intention Towards using 3G mobile services*. Journal of Information Technology Management 22(1): pp. 1-7
- [162] Sullivan, R., & Wang, Z. (2014). *Internet Banking. An exploration in Technology Diffusion and Impact*. Working paper series. Downloaded from <http://www.richmondfed.org/publications/>
- [163] Sullivan, R. J. (2000), "How Has the Adoption of Internet Banking Affected Performance and Risk at Banks? A Look at Internet Banking in the Tenth Federal Reserve District", Financial Industry Perspectives, Federal Reserve Bank of Kansas City, December, pp. 1-16.
- [164] Trends in Global Banking Industry, 2013
- [165] Venkatraman, N. (2000), "Five steps to a dot-com strategy: how to find your footing on the Web", Sloan Management Review, Spring2000, Vol.41 Issue 3, pp. 15-28.
- [166] Venkatesh, V., Brown, S. A. &Bala, H. (2013). *Bridging the Qualitative-Quantitative Devide: Guidelines for conducting mixed methods Research in Information Systems*. MIS Quaterly37(1): pp. 21-54
- [167] Vijayaragavan, T. (2014). *Modern Banking Services - A key Tool for Banking Sector*. International Journal of Commerce, Business and Management (IJCBM), 3(4)
- [168] Virk, N. (2013). *Factor analysis of customer's preference attributes in using e-banking*.The IUP Journal of Bank Management, 7(1): pp. 72-78
- [169] Wadi, R. (2008). *Importance and advantage of e-banking and obstacles pervert local Banks in Ghaza strip*. Journal of Islamic University, 16(2): pp. 855-893
- [170] Wen, J. H., Chen, H., & Hwang, H. (2001). *E-Commerce Website design. Strategies Models*. Journal of information management and computer security
- [171] Wessels, L., &Drennan, J. (2010) "An investigation of consumer acceptance of M-banking", International Journal of Bank Marketing, 28(7): pp.547 – 568
- [172] Wet, K. D. (2010). *The importance of ethical appraisal in social science research: Reviewing a faculty of humanities" research ethics committee*.Journal of Academic Ethics, 8, pp. 301-314.
- [173] Williams, H., &Torma, M. (2007). *Trust and Fidelity:From "under the mattress" to the mobile phone*. Moving the debate forwrad.The Policy paper series. No. 6.
- [174] Witkin, B.R.,&Altschuld, J.W.(1995). *Planning and Conducting Needs Assessments: A Practical Guide*. Sage Publications, Inc
- [175] Yaghoubi, N. M., &Bahmani, E. (2010). *Factors affecting the adoption of online Banking: An integration of technology acceptance model and theory of plannedBehaviour*. Pakistan Journal of Social Sciences, Medwell Journals, 7(3): pp. 231-236
- [176] Yousafzai, S., &Yani-de-Soriano, M. (2012). *Understanding Customer-Specific factors Underpinning Internet Banking adoption*. International Journal of Bank Marketing. 30(1): pp. 60-81
- [177] Yusoff,Y., Muhammad,Z., Pasah, E. & Robert, E. (2009). *Individual Differences, Perceived Ease of Use, and Perceived Usefulness in the E-library Usage*. Computer and Information Science, 2 (1): pp. 76-81
- [178] Zahid, N., Mujtaba, A., &Riaz, A. (2010). *Consumer acceptance of online banking*. European Journal of Economics, Finance and Administrative Sciences, 27, ISSN 1450-2275
- [179] Zanoon, N. &Gharaibeh, N. (2013). *The impact of customer knowledge on the security of e-banking*. International Journal of Computer Science and Security (IJCSS), 7(2): pp. 81-91
- [180] Zikmund, W. G. Carr, J. C. & Griffin, M. (2012). *Business research methods: CengageBrain.com*
- [181] Zimucha, T. (2012). *An Evaluation of the Effectiveness of E-banking Security Strategies in Zimbabwe: A Case Study of Zimbabwean Commercial Banks*. Journal of Internet Banking and Commerce, 17(3).
- [182] Zolait, A. H. S., Sulaiman,A.&Alwi, S. F. S. (2008). *Prospective and challenges of Internet banking in Yemen: an analysis of bank websites*. International Journal Business Excellence 1(3): pp. 353-373

### Author Profile

**Orucho Daniel Okari**, Kisii University, Nairobi Campus, P.O Box 408-40200 Kisii-Kenya