FACTORS INFLUENCING THE ADOPTION OF INTERNET BANKING IN KENYA: A CASE OF IMPERIAL BANK

BY

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UNITED STATES INTERNATIONAL UNIVERSITY

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A Project Report Submitted to the Chandaria School of Business in Partial Fulfilment of the Requirement for the Degree of Executive Masters in Organizational Development (EMOD)

UNITED STATES INTERNATIONAL UNIVERSITY

SUMMER 2014
STUDENT’S DECLARATION

I, the undersigned, declare that this is my original work and has not been submitted to any other college, institution or university other than the United States International University in Nairobi for academic credit.

Signed: _______________________ Date: ______________________

Njambi Warui (ID No: 611495)

This project has been presented for examination with my approval as the appointed supervisor.

Signed: _______________________ Date: ______________________

Dr. Kefah Njenga

Signed: _______________________ Date: ______________________

Dean, School of Business
ABSTRACT

The purpose of this study was to investigate the factors influencing the adoption of internet banking among users using a case of Imperial bank in Kenya. The study was guided by the following research questions: To what extent does the perception of security from hackers increase the utilization of internet banking services among customers? To what extent does the introduction of online banking predict the users’ attitude to adopt of internet banking services? And to what extent do the internet payment arrangements increase the use of internet banking services?

This research adopted a descriptive research design. The research population was 4,916 which consisted of 476 employees, 110 corporate and 4,330 retail customers at Imperial Bank in Kenya, using a confidence level of 95%, the sample size was 47 employees, 11 corporate and 433 retail customers. Random sampling techniques were adopted. Structured questionnaires were used as data collection tool. Demographic data were tabulated using frequency and percentages. In order to describe the data, the study used means of each variable.

The findings on the perception of security and utilization of internet banking services indicated that customers face a dilemma between desirable and undesirable consequences of the adoption and hence face a risky decision on security. Insufficient trust on financial institutions is a critical perceived credibility issues that lower internet banking acceptance. Customer trust is an essential way to retain existing bank customers as well as encouraging the adoption of internet banking.

The findings on the online banking environment and utilization of internet banking revealed that long response time is the criticised transaction risks of internet banking services. The slow response to customers’ online requests is mainly due to the shortage of knowledgeable personnel. The cost and time taken to process an internet banking transaction was short compared to bank branches. Internet banking allows costs saving, increases productivity, improves bank service delivery, customises banking services, and minimises the human errors of the front-desk staffs in performing routine banking.
The findings on the internet payment arrangements and the use of internet banking services established that web server delays may lead to financial and time loss. Users will have greater confidence in using a simple online service. Internet banking has a clear cost savings goal. This may explain why most consumers may not adopt internet banking because it is expensive. Correct processing of payments may relate with the proper functioning of the internet banking services. Reliability is positively related to the use of internet banking. Therefore, the results on the utilization of internet banking services established that all the customers faced security risks, transaction risks and web server delays may lead to financial and time loss.

The study recommends that banks should ensure internet banking security to boost consumer confidence. Internet banking should be trustworthy and secure to avoid undesirable consequences in the face of risky decisions. There should be a fast response time to answer customer queries in relation to internet banking services. Banks should hire well knowledgeable and qualified personnel to answer customer queries. Internet banking websites should be faster to avoid delay in web browsers for users who may experience financial and time loss. Internet banking should be cheaper for users with a clear cost saving goal for achieving greater confidence in using a simple online service.
ACKNOWLEDGEMENT

As I begin to reflect on the magnitude of this project, I would like to thank the Almighty God for providing the resources and energy to make this Research Project become a reality. I wish to extend my deep felt gratitude to all the people who offered their support and assistance. To the giants whose shoulders I stand upon, the teachers who have shaped so much of my strategy and skills, in particular, I thank my supervisor, Dr. Kefah Njenga, for offering a lot of guidance and assistance in coming up with this research project. Gratitude also goes to my family; this project could not have been completed without their unswerving support. Finally I thank all my friends, and a whole host of behind-the-scenes people who assisted me a lot in coming up with the project.
DEDICATION

This project is dedicated to my parents Mr. & Mrs. Anthony Warui, my son Nathan Warui and my partner Benjamin Karari who are a living example of unconditional love and support.
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<tr>
<td>ATMs</td>
<td>Automated Teller Machines</td>
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<tr>
<td>CFCA</td>
<td>China Financial Certification Authority</td>
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<td>CNNIC</td>
<td>China Internet Information Network</td>
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<td>GLBL</td>
<td>Gramm-Leach-Bliley</td>
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<td>GPRS</td>
<td>General Packet Radio Service</td>
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<td>ICT</td>
<td>Information Communication Technology</td>
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<td>IDT</td>
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<td>IMOT</td>
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<td>ISP</td>
<td>Internet Service Providers</td>
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<td>ITU</td>
<td>Internet Technology Utilization</td>
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<td>SPSS</td>
<td>Statistical Package for the Social Sciences</td>
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<td>TAM</td>
<td>Technology Acceptance Model</td>
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<tr>
<td>TPB</td>
<td>Theory of Planned Behaviour</td>
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<tr>
<td>TRA</td>
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CHAPTER ONE

1.0 INTRODUCTION

1.1 Background of the Study

The rapid growth of the Internet has dramatically changed delivery channels in the banking industry and many banks have established a presence on the Internet (Trideau, 2010). Internet banking was first introduced by Security First Network Bank in the United States in 1995 (Liao, Shao, Wang and Chen, 1999). One year later, it is introduced in Estonia (Eriksson et al., 2005) and South Africa (Singh, 2004), followed by Australia in 1997 (Sathye, 1999), Turkey in 1997 (Polatoglu and Ekin, 2001), Singapore in 1997 (Gerrard and Cunningham, 2003), China in 1997 (Laforet and Li, 2005), England in 1998 (White and Nteli, 2004), Hong Kong in 1999 (Wan, Luk and Chow, 2005), Romania in 1999 (Gurau, 2002), Thailand in 1999 (Jaruwachirathanakul and Fink, 2005) and Malaysia in 2000 (Bank Negara Malaysia, 2009). Enhanced technology is deployed to enable the banking industry to offer their services via the Internet.

There is a steady increase in internet banking acceptance since the year 2000 (Liao and Cheung, 2002). There are an increasing number of banks worldwide applying business investments in Internet technology driven by the expectation that the Internet technology would provide better opportunities to establish a distinctive strategic position compared to other traditional forms of banking services (Evans and Wurster, 1997). Internet banking is particularly well-practiced in the developed countries such as Korea, Spain, and Austria, where more than 75 percent of all banks offer transactional services via the Internet (Maenpaa, 2006). The development of the Internet as a service and marketing channel has breached the geographical and industrial barriers, creating new products, services and market opportunities (Liao and Cheung, 2002).

Bell, Hogarth and Robbins (2009) have also revealed the disparity in adoption of internet banking between developed and developing countries. Bughin (2004) found approximately two-thirds of the variance (64%) explained for internet banking (IB) adoption is linked to country level Internet utilization. According to comScore (2010), a leader in measuring the digital world, Canada is one of the world’s leaders in internet banking with 65 percent of its population being internet banking users, followed by the
Netherlands (61%). The percentages of internet banking users in United Kingdom and in the United States were 52% and 45% respectively.

In most developed countries that have established their IT infrastructure and their Internet adoption rate is generally above 70 percent of their population (ITU, 2011). In contrast, the majority of developing counties still have an Internet adoption rate below 40% (Internet World Stats, 2011). The adoption rate of internet banking generally is not available in some countries because adoption is still at its early stage, although the technology is available and people are aware of its existence (Azouzi, 2009). For example, although the Internet penetration rate in Indonesia was 12.3%, its adoption rate of internet banking has been estimated at less than 0.01% (ComScore, 2011).

According to a China Internet Information Network (CNNIC)’s survey, the total number of Internet users in China has increased to 457.3 million individuals, representing approximately 34.3% of the country’s population; however, only 139.5 million of Internet users (30.5%) had utilized internet banking (China Internet Information Network, 2011). Since internet banking adoption is linked to a country’s Internet utilization rate (Trideau, 2010) and IT usage has been shown to promote economic growth (White et al., 2011), examining internet banking acceptance and the determinants affecting internet banking adoption is an important undertaking.

The most cited factor preventing non internet banking users from opening an internet banking account has been the security problem. This is supported by a survey carried out by China Financial Certification Authority (2008) where more than 70 percent participants indicated that they do not believe dealing with money through the Internet is safe. While the China Financial Certification Authority (CFCA) signed a contract with major commercial banks to issue digital certificates to improve the security of internet banking services in 2005, the CFCA (2008) reported that non internet banking customers still had many concerns about financial transactions via the Internet.

Internet banking enables customers to browse essential bank products and services seven days a week through their personal computers (Polatoglu and Ekin, 2001). It allows consumers to perform banking transactions over the Internet anywhere and anytime.
According to the Reserve Bank of India (2007), there are three basic types of internet banking services, the informational, communicative and transactional internet banking services. The Informational internet banking is a basic type of internet banking that provides comprehensive bank products and services information (Bank Indonesia, 2004). It provides background and history of the bank, organisational structure, affiliated entities in the banking group and available corporate, retail and specialised banking facilities (Reserve Bank of India, 2007). This type of internet banking does not involve any execution of transactions (Bank Indonesia, 2004).

Communicative internet banking is the second type of banking that allows customers to have some interactions with bank system such as to submit their applications and queries for different internet banking services, but it does not allow money transactions between accounts (Reserve Bank of India, 2007). Since the web server of communicative internet banking is linked with the internal network of a bank, it is at a higher security risk compared to informational internet banking services (OCC, 1999). Adequate controls have to be available to prevent unlawful intrusion to the internal network of a bank (OCC, 1999). Virus detection is also an important issue for the communicative internet banking services (OCC, 1999).

Transactional internet banking is the third type of internet banking that allows the customers to transfer funds, make payments, and update personal information (OCC, 1999). The server and the internal network of the bank’s outsourcers pose the highest security risk and deserve the strongest controls (OCC, 1999). Security and safety, confidentiality and privacy issues of the customers’ accounts are critical. The accuracy and integrity of transaction records need to be ensured at all time (Bank Indonesia, 2004; Reserve Bank of India, 2007).

According to Maugis et al. (2005), the evolution of internet banking can be divided into four stages: introduction set up, development, and maturity. During the introduction stage, each individual bank starts to set up its own web site, introduces the concepts of internet banking, and puts a few traditional services online. The aim is to provide bank customers with information such as account inquiries and account transfers. During the
set up stage, the banks begin to put more of their traditional services online. The main goals of this stage are to offer customers’ online payment services, extended service hours, greater efficiency, and lower costs. The next stage of internet banking is to transform all traditional services of the bank onto its web site. The final stage provides sophisticated business intelligence products such as aggregation of accounts. In this stage, banks are able to provide their customers with financial information from all different accounts (Maugis et al., 2005). However, the majority of Kenyan banks appear to be in the second stage with a few developed banks advancing into the third stage.

At imperial bank, internet banking is developed to help bank deliver services and products better, faster, and cheaper. Imperial internet banking platform iBLINK is a new and dynamic online platform that provides secure, real-time and fully transactional financial management solutions all from the convenience of the customer’s personal computer. The platform provides the freedom to customers in accessing their accounts and transact at anytime, anywhere with a stable internet connection. iBLINK features includes viewing account information such as account balances, account details and transaction history, deposits and loans among others. There are also online payments to Imperial bank accounts, setting standing order instructions, provide facility details such as interest rates, interest accrued, interest earned, principal outstanding and amount payable at maturity (Imperial Bank, 2013).

1.2 Statement of the Problem

There has been mixed results in regards to the adoption of internet banking. For instance, Chen (2012) exploratory study into the adoption of internet banking in mainland China which collected data from two public universities in Shandong Province established trust was one of the important influential factors affecting an individual intention to adopt internet banking. These findings validated prior studies that have found trust as one of the important factors in intention to adopt internet banking. In another study conducted by Shah, Ahmad, Sayyed and Bin (2007) on the factors affecting internet banking adoption in the manufacturing companies in Malaysia. The findings established that security or confidentiality was taken as additional factor in the adoption of the technology besides relative advantage and compatibility which have a significant influence. The current study
aims to investigate whether the perception of security increase the utilization of internet banking services among Imperial bank customers.

Mettalwally (2013) also conducted a study the assessment of Users’ Acceptance of internet banking, an Empirical Case of Egypt. The results show that the main factor, which affected banks' customers' decision to use internet banking service, was ease of use, followed by usefulness and trust and credibility of the service. Other external factors such as personal innovativeness, individual differences, computer and Internet use experience, promoting circumstances and service assistance, and communication, which determined the three antecedents, were applicable and valid in explaining users' adoption. Although these studies show that internet banking is important to China, Malaysia and Egypt, it seems that there are not many studies conducted to investigate internet banking activities and user attitudes among Kenyan banks, specifically on Imperial Bank.

Scupola (2002) argued that financial institutions are not getting what they expect from Internet-based technology investments since Internet-based projects carry risks which usually appear later. The risks associated with the Internet based technology investments become even higher in a competitive business environment. At imperial bank, the frequency and the use of internet banking at Imperial bank remains poorly defined and fragmented (Martin, 2014). Hence, this study aims to extend the web of knowledge with regards to the perception of security as an influence on the utilization of internet banking services among customers, the implications of introducing online banking services to create a favourable environment in predicting the users’ attitude to adopt services and how the internet payment arrangements increase the use of internet banking services.

1.3 Purpose of the Study
The purpose of this study was to investigate the factors influencing the adoption of internet banking among users using the case of imperial bank.
1.4 Research Questions
The study was guided by the following research questions:

1.4.1 To what extent does the perception of security from hackers increase the utilization of internet banking services among customers?

1.4.2 To what extent does the introduction of online banking predict the users’ attitude to adopt internet banking services?

1.4.3 To what extent do the internet payment arrangements affect the use of internet banking services?

1.5 Importance of the Study
1.5.1 Banking Institutions
This study can provide a practical understanding of internet banking among the financial institutions. From a practical standpoint, the study can provide banks with a better understanding of the determinants of internet banking acceptance and be able to address and review their internet banking strategies, website features, and online security features.

1.5.2 Imperial Bank Management
Findings of this research could provide better insights into the behaviours of the customers in the adoption of internet banking. This can help the bank management come up with policies to remedy existing or devise appropriate plans to better Internet-based ICT adoption and implementation. These findings may assist the management further plan, schedule and implement Internet-based factors.

1.5.3 Contributions to Academic Research
The main purposes of this study are to develop a more comprehensive model that can be used to study internet banking adoption and to use this model to investigate factors that affect internet banking adoption at Imperial Bank. Thus, the results of this study can contribute to our understanding of internet banking behaviours in general.
1.6 Scope of the Study
The population for the study comprised of Imperial bank internet banking users who hold accounts with the bank for personal use. In addition, the respondents were aged above 18 years old and often make banking transactions online. The study was done in the month of January to Early February 2014.

1.7 Definition of Terms
1.7.1 Internet
Martin, Brown, DeHayes, Hoffer and Perkins (2005) defined the Internet as “a network of networks that use the TCP/IP protocol, with gateways to even more networks that do not use the TCP/IP protocol”. According to Jessup and Valacich (2006), the Internet is derived from the concept of internetworking. The Internet connects host computers and their networks together to form larger networks. The researchers added that the Internet is “a collection of networks that use common protocol to communicate with each other”.

1.7.2 Internet Banking
Daniel (1999) defines internet banking services as major information services of a bank to serve its customers via the Internet. Internet banking permits consumers to carry out usual banking transactions on a computer which is equipped with Internet connection (Fox, 2006). Among the most commonly used internet banking services include transferring funds between accounts, checking the balance in one’s bank account and bill paying (Fox, 2006).

1.8 Chapter Summary
This chapter presents the introduction to the research study. Problem statements and study objectives are addressed. The purpose of the study, research objectives, importance of the study and the definitions of terms as well as the research scope are clearly defined. The proposal was organized as follows. Chapter two presents the literature review. Chapter Three described the research methodology and how the data was analyzed. Chapter Four described the statistical analysis and results of the study. The project concluded with Chapter five that included the discussion, conclusions and recommendations of the study as well as the future research.
CHAPTER TWO

2.0 LITERATURE REVIEW

2.1 Introduction

This chapter investigates on empirical studies in relation to the factors influencing the adoption of internet banking among users. The chapter analyzed the literature review in accordance to the stated research questions in the first chapter. The first section of the literature review looked at the extent to which security determine the potential users’ attitude to adopt internet banking services. The second section of the literature looked at how convenience determine the potential users’ attitude to adopt internet banking services and third section analyzed how the transaction cost determine the potential users’ attitude to adopt internet banking services.

The rapid growth of the Internet has dramatically changed delivery channels in the banking industry and many banks have established a presence on the Internet (Trudeau, 2009). Bughin (2004) found approximately two-thirds of the variance (64%) explained for internet banking (IB) adoption is linked to country level Internet utilization. According to comScore (2010), Canada is one of the world’s leaders in internet banking with 65 percent of its population being internet banking users, followed by the Netherlands (61%). The percentages of internet banking users in United Kingdom and in the United States were 52% and 45%, respectively. Typically, most developed countries have established their IT infrastructure and their Internet adoption rate is generally above 70 percent of their population (ITU, 2011). In contrast, the majority of developing counties, such as Kenya, still have an Internet adoption rate below 40% (Internet World Stats, 2011).

Venkatesh, Morris, Davis and Davis (2003) theoretical model explained an individual intention to use the technology. The theory was an extension of Triandis (1971) argument that the behaviour to use internet were determined by attitudes, social norms, old habits, and expected consequences of new behaviours. He proposed cognitive, affective, and behavioural factors as the main drivers influencing one’s attitudes toward a new behaviour. Therefore, accepting new IT and using internet banking can been seen as how people believe (cognitive), feel (affective), behave (behavioural), and are influenced by
the surroundings (social norm) toward internet banking. The Triandis’ theory has provided a theoretical foundation for much of the IT adoption research.

There are other theoretical models that have been used to explain the adoption of internet banking. The theoretical model range from social psychology (Swanson, 1982). Of these models, the Innovation Diffusion Theory (IDT) by Rogers (1995), the Theory of Reasoned Action (TRA) proposed by Fishbein and Ajzen (1975) and Ajzen and Fishbein (1980), the Theory of Planned Behaviour (TPB) by Ajzen (1991), the Technology Acceptance Model by (Davis, 1989), and the Decomposed Theory of Planned Behaviour (DTPB) by Taylor and Todd (1995) have been widely used in providing determinants of IT adoption research. The Innovation Diffusion Theory (IDT) asserts that diffusion occurs when individuals accept and use these new ideas, practices, or objects and when information is exchanged and disseminated within social systems (Rogers, 1983). Rogers (1983) identified five characteristics of an innovation (relative advantage, compatibility, complexity, trialability and observability) which can influence the rate of diffusion of an innovation. First, relative advantage of an innovation is an individual’s perception whether the innovation is better or worse than other similar events.

According to Rogers (1983), individuals tend to adopt innovations if they perceive the innovations are better than existing ones. Second, compatibility refers to a person’s perception whether an innovation fits his/her existing and past ideas, knowledge, or experience. Innovations will be more easily adopted if they match or are similar to a person’s existing understanding. Third, complexity is defined as an individual’s perception whether an innovation is difficult for him or her to understand or use. It assumes that complexity is negatively associated with the rate of adoption. Fourth, trialability provides an opportunity for an individual to experience a new thing. Exploring features of an innovation will increase the adoption rate.

Last, observability comes from an individual’s perception whether an innovation is available and visible. Observable and potential societal norms such as whether other members of a society are using or rejecting a new idea affect an individual’s adoption intention (Rogers, 1983). Rogers’s work provided a comprehensive structure for understanding the individual adoption processes and is particularly important because it
has influenced other adoption theories in information technology acceptance (Moor and Benbasat, 1991). The adoption behaviour is determined by individual’s perception of using an innovation rather than perceptions of the innovation itself.

Nor and Pearson (2008) investigated the factors influencing intention to use internet banking. They used the characteristics of Rogers’ (1983) IDT to test the relationships between belief structure and attitude toward using internet banking technology. The study found that perceived relative advantage, perceived compatibility, perceived ease of use, trialability, and perceived image have significant relationships with the intentions of internet banking adoption. Nor and Pearson also added a trust variable into the DTPB and tested potential internet banking adopters’ trust perception toward the intention to accept internet banking. This variable turned out to be a key determinant of internet banking adoption.

Fishbein (1967) advocated for the theory of reasoned action (TRA) evolved from the social psychology setting. The model explained why people behave as they do in order to predict individual behaviour and understand the determinants that affect a person’s intentions to perform or not perform a specific behaviour. The TRA was modified and refined by Ajzen and Fishbein in 1980. In general, there are three constructs in this theory: behavioural intention (BI), attitude (A), and subjective norm (SN). According to TRA, an individual’s behaviour is determined by its behavioural intention (BI) to perform the behaviour and in return, this intention is a linear function of his/her attitude (A) toward the behaviour and his/her subjective norm (SN) based on the relative importance of these two determinants (BI = A + SN) (Fishbein, Ajzen and Hinkle, 1980).

The behaviour refers to the user intention to use technology; the behavioural intention (BI) is a person’s motivation to exert effort to carry out behaviour and the function of two factors (personal attitude and subjective norm). Attitude refers to an individual’s evaluation that performing the behaviour is good or bad or whether an individual is in favour or against performing the behaviour. The subjective Norm (SN) refers to the perceived subjective social pressure to perform or not perform a specific behaviour. In other words, it is a person’s perceptions whether people who are important to him/her support or disapprove of a particular behaviour. The main assumption in TRA is that if a
person intends to perform behaviour, then it is likely that the person will do so. The stronger the intention, the more likely the person is expected to try to perform the activity (Ajzen and Madden, 1986). The TRA is a generic model and has been used as the theoretical foundation of TPB, TAM, and DTPB (Ajzen, 2010).

The current study selects TAM which has been examined and utilized specifically within the IT context. The Technology Acceptance Model (TAM) is a modification of the theory of reasoned action (TRA). Davis (1989) asserts that IT adoption behaviours are determined by the intention to use information technology in which only two primary factors determine behavioural intention to use computer technology: ease of use and usefulness. Ease of use is defined as the degree of which a user expects the target system to be free of effort and usefulness refers to a user’s subjective probability that using a specific IT application will increase his/her job performance. TAM posits that person’s attitude and perceived usefulness together affect behavioural intention directly. Both ease of use and usefulness have a significant effect on intention, but perceived usefulness can be affected by perceived ease of use, implying that usefulness is a mediator variable between ease of use and intention.

The technology acceptance model also postulates that external factors affect behavioural intention and actual use through mediated effects on perceived usefulness and perceived ease of use (Davis, 1989). It is generally believed that the acceptance of IT will be higher to the extent that the users perceive the technology as useful and easy to use. The TAM has been shown to be empirically superior to other models such as TRA (David, 1989) due to its parsimony, robustness of its scales, and the strong generalizability of the model (Venkatesh, Davis and Morris, 2007). TAM has been examined and utilized specifically within the IT context. Since TAM has been used in many studies to predict and understand user perceptions of system use and the probability of adopting an online system (Gefen et al., 2003; Hsu, 2006; Wu and Chen, 2005), they are the most appropriate tools for understanding online banking adoption. This study proposes integration of TAM in order to provide a more comprehensive model of online banking evaluation and adoption.
2.2 Perception of Security and the Utilization of Internet Banking Services

2.2.1 Hacking of Internet Banking Services

There are still numerous scams or hacking problems on the internet. There could be data leakage during internet banking. A common and widely recognized obstacle to internet banking has been the lack of security and privacy over the internet (Quein and Klein, 1996; Bee, 2008). The level of internet banking perceived riskiness could possibly fall between these two transactions. In internet banking, the amount of confidential information required is not as much as in bill payment service. In internet banking, providing bank information is an optional item.

According to Chan and Lu (2004), this has led many people to view internet banking as risky undertakings. Therefore in the context of this study, individuals who regard internet banking as low risk would have a tendency to accept and use the platform. Internet banking, perceived risk was defined as the user’s perception of the uncertainty and adverse consequence of a desired outcome (Fu et al., 2005). Generally, internet banking, there are two main processes involved during the online transaction, the report and payment (Hussein et al., 2010). Citizens perceived less risk when they report the tax, but when it comes to internet banking payment, the level of perceived risk could be higher resulting less intention to use the system in the future (Hussein et al., 2010). The users may hesitate to use internet banking if they do not feel enough security about the bank service.

In Hung et al.’s (2006) research, the perceived risk significantly influence adopters’ attitudes toward internet banking. But perceived risk is not significant for non-adopters. In their opinion, lower risk level should be beneficial determinants for e-tax services adopters; as for non-adopters, possible reasons are that perceived risk not easily perceived or that little weight is assigned to them (Hung et al., 2006). In Fu et al.’s (2005) study, they have found that in spite of the adopters of e-tax service have perceived higher risk than non-adopter, but perceived risk may not be an important factor that directly influences taxpayers’ choice of tax-filing method. On the other hand, for antivirus software user, ease of use of the software has no relationship with level of risk. This explained why users still adopt antivirus software although most of them understand that
antivirus software cannot defend their computer completely from virus attack (Bee, 2008).

2.2.2 Privacy of Internet Banking Services
Information privacy refers to the process by which a financial institution protects individuals’ privacy relative to the collection, processing, disclosure, or use of personal information, or that provide for access to such information in general. The online exchange raises information privacy risk as it often involves the collection, use, or disclosure of consumers’ personal data (Seounmi, 2009). Thus, perceived information privacy risk in this study refers to an individual’s subjective perception about how their personal financial information is collected, maintained, used, and disseminated (Angst and Agarwal, 2009).

Privacy in internet banking is the level of control that clients have over the timing, and circumstances of sharing oneself physically, behaviourally, or intellectually with others (Ghosh and Swaminatha, 2001). As an element of perceived security risk, it is the extent to which technology-enabled services are perceived to be secure, sufficiently safe and reliable to use (Chavidi and Mulabagula, 2004). With more private information exposed to service providers, internet banking customers require more assurance of privacy protection and more control over the information that can be released (Liu and Arnett, 2000).

For potential adopters, privacy protection can be significant and as a result internet banking providers should give strong assurances of privacy and more importantly empower their clientele with more control over the level of privacy exposure (Liu and Arnett, 2000). Adoption is a function of consumer innovativeness and this implies that perception of risk may not have much to do with actual adoption. Nevertheless, it may lead to consumers seeking more information to ascertain the level of risk, mitigate the perception of risk, or manage the perceived risk. Previous studies have suggested that perceived risk may negatively influence the decision to adopt new products, which may not be too obvious (Im, Bayus and Mason, 2003).
The Gramm-Leach-Bliley (GLBL) Act requires financial institutions to inform customers about their policies regarding the privacy of customer’s personal financial information. Under the GLBL Act, financial institutions can provide customers’ personal financial information to non-affiliated service providers including joint marketers. In this sense, the GLBL Act can be considered as a self regulatory law requiring consumers to be responsible for their online behaviours and to protect their information privacy. However, this self regulatory policy may not affect consumers’ information privacy perception and related behaviour because they are not aware of or not take action accordingly (Larose and Rifon, 2007). Sometimes, breach in privacy may occur on the suppliers’ side if businesses do not provide privacy policies to their customers or fail to prevent unauthorized accessing private information.

Although information privacy is self regulated and financial institutions have to provide privacy policies to their customers in order to avoid law suits, it is likely that all financial institutions will self-regulate their internet banking (Littler and Melanthiou, 2006). Lee (2009) has suggested perceived information privacy risk is still negatively influencing internet banking adoption because potential internet banking customers worry about their inability to predict whether a financial institution will comply with fair information privacy practice. It is also worth noting how potential internet banking customers perceive privacy risks in their banking needs.

2.2.3 Trust

Trust on Internet transactions has been documented as an important determinant in consumer literature. Prior research distinguishes consumer behaviours according to the transaction environment and recognizes the nature of the virtual interface (Salam, Iyer, Palvia and Singh, 2005). Many studies advocate that one of the largest challenges within the context of the digital era is the lack of trust in the online environment (Beldad, de Jong and Steehouder, 2010). Among competing definitions and theories of trust, Mayer, Davis, and Schoorman’s (1995) integrative model of organizational trust (IMOT) has been widely accepted within online consumer research (Chen and Dibb, 2010).

According to this model, trust refers to “the willingness of a party to be vulnerable to the actions of another party based on the expectation that the other will perform a particular
action important to the trustor, irrespective of the ability to monitor or control that other party” (Mayer et al., 1995). The integrated model of organizational trust incorporates both characteristics of a trustor and a trustee and posits that an individual (influenced by a trustor’s personality) assesses the trustworthiness of a trustee based on trustor’s beliefs in the trustee’s ability, benevolence, and integrity in the development of trust relationship within an institutional context (Mayer et al., 1995). In other words, intention to trust is determined by an individual’s characteristic (disposition of the trustor) and perceived characteristics (ability, benevolence, and integrity) of the trustee. Figure 2.1 presents the diagram of IMOT and the trust relationships between the trustor and the trustee:

![Figure 2.1: Research model of Trust](image)


In the context of internet banking, potential bank customers will conduct their banking businesses in a virtual environment characterized as impersonal interactions associated by the physical separation of bank personnel. It is vital for potential customers of internet banking to perceive that they are doing business with “a real financial institution” and the institutional structures are sound and guaranteed in similar ways as brick-and-mortar bank branches. Thus, institutional based trust and its effect on impersonal and business
relationships have played an important role in the adoption of internet banking. Previous research has examined the effect of institutional trust in the context of an organizational setting (McKnight, Choudhury and Kacmar, 2002) and in IT adoption literature (Beldad et al., 2010).

Internet banking adoption and usage is strongly associated with high levels of trust and trust in internet banking is a new and emerging area of interest in the internet banking adoption context (Nor and Pearson, 2008; Yousafzai, Foxall and Pallister, 2010). However, this association has not yet been fully investigated with the presence of the perceived uncertainty construct under the theoretical framework of decomposed theory of planned behaviour (McKnight et al., 2002).

2.2.4 Encryption Threat
Employees working for internet banking provider pose the threat of insider fraud racket. Similar to any electronic banking system, the danger lies in the interception and modification of payment instructions by the staff whereby they may alter a payment instruction (Szmigin, 1999). On the other hand cyber criminals are increasingly attacking internet banking and payment services according to Lee and Park (2006). Viruses have been identified whereby a malicious code, that is software inform of a virus, worm or other malware, can be loaded onto the computer or the banks server to perform unauthorized process that will have adverse impact on the confidentiality, integrity or availability of financial information and transactions (Luarn and Lin, 2005).

Institutions offering internet banking to customers need to think out carefully their encryption strategies (Mattila, 2003). Banks should be well-positioned to provide a technical solution designed for minimising fraud and permitting the fair allocation of liability for damages from swindle. To prevent internet theft, some level of security is already part of the authentication means of existing systems. Additionally, it is comparatively easy and easy on the pocket for device manufacturers to have as a feature rate additional mechanism to guarantee secure transaction authorization (Amir, 2003). These mechanisms may facilitate in preventing most fraud and allocate responsibility reasonably for any residual fraud.
Therefore in internet banking environment, lack of consumer perceived security and trust in vendors and payment systems is one of the main barriers to electronic commerce transactions (Siau, Sheng, Nah and Davi, 2004). The key requirements for secure financial transactions in electronic environment include confidentiality, data integrity and authentication, (Shon and Swatman, 2000). Other security factors important for consumer adoption are anonymity and privacy, which relate to use policies of customers’ personal information and purchase records (Jayawardhena and Foley, 2000). In summary, these finding suggests that internet must be secure. Data integrity against unauthorized modification must be provided. In addition, data transmission must be secure and application and data access must be controlled. Therefore security or lack thereof must be addressed in order to encourage the adoption of internet banking.

2.3 User’s Attitude and Utilization of Internet Banking

2.3.1 Attitude
When users understand or learn the internet banking system quicker, the filing efficiency and accuracy will be increased. Users can complete bank transactions quicker (perceived usefulness) when they perceive the ease of use of the system is higher (Fu et al., 2006). Hence, perceived ease of use is the determinant of perceived usefulness. Besides, taxpayers are able to complete the filing easier if the bank provide a more user-friendly internet banking system (simple operation, easy-to-understand interface, and check transactions automatically) (Ramayah et al., 2009). The possibility of using internet banking will be increased at the same time. Hence, higher perceived ease of use will produce perceived behavioural control. On the other hands, users will know the advantages of the system only if it is easy to operate (Warkentin et al., 2002). They will also have a positive attitude toward the system. When users perceive that the system is easy to operate, they will have more positive attitude.

2.3.2 Accessibility
Benefits expected to be gained are major factors for a firm to decide to go the internet banking direction. According to Basu and Muylle (2007), companies can gain two fundamental types of benefits from e-banking. These are generally described as value creation or value enhancement for one or more of a company’s stakeholder groups and cost saving, increased market share, speed and efficiency of doing business and
improvement in customer service. Value creation could also result in improvement in internal and external communication through effective e-marketing, increment of sales through e-commerce websites integrated with back office.

Windrum and De-Berranger (2002) suggest that the commercial benefits of e-banking lie in five areas. Firstly, firms are able to expand their geographical reach. Secondly, important cost benefits lie in improved efficiency in procurement, production and logistics processes. Thirdly, there is enormous scope for gaining through improved customer communications and management. Fourthly, the Internet reduces barriers to entry for new market entrants and provides an opportunity for small firms to reorient their supply chain relationships to forge new strategic partnerships. And finally, e-banking technology facilitates the development of new types of products and new business models for generating revenues in different ways.

Internet banking offers ‘anytime, anywhere’ convenience not only for communication but increasingly for mobile financial services, even for parts of the world where traditional Banking does not exist. Those financial institutions who offer internet banking know for a fact that consumers demand choice as to where and when they connect, interact and transact with the financial services provider (Berry, Seiders and Grewal, 2002). They also know that as internet banking providers need to offer a combination of different Banking technologies to reach their entire consumer base (Polatoglu and Ekin, 2001).

Going to the banks for some simple transactions like balance inquiry and payment of bills have become things of the past which used to be time consuming and sometimes exhausting but because of internet banking one does not need to go to the bank anymore. Customers of banks offering Mobile Banking via cell phones and smart phones can check their account balances, transfer funds between existing accounts, and with some services pay bills online (Jin and Lee, 2003).

According to the Finnish Bankers’ Association (2002), Finnish customers conduct their routine Banking mainly via Internet, over 70% of the customers visit a branch office less than twice a year. The number of branches in Finland has been shrinking in rhythm with increased internet banking usage. At the moment Internet is also the leading electronic
Banking channel elsewhere where the electronic delivery channels have been introduced, although telephone banking seemed to have toehold on the British financial services market (Howcroft, Hamilton and Hewer, 2002).

2.3.3 Convenience

Berry, Seiders and Grewal (2002) have defined efficiency as an aspect of convenience. On the contrary, Holbrook (1999) has placed convenience under the concept of efficiency. However, these authors agree that efficiency refer to the perceived benefits customers receive in relation to the sacrifice or costs. This efficiency perception implies that consumer perceives cognitively the ratio of benefits and sacrifice. For instance, a consumer who perceives that mobile bill paying saves time compared to his earlier way of paying forms the perception of efficiency in him/her (Laukkanen and Lauronen, 2007). Therefore, whereas convenience is a multi-dimensional construct, it is purely related to economic ratio between benefits and sacrifice.

Huang et al. (2005) considers internet banking as one of the most effective banking transaction methods because it possesses many advantages which offline banking channels cannot offer. Thus, online banking managers aim to utilize these advantages to increase the online banking adoption rate. Based to a certain extent on reasons offered by Lee (2008), there are two main types of perceived benefits, which can be categorized as direct and indirect advantages. Direct advantages refer to immediate and tangible benefits that customers would enjoy by using online banking. For example, customers can benefit from a wider range of financial benefits, faster transaction speed, and increased information transparency.

First, this wider range of financial benefits includes the lower transaction handling fees, higher deposit rates, opportunities to win prizes and extra credit card bonus points. Second, the faster transaction speed obviously means that time can be saved since online banking does not need paper documents, the processing of which can give rise to errors and delays, and which also requires more personnel (Wendy, 2008). Online banking automates this process by mediating transactions through websites and electronic data interchange, and can also reduce the need for customers to communicate with bank staff regarding transaction details because they can be obtained at a website. Third, during the
transaction, online banking allows customers to monitor contractual performance at any
time, or to confirm delivery automatically. In other words, more relevant information is
immediately available and transparent to customers (Mohamed and Kathy, 2008).

Indirect advantages are those benefits that are less tangible and difficult to measure. For
example, online banking allows customer to perform banking transactions anywhere in
the world and enjoy 24-hour service, as well as offering customers more investment
opportunities and services, such as stock quotations and news up-dates. In internet
banking convenience can result from using communication capabilities when paying for
goods and services, whether on foot or in cars, planes, or trains, and authorizing
transactions at remote servers of banks, brokerages, and merchants (Wendy, 2008). When
compared to security, cost, efficiency and privacy, convenience has been found to have
less influence on adoption of internet banking (Mohamed and Kathy, 2008). Therefore,
although e-commerce in general is claimed to break the temporal and geographical
barriers, it is only internet banking that is truly anytime and anywhere.

Internet banking improves convenience by enabling the user to view bank balances and
logs of transactions done during a certain period. Internet banking payments have been
found to increase consumer convenience by reducing the need for coins and cash in small
transactions and increasing the availability of purchase possibilities (Coursaris and
Hassanein, 2002). To support the many possible scenarios and applications Pousttchi and
Schurig (2004) suggest that, these devices should incorporate modular authorization
architectures. Location-based services and customization based on users’ prescribed or
self-ascribed roles are significant internet banking features contributing to its convenience
(Dholakia and Dholakia, 2003).

2.3.4 Service Efficiency
Network interruptions pose a serious challenge to internet banking success. Drummond
(2008) notes that internet banking Web connections are generally slower than broadband
connections; however, he observes that customers can be good about accepting a say, 10-
second refresh interval. The threat of losing connectivity in the middle of a transaction
makes internet banking inconvenient. For example consumers worry is if the information
simply lost or is it cached locally and then uploaded when the network becomes available.
Service efficiency has two facets in internet banking namely navigation and transaction processing efficiencies (Limayem, Khalifa and Frini, 2000). Navigational efficiency is particularly important for internet banking as the restrictive visual interface is usually regarded as a major hindrance for its adoption (Lee and Benbasat, 2003). One way to address this challenge is to leverage multi-media input or output components such as speech interfaces (Fan, Saliba, Kendall and Newmarch, 2005). Another important way of enhancing efficiency is personalization. (Lee, McGoldrick, Keeling and Doherty 2003).

Internet banking fund transfer service claim that the ability to use the service wherever wanted enables immediate actions like to transfer money or pay a bill, which in turn saves time and thus is perceived as efficient (Laukkanen, 2006).

Other findings reveal that convenience is the most important factor in making the decision to bank using the internet, supporting the recent findings in Australia of ACNielsen (2005). New findings in Pew (2003) study suggest, however, that convenience means much more to consumers than simply 24/7 access and ‘saved time’. Some users saw internet banking convenience as an extension of overall internet convenience that is, they had obtained internet access in the expectation that many services and other needs fulfilment would be more convenient through its use. Convenience was mostly described in terms of lifestyle, workplace use, housebound use, not having to travel, personal safety, not having to wait - and also, as found in the study, ‘saved time’ and 24/7 access.

Pew (2003) also found that relative time savings dominated banking channel convenience perceptions. An interesting finding was that internet banking users believed internet banking to be faster than phone banking, while phone banking aficionados held the opposite view. Also of interest was that although slowness of site access and download was mentioned by several users, this issue did not unduly worry people once they had commenced internet banking. These findings suggest the influence of habit and channel self-efficacy in perceptions of convenience. Not surprisingly, the younger users in our sample commented more on the importance of speed in their choice of internet banking than did older users. Also highlighting the speed issue, several users and non-users referred to the unpleasantness of waiting in line at bank branches. Phone bankers perceived phone banking as convenient. According to one such participant, an important
convenience advantage of phone banking is its ubiquity compared with inadequate internet access in hotel rooms when travelling.

2.4 Internet Payment Arrangements and the use Internet Banking Services

2.4.1 Price of Technology
Price of a technology is an important factor that influences the adoption of the technology. In times of increased competition, a distribution channel must organize business processes efficiently so as to reduce distribution costs. Several studies have pointed to the fact that the cost of delivery of banking service through Internet is several times less than the traditional delivery methods (Lichtenstein and Williamson, 2006). A number of banks have set up banking portals allowing their customers to access facilities like obtaining information, querying on their accounts, etc. Soon, still higher level of online services will be made available (Windrum and Berranger, 2002). Other banks will sooner than later, take to internet banking. Internet banking has grown enormously as technically, one can access the products and services from any part of the world. So does the potential competition. The methods of reaching out to customers, receiving the response and offering services have a new, simpler and efficient alternative, now, that is, Internet. The cost of advertisement, offer and delivery of services through Internet has reduced considerably, forcing most companies to rework their strategies to remain in competition (Huang, Hung and Yen, 2005).

Internet provides an ever-growing market both in terms of number of potential customers and geographical reach. Technological development has made access to Internet both cheaper and faster. More and more people across the globe are accessing the net either through PCs or other devices. The purchasing power and need for quality service of this segment of consumers are considerable. Anybody accessing Internet is a potential customer irrespective of his or her location (Bahmanziari, Odom and Ugrin, 2009). Thus, any business targeting final consumers cannot ignore the business potential of Internet. Also, time sensitive information can be updated faster than any other media. A properly designed website can convey a more accurate and focussed image of a product or service than any other media. Use of multimedia capabilities such as sound, picture and movies has made Internet as an ideal medium for information dissemination. However, help of
other media is necessary to draw the potential customers to the web site (Angst and Agarwal, 2009).

This alone is enough reason for banks to flock to Internet and to deliver more and more of their services through Internet and as soon as possible. Not adopting this new technology in time has the risk of banks getting edged out of competition (Huang et al., 2005). In such a scenario, the thrust of regulatory thinking has been to ensure that while the banks remain efficient and cost effective, they must be aware of the risks involved and have proper built-in safeguards, machinery and systems to manage the emerging risks. It is not enough for banks to have systems in place, but the systems must be constantly upgraded to changing and well-tested technologies, which is a much bigger challenge (Lichtenstein and Williamson, 2006). The other aspect is to provide conducive regulatory environment for orderly growth of such form of banking. Central Banks of many countries have put in place broad regulatory framework for internet banking (Burnham et al., 2003).

Internet banking is a public domain and a highly cost effective delivery channel; it does impact both the dimension and magnitude of traditional banking risks. In fact, it adds new kinds of risk to banking. Some of the concerns of the Regulatory Authority in internet banking relate to technology standards including the level of security and uncertainties of legal jurisdiction (Lichtenstein and Williamson, 2006). Its cost effective character provides opportunities for efficient delivery of banking services and higher profitability and a threat to those who fail to harness it. Internet provides an ever-growing market both in terms of number of potential customers and geographical reach. Technological development has made access to internet both cheaper and faster. More and more people across the globe are accessing the net either through PCs or other devices. The purchasing power and need for quality service of this segment of consumers are considerable. Anybody accessing Internet is a potential customer irrespective of his or her location. Thus, any business targeting final consumers cannot ignore the business potential of Internet (Akoh, 2001).
2.4.2 Cost of Payment Transactions

Also, the cost of a payment transaction has a direct effect on consumer adoption if the cost is passed on to customers. Fenech (2002), studied consumer intention to WAP shopping and found that the strongest characteristic differentiating the high and low intention groups was price consciousness. As shoppers in electronic channels are attentive to price the transaction costs of internet banking should be low enough to make the total cost of the purchase competitive with physical world prices. Arguably, a technology must be plausibly priced relative to alternatives for consumers to use the novel technology. As Laukkanen et al (2007) puts it value barrier is responsible for the failure of many new developments because of people’s perception that the cost of adopting an innovation is far greater than any ensuing benefits. Thus, if internet banking is not being adopted it could be because it is not been reasonably priced compared to either traditional Banking, ATM Banking or internet banking (Sathye, 1999). The technology used for internet banking may increase or lower the cost of Banking as each technology has its own features which differ in costs. This cost impact in turn may encourage or discourage adoption of internet banking.

With the General Packet Radio Service (GPRS), the costs advantage is that the subscriber pays for the volume of the transmitted data and not the time required in the process (Toh, 2002) making it the first technology that can not only enable but also promote internet banking. Internet banking products and services provide opportunities for simplified financial management (for example, aggregating expenses in one place for payments) and may be lower cost to firms which would then pass along cost savings to consumers hence attract even more customers (Jane, 2004).

Affordability in internet banking varies by number, size and type of transactions. There can be a typical user doing just a few transactions per month like say, single balance inquiry, single remittance and single airtime purchase per month or a user doing all the transaction offered on his/her branchless banking account which may include other functions like account balances, saving, paying bills, making store purchases (Rosenberg, 2008). In a study conducted by Fenech (2002) on consumer intention to adopt internet banking, some interviewees said that they had refrained from using internet banking payments because of premium pricing.
2.4.3 Other Costs of Internet Banking Services

Cost is an important issue in an e-venture. It is generally accepted that the cost of overhead, servicing and distribution such as through Internet is less compared to the traditional way of doing business. Although the magnitude of difference varies depending on the type of business and the estimates made, but there is unanimity that Internet provides a substantial cost advantage and this, in fact, is one of the major driving forces for more number of traditional business adopting to e-commerce and pure e-commerce firms to sprout (Burnham et al., 2003). Cost of communication through WWW is the least compared to any other medium. Many a time one’s presence in the web may bring in international enquiries, which the business might not have targeted. The business should have proper plans to address such opportunities (Basu and Muylle, 2007).

Consumers cited various types of costs which had inhibited their use of internet banking. Burnham et al. (2003) identified procedural, financial and relational costs considered by consumers when switching between various types of service offerings and such costs were cited by participants. The set-up and learning procedures were major hurdles for many non-users, while still not as significant to adoption as convenience issues. Inertia was cited with comments such as, “We’ve got the internet at home, but I don’t do banking. It’s partly the slackness of not getting around to working out how to do it.” Plentiful comments were made by users about difficulties anticipated or experienced in getting set up, centred on changes to current accounts, paperwork, delays such as waiting for approval, and the learning involved. Users also saw the set up procedure as a key barrier that they had overcome. After set-up, procedures required to log on, access and download the banking site, and transact, were considered costly by users and non-users alike.

According to Burnham et al. (2003), computer purchase, internet access and internet banking transactions incur charges. Participants mentioned recent changes in the introduction of fees for internet banking where previously there were none. One non-user mentioned the lack of need for such a ‘sophisticated service’, thereby enabling him to avoid the cost. Some participants were highly aware of even small differences in transaction fees between alternative services. Burnham et al. mentions that while one user was pleased with the loss of contact with call-centre staff when moving from phone
banking to internet banking, some users commented on the sadness of losing personal relationships with branch personnel. This suggests that for some people, there are relationship costs to be factored into the adoption decision (Lichtenstein and Williamson, 2006).

Further, Akoh (2001) answers the question why firms should go the internet banking way and outlines the tremendous benefits derived by firms who have already integrated electronics into their business processes. According to him it is shown that if the cost of a full-service trading transaction is about $150, it will cost $69 doing the same using a discount broker and $10 using an online broker. He continued that it will cost all parties (the bank, consumer, service provider) $1.27 for a banking transaction (such as a simple cash withdrawal) at a bank branch, $0.27 using an ATM machine and $0.01 using the Internet. Akoh (2001) then adds that doing business electronically does not only reduce cost but tremendously affects the speed and efficiency of businesses.

2.5 Conceptual Framework

<table>
<thead>
<tr>
<th>Independent Variable</th>
<th>Moderating variables</th>
<th>Dependent Variable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Perceived Security</td>
<td></td>
<td>Adoption of Internet Banking</td>
</tr>
<tr>
<td>• Hacking</td>
<td></td>
<td>• Use of Internet banking.</td>
</tr>
<tr>
<td>• Privacy</td>
<td></td>
<td>• Acceptance of internet banking.</td>
</tr>
<tr>
<td>• Trust</td>
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<tr>
<td>• Encryption Threat</td>
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<tr>
<td>User Attitude</td>
<td></td>
<td>Intention to Use Internet Banking</td>
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<tr>
<td>• Perceived accessibility</td>
<td></td>
<td>• Use of Internet banking.</td>
</tr>
<tr>
<td>• Perceived efficiency</td>
<td></td>
<td>• Acceptance of internet banking.</td>
</tr>
<tr>
<td>• Convenience</td>
<td></td>
<td></td>
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<tr>
<td>Internet Payment</td>
<td></td>
<td></td>
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<tr>
<td>• Price of technology</td>
<td></td>
<td></td>
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<tr>
<td>• Transaction cost</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Other costs</td>
<td></td>
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</tr>
</tbody>
</table>

Figure 2.1: Conceptual Framework

Source: Author (2014).
2.6 Chapter Summary
The chapter reviewed literature in relation to the extent in which security determined the potential users’ attitude to adopt internet banking services. The second section of the literature review looked at how convenience determine the potential users’ attitude to adopt internet banking services and third section of the literature analyzed how the transaction cost determine the potential users’ attitude to adopt internet banking services. The next chapter is on the research methodology.
CHAPTER THREE

3.0 RESEARCH METHODOLOGY

3.1 Introduction
This chapter presents the research methodology and the profile of the study area. The key issues discussed in this chapter include the research design, data required and sources, data collection tools, sampling procedures, key variables and the analysis of the data. In addition there are issues on the perception of security from hackers, introduction of online banking predict the users’ attitude to adopt internet banking services and the internet payment arrangements increase the use of internet banking services.

3.2 Research Design
This research adopted a descriptive research design. Descriptive research design is concerned primarily with addressing the particular characteristics of a specific population of subjects, either at a fixed point in time or at varying times for comparative purposes (Gill and Johnson, 2010). In addition, a descriptive study attempts to describe a subject, often by creating a profile of a group of problems, people or events, through collections of data and the tabulation of frequencies on research variables and the research reveals who, what, when, where or how much (Saunders and Thornhill, 2000). A survey in form of standardized questions in a questionnaire was used to collect data. A survey is defined by Malhotra and Birks (2007) as a method of collecting data from people about who they are, how they think (motivations and beliefs) and what they do (behaviour). Therefore, the study adopted a quantitative approach on the perception of security from hackers, introduction of online banking and the internet payment arrangements as an influence on the use of internet banking services as independent variables. The dependent variable was the adoption of internet banking.

3.3 Population and Sampling Design
3.3.1 Population
According to Frankel and Wallen (2000) a population refers to the group to which the results of the research are intended to apply. They stated that a population is usually the individuals who possess certain characteristics or a set of features a study seeks to
examine and analyze. Kumekpor (2002) emphasized this by defining a population as the total number of all units of the issue or phenomenon to be investigated into which is “all possible observations of the same kind”. The research population was 4,916 which consisted of 476 employees, 110 corporate and 4,330 retail customers.

Table 3.1: Total Population Distribution

<table>
<thead>
<tr>
<th>Customer Category</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employees</td>
<td>476</td>
</tr>
<tr>
<td>Corporate</td>
<td>110</td>
</tr>
<tr>
<td>Retail</td>
<td>4,330</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>4,916</strong></td>
</tr>
</tbody>
</table>

Source: Imperial Bank (2013).

3.3.2 Sampling Design and Sample Size

3.3.2.1 Sampling Frame
A research sampling design is that part of the research plan that indicates how cases are to be selected for observation. The design therefore maps out the procedure to be followed to draw the study’s sample. A sampling frame is a list of elements from which the sample is actually drawn and is closely related to the population under study (Cooper and Schindler, 2003). In this study, the sampling frame constituted of employees, corporate and retail customers. The information were obtained from the Imperial bank customer database and the number of employees was obtained from Imperial Bank human resource department.

3.3.2.2 Sampling Techniques
The sampling techniques included the random sampling method in the determination of customers to be included in the study. Random sampling was used when the various sampling units satisfy certain criteria of interest. In this study, the chosen group were customers banking with Imperial Bank. Random sampling technique (Lottery Method) was also employed to ensure fair representation of individual members in the groups selected for the study. A random sample is a subset of individuals (a sample) chosen from a larger set (a population). Each group was chosen randomly and entirely by chance, such that each individual has the same probability of being chosen at any stage during the sampling process, and each individual has the same probability of being chosen for the
sample (Yates, Daniel, Moore and Starnes, 2008). This minimized bias and simplified analysis of the results.

### 3.3.2.3 Sampling Size

The term sample refers to a segment of the larger population selected for research to represent the population as a whole. Sample size is the number of items, objects or individuals selected for study to represent the population as a whole. According to Mugenda and Mugenda (2001), to ensure that the sample accurately represents the population, the researcher is required to clearly define the characteristics of the population, to determine the required sample size and then choose the best method of selecting members of the sample from the larger population (approximately 10% of the total population) as indicated in Table 3.2.

<table>
<thead>
<tr>
<th>Customer Category</th>
<th>Total</th>
<th>Sample Size</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employees</td>
<td>476</td>
<td>47</td>
<td>10%</td>
</tr>
<tr>
<td>Corporate</td>
<td>110</td>
<td>11</td>
<td>10%</td>
</tr>
<tr>
<td>Retail</td>
<td>4,330</td>
<td>433</td>
<td>10%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>4,916</strong></td>
<td><strong>491</strong></td>
<td><strong>10%</strong></td>
</tr>
</tbody>
</table>

Source: Imperial Bank (2014).

### 3.4 Data Collection Method

The data collection technique that was employed for the research included the use of structured questionnaires. The questionnaires were used for the collection of data from the selected customers. The questionnaire embodied both open and closed-ended questions for randomly selected members of the various groups. A survey questionnaire was designed to apply to a heterogeneous sample selected from the large population of customers (Burns, 2000). A questionnaire is defined as a formalized schedule or form which contains an assembly of carefully formulated questions for information gathering (Wong, 1999). The questionnaire were structured in three broad areas that included the general information, a rating on the perception of security seal on the website increase the utilization of internet banking services among customers, the introduction of online banking create a favourable environment predict the users’ attitude to adopt internet banking services and how the internet payment arrangements increase the use of internet
banking services. The variables on the key objectives of the study were measured in interval scales on a five point Liker scale (1-representing strongly agree to 5– strongly disagree) to determine respondents agreement with the concepts under investigation.

3.5 Research Procedures
The respondents were requested for their time prior to sending the actual questionnaire. A pilot test involving 5 customers was carried out to evaluate the completeness, precision, accuracy and clarity of the questionnaires. This ensured the reliability of the data collection instruments used. After the amendment of the final questionnaire, the researcher explained the purpose of the research and sought permission from the institution to carry out the actual research. The final questionnaires were distributed to the respondents with the help of research assistants. This enhanced the speed of data collection. Each completed questionnaire was treated as a unique case and a sequential number given to each. Filling the questionnaire took approximately 10 minutes. The collected data was edited and entered into the Statistical Package for the Social Sciences (SPSS) software to enable the carrying out of the analysis.

3.6 Data Analysis Methods
To ensure easy analysis, the questionnaire was coded according to each variable of the study. This study used descriptive statistics. According to McDanile and Gates (2001), descriptive analysis involves a process of transforming a mass of raw data into tables, charts, with frequency distribution and percentages, which are a vital part of making sense of the data. In this study, the descriptive statistics such as percentages and frequency distribution were used to analyze the demographic profile of the participants. The demographic data was tabulated using frequency and percentages. In order to describe the data, the study used means to interpret data on the key research questions.

3.7 Chapter Summary
This chapter presents the various methods and procedures the researcher adopted in conducting the study in order to answer the research questions raised in the first chapter. The chapter is organized in the following ways: the research design, population, sampling design and sample size, data collection methods, research procedures and data analysis methods. The next chapter presents the results and findings of the study.
CHAPTER FOUR

4.0 RESULTS AND FINDINGS

4.1 Introduction

This chapter addresses the results and findings on the factors influencing the adoption of internet banking among users using the case of imperial bank. The findings are presented on the order of the research objectives. The first section of the results and findings are based on the respondent demographic profile. The second section of the results and findings are based on the perception of security from hackers increase the utilization of internet banking services among customers. The third section of the results and findings are based on how the introduction of online banking predicts the users’ attitude to adopt internet banking services. The fourth section of the results and findings are based on how the internet payment arrangements increase the use of internet banking services. A total of 491 questionnaires were distributed to three categories of respondents: employees, corporate and retail customers. However, 315 responded to the questionnaires creating a response rate of 64% as outlined in Table 4.1.

<table>
<thead>
<tr>
<th>Category</th>
<th>Target Respondents</th>
<th>Response</th>
<th>Response Rate (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employees</td>
<td>47</td>
<td>33</td>
<td>70</td>
</tr>
<tr>
<td>Corporate</td>
<td>11</td>
<td>9</td>
<td>82</td>
</tr>
<tr>
<td>Retail</td>
<td>433</td>
<td>257</td>
<td>59</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>491</strong></td>
<td><strong>315</strong></td>
<td><strong>64</strong></td>
</tr>
</tbody>
</table>

4.2 General Information

The general information is organized in the following areas: gender, age, marital status purpose of using internet, frequency of using the internet, using the internet banking, learning about internet banking, purpose of accessing internet banking and the frequency of using the internet banking.
4.2.1 Gender
The researcher sought to find out the gender of the target respondents involved in the study. The findings in Figure 4.1 established that 53% of the respondents were male as compared to 47% of the respondents who were female. Thus, the findings indicate that majority of the respondents were male.

![Figure 4.1: Gender](image)

4.2.2 Age
The study intended to determine the age of the target respondents involved in the study. The findings in Figure 4.2 illustrates that 7% of the respondents were under 18 years, 6% between 19 to 30 years, 10% were between 31 to 45 years, 39% between 46 to 60 years and 38% of the respondents were above 60 years. Thus, the findings indicate that majority of the respondents are above 31 years old.
4.2.3 Marital Status

The study intended to determine the marital status of the respondents involved in the study. The findings on Figure 4.3 illustrates that 37% of the respondents were married, 8% of the respondents were divorced, 11% were cohabiting and 44% were single. The findings suggest that majority of the respondents were single.
4.2.4 Purpose of Using Internet
The study intended to determine the purpose of using internet from the target respondents involved in the study. The findings on Table 4.6 illustrates that 46% of the respondents accessed email, 28% of the respondents used internet for entertainment, 20% used the internet for study, 3% used the internet to access current news and another 3% accessed internet for internet banking. Thus, the findings indicate that majority of the respondents used internet for checking emails and entertainment as compared to transacting internet banking.

Figure 4.4: Purpose of Using Internet

4.2.5 Frequency of Using the Internet
The study intended to determine the frequency of using the internet by the target respondents. The findings on Figure 4.5 illustrated that 37% of the respondents used internet daily, 32% used it once a week, 26% of the respondents used the internet more than two time a week and 5% of the respondents used the internet once a month. Thus, the findings indicated that majority of the respondents used the internet daily.
4.2.6 Using the Internet Banking

The study intended to determine whether the respondents had ever used internet banking. The findings on Figure 4.6 illustrate that 83% of the respondents had used it compared to 17% of the respondents who stated otherwise. The findings indicate that majority of the respondents had used internet banking.

Figure 4.5: Frequency of Using the Internet

Figure 4.6: Using the Internet Banking
4.2.7 Learning about Internet Banking

The study intended to determine how the respondents learned about internet banking. The findings on Figure 4.7 illustrates that 54% of the respondents suggested through bank brochures or bank website, 27% of the respondents mentioned through the television, 9% through newspapers and 10% of the respondents were referred by friends. Thus, the findings indicated that majority of the respondents learned about internet banking through bank brochures and company websites. Kerem (2003) noted that promotional initiatives on ICT Usage are vital to positively influence customer adoption of electronic solutions.

![Figure 4.7: Learning about Internet Banking](image)

4.2.8 Purpose of accessing Internet Banking

The study intended to determine the purpose of accessing internet banking from the target respondents involved in the study. The findings on Table 4.2 illustrates that 28% of the respondents used internet banking for viewing account statements, 20% of the respondents used internet banking for account analysis and information retrieval, 8% have used to bill payments, 7% for foreign currency transactions, 9% making money transfers, 9% for tuition payment processing, 10% for viewing cheque account balances, 8% for making payments and 10% for transferring funds.
Table 4.2: Purpose of accessing Internet Banking

<table>
<thead>
<tr>
<th>Purpose of accessing Internet Banking</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Viewing account statements</td>
<td>95</td>
<td>28</td>
</tr>
<tr>
<td>Statements of account analysis and information retrieval</td>
<td>68</td>
<td>20</td>
</tr>
<tr>
<td>Bill payments</td>
<td>27</td>
<td>8</td>
</tr>
<tr>
<td>Foreign Currency Transactions</td>
<td>24</td>
<td>7</td>
</tr>
<tr>
<td>Tuition payment processing</td>
<td>31</td>
<td>9</td>
</tr>
<tr>
<td>Viewing cheque account balances</td>
<td>34</td>
<td>10</td>
</tr>
<tr>
<td>Making payments</td>
<td>34</td>
<td>10</td>
</tr>
<tr>
<td>Transferring funds</td>
<td>34</td>
<td>10</td>
</tr>
<tr>
<td>Total</td>
<td>309</td>
<td>100</td>
</tr>
</tbody>
</table>

4.2.11 Frequency of Using the Internet Banking

The study intended to determine the frequency of using the internet banking by the target respondents involved in the study. The findings on Figure 4.8 illustrates that 23% of the respondents used internet banking daily, 33% weekly, 17% monthly and 27% quarterly. Thus, the findings indicate that majority of the respondents used internet banking weekly.

Figure 4.8: Frequency of Using the Internet Banking
4.3 Perception of Security and Utilization of Internet Banking Services
The study aimed to determine whether online banking environment could lead to the utilization of internet banking services and the findings are presented in Table 4.3. First, majority of respondents generally suggested that it was extremely not secure to send sensitive information across online banking at a mean of 2.81. Most of the corporate (m=3.63) and the employees (m=3.17) agreed to this statement as compared to retail customers at a mean of 1.63. Second, a number of the respondents suggested that the bank was able to provide the necessary security at a mean of 2.80. Most of the employee respondents (m=3.11) and corporate respondents (m=2.26) agreed to this statement as compared to the retail customers at a mean of 2.32.

Third, a number of the respondents suggested that they trusted the bank ability to maintain internet banking confidentiality at a mean of 2.70. Most of the corporate respondents (m=3.33) and employee respondents (m=2.97) agreed to this statement as compared to the retail customers at a mean of 1.79. Fourth, a number of the respondents suggested that internet banking was insecure at a mean of 2.52. Most of the corporate respondents (m=2.98) and employee respondents (m=2.89) agreed to this statement as compared to the retail customers at a mean of 1.68.

Fifth, a number of the respondents suggested that security risk negatively influenced attitudes towards the use of online banking at a mean of 2.44. Most of the employee respondents (m=3.28) and corporate respondents (m=2.56) agreed to this statement as compared to the retail customers at a mean of 1.49. A small number of the respondents suggested that it was not safe providing corporate over internet banking at a mean of 2.15. Most of the employee respondents (m=2.76) and corporate respondents (m=2.69) agreed to this statement as compared to the retail customers at a mean of 1.00. Fewer respondents suggested that various services can be accessed at the same time using internet banking at a mean of 1.85. Most of the corporate respondents (m=2.68) and retail customers (m=1.63) agreed to this statement as compared to the employee respondents at a mean of 1.23.
Table 4.3: Perception of Security and Utilization of Internet Banking Services

<table>
<thead>
<tr>
<th></th>
<th>Employee</th>
<th>Corporate</th>
<th>Retail Customers</th>
<th>Average</th>
<th>Ranking</th>
</tr>
</thead>
<tbody>
<tr>
<td>Security risk negatively influences intentions to use online banking.</td>
<td>1.23</td>
<td>3.31</td>
<td>2.51</td>
<td>2.35</td>
<td>6</td>
</tr>
<tr>
<td>Security risk negatively influences attitudes towards the use of online banking.</td>
<td>3.28</td>
<td>2.56</td>
<td>1.49</td>
<td>2.44</td>
<td>5</td>
</tr>
<tr>
<td>It is not safe providing corporate over internet banking.</td>
<td>2.76</td>
<td>2.69</td>
<td>1.00</td>
<td>2.15</td>
<td>8</td>
</tr>
<tr>
<td>Internet banking is insecure</td>
<td>2.89</td>
<td>2.98</td>
<td>1.68</td>
<td>2.52</td>
<td>4</td>
</tr>
<tr>
<td>I trust in the ability of the bank to protect my confidentiality.</td>
<td>2.97</td>
<td>3.33</td>
<td>1.79</td>
<td>2.70</td>
<td>3</td>
</tr>
<tr>
<td>It is not secure sending sensitive information across online banking.</td>
<td>3.17</td>
<td>3.63</td>
<td>1.63</td>
<td>2.81</td>
<td>1</td>
</tr>
<tr>
<td>The bank is able to provide the necessary security.</td>
<td>3.11</td>
<td>2.96</td>
<td>2.32</td>
<td>2.80</td>
<td>2</td>
</tr>
<tr>
<td>Security risks of internet banking are not known.</td>
<td>2.61</td>
<td>2.26</td>
<td>1.61</td>
<td>2.16</td>
<td>7</td>
</tr>
<tr>
<td>Various services can be accessed at the same time using internet banking.</td>
<td>1.23</td>
<td>2.68</td>
<td>1.63</td>
<td>1.85</td>
<td>9</td>
</tr>
</tbody>
</table>

4.3.1 Correlation between Usage and Perception of Security

The study determined the correlation between usage and perception of security of internet banking from the participants surveyed in the study. The findings established that there was a significant relationship between usage and security risk negatively influencing intentions to use online banking at \( r=0.685, p>0.01 \). The relationship was extended to the security risk negatively influences attitudes towards the use of online banking \( r=0.730, p>0.01 \), internet banking is insecure \( r=0.583, p>0.01 \), the ability of the bank to protect confidentiality \( r=0.561, p>0.01 \), it is not secure sending sensitive information across online banking \( r=0.660, p>0.01 \) and the bank is able to provide the necessary security \( r=0.660, p>0.01 \). The findings are presented in Table 4.4.
4.4 Online Banking Environment and Utilization of Internet Banking

The study aimed to determine whether online banking environment could lead to the utilization of internet banking services and the findings are presented in Table 4.5. First, majority of respondents generally suggested that the bank cannot quickly help in technical and non technical issues of internet banking at a mean of 2.78. Most of the corporate respondents (m=3.07) and employees (m=2.98) agreed to this statement as compared to the retail customers at a mean of 2.28.

Second, a number of the respondents suggested that using the online banking would enable them to accomplish their banking tasks more quickly at a mean of 2.73. Most of the corporate respondents (m=2.97) and retail customers (m=2.62) agreed to this statement as compared to the employee respondents at a mean of 2.61. Third, a number of the respondents suggested that it was easy to use online banking to accomplish their banking tasks at a mean of 2.63. Most of the retail customer (m=3.00) and employee

<table>
<thead>
<tr>
<th><strong>Table 4.4: Correlation between Usage and Perception of Security</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Usage of internet banking</strong></td>
</tr>
<tr>
<td>Security risk negatively influences intentions to use online banking.</td>
</tr>
<tr>
<td>Security risk negatively influences attitudes towards the use of online banking.</td>
</tr>
<tr>
<td>Internet banking is insecure.</td>
</tr>
<tr>
<td>I trust in the ability of the bank to protect my confidentiality.</td>
</tr>
<tr>
<td>It is not secure sending sensitive information across online banking.</td>
</tr>
<tr>
<td>The bank is able to provide the necessary security.</td>
</tr>
</tbody>
</table>

* Correlation is significant at the 0.05 level (2-tailed).
** Correlation is significant at the 0.01 level (2-tailed).
respondents (m=2.97) agreed to this statement as compared to the corporate respondents at a mean of 1.93.

Fourth, a number of the respondents suggested that online banking offered a wider range of banking products, services and investment opportunities at a mean of 2.54. Most of the employees respondents (m=2.62) and corporate (m=2.51) agreed to this statement as compared to the retail customers at a mean of 2.48. Fifth, a number of the respondents suggested that online banking saves time in performing banking transaction at a mean of 2.52. Most of the corporate respondents (m=3.31) and employees (m=2.22) agreed to this statement as compared to the retail customers at a mean of 2.03.

Sixth, a number of the respondents suggested that online banking was used for their banking needs at a mean of 2.48. Most of the corporate respondents (m=2.74) and employees (m=2.61) agreed to this statement as compared to the retail customers at a mean of 2.10. Seventh, a number of the respondents suggested that the interaction with online banking does not require a lot of mental effort in performing organization tasks at a mean of 2.45. Most of the corporate (m=2.76) and employees (m=2.70) respondents agreed to this statement as compared to the retail customers at a mean of 1.88. Eighth, a number of the respondents suggested that using online banking is useful for the organization at a mean of 2.25. Most of the corporate (m=3.07) and employees respondents (m=2.58) agreed to this statement as compared to the retail customers at a mean of 1.09.
Table 4.5: Online Banking Environment and Utilization of Internet Banking

<table>
<thead>
<tr>
<th></th>
<th>Employee</th>
<th>Corporate</th>
<th>Retail Customers</th>
<th>Average</th>
<th>Ranking</th>
</tr>
</thead>
<tbody>
<tr>
<td>Using the online banking would enable me to accomplish my tasks more quickly in the organization.</td>
<td>2.61</td>
<td>2.97</td>
<td>2.62</td>
<td>2.73</td>
<td>2</td>
</tr>
<tr>
<td>Using online banking is useful for the organization.</td>
<td>2.58</td>
<td>3.07</td>
<td>1.09</td>
<td>2.25</td>
<td>8</td>
</tr>
<tr>
<td>Interaction with online banking does not require a lot of mental effort in performing organization tasks.</td>
<td>2.70</td>
<td>2.76</td>
<td>1.88</td>
<td>2.45</td>
<td>7</td>
</tr>
<tr>
<td>It is easy to use online banking to accomplish my banking tasks in the organization.</td>
<td>2.97</td>
<td>1.93</td>
<td>3.00</td>
<td>2.63</td>
<td>3</td>
</tr>
<tr>
<td>Online banking offer a wider range of banking products, services and investment opportunities</td>
<td>2.62</td>
<td>2.51</td>
<td>2.48</td>
<td>2.54</td>
<td>4</td>
</tr>
<tr>
<td>Online banking saves time in performing banking transaction</td>
<td>2.22</td>
<td>3.31</td>
<td>2.03</td>
<td>2.52</td>
<td>5</td>
</tr>
<tr>
<td>Bank cannot quickly help in technical and non technical issues of internet banking</td>
<td>2.98</td>
<td>3.07</td>
<td>2.28</td>
<td>2.78</td>
<td>1</td>
</tr>
<tr>
<td>Online banking is used for the corporate banking needs</td>
<td>2.61</td>
<td>2.74</td>
<td>2.10</td>
<td>2.48</td>
<td>6</td>
</tr>
</tbody>
</table>

4.4.1 Correlation between Usage and Online Banking Environment

The study determined the correlation between usage and challenges of internet banking adoption from the participants surveyed in the study. The findings established that there was a significant relationship between usage and the respondents using the online banking would enable them to accomplish my tasks more quickly in the organization at (r=0.174, p>0.01). The relationship was extended to it is easy to use online banking to accomplish my banking tasks in the organization at (r=0.178, p>0.01), online banking offer a wider range of banking products, services and investment opportunities at (r=0.314, p>0.01) and the bank cannot quickly help in technical and non technical issues of internet banking (r=0.376, p>0.01). The findings are presented in Table 4.6.
Table 4.6: Correlation between Usage and Online Banking Environment

<table>
<thead>
<tr>
<th></th>
<th>Usage of internet banking</th>
</tr>
</thead>
</table>
| Using the online banking would enable me to accomplish my tasks more quickly in the organization. | Pearson Correlation: .174**  
Sig. (2-tailed): .006  
N: 307 |
| It is easy to use online banking to accomplish my banking tasks in the organization. | Pearson Correlation: .178**  
Sig. (2-tailed): .008  
N: 320 |
| Online banking offer a wider range of banking products, services and investment opportunities. | Pearson Correlation: .314**  
Sig. (2-tailed): .000  
N: 336 |
| Bank cannot quickly help in technical and non technical issues of internet banking. | Pearson Correlation: .376**  
Sig. (2-tailed): .000  
N: 336 |

* Correlation is significant at the 0.05 level (2-tailed).
** Correlation is significant at the 0.01 level (2-tailed).

4.5 Internet Payment Arrangements and the Use Internet Banking Services

The study aimed to determine whether internet payment arrangements could lead to the utilization of internet banking services and the findings are presented in Table 4.7. First, majority of participants in the study online banking service leads to losses and waste of time when fixing payments errors at a mean of 2.82 Most of the corporate respondents (m=3.35) and employees (m=2.57) agreed to this statement as compared to the retail customers at a mean of 2.55. Second, a number of the respondents suggested that using online banking for financial transactions would be a wise idea at a mean of 2.75. Most of the corporate respondents (m=3.20) and employees (m=2.94) agreed to this statement as compared to the retail customers at a mean of 2.11.

Third, a number of the respondents suggested that online banking saves the bank transaction handling fees in performing banking transactions at a mean of 2.74. Most of the employee respondents (m=3.23) and corporate respondents (m=2.52) agreed to this statement as compared to the retail customers (m=2.46) at a mean of 2.46. Fourth, a number of the respondents suggested that when transaction errors occur, it is difficult to get compensation from banks at a mean of 2.70. Most of the employee respondents (m=3.08) and retail customers (m=2.58) agreed to this statement as compared to the corporate customers at a mean of 2.44.
Fifth, a number of the respondents suggested that using online banking can save the transaction handling fees in performing banking transaction at a mean of 2.56. Most of the employees respondents (m=2.66) and corporate (m=2.65) agreed to this statement as compared to the retail customers at a mean of 2.37. Sixth, a number of the respondents suggested that online banking sometimes does not perform well and processes payments incorrectly at a mean of 2.42. Most of the corporate respondents (m=3.04) and employees (m=2.50) agreed to this statement as compared to the retail customers at a mean of 1.73. Seventh, a number of the respondents suggested that online banking servers may not perform well and process payments incorrectly at a mean of 2.36. Most of the employee respondents (m=2.67) and corporate respondents (m=2.44) agreed to this statement as compared to the retail customers at a mean of 1.97.

Table 4.7: Internet Payment Arrangements and the Use Internet Banking Services

<table>
<thead>
<tr>
<th></th>
<th>Employee</th>
<th>Corporate</th>
<th>Retail Customers</th>
<th>Average</th>
<th>Ranking</th>
</tr>
</thead>
<tbody>
<tr>
<td>Using online banking for financial transactions would be a wise idea.</td>
<td>2.94</td>
<td>3.20</td>
<td>2.11</td>
<td>2.75</td>
<td>2</td>
</tr>
<tr>
<td>using online banking can save the transaction handling fees in performing banking transaction</td>
<td>2.66</td>
<td>2.65</td>
<td>2.37</td>
<td>2.56</td>
<td>5</td>
</tr>
<tr>
<td>Online banking servers may not perform well and process payments incorrectly</td>
<td>2.67</td>
<td>2.44</td>
<td>1.97</td>
<td>2.36</td>
<td>7</td>
</tr>
<tr>
<td>When transaction errors occur, it is difficult to get compensation from banks</td>
<td>3.08</td>
<td>2.44</td>
<td>2.58</td>
<td>2.70</td>
<td>4</td>
</tr>
<tr>
<td>Online banking service leads to losses and waste of time when fixing payments errors.</td>
<td>2.57</td>
<td>3.35</td>
<td>2.55</td>
<td>2.82</td>
<td>1</td>
</tr>
<tr>
<td>Online banking sometimes does not perform well and processes payments incorrectly</td>
<td>2.50</td>
<td>3.04</td>
<td>1.73</td>
<td>2.42</td>
<td>6</td>
</tr>
<tr>
<td>Online banking saves the bank transaction handling fees in performing banking transactions.</td>
<td>3.23</td>
<td>2.52</td>
<td>2.46</td>
<td>2.74</td>
<td>3</td>
</tr>
</tbody>
</table>

4.5.1 Correlation between Usage and Internet Payment Arrangements

The study determined the correlation between usage and challenges of internet banking adoption from the participants surveyed in the study. The findings established that there was a significant relationship between usage and using online banking for financial transactions would be a wise idea at (r=0.365, p>0.01). The relationship was extended to
online banking service leads to losses and waste of time when fixing payments errors at \( r=0.163, \ p>0.01 \). The findings are presented in Table 11.

<table>
<thead>
<tr>
<th>Table 4.8: Correlation between Usage and Internet Payment Arrangements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Using online banking for financial transactions would be a wise idea.</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
</tr>
<tr>
<td>N</td>
</tr>
<tr>
<td>Online banking service leads to losses and waste of time when fixing payments errors.</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
</tr>
<tr>
<td>N</td>
</tr>
</tbody>
</table>

* Correlation is significant at the 0.05 level (2-tailed). ** Correlation is significant at the 0.01 level (2-tailed).

4.6 Chapter Summary

The findings on the perception of security and utilization of internet banking services indicated that customers face a dilemma between desirable and undesirable consequences of the adoption and hence face a risky decision on security. Insufficient trust on financial institutions is a critical perceived credibility issues that lower internet banking acceptance. Customer trust is an essential way to retain existing bank customers as well as encouraging the adoption of internet banking.

The findings on the online banking environment and utilization of internet banking revealed that long response time is the criticised transaction risks of internet banking services. The slow response to customers’ online requests is mainly due to the shortage of knowledgeable personnel. The cost and time taken to process an internet banking transaction was short compared to bank branches. Internet banking allows costs saving, increases productivity, improves bank service delivery, customises banking services, and minimises the human errors of the front-desk staffs in performing routine banking.

The findings on the internet payment arrangements and the use internet banking services established that web server delays may lead to financial and time loss. Users will have greater confidence in using a simple online service. Internet banking has a clear cost savings goal. This may explain why most consumers may not adopt internet banking because it is expensive. Reliability involves consistency of performance and
dependability which means that the banking firm performs the services right the first time and honours its promises. Correct processing of payments may relate with the proper functioning of the internet banking services. Reliability is positively related to the use of internet banking.
CHAPTER FIVE

5.0 DISCUSSION, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction
This chapter provides a discussion on the findings of the research as compared to the findings in the literature review, the summary of the study and recommendations on the factors influencing the adoption of internet banking among users. The research is concluded on the basis of the discussion of the research questions.

5.2 Summary
The purpose of this study was to investigate the factors influencing the adoption of internet banking among users using the case of imperial bank. The study was guided by the following research questions: To what extent does the perception of security from hackers increase the utilization of internet banking services among customers? To what extent does the introduction of online banking predict the users’ attitude to adopt internet banking services? And to what extent do the internet payment arrangements increase the use of internet banking services?

This research adopted a descriptive research design. The research population was 4,916 which consisted of 476 employees, 110 corporate and 4,330 retail customers at Imperial Bank in Kenya, using a confidence level of 95%, the sample size was 47 employees, 11 corporate and 433 retail customers. Random sampling techniques were adopted. Structured questionnaires were used as data collection tool. Demographic data were tabulated using frequency and percentages. In order to describe the data, the study used means of each variable.

The findings on the perception of security and utilization of internet banking services indicated that customers face a dilemma between desirable and undesirable consequences of the adoption and hence face a risky decision on security. Insufficient trust on financial institutions is a critical perceived credibility issues that lower internet banking acceptance. Customer trust is an essential way to retain existing bank customers as well as encouraging the adoption of internet banking.
The findings on the online banking environment and utilization of internet banking revealed that long response time is the criticised transaction risks of internet banking services. The slow response to customers’ online requests is mainly due to the shortage of knowledgeable personnel. The cost and time taken to process an internet banking transaction was short compared to bank branches. Internet banking allows costs saving, increases productivity, improves bank service delivery, customises banking services, and minimises the human errors of the front-desk staffs in performing routine banking.

The findings on the internet payment arrangements and the use internet banking services established that web server delays may lead to financial and time loss. Users will have greater confidence in using a simple online service. Internet banking has a clear cost savings goal. This may explain why most consumers may not adopt internet banking because it is expensive. Reliability involves consistency of performance and dependability which means that the banking firm performs the services right the first time and honours its promises. Correct processing of payments may relate with the proper functioning of the internet banking services. Reliability is positively related to the use of internet banking.

5.3 Discussion
5.3.1 Perception of Security and Utilization of Internet Banking Services
When adopting new products, customers face a dilemma between desirable and undesirable consequences of the adoption and hence face a risky decision on security. Majority of respondents generally suggested that it was extremely not secure to send sensitive information across online banking. Most of the corporate and the employees agreed to this statement as compared to retail customers. The vulnerability of using internet banking essentially comes from failures of the security system to protect the network from an unauthorized person gaining access to the banking network system. Similarly, Yang et al. (2005) explain that the vulnerability of using internet banking may come from failures to protect the network system from unauthorized person within the network, intentionally or accidentally gaining access to or damaging the network.
Since many customers had common perceptions that the Internet enabled easy access to information (Bandyopadhyay, 2009). A number of the respondents suggested that the bank was able to provide the necessary security. Most of the employee respondents and corporate respondents agreed to this statement as compared to the retail customers. Most of the time customers prefer to choose to stay with banks which they trust more, such as banks that provide detailed privacy, policy because they disliked unauthorised people to misuse their personal information over the Internet (Bandyopadhyay, 2009). On the other hand, non-internet banking users in Australia, for example, rejected internet banking providers that failed to provide adequate security and privacy information (Bandyopadhyay, 2009).

Insufficient trust on financial institutions is a critical perceived credibility issues that lower internet banking acceptance (Madu and Madu, 2002). A number of the respondents suggested that they trusted the bank ability to maintain internet banking confidentiality. Also, a number of the respondents suggested that security risk negatively influenced attitudes towards the use of online banking. A small number of the respondents suggested that it was not safe providing internet banking. Most of the employee respondents (and corporate respondents agreed to this statement as compared to the retail customers. Similarly, Bandyopadhyay (2009) suggests that creating customer trust is an essential way to retain existing bank customers as well as encouraging the adoption of internet banking.

Accessibility at any time is one of the benefits associated with internet banking. A number of the respondents suggested that various services can be accessed at the same time using internet banking. Most of the corporate respondents and retail customers agreed to this statement as compared to the employee respondents. As discovered by Polatoglu and Ekin (2001), the Internet technology enables users to visit an internet banking website at any time and from any location more easily and efficiently. In addition, Gerrard and Cunningham (2003) add that with comparison to traditional banking, internet banking is able to reach far more people and keep away people from waiting in lines. Internet banking is the ideal choice for customers as it offers greater convenience and time saving benefits.
5.3.2 Online Banking Environment and Utilization of Internet Banking

Long response time create transaction risks of internet banking services (Jun and Cai, 2001). Majority of respondents generally suggested that the bank cannot quickly help in technical and non technical issues of internet banking. Most of the corporate respondents and employees agreed to this statement as compared to the retail customers. The slow response to customers’ online requests is mainly due to the shortage of knowledgeable personnel (Jun and Cai, 2001). Similarly, fifty percent of the respondents in Yang et al. (2005)’s study found that lack of information technology experts were the main causes of long internet banking response time. Some small banks had outsourced part of their online services, and they need to wait for technological support from information technology professionals outside the organisation (Yang et al., 2005).

Despite the slowness in responding to consumers queries, enabling customers complete their banking tasks is also critical. A number of the respondents suggested that using the online banking would enable them to accomplish their banking tasks more quickly. Most of the corporate respondents and retail customers agreed to this statement as compared to the employee respondents. Many respondents’ consumers utilize online banking because it offers convenience, saves time, and maintains privacy. Similarly, George (2002) study suggests that eight out of ten E-bankers in U.S., ranked convenience and saving time high; four out of ten E-bankers said it is very important to bank without the need to talk to anyone. Jiang, Shu, Klein and Lin (2000) found that users would use internet banking services if they can get more assistance and information from the sites.

Internet banking offers more services compared to physical bank branches at cheaper rates (Calisir and Gumussoy, 2008). A number of the respondents suggested that it was easy to use online banking to accomplish their banking tasks. Most of the retail customer and employee respondents agreed to this statement as compared to the corporate respondents. The Internet is a well organized way for banks to collect customer information to fulfill their financial needs in different ways (Calisir and Gumussoy, 2008). Similarlry, Lederer et al. (2000) argues that users of internet banking gather up-to-date and relevant information through the Internet to support them in making decisions to adopt a particular internet banking services.
Online banking and other electronic payment systems are new and the development and diffusion of these technologies by financial institutions results in a more efficient banking system. A number of the respondents suggested that online banking offered a wider range of banking products, services and investment opportunities. Most of the employees respondents and corporate agreed to this statement as compared to the retail customers. Internet banking offers institutions alternative or non-traditional delivery channels through which banking products and services can be delivered to consumers more conveniently and economically without diminishing the existing service levels (Akinci et al., 2004).

Accessibility is one of the benefits associated with internet banking. A number of the respondents suggested that online banking saves time in performing banking transaction. Most of the corporate respondents and employees agreed to this statement as compared to the retail customers. As discovered by Polatoglu and Ekin (2001), the Internet technology enables users to visit an internet banking website at any time and from any location more easily and efficiently. In addition, Gerrard and Cunningham (2003) add that with comparison to traditional banking, internet banking is able to reach far more people and keep away people from waiting in lines. Internet banking is the ideal choice for customers as it offers greater convenience and time saving benefits.

Convenience was the major advantage of internet banking. A number of the respondents suggested that online banking was conveniently used for their banking needs. Most of the corporate respondents and employees agreed to this statement as compared to the retail customers. It seems that the respondents were not satisfied with online banking for their banking needs. However, Lee et al. (2005) discovered that convenience was a crucial factor of internet banking acceptance. Similaryl, Beyer (1999) and Ramsaran (2003) found that users could bank online just at the tip of a finger. Soliman and Janz, 2004) also discovered that internet banking enhanced task performance. Since the cost and time taken to process an internet banking transaction was short compared to bank branches (Yakhelef, 2001).

Web-based self service such as internet banking provides users with more autonomy (Karjaluoto et al., 2009) to allow users to merely focus on their financial transaction. A
number of the respondents suggested that the interaction with online banking does not require a lot of mental effort in performing organization tasks. Most of the corporate and employees respondents agreed to this statement as compared to the retail customers. The results suggest that internet banking does not provide less mental effort. This contradicts Karjaluoto et al., 2009) findings that autonomy positively affects user internet banking acceptance. In addition, Karjaluoto et al. (2009) argues that simple and highly accessible technology is perceived as more useful than others because it requires less learning.

Internet banking allows costs saving, increases productivity, improves bank service delivery, customises banking services, and minimises the human errors of the front-desk staffs in performing routine banking. A number of the respondents suggested that using online banking is useful. Most of the corporate and employees respondents agreed to this statement as compared to the retail customers. By offering internet banking services, bank do not have to keep their branches open 24 hours a day to provide banking service, resulting in low cost of entry into the banking sector (Turban et al., 2000). Rohde (2002) argues that using online banking brings about convenience, time-saving, improved control over finances, removal of need to stand in line or talk to bank clerks, saved money, and easier access to more information.

5.3.3 Internet Payment Arrangements and the Use Internet Banking Services
The Internet speed is slow when there are many users bank online (Chou, 2003). Majority of participants in the study agreed that using online banking service leads to losses and waste of time when fixing payments errors. Most of the corporate respondents and employees agreed to this statement as compared to the retail customers. The findings suggest that due to delay in web servers users may experience financial and time loss. Similarly, Chou (2003) explains that due to the technical problem of the web server, users may need to wait for a long time during busy hours, which cause frustration resulting from the failure to conduct internet banking transactions in time. Chou (2003) adds that the internet failure is another drawback that can trigger worries among users who are in hurry to complete an online transaction yet unable to read the content of an online service due to Internet failure and most of the times incurring losses.
Users will have greater confidence in using a simple online service. A number of the respondents suggested that using online banking for financial transactions would be a wise idea. Most of the corporate respondents and employees agreed to this statement as compared to the retail customers. The findings suggest that the users are self efficient. Similarly, Schunk (2000) explains that learning from users who have successfully used a web technology can also raise the individual’s self-efficacy. Dinev et al. (2009) adds that new adopters who learn the knowledge of using an online service from competent users tend to have more confidence in using the technology.

Internet banking has a clear cost savings goal. A number of the respondents suggested that online banking saves the bank transaction handling fees in performing banking transactions. Most of the employee respondents and corporate respondents agreed to this statement as compared to the retail customers. This indicates that price is a motivator for the utilization of internet banking. This may explain why most consumers may not adopt internet banking because it is expensive. Similarly, Sathye (1999) found that price was another cause of aversion for internet banking users. Dauda and Santhaparraj (2007) confirmed this finding by stating that about 51 percent Malaysian were concerned about their bank charges for internet banking transactions.

Provision of infrastructural facilities is another factor that could lead to quicker diffusion of innovation. A number of the respondents suggested that when transaction errors occur, it is difficult to get compensation from banks. Most of the employee respondents and retail customers agreed to this statement as compared to the corporate customers. Study from Jayawardhena and Foley (2000) reveals that there is a significant correlation between functionality of the system and user satisfaction. Moreover other features such as interactivity, navigation and security are relevant according to the author. Broderick and Vachirapornpuk (2002) found through observations and narrative analysis of internet banking customers, that problems such as slowness, poor navigational possibilities, poor interactivity and critical incidents such as lack of help and empathy by internet banking service providers, triggered considerable switching and negative word of mouth.

Reliability involves consistency of performance and dependability which means that the banking firm performs the services right the first time and honours its promises (Khan,
2007). A small proportion of the respondents suggested that online banking servers may not perform well and process payments incorrectly. Most of the employee respondents and corporate respondents agreed to this statement as compared to the retail customers. Correct processing of payments may relate with the proper functioning of the internet banking services. Polatoglu and Ekin (2001) find that the reliability dimension is an important factor for consumers who use internet banking. Furthermore, Sathye (1999) and Liao and Cheung (2002) find that reliability is positively related to the use of internet banking.

5.4 Conclusion

5.4.1 Perception of Security and Utilization of Internet Banking Services

When adopting new products, customers face a dilemma between desirable and undesirable consequences of the adoption and hence face a risky decision on security. The vulnerability of using internet banking essentially comes from failures of the security system to protect the network from an unauthorized person gaining access to the banking network system. Most of the time customers prefer to choose to stay with banks which they trust more, such as banks that provide detailed privacy policy because they disliked unauthorised people to misuse their personal information over the internet. Many customers had common perceptions that the internet enabled easy access to information. Insufficient trust on financial institutions is a critical perceived credibility issues that lower internet banking acceptance. Customer trust is an essential way to retain existing bank customers as well as encouraging the adoption of internet banking. Accessibility at any time is one of the benefits associated with internet banking. A number of the respondents suggested that various services can be accessed at the same time using internet banking. Internet banking is the ideal choice for customers as it offers greater convenience and time saving benefits. Insufficient trust on financial institutions is a critical perceived credibility issues that lower internet banking acceptance creating customer trust is an essential way to retain existing bank customers as well as encouraging the adoption of internet banking.
5.4.2 Online Banking Environment and Utilization of Internet Banking
Long response time is the criticised transaction risks of internet banking services. Majority of respondents generally suggested that the bank cannot quickly help in technical and non technical issues of internet banking. The slow response to customers’ online requests is mainly due to the shortage of knowledgeable personnel. Internet banking offers more services compared to physical bank branches at cheaper rates. The Internet is a well organized way for banks to collect customer information to fulfil their financial needs in different ways. A number of the respondents suggested that online banking saves time in performing banking transaction. Since the cost and time taken to process an internet banking transaction was short compared to bank branches. Internet banking allows costs saving, increases productivity, improves bank service delivery, customises banking services, and minimises the human errors of the front-desk staffs in performing routine banking. Internet banking offers institutions alternative or non-traditional delivery channels through which banking products and services can be delivered to consumers more conveniently and economically without diminishing the existing service levels. Convenience was the major advantage of internet banking. A number of the respondents suggested that online banking was conveniently used for their banking needs. Autonomy positively affects user internet banking acceptance. Internet banking allows costs saving, increases productivity, improves bank service delivery, customises banking services, and minimises the human errors of the front-desk staffs in performing routine banking.

5.4.3 Internet Payment Arrangements and the Use Internet Banking Services
The Internet speed is slow when there are many users bank online. The findings suggest that due to delay in web servers users may experience financial and time loss. Majority of participants in the study agreed that using online banking service leads to losses and waste of time when fixing payments errors internet failure is another drawback that can trigger worries among users. Users will have greater confidence in using a simple online service. Internet banking has a clear cost savings goal. This may explain why most consumers may not adopt internet banking because it is expensive. Provision of infrastructural facilities is another factor that could lead to quicker diffusion of innovation. A number of the respondents suggested that using online banking for financial transactions would be a wise idea. Internet banking has a clear cost savings goal.
A number of the respondents suggested that online banking saves the bank transaction handling fees in performing banking transactions. Reliability involves consistency of performance and dependability which means that the banking firm performs the services right the first time and honours its promises. A number of the respondents suggested that using online banking for financial transactions would be a wise idea. Internet banking has a clear cost savings goal. A number of the respondents suggested that online banking saves the bank transaction handling fees in performing banking transactions. Correct processing of payments may relate with the proper functioning of the internet banking services. Reliability is positively related to the use of internet banking. Most of the employee respondents and corporate respondents agreed to this statement as compared to the retail customers Provision of infrastructural facilities is another factor that could lead to quicker diffusion of innovation. A number of the respondents suggested that when transaction errors occur, it is difficult to get compensation from banks.

5.5 Recommendations

5.5.1 Recommendation for Improvement

5.5.1.1 Perception of Security and Utilization of Internet Banking Services

The study recommends that banks should ensure internet banking security to boost consumer confidence. Internet banking should be trustworthy and secure to avoid undesirable consequences in the face of risky decisions. Sufficient trust on financial institutions is a critical perceived credibility issues that enhance internet banking acceptance. Customer trust is an essential way to retain existing bank customers as well as encouraging the adoption of internet banking. Internet banking should be easily accessible for customers to access at any time and offer time saving benefits.

5.5.1.2 Online Banking Environment and Utilization of Internet Banking

There should be a fast response time to answer customer queries in relation to internet banking services. Banks should hire well knowledgeable and qualified personnel to answer customer queries. Internet banking should offer banking services at cheaper rates. Internet banking should be well organized to collect customer information to fulfil their financial needs in different ways. Internet banking should allow costs saving, increase
productivity, improves bank service delivery, customise banking services, and minimise the human errors of the front-desk staffs in performing routine banking.

5.5.1.3 Internet Payment Arrangements and the Use Internet Banking Services
Internet banking websites should be faster to avoid delay in web browsers for users who may experience financial and time loss. Internet banking should be cheaper for users with a clear cost saving goal for achieving greater confidence in using a simple online service. The services should be made cheaper to encourage most consumers to adopt internet banking services because expensive services will lead to lower acceptance of the services. Provision of infrastructural facilities is another factor that could lead to quicker diffusion of innovation. Internet banking should be more reliable for banks to perform the services right the first time and honours its promises. The reliability of internet banking services may lead to customer satisfaction.

5.5.2 Suggestions for Further Research
The current study investigated on the factors influencing the adoption of internet banking among users using the case of imperial bank. The study recommends that future researchers can carry out a study on internet banking in other banks such as National Bank of Kenya, Barclays Bank, Standard Chartered Bank, just the few to compare the similarities or differences of the results.
REFERENCES


McKnight, D. H., Choudhury, V., & Kacmar, C. (2002). Developing and validating trust


APPENDICES

APPENDIX I: LETTER

To Whom It May Concern

Dear Sir/Madam,

I am a student at the United States International University Africa undertaking a degree in the Executive Masters in Organizational Development (EMOD). I am carrying out a research as part of the program degree requirements on the factors influencing the adoption of internet banking among users using the case of Imperial Bank.

Given your unique position and experience as an entrepreneur, you have been selected as one of the respondents. Your role in this study will only involve completing a questionnaire. The questions to be asked will relate to your experience and opinions in your area of specialization. It is important that you understand that there is no correct or wrong answer. This research is aimed at allowing you to provide details about what you honestly think.

Please note that any information you give will be treated with confidentiality and at no instance will it be used for any other purpose other than for this project. Your assistance will be highly appreciated. I look forward to your prompt response.

Thank you for your indulgence.

Yours Faithfully,

Njambi Warui (Researcher)
APPENDIX II: RETAIL CUSTOMER QUESTIONNAIRE

PART A: GENERAL INFORMATION

1. Gender
   Male [ ]   Female [ ]

2. Age
   Under 18 [ ]   19-30 [ ]   31-45 [ ]
   46-60 [ ]   Over 60 [ ]

3. Occupation
   Employed [ ]   Not employed [ ]   Self employed [ ]
   Other (specify):________________

4. Marital Status
   Married [ ]   Divorced [ ]   Cohabiting [ ]
   Single (never married) [ ]   Widower [ ]   Widow [ ]

5. How do you use your internet?
   E-mail [ ]   Entertainment [ ]   Study [ ]
   Update on current news [ ]   Banking [ ]   Other (specify):________________

6. How often do you use the Internet?
   Daily [ ]   Once a week [ ]   More than 2 times a week [ ]
   Once a month [ ]   Other, please specify:________________

7. Have you ever used the Internet?
   Yes [ ]   No [ ]
8. If yes, where did you learn about internet banking?

- Bank leaflets/advertisements [ ]
- Television/Radio [ ]
- Newspaper/Magazines [ ]
- Referred by a friend [ ]
- Bank Brochure [ ]
- Words-of-mouth [ ]

Other, please specify: __________________________

9. Where do you use internet banking?

- Home [ ]
- Workplace [ ]
- Internet café [ ]
- Library [ ]

Other, please specify: _____________

10. What do you access through internet banking for?

Rank the most important priorities of internet banking from the selection below ranking them from 1=5.

- Viewing account statements [ ]
- Statements of account analysis and information retrieval [ ]
- Bill payments [ ]
- Foreign Currency Transactions [ ]
- Foreign Currency Transactions [ ]
- Making Money Transfers [ ]
- Credit Card Processing [ ]
- Tuition payment processing [ ]
- Viewing cheque account balances [ ]
- Making payments [ ]
- Transferring funds [ ]

Other, please specify: ______________

11. How often do you use internet banking?

- Daily [ ]
- Weekly [ ]
- Monthly [ ]
- Quarterly [ ]
- Yearly [ ]
PART B: PERCEPTION OF SECURITY ON HACKING AND UTILIZATION OF INTERNET BANKING

How would you rate internet banking on the perception of security and the utilization of the services? (5= Strongly Agree, 3=Agree, 2=Disagree and 1=Strongly disagree).

<table>
<thead>
<tr>
<th></th>
<th>Strongly disagree</th>
<th>Disagree</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>12. Security risk negatively influences intentions to use online banking.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>13. Security risk negatively influences attitudes towards the use of online banking.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>14. It is not safe providing corporate over internet banking.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>15. Internet banking is insecure</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>16. I trust in the ability of the bank to protect my confidentiality.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>17. It is not secure sending sensitive information across online banking.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>18. The bank is able to provide the necessary security.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>19. Security risks of internet banking are not known.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>20. Various services can be accessed at the same time using internet banking.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>

21. What other security issues enhance or prevents the utilization of online banking by corporations?

__________________________________________________________________________________
__________________________________________________________________________________
PART C: USER ATTITUDE AND UTILIZATION OF INTERNET BANKING

How would you rate internet banking on the following aspects that greatly influence your decision to adopt the services? (1= Not at all important, 2= slightly important, 3= important and 4= extremely important).

<table>
<thead>
<tr>
<th></th>
<th>Not at all important</th>
<th>Slightly Important</th>
<th>Important</th>
<th>Extremely Important</th>
</tr>
</thead>
<tbody>
<tr>
<td>22. Using the online banking would enable me to accomplish my tasks more quickly in the organization.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>23. Using online banking is useful for the organization.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>24. Interaction with online banking does not require a lot of mental effort in performing organization tasks.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>25. It is easy to use online banking to accomplish my banking tasks in the organization.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>26. Online banking offer a wider range of banking products, services and investment opportunities</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>27. Online banking saves time in performing banking transaction</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>28. Bank cannot quickly help in technical and non technical issues of internet banking</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>29. Online banking is used for the corporate banking needs</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>

30. What other favourable factors have been created by online banking to enhance its utilization by corporations?

__________________________________________________________________

__________________________________________________________________
PART D: INTERNET PAYMENT ARRANGEMENTS AND THE USE INTERNET BANKING SERVICES

How would you rate internet banking payment arrangements based on the following aspects that greatly influence your decision to adopt the services? (1= Not at all important, 2= slightly important, 3= important and 4= extremely important).

<table>
<thead>
<tr>
<th></th>
<th></th>
<th>Not at all important</th>
<th>Slightly Important</th>
<th>Important</th>
<th>Extremely Important</th>
</tr>
</thead>
<tbody>
<tr>
<td>31. Using online banking for financial transactions would be a wise idea.</td>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>32. Using online banking can save the transaction handling fees in performing banking transaction</td>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>33. Online banking servers may not perform well and process payments incorrectly</td>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>34. When transaction errors occur, it is difficult to get compensation from banks</td>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>35. Online banking service leads to losses and waste of time when fixing payments errors.</td>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>36. Online banking sometimes does not perform well and processes payments incorrectly</td>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>37. Online banking saves the bank transaction handling fees in performing banking transactions.</td>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>

38. In what other ways has the payment arrangement influenced the utilization of internet banking by corporations?
APPENDIX II: EMPLOYEE QUESTIONNAIRE

SECTION A: GENERAL INFORMATION

1. Gender
   Male [ ]    Female [ ]

2. Age
   Under 18 [ ] 19-30 [ ] 31-45 [ ]
   46-60 [ ] Over 60 [ ]

3. Occupation
   Employed [ ] Not employed [ ] Self employed [ ]
   Other (specify):____________________

4. Marital Status
   Married [ ] Divorced [ ] Cohabiting [ ]
   Single (never married) [ ] Widower [ ] Widow [ ]

5. How do you use your internet?
   E-mail [ ] Entertainment [ ] Study [ ]
   Update on current news [ ] Banking [ ] Other (specify):___________

6. How often do you use the Internet?
   Daily [ ] Once a week [ ] More than 2 times a week [ ]
   Once a month [ ] Other, please specify:____________________

7. Have you ever used the Internet?
   Yes [ ] No [ ]
8. If yes, where did you learn about internet banking?

Bank leaflets/advertisements [ ] Television/Radio [ ]
Newspaper/Magazines [ ] Referred by a friend [ ]
Bank Brochure [ ] Words-of-mouth [ ]
Other, please specify:_________________________

9. Where do you use internet banking?

Home [ ] Workplace [ ]
Internet café [ ] Library [ ]
Other, please specify: ____________

10. What do you access through internet banking for?

Rank the most important priorities of internet banking from the selection below ranking them from 1=5.

Viewing account statements [ ]
Statements of account analysis and information retrieval [ ]
Bill payments [ ]
Foreign Currency Transactions [ ]
Making Money Transfers [ ]
Credit Card Processing [ ]
Tuition payment processing [ ]
Viewing cheque account balances [ ]
Making payments [ ]
Transferring funds [ ]
Other, please specify:________________________

11. How often do you use internet banking?

Daily [ ] Weekly [ ] Monthly [ ]
Quarterly [ ] Yearly [ ]
PART B: PERCEPTION OF SECURITY AND UTILIZATION OF INTERNET BANKING SERVICES

How would you rate internet banking on the perception of security and the utilization of the services? (5= Strongly Agree, 3=Agree, 2=Disagree and 1=Strongly disagree).

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<th>Extremely Important</th>
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<tbody>
<tr>
<td>12. Security risk negatively influences my intentions to use online banking.</td>
<td>1 2 3 4</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13. Security risk negatively influences attitudes towards the use of online banking.</td>
<td>1 2 3 4</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>14. It is not safe providing transactions over internet banking.</td>
<td>1 2 3 4</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15. Internet banking is insecure</td>
<td>1 2 3 4</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16. Internet banking ensures client confidentiality.</td>
<td>1 2 3 4</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>17. It is not secure sending sensitive information across online banking.</td>
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<td>18. The bank is able to provide the necessary security.</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>19. Security risks of internet banking are not known.</td>
<td>1 2 3 4</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>20. Various services can be accessed at the same time using internet banking.</td>
<td>1 2 3 4</td>
<td></td>
<td></td>
<td></td>
</tr>
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</table>

21. What other security issues enhance or prevents the utilization of online banking?

________________________________________________________________________
________________________________________________________________________
PART C: USER ATTITUDE AND UTILIZATION OF INTERNET BANKING

How would you rate internet banking on the following aspects that greatly influence your decision to adopt the services? (1= Not at all important, 2= slightly important, 3= important and 4= extremely important).

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<td>22. Using the online banking would enable me to accomplish my tasks more quickly.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>23. Using online banking is useful.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>24. Interaction with online banking does not require a lot of mental effort.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>25. It is easy to use online banking to accomplish banking tasks.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>26. Online banking offer a wider range of banking products, services and investment opportunities.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>27. Online banking saves time in performing banking transaction</td>
<td>1</td>
<td>2</td>
<td>3</td>
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<tr>
<td>28. Bank cannot quickly help in technical and non technical issues of internet banking.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
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<tr>
<td>29. Online banking suit my banking needs</td>
<td>1</td>
<td>2</td>
<td>3</td>
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</tr>
</tbody>
</table>

30. What other favourable environmental factors have been created by online banking to enhance its utilization?

________________________________________________________________________

________________________________________________________________________
PART D: INTERNET PAYMENT ARRANGEMENTS AND THE USE INTERNET BANKING SERVICES

How would you rate internet banking payment arrangements based on the following aspects that greatly influence your decision to adopt the services? (1= Not at all important, 2= slightly important, 3= important and 4= extremely important).

<table>
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<tr>
<th>Question</th>
<th>Not at all important</th>
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<tbody>
<tr>
<td>31. Using online banking for financial transactions would be a wise idea</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>32. Using online banking can save the transaction handling fees in performing banking transaction</td>
<td>1</td>
<td>2</td>
<td>3</td>
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</tr>
<tr>
<td>33. Online banking servers may not perform well and process payments incorrectly</td>
<td>1</td>
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<tr>
<td>34. When transaction errors occur, it is difficult for me to get compensation from banks</td>
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<tr>
<td>35. Online banking service leads to losses and waste of time when fixing payments errors.</td>
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<tr>
<td>36. Online banking sometimes does not perform well and processes payments incorrectly</td>
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<td>37. Online banking saves on bank transaction handling fees in performing banking transactions.</td>
<td>1</td>
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38. In what other ways has the payment arrangement influenced the utilization of internet banking?

________________________________________________________

________________________________________________________

THANK YOU FOR YOUR PARTICIPATION
SECTION A: GENERAL INFORMATION

1. Gender
   Male [ ]  Female [ ]

2. Age
   Under 18 [ ]  19-30 [ ]  31-45 [ ]
   46-60 [ ]  Over 60 [ ]

3. Marital Status
   Married [ ]  Divorced [ ]  Cohabiting [ ]
   Single (never married) [ ]  Widower [ ]  Widow [ ]

4. How do you use your internet?
   E-mail [ ]  Entertainment [ ]  Study [ ]
   Update on current news [ ]  Banking [ ]  Other (specify):___________

5. How often do you use the Internet?
   Daily [ ]  Once a week [ ]  More than 2 times a week [ ]
   Once a month [ ]  Other, please specify:________________________

6. Have you ever used the Internet?
   Yes [ ]  No [ ]

7. If yes, where did you learn about internet banking?
   Bank leaflets/advertisements [ ]  Television/Radio [ ]
   Newspaper/Magazines [ ]  Referred by a friend [ ]
   Bank Brochure [ ]  Words-of-mouth [ ]
   Other, please specify:______________________________
8. Where do you use internet banking?

Home [ ] Workplace [ ]

Internet café [ ] Library [ ]

Other, please specify: _____________

9. What do you access through internet banking for?

Rank the most important priorities of internet banking from the selection below ranking them from 1=5.

- Viewing account statements [ ]
- Statements of account analysis and information retrieval [ ]
- Bill payments [ ]
- Foreign Currency Transactions [ ]
- Foreign Currency Transactions [ ]
- Making Money Transfers [ ]
- Credit Card Processing [ ]
- Tuition payment processing [ ]
- Viewing cheque account balances [ ]
- Making payments [ ]
- Transferring funds [ ]

Other, please specify: _____________

10. How often do you use internet banking?

Daily [ ] Weekly [ ] Monthly [ ]

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### PART B: PERCEPTION OF SECURITY AND UTILIZATION OF INTERNET BANKING SERVICES

How would you rate internet banking on the perception of security and the utilization of the services? (5= Strongly Agree, 3=Agree, 2=Disagree and 1=Strongly disagree).

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