MODERATING EFFECT OF CUSTOMER PROFILE ON THE RELATIONSHIP BETWEEN EFFICACY OF ELECTRONIC BANKING AND CUSTOMER SATISFACTION IN SELECTED COMMERCIAL BANKS IN KISUMU COUNTY, KENYA.

BY

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DECLARATION

I do declare that this thesis is my original work and has never been presented for award of a degree in part or as a whole in any institution of learning and should not be reproduced anywhere whatsoever without my consent or permission from Moi University.

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DEDICATION

This thesis is dedicated to my beautiful daughter Jeyleen Chantell Hellen Oduri, and also to my lovely parents Mr. and Mrs. Zachary Oduri, for their great contribution through moral and financial support. Above all, to God, for, giving me the grace to finish this thesis.

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ABSTRACT

In the bid to compete with global developments and improve the quality of their service delivery, banks have no doubt invested much on technology, and have widely adopted electronic and telecommunication networks for delivering a wide range of value added products and services. However, the integration of customers into electronic banking is far from being realized. The aim of this study was to investigate the moderating effect of customer profile on the relationship between efficacy of electronic banking and customer satisfaction. The study specifically determined efficacy of ATMs on customer satisfaction, established efficacy of internet banking on customer satisfaction, determined the efficacy of mobile banking on customer satisfaction, established efficacy of telebanking on customer satisfaction and moderating effect of customer profile on the relationship between the efficacy of ATMs, internet banking, mobile banking, and telebanking on customer satisfaction. The study was guided by Assimilation Theory, Contrast Theory, Assimilation Contrast theory and the theory of disconfirmation. The study adopted explanatory research design. The target population of the study was registered banks customers from 12 selected commercial banks in Kisumu County. There were an estimated 2,824,404 number of customers in the 12 banks using either ATMs, internet banking, mobile banking or Telebanking .Stratified random sampling technique was used to sample 224 customers. The research utilized both primary and secondary data. Questionnaires were used to obtain the primary data. In descriptive statistics the research employed means, standard deviation and frequencies. Multiple regressions and correlation as a form of inferential statistic analysis, was used in determining the relationship between the dependent and independent variables. Findings showed Internet banking ($\beta 1 = 0.226$, $p<0.05$), mobile banking ($\beta 2 = 0.268$, $p<0.05$), ATM ($\beta 3 = 0.364$, $p<0.05$) had a positive and significant effect on customer satisfaction, while Telebanking ($\beta 4 = -0.538$, $p<0.05$) had a negative and significant effect on customer satisfaction, efficacy of ATM, Internet banking and mobile banking contributed to an increase in customer satisfaction. Findings also showed that age had a positive and significant moderating effect on the relationship between Internet banking, mobile banking and customer satisfaction ($\beta 5= 0.187$, $\rho<0.05$). Age affected customer attitudes towards Internet banking and their ability to use it. Preferably, as individual get older they are more likely to use Internet banking. The study recommended that Banks should also raise awareness of the online banking and its advantages so that customers can adopt and embrace its use. The banks should also assure customers that the security offered to them cannot be breached. They should be adequate and the system needs to be user-friendly so as to enhance customer satisfaction.

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LIST OF ABBREVIATIONS AND ACRONYMS

ACS	-	Abstract Customer Satisfaction
ANOVA	-	Analysis of Variance
ATM PIN	-	Automated Teller Machine Personal Identification Number
ATM	-	Automated Teller Machines
B2C	-	Business to Consumer
E-banking	-	Electronic banking
E-Channels	-	Electronic channels
EUCS	-	End User Computing Satisfaction
HDFC	-	Housing Development Fund Corporation
IB	-	Internet Banking
ICICI	-	Industrial Credit and Investment Corporation of India
ICT	-	Information communication technology
ISIN	-	International securities identification number
IV and DV	-	Independent variable and Dependent variable
IVR	-	Interactive Voice Response
M-banking	-	Mobile banking
MCS	-	Material Customer Satisfaction level
PC	-	Personal Computer
SBI	-	State bank of India
SMS	-	Short Messaging Service
SPSS	-	Statistical Package for the Social Sciences
Tele-banking	-	Telephone banking
WAP	-	Wireless Application Protocol
E-Business	-	Electronic business

OPERATIONAL DEFINITION OF TERMS

E-Banking- e-banking or virtual banking, is an electronic payment system that enables customers of a bank or other financial institution to conduct a range of financial transactions through the financial institution's website.

E-Business -Electronic Business is the administration of conducting business via the Internet. It’s the conduct of business electronically, typically over the Internet.

E-Channels-this are channels that enables customers of a bank or other financial institution to conduct a range of financial transactions through the financial institution's website.

Efficacy-capacity for producing a desired result or effect; effectiveness: a remedy of great efficacy also referred to as Effectiveness

Mobile banking- Mobile banking is a service provided by a bank or other financial institution that allows its customers to conduct a range of financial transactions remotely using a mobile device such as a mobile phone or tablet, and using software, usually called an app, provided by the financial institution for the purpose.

Mobile payment- generally refers to payment services operated under financial regulation and performed from or via a mobile device. Instead of paying with cash, cheque, or credit cards, a consumer can use a mobile phone to pay for a wide range of services and digital or hard goods.

Moderator-in our case may increase or weaken the strength of a relationship.

SERVQUAL-Model for assessing Service Quality

Tele banking- Telephone banking is a service provided by a bank or other financial institution, that enables customers to perform a range of financial transactions over the telephone, without the need to visit a bank branch or automated teller machine.

CHAPTER ONE

INTRODUCTION

1.1 Overview

This chapter contains the following: background of the study, statement of the problem, objective, hypothesis, scope and significance of the study.

1.2 Background of the Study

In light of the recent financial crisis and global economic recession, leaders of financial institutions are under additional pressure not only to maintain customer satisfaction while sustaining lower costs, but also to maintain market leadership. To lower costs and maintain market leadership, bank leaders have capitalized on superior service quality and information technology infrastructures. Electronic banking is considered as a new revolution of the traditional banking services which offers customers the greatest expediency for performing banking transactions via electronic. All banks, especially the large banks and mutual banks, have gradually increased their number of Internet banking services available to customers over the past decades (Momeni, M., Kheiry, B. and Dashtipour M, 2013).

Advances in electronic banking technology have created new ways of handling banking transactions, especially via the online banking channel. A feature of the banking industry across the globe has been that it is increasingly becoming turbulent and competitive, characterized by an increasing trend towards internationalization, mergers, takeovers and consolidation of the banking industry(Kesseven *et al*, 2007). With the advancement of science and technology the modern market has gone a buyer's market that is customer oriented market. Banking institutions are one of the most important service industries which provide various products in the services marketing with the changing dimensions of service sector; bank customers also

expect convenient and modern banking products and services. To convey this customer' desire, the banks need to change towards the modern banking. Information and Communication Technology (ICT) have changed means of business and methods of operations in various businesses. Similarly, the banking industry also changed according to need of hours in the electronic era and almost all banks in the world are developing them a virtual bank. Virtual banking is nothing but e-business in banking industry, it may also be referred to as branchless banking. Virtual banking is an e-Banking model in which bank operates without the presence of physical branches. Basically virtual banking includes all non- traditional and electronic means of banking such as ATM, Phone Banking, Internet Banking (IB), Credit Cards and Debit Cards among others. A special feature of virtual banking is the physical absence of the person seeking banking services at the premises and out of premises even in abroad.

Gan et. al. (2006) mentioned that demographic variables (age, gender, marital status, ethnic background, educational qualification, employment, income, and area of residence) influence consumer decision making process in adoption of E-Banking. Other researchers also posited that, educational profile is one of the important factor in adoption of e-Banking and customers' satisfaction in e-Banking that is. (Jain, 2006; Liao and Cheung, 2003)

An understanding of the extent of the customers' adoption or utilization of internet banking services has become critical. Courtier and Gilpatric (1999) recommended that banks and financial companies must survey customers' requirements on a regular basis in order to understand factors that can affect their adoption or usage of internet banking. Since the onset of internet banking in Kenya in early 2000, the number of

online customers is still very low. However, there has been a notable increase as banks continue to intensify marketing and the infrastructures continues to mature. Privacy and security are perceived to be the most important issues that inhibit customers from using internet banking in Kenya (Gikandi & Bloor, 2010).

1.3 Statement of the Problem

In a bid to catch up with global developments and improve the quality of their service delivery, Kenyan banks have no doubt invested much on technology; and have widely adopted electronic and telecommunication networks for delivering a wide range of value added products and services. They have in the last few years transformed from manual to automated systems. Unlike before when ledger-cards were used, today banking has been connected to computer networks, thereby facilitating the practice of inter-bank/inter-branch banking transactions. Developments at home, such as the introduction of mobile telephone in 2001 and improved access to personal computers and Internet service facilities have also added to the growth of electronic banking in the country.

However, whereas local banks most commonly practise real time online intranet banking, the integration of customers into the process is far from being realized. Many of the reasons are attributed to the high prevalence of Internet fraud and lack of an adequate regulatory framework to protect the banks from the volatility of risks associated with Internet banking, especially at the levels of communication and transaction. The consumer perspective of relationship marketing requires further examination, particularly the business-to-consumer aspect of the relationship-based approach in a web environment (Casalo *et al*., 2007; Colgate *et al*., 2005; Durkin and Howcroft, 2003). Furthermore Consumer profiles in the financial sector have been examined in some studies (such as. Athanassopoulos, 2000; Machauer and Morgner,

2001; Zuccaro and Savard, 2010). However in Kenya and particularly Kisumu County, no study has attempted to classify the efficacy of various electronic banking services, on customer satisfaction based on customers' profile.

The constraints in achieving customer satisfaction in the use of e-banking services, has become a major issue in the overall banking sector. The study will help banks come up with e-banking services that will be in line with the type of customers they have based on their profile, hence increase customer satisfaction and overall banks productivity in terms of integrating customers to use the e banking services.

1.4 Research Objective

1.4.1General Objective

The general aim of the study was to investigate the moderating effect of customer profile on the relationship between efficacy of electronic banking and customer's satisfaction

1.4.2 Specific Objectives

1. To determine the efficacy of ATMs on customers satisfaction in selected commercial banks in Kisumu County.
2. To establish the efficacy of internet banking on customer satisfaction in selected commercial banks in Kisumu County.
3. To determine the efficacy of mobile banking on customer satisfaction in selected commercial banks in Kisumu County.
4. To establish the efficacy of Telebanking on customer satisfaction in selected commercial banks in Kisumu County.
5. To determine the moderating effect of gender on the relationship between the efficacy of e-Banking and customer satisfaction in selected commercial banks in Kisumu County.

6. To determine the moderating effect of age on the relationship between the efficacy of e-Banking and customer satisfaction in selected commercial banks in Kisumu County.
7. To determine the moderating effect of level of education on the relationship between the efficacy of e-Banking and customer satisfaction in selected commercial banks in Kisumu County.
8. To determine the moderating effect of number of years as bank customer on the relationship between the efficacy of e-Banking and customer satisfaction in selected commercial banks in Kisumu County.

1.5 Research Hypotheses

$H_{O1:}$ The efficacy of ATMS has no significant effect on customer satisfaction in selected commercial banks in Kisumu County.

$H_{O2:}$ The efficacy of Internet banking has no significant effect on customer satisfaction in selected commercial banks in Kisumu County.

$H_{O3:}$ The efficacy of Mobile banking has no significant effect on customer satisfaction in selected commercial banks, in Kisumu County.

$H_{O4:}$ The efficacy of Tele-banking has no significant effect on customer satisfaction in selected commercial banks, in Kisumu County.

$H_{O5:}$ There is no significant moderating effect of gender on the relationship between the efficacy of e-Banking and customer satisfaction in selected commercial banks, in Kisumu County

$H_{O6:}$ There is no significant moderating effect of age on the relationship between the efficacy of e-Banking and customer satisfaction in selected commercial banks, in Kisumu County

$H_{O7:}$ There is no significant moderating effect of level of education on the relationship between the efficacy of e-Banking and customer satisfaction in selected commercial banks, in Kisumu County

$H_{O8:}$ There is no significant moderating effect of years as bank customer on the relationship between the efficacy of e-Banking and customer satisfaction in selected commercial banks, in Kisumu County

1.6 Significance of the Study

The justifications of this study were based on the following grounds. Banking management will be able to use the results in developing marketing strategies and promotion approaches of the electronic banking services products which increased the rate of adoption. They can also use electronic banking as a positive competitive advantage as well as differentiation strategy with rivals. In addition to that, the key players of electronic banking such as banks can use these services as an attraction tool for prospective customers. In addition, the academicians will also be able to appreciate program of study on the moderating effect of customer profile. Future researchers in the same field of study will be provided with information for future research in the same area under study and also they will be able to use the study as a point of reference.

From a theoretical perspective, this study contributed to knowledge advancement in both the fields of relationship marketing and that of e-commerce by providing an overview of the characteristics of relational customers in the e-Banking industry.

From a managerial point of view, it allows financial institutions to target their actions and strategies more effectively. Furthermore, it is essential for the banks to understand the customer profile factors and how they influence e-banking usage by customers, if they are to stay competitive and relevant. It is also imperative for customers to understand the benefits offered by e-banking services, so as to get maximum customer satisfaction from the e banking services.

1.7 Scope of the Study

The study determined moderating effect of customer profile on the relationship between efficacy of electronic banking and customers' satisfaction. The study focused on the efficacy of ATMs, internet banking, mobile banking, and telebanking on customer satisfaction. The target population of the study was registered bank customers from 12 selected commercial banks in Kisumu County. Questionnaires were used to obtain the primary data. The study was conducted within a period of 3 months.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter reviews existing studies carried out in the area of electronic banking and its effects on customer satisfaction. It highlights concept of Customer profile, concept of customer satisfaction, concept of e-Banking, theoretical framework and also conceptual framework, it brings out other studies on the area of customer profile, customer satisfaction and e-Banking.

2.2 Concept of Customer Profile.

Previous empirical studies (Dwivedi and Lal, 2007; Choudrie and Papazafeiropoulo, 2006; Chinn, M.D. and Fairlie, R.W, 2004; Pikkarainen *et al*., 2004; Gerrard and Cunningham, 2003; Chang, 2002; Karjaluoto *et al*., 2002; Mattila, 2001; Polatoglu and Ekin, 2001; Jayawardhena and Foley, 2000; Tan and Teo, 2000; Daniel, 1999; Sathye, 1999;) have identified a number of factors that affect the adoption and usage of electronic banking services.

Customer's age affects the attitude of individuals towards Internet banking and their ability to learn how to use it. Barnett showed that the younger the consumers, the more comfortable they were in using electronic banking. Similarly, Karjaluoto, (2002) demonstrated that electronic banking users were younger than non-electronic banking users. These findings implied that younger customers were more likely to adopt electronic banking.

Customer's income is a demographic factor that affects use of e banking. Higher paid customers, who have higher value of time than customers with lower income, are more likely to favor electronic banking. Empirical findings of income positively

influencing adoption of electronic banking can be found in Al-Ashban and Burney's (2001), Stavins's (2001) and Karjaluoto's (2002) studies.

Education also affects the level of e banking. Al-Ashban and Burney (2001) and Stavins (2001) studies showed that as consumers increased their educational qualification level, their adoption of electronic banking would increase as well. Bartel indicated that more educated individuals may require less training in response to technological change if their general skills enable them to learn the new technology. Consequently, well-educated individuals will respond more quickly than less educated individuals when Internet banking is introduced. However, the effect of education on adopting Internet banking should also depend on the age of the customer. For example, the attitude of a college graduate towards adopting e-Banking is different at age 35 than 55 because the benefits and costs of adopting are different.

Customers gender also affect how they use the internet, a number of empirical studies (MacGregor & Vrazalic, 2006; Chen & Wellman, 2004; Venkatesh & Morris, 2000) show that males are more likely to adopt to e-service than females.

A significant number of studies found that the perceived ease of use has an important effect on customer's decision to adopt a new technology .In the online context perceived ease of use was found to affect e-service adoption significantly, reflecting the importance of the role of the ease of use variable on adoption of e-services (Chau& Lai, 2003; Venkatesh & Davis, 2000; Venkatesh & Morris, 2000).

2.3 Concept of Customer Satisfaction

Modern management science philosophy considers customer satisfaction as a baseline standard of performance and a possible standard of excellence for any business organization, especially, due to similar services in the banking sector, banks tend to

compete together in order to achieve customer satisfaction. They try to create eases for their customers. E-Banking is a new system that most banks have used to achieve this objective. This system opens multiple routes to the customer service such as. ATM machines, telephones, Internet and mobile phones. Although, advancements in e-Banking technology have already transformed the modern world, e -banking is still an innovation in creating products and services through electronic channels with low cost. These products and services include billing, credit, deposit management and electronic payment of products and services such as electronic money (Samadi and Eskandari, 2012).

Many researchers have studied e -banking (Rexha *et al*., 2003; Poon, 2007; Eriksson and Nilsson, 2007; Udo *et al*., 2010; Gilaninia and Mosavian, 2010.A new approach in the field of banking services is the supply of financial and banking services with mobile phones. Mobile banking is as a wireless communication channel for creating value by customers in banking transactions (TaghaviFard and Torabi, 2011).

Mobile- banking is a new concept that emerged in the global economy in the recent years and has created new streaming in the fields of commerce and trade. Therefore, the attention of some researchers have focused on this concept (Laforet and Li, 2005; Tobbin, 2007; Laukkanen and Kiviniemi, 2010; Lee *et al*., 2011; TaghaviFard and Torabi, 2011; Singh, 2012; Zhou, 2012). In Iran, E- business have got benefits such as the lack of legal restrictions, minimum needed requirements, high penetration rate of mobile and advanced wireless communication technology. However, financial resource of people is limited; consequently, banks are challenging each other in attracting customers.

Banks, including private and public banks, numerous financial and credit institutions need to exert many efforts to keep their customers in order to survive. The constraints of financial resource under which bank services are managed make it essential for the managers to understand and measure customers' expectations. In addition, any gap in service quality has to be identified from the customers' perspective (Rakesh, 2012).

Thus, many researchers examined satisfaction and intention of banking customers (Moutinho and Smith, 2000; Mihelis *et al*., 2001; Wirtz, 2003; Laforet and Li, 2005; Liu *et al*., 2008; Bamdad and Rafiei, 2009; Udo *et al*., 2010; Gilaninia and Mosavian, 2010; Kazemi and Mohajer, 2010; Samadi and Eskandari, 2011; Grigoroudis *et al*., 2012).

Customers choose a products or services by considering their qualities. For example, Islam (2012) examined application of SERVQUAL model in customer service of mobile operators. Zekiri (2011) also applied SERVQUAL model and factor analysis in assessing customer satisfaction with service quality in the case of mobile telecommunications in Macedonia. In the case of banking services, some of the previous studies only used SERVQUAL model to examine the quality perception of the customers (Newman, 2001; Kumar *et al*., 2009; Padhy, 2009; Agathee, 2010; Kumar *et al*., 2010; Ravichandran *et al*., 2010; Tsoukatos and Mastrojianni, 2010; Abdelghani, 2012;Rakesh, 2012; Seranmadevi and Saravanaraj, 2012;). In these previous studies, effect of quality services on banking and customer satisfaction have been examined (Daniel and Berinyuy, 2010; Kumbhar, 2011; Samadi and Eskandari, 2011).

In the conditions of competitive market environment the creation, maintenance and enhancing long-term customer relationships are treated as a basis for successful

performance of any enterprise. It is determined, that an increase in customer retention leads to the increase in enterprise profitability. Thus identification of factors, influencing longevity of customer -service provider relationships becomes a priority task. However, literature analysis on this topic shows that there is still no consensus regarding identification of those factors and determination of their importance to customer retention. (Mohajer et *al*.2010)

For many years it was thought that service customer satisfaction is the main factor influencing customer repetitive buying behavior that is, Customer intentions to return to the same service provider. Notwithstanding, after subsequent researches customer satisfaction and its importance to the long-term relationships with service provider has been treated controversially. It was maintained that satisfaction is not the only one important antecedent of long-term customer relationships and such antecedents as trust, commitment, among others, Should be analyzed as well (Torabi *et al*. 2010).

Meanwhile the research of other scientists has confirmed the necessity to investigate customer satisfaction as one of the most important antecedent of long-term customer relationships in order to make adequate decisions for customer retention and in the same time for increasing in the activity's results of service provider (Ennew, Binks, 1999; Bolton et al, 1999; Olsen, John-son, 2003; Egan, 2001; Garbarino, Johnson, 1999; Mittal, Katrichis and Kumar, 2001 and others). The results of our previous research (Dovalienė, Gadeikienė and Piligrimienė, 2007) on customer trust in service provider confirm latter position, and necessitate the research of customer satisfaction in more detail. Moreover the performed literature analysis shows that the relationship between satisfaction and customer behavioral intentions in most cases depends both on the selection of research criteria, measurement techniques (Chu, 2002) and the specifics of the selected field of the r e-search (Cronin *et al*., 2000).

Referring to a numerous researches on service quality and satisfaction (Szymanski, Henard, 2001; Cronin *et al*., 2000), service quality is the main driver of customer satisfaction with service provider. However it can be noticed the diversity of results regarding factors influencing service quality and then customer satisfaction. These results mainly depend on the field in which research is carried out and on the selection of research's criteria.

2.4 Concept of Electronic Banking

Electronic banking (e-Banking) is the newest delivery channel of banking services. The definition of e-Banking varies amongst researches partially because electronic banking refers to several types of services through which a bank's customers can request information and carry out most retail banking services via computer, television, telephone or mobile phone (Daniel, 1999).

E - Banking involves consumers using the Internet to access their bank account and to undertake banking transactions (Attaran, 2000). At the basic level, Internet banking can mean the setting up of a web page by a bank to give information about its products and services. At an advanced level, it involves provision of facilities such as accessing accounts, transferring funds, and buying financial products or services online. More over Electronic banking is an umbrella term for the process by which a customer may perform banking transactions electronically without visiting a brick-and-mortar institution.

Electronic banking can also be defined as a variety of the following platforms: Internet banking or online banking, telephone banking, TV-based banking, mobile phone banking, and PC banking or offline banking. In this study, the ATM (Automated Teller Machine) channel is also added to the research. The channels

comprise two major groups: the traditional channels and e-channels. The traditional channels are defined on the basis of the type of human assistance: teller, retail or corporate manager. E-channels are divided into 4 sub-groups on the basis of how the channel is seen by clients, with some exceptions based on the technological processes of transaction execution. (Yang and Kim 2004).

The following terms all refer to one form or another of electronic banking: personal computer (PC) banking, Internet banking, virtual banking, online banking, home banking, remote electronic banking, and phone banking. PC banking and Internet or online banking is the most frequently used designations. However it should be noted, that the terms used to describe the various types of electronic banking are often used interchangeably (Dasgupta, 2002).

PC banking is a form of online banking that enables customers to execute bank transactions from a PC via a modem. In most PC banking ventures, the bank offers the customer a proprietary financial software program that allows the customer to perform financial transactions from his or her home computer. The customer then dials into the bank with his or her modem, downloads data, and runs the programs that are resident on the customer's computer. Currently, many banks offer PC banking systems that allow customers to obtain account balances and credit card statements, pay bills, and transfer funds between accounts (Nolle, 2002).

Internet banking, sometimes called online banking, is an outgrowth of PC banking (Hoffman, 2002). It uses the Internet as the delivery channel by which to conduct banking activity, for example, transferring funds, paying bills, viewing current and savings account balances, paying mortgages, and purchasing financial instruments and certificates of deposit. An Internet banking customer accesses his or her accounts

from browser software that runs Internet banking programs resident on the bank's World Wide Web server, not on the user's PC. Net Banker defines a true Internet bank as one that provides account balances and some transactional capabilities to retail customers over the World Wide Web. Internet banks are also known as virtual, cyber, net, interactive, or web banks.

Another dimension of e-Banking is internet banking. Internet offers a lot of benefits to consumers, like any time anywhere banking, updated information, convenience, faster transaction, among others. (Jun and Cai, 2001).

It should be noted that E-Banking services are replacing traditional services and creating a new scale in transformation. In the initial stage, e- channels were introduced in metropolitan cities and urban areas, but recently some banks have started focusing on rural and semi urban areas. New private sector banks are taking the lead in capturing rural and semi urban sector. The different e-channels such as ATMs, Credit and debit cards, Tele-Banking, Mobile banking, online banking and Smart Cards are changing the face of the retail banking sector. New private sector banks and foreign banks are attracting customers in a big way. The potential customers and big companies are shifting their accounts from traditional banks (not fully computerized) to E-banks (fully computerized and provide different e-channels). If traditional banks, mostly public sector banks, do not transform their business by introducing IT, their survival will become difficult, as now-a-days IT is not a matter of convenience but a survival factor. Therefore, e-Banking services are a potent factor for transformation in this e-age.

2.5 Theoretical Framework

The theoretical framework shows a set of existing theories, concepts and relevant definitions that were used in the study. The following four theories were used to guide the aspect of the study that is, Assimilation Theory, Contrast Theory, Assimilation -Contrast theory and Disconfirmation Theory.

They show empirical facts obtained from credible studies, on the area of customer satisfaction, hence were found relevant in the study on moderating effect of customer profile on the relationship between efficacy of electronic banking and customer satisfaction in selected commercial banks in Kisumu County.

2.5.1 Assimilation Theory

Assimilation theory is based on Festinger's dissonance theory. Dissonance theory posits that consumers make some kind of cognitive comparison between expectations about the product and the perceived product performance. This view of the consumer post-usage evaluation was introduced into the satisfaction literature in the form of assimilation theory. According to Anderson (1973), consumers seek to avoid dissonance by adjusting perceptions about a given product to bring it more in line with expectations. Consumers can also reduce the tension resulting from a discrepancy between expectations and product performance either by distorting expectations so that they coincide with perceived product performance or by raising the level of satisfaction by minimizing the relative importance of the disconfirmation experienced.

This explains why customers are satisfied with some of the e-banking services, they tend to minimize the disconfirmation experienced from use of an e-banking service by raising level of satisfaction, hence assimilating the product.

2.5.2 Contrast Theory

Contrast theory was first introduced by Hovland, Harvey and Sherif (1957). Dawes *et al* (1972) defined contrast theory as the tendency to magnify the discrepancy between one's own attitudes and the attitudes represented by opinion statements. Contrast theory presents an alternative view of the consumer post-usage evaluation process than was presented in assimilation theory in that post-usage evaluations lead to results in opposite predictions for the effects of expectations on satisfaction.

While assimilation theory posits that consumers will seek to minimize the discrepancy between expectation and performance, contrast theory holds that a surprise effect occurs leading to the discrepancy being magnified or exaggerated. According to the contrast theory, any discrepancy of experience from expectations will be exaggerated in the direction of discrepancy.

If banks raises expectations in its e-banking services, and then a customer's experience is only slightly less than that promised, the service would be rejected as totally un-satisfactory. Conversely, under-promising in advertising and over-delivering will cause positive disconfirmation also to be exaggerated, (Prathima, 2003).This explains why customers reject some of the e-banking services that are offered by banks.

2.5.3 Assimilation-Contrast Theory

Assimilation-contrast theory was introduced by Anderson (1973) in the context of post-exposure product performance based on Sherif and Hovland's (1961) discussion of assimilation and contrast effect. Assimilation-contrast theory suggests that if performance is within a customer's latitude (range) of acceptance, even though it may fall short of expectation, the discrepancy will be disregarded – assimilation will

operate and the performance will be deemed as acceptable. If performance falls within the latitude of rejection, contrast will prevail and the difference will be exaggerated, the produce/service deemed unacceptable.

The assimilation-contrast theory has been proposed as yet another way to explain the relationships among the variables in the disconfirmation model. This theory is a combination of both the assimilation and the contrast theories. This paradigm posits that satisfaction is a function of the magnitude of the discrepancy between expected and perceived performance. As with assimilation theory, the consumers will tend to assimilate or adjust differences in perceptions about product performance to bring it in line with prior expectations but only if the discrepancy is relatively small (ward *et al* , 2006).

Assimilation-contrast theory attempts to illustrate that both the assimilation and the contrast theory paradigms have applicability in the study of customer satisfaction. Variables other than the magnitude of the discrepancy that might also influence whether the assimilation effect or the contrast effect would be observed, when product performance is difficult to judge, expectations may dominate and assimilation effects will be observed, contrast effect would result in high involvement circumstances. The strength of the expectations may also affect whether assimilation or contrast effects are observed (Bauer 2006).

Assimilation-contrast theory explains why customers are satisfied or not satisfied by the e-banking services offered by banks. The theory suggests that if performance of e-banking service is within a customer’s latitude of acceptance, even though it may fall short of expectation the discrepancy will be disregarded hence assimilation will operate and the performance will be deemed as acceptable. If performance falls within

the latitude of rejection no matter how close to expectation, contrast will prevail and the difference will be exaggerated, the product deemed unacceptable (Bauer 2006).

2.5.4 Disconfirmation Theory

Disconfirmation theory argues that ‘satisfaction is related to the size and direction of the disconfirmation experience that occurs as a result of comparing service performance against expectations. Szymanski and Henard found in the meta-analysis that the disconfirmation paradigm is the best predictor of customer satisfaction. (Neil *et al*, 2003).

Ekinci *et al* (2004) cites Oliver’s updated definition on the disconfirmation theory, which states Satisfaction is the guest’s fulfillment response. It is a judgment that a product or service feature, or the product or service itself, provided (or is providing) a pleasurable level of consumption-related fulfillment, including levels of under- or over-fulfillment.

Mattila (2003) discusses that amongst the most popular satisfaction theories is the disconfirmation theory, which argues that satisfaction is related to the size and direction of the disconfirmation experience that occurs as a result of comparing service performance against expectations. Basically, satisfaction is the result of direct experiences with products or services, and it occurs by comparing perceptions against a standard such as, expectations. Research also indicates that how the service was delivered is more important than the outcome of the service process, and dissatisfaction towards the service often simply occurs when guest’s perceptions do not meet their expectations.

Hence in the context of this study, the theory explains reasons why customers are satisfied or not satisfied by e-banking services offered by banks. It could be when

customers' perception towards an e-banking service meets their expectation they are more satisfied and if their perception towards an e-banking service is not met they become dissatisfied.

2.6 Efficacy of ATMs on Customer Satisfaction

Lovelock (2000) identified the dimension of ATM service quality such as secure and convenient location, adequate number of ATM, user-friendly system, and functionality of ATM. He examined the factors that influence customers' satisfaction on ATM service quality. These factors include costs involved in the use of ATM, and efficient functioning of ATM. Researchers have divergent views about the use and effectiveness of ATMs. They stress the positive dimension of ATMs based on freedom of transaction.

Effective service delivery in ATM system guarantees quality excellence and superior performance and provide autonomy to the customers (Lovelock, 2000). Yavas *et al*. (2004) argued that customer-focused ATM delivery systems that fulfill their needs and maximize operational performance are essential dimensions for banks to achieve and sustain competitive advantage. Dilijonas *et al*. (2009) examined the essential aspects of ATM service quality in Baltic States. They identified essential resources adequate number of ATMs, convenient and secure location and user-friendly system; important dimensions of operation of ATM maximum speed, minimum errors, high uptime, cash back-up; and value-based aspects quality service at reasonable cost, and maximum offering to cover maximum needs of customers as vital facets.

Al-Hawari and Ward (2006) compiled a list of five major items about ATM service quality that include convenient and secured locations, functions of ATM, adequate number of machines and user-friendliness of the systems and procedures. These items

constitute important aspects of ATM service quality. Islam *et al*. (2007) examined the satisfaction level of ATM cardholders of a leading bank (HSBC) in Bangladesh. The study found significant relationship of ATM service quality with customers' satisfaction. The study identified that location, personnel response, quality of currency notes, promptness of card delivery and performance of ATM were positively and significantly related to customers' satisfaction. The security, frequent breakdown of machine, and insufficient number of ATMs were major contributors of customers' dissatisfaction.

In another study in Bangladesh, Shamsuddoha *et al*. (2005) found that 24 hours service, accuracy and convenient locations were the main predictors of customer satisfaction. It also indicated that lack of privacy in executing the transaction, fear of safety and complexity of the machine were the major cause of concern for the customers. Joseph and Stone (2003), through focus group study in the USA, found that easy access to location, user-friendly ATM and security are important factors that influence majority of bank customers' perception of ATM service quality.

Patrício *et al*. (2003) undertook a qualitative study of a Portuguese bank regarding customers' use of multi-channel offerings. The study identified accessibility and speed of operation as strong predictors of customers' satisfaction, whereas security dimension and technical failures were main causes of dissatisfaction. Previous researchers have found that reliability feature of ATM is essential to consumers' use of electronic channels of banking (Polatoglu and Ekin, 2001; Liao and Cheung, 2002). Marketers have identified customers' satisfaction through behavioral, cognitive and attitudinal response to the service provider. These dimensions manifest in repeated use of services, tolerance with regard to price, word-of mouth promotion and display of cognitive and attitudinal behavior (Bowen and Chen, 2001).

Athanassopoulos (2000) found strong empirical evidence of innovation, convenience, and price and service quality as vital dimensions of customers 'satisfaction. An understanding of customers' expectations enables organizations to offer customer-focused services and reduce attrition of customers. Literature offers significant evidence of the association between satisfactions of customers and superior financial performance, customer loyalty and market share (Beerli *et al*., 2004; Wood, 2008). A number of studies have highlighted the satisfaction of customers with ATMs (Wan *et al*., 2005; Mobarek, 2007; Komal and Singh, 2009).

Mcandrews (2003) identified that secure and convenient location, adequate number of ATM, user-friendly system and functionality of ATM play important role in customers' satisfaction. While, Joseph and Stone (2003), Mobarek (2007) and Dilijonas *et al*. (2009) mentioned that adequate number of ATMs, convenient and secure location, user-friendly system, speed, minimum errors, high uptime, cash back-up, cost and service coverage are essential service quality aspects of ATM.

Liao and Cheung (2002) argued that expectation of security is essential in shaping customers' perception of service quality. The concern of customers about security and privacy, while using this service, is a major cause of their dissatisfaction (Madu and Madu, 2002).Wan *et al*. (2005) discovered that the accuracy of transactions' information was a major predictor shaping customers' perception of ATM service quality. Tan *et al*. (2003) found that accuracy of transactions' information aspect positively and significantly contributes toward customers' perception of quality. The literature provides strong support that reliability is an essential determinant of customers' perceived service quality and positively relates to customers' use of ATM services (Polatoglu and Ekin, 2001;Fassnacht and Koese, 2006). Komal and Singh (2009) had identified that customer satisfaction is one of the major factors measuring

the performance of the banks. They examined the relationship between various ATM facilities, factors affecting the choice of ATM and its interplay with customer satisfaction. This study has analyzed the customer satisfaction level in two terms, that is. Material Customer Satisfaction (MCS) level and Abstract Customer Satisfaction (ACS) level. Customer satisfaction in material sense denotes the aggregate position of the banks in terms of fee charged, frequency with which problems are faced and post-purchase behavior of the customers. In abstract sense, customer satisfaction level denotes the position of the banks in terms of post-purchase behavior, the efficiency of facilities provided and the example of others using the ATM of the same bank. It indicated that there is direct relation between fee charged and customer satisfaction.

The overall material customer satisfaction is highest in SBI, followed by ICICI and HDFC bank. In case of abstract customer satisfaction it is in reverse order; HDFC has the highest satisfaction level followed by ICICI and SBI. Kumbhar (2011) has stated that system availability, fulfillments and efficiency, security and responsiveness, easiness, convenience, problem handling and contact were not significantly correlated with overall satisfaction in ATM service. However, cost-effectiveness of ATM service was positively and significantly correlated with overall customers' satisfaction in ATM services.

Khan (2010) in his study of Pakistani bank has stated that there is a positive and strong relationship between ATM service quality and customers satisfaction. The study has identified that convenience, efficient operation, security and privacy, reliability and responsiveness positively and significantly affect customers' perception of ATM service quality. ATM service quality also relates to the ability of the bank staff to provide the agreed services timely, accurately, dependably and promptly. Customers prefer to resolve their complaints expeditiously (Karjaluoto *et al.*, 2002).

Gerrard and Cunningham (2003) found that staff response to customers' ATM-related needs influence their perception about service quality. The responsiveness is crucial to sustain service quality and facilitates building long-term relationship between service provider and the customers (Long and McMellon, 2004; Bauer *et al*., 2006)

2.7 Efficacy of Internet Banking on Customer Satisfaction

Sathye (1999) conducted a research on adopting the services of online banking in Australia. The study basically attempted to identify the factors which averting customers from adopting internet banking services. The sample size of the research consisted of 500 respondents who included both the individual and business customers of the bank. The variables considered in this research were ease of use, security, awareness of online banking and its advantages, availability of infrastructure and resistance to change. It was demonstrated through the results of this research that customers were not adopting to internet banking services because of the lack of awareness regarding online banking and its advantages, as well as the security issues in online bank accounts. Most of the customers who were not educated also hesitated in adopting internet banking. From these findings, it was recommended that the management of banks should have to consider these factors in order to eliminate them and to bring awareness among the customers to adopt internet banking services by classifying its benefits. The banks should also require targeting the educated and wealthy people first to migrate them towards online banking.

Polatoglu and Ekin (2001) scrutinized the acceptance of online banking services by the customers of Turkey. The research considered the customers of Garanti Bank as their sample size which comprised of 150 respondents. The variables considered in this research included reliability, accessibility, saving of costs, perceived risk, security and privacy. The results of the research showed that the customers were more satisfied

on reliability, security, privacy, accessibility and perceived risk variables of online banking, as they were enjoying these services without facing any reliability issues. The customers also reported that they were using online banking services due to its accessibility and convenience. However, the variable of saving of costs had not been considered as an acceptance of online banking usage from the perspective of customers. The results of the study recommended that as the customers were satisfied on all variables of online banking provided by Garanti Bank, the management of Garanti Bank should be focused on making enhancements in its services with the advancement of technology. The management of banks were also required to efficiently deal with the complaints of customers in order to retain the existing customers as well as to attract new customers.

Jun and Cai (2001) empirically investigated the essential factors which were helpful in determining the service quality of internet banking. The data collection for this research had been done by considering 180 respondents. The results of the study revealed that customers were satisfied with the dimensions of reliability, tangibles and assurance. Due to technological advancement, the customers had started to focus on the design and content of online banking websites. The banking services which were being used by the customers were very reliable and their online banks provided them accurate information. It was recommended in this study that management of online banks had to design programs for improvement of the service quality in order to pay attention to the requirements of customers as well as to solve their issues. The management was also required to make their systems more efficient and effective so as to provide satisfaction to the customers in usage of internet banking services.

Pikkarainen *et al*., (2006) have studied how to measure the satisfaction of customers in usage of internet banking in Finland. This study was conducted in Finland. This research was performed on the basis of End-User Computing Satisfaction (EUCS) Model. According to responses of customers, it was analyzed that the information provided by online banking websites was very limited and was not in accordance with their requirements. It was proposed that managers should focus on the methods which are helpful in enhancement of customer satisfaction by improving the content factor regarding online banking services. It also recommended that the services of internet banking could be enhanced by establishing personalization and user interfaces, which usually considers the diverse needs of distinct user segments.

Herington and Weaven (2009) scrutinized the service quality of internet banking and its emphasis on the satisfaction level of customers in Australia. The sample size chosen for this study was 200 respondents. It was observed from the results that personal needs, site organization and user friendliness were found to have a positive as well as compelling influence on the satisfaction level of customers. The recommendations of the study showed that the management of banks needed to evaluate their performance individually in association with the e-service quality. The management of online banking services were required to be conscious about the role and significance of the services which had been provided conventionally in order to encourage enduring relationships with the customers.

Rod *et al*., (2009) have examined the association among the service quality of internet banking and customer satisfaction in New Zealand by using SERVQUAL instrument.

The sample comprised of 300 people who were regular users of internet banking. The results of the study showed that the dimensions of service quality of internet banking

had a positive as well as an indicative relationship with the customer satisfaction. It has was recommended that the management of online service providers of banks be compelled to constantly analyze the level of fulfillment of the requirements and demands of customer with the site of the company, if they desired to endure the customers loyal with their online services.

Santouridis *et al*., (2009) empirically investigated the internet banking in Greece by examining the customer satisfaction and the quality of internet banking services.SERVQUAL model was used to measure the internet banking service quality. The sample size of 200 respondents was considered for data collection. It has was observed from the results of the research that the dimensions of assurance, responsiveness and reliability had a positive and significant impact on customer satisfaction level. Among these dimensions, reliability was found to have the most strong and highest impact on customer satisfaction. It has been recommended that the dimensions which do not have association with level of customer satisfaction needed to be improved by the banking sector.

Nupur (2010) performed an analysis on the internet banking and the satisfaction level of customers in Bangladesh. A sample size of, 250 respondents was used to collect the data. The SERVQUAL model was used to measure the association between the level of customer satisfaction and internet banking. It was observed that a relationship existed between the internet banking services and customer satisfaction level. The main dimensions examined were reliability, empathy, responsiveness and assurance which resulted in adequately satisfying the customers, whereas, the tangibles dimension did not have any link to customer satisfaction. It was recommended that internet banking system should be made more formative and the government of

Bangladesh should play a leading role in fostering the framework of Information Technology in Bangladesh.

Sadeghi and Hanzaee (2010) have investigated the factors of customer satisfaction in the usage of internet banking services in Iran. The result of the study revealed that reliability, design of the website, image, accuracy and impression of the management of bank were found to have had the most significant impact on the satisfaction level of customers. The variables of privacy and security also had an impact on customer satisfaction, but its impact was very low. It was proposed that in order to explore a direct association between the educational level of customers and the degree to which the electronic services of banks were used by the customers, the knowledge and apprehension of customers could be a conclusive factor that escalated the degree to which customers used services as well as how habitually they were using it.

Ahmad and Zu'bi (2011) did a research related to how the functionality of internet banking was related to the consequences of customer satisfaction. The research done considered banks of Jordan. Through the random sampling technique, the sample size chosen was 185. It was found that the variables which included privacy, accessibility, design, convenience, content and security had a significant influence on the customer satisfaction. Out of these variables, three variables namely, privacy, content and security had the highest impact on customer satisfaction.

Ankit (2011) has determined the factors of online banking that had an impact on customer satisfaction in India. The sample size of 250 respondents was selected for the study, questionnaires were used to collect data. The results of the study showed that the banking needs which included convenience, privacy, risk, and problem

resolution were found to be the most important determinants with a positive impact on customer satisfaction.

2.8 Efficacy of Mobile Banking on Customer Satisfaction

The term mobile refers to applications, which are designed for users on the move. Mobile device is commonly known as cell phone and users commonly use it for communication and as a wireless delivery channel. Mobile banking is also known as M-Banking or m-banking. (Tojib 2012)

Mobile services are more attractive than current online services due to service ubiquity, a unique characteristic exclusive to the mobile environment (Tojib and Tsarenko, 2012). In Iran, the most important services provided in MB system are : balance enquiry, last three accounts transactions enquiry, draft, approved of Cheque amount, Cheque status enquiry, blocking card, buy prepaid recharge, installments payment, bills payment, received messages archives, ability of receiving various customer accounts information, shopping ability, hotel expenses payment, stock market status enquiry.

According to Pento (2002) m-banking is defined as a form of banking transaction carried out via a mobile phone. Moreover, it is defined as a type of execution of financial services in the course of which - within an electronic procedure-the customer uses mobile communication techniques in conjunction with mobile devices. The technologies generally used for mobile banking are Interactive Voice Response (IVR), Standalone Mobile Application Clients, Short Messaging Service (SMS) and Wireless Application Protocol (WAP).

Mobile banking can be categorized as the latest advancement in electronic banking, which has widened customers’ access to bank accounts through wireless channels.

Mobile banking is a financial service where the bank customers perform balance inquiry, credit transfer, and other businesses according to instruction sent through the mobile phone, (Singh, 2012).

From customers' perspective adopting mobile banking services benefit in terms of convenience to perform banking transactions anytime and anywhere, with ease to use. Security is ensured, as banking transactions are encrypted and password-protected, (Poon, 2007).

Pakistan has a successfully growing economy as its telecommunication industry has advanced tremendously in the recent years. Pakistan's mobile technology, which had started to grow strongly over the last few years, rocketed to 95 million subscribers by June 2009 and is gearing up for further growth. The mobile population has been increasing at a remarkable rate of 58% with six mobile companies operating in Pakistan, as reported by, (Coulter, 2002).

Brady (2000) argues that people belonging to all income groups are using this technology as a result of foreign investment in Pakistan and reduced telecommunication rates. The encouraging prospect of mobile usage has led foreign banks of Pakistan to provide mobile banking services to customers in the country. After the multinational banks, numerous local banks have intended to initiate this service for their customers. State Bank has issued orders to these banks to facilitate poor people, especially the residents of earthquake-affected areas.

Mobile Accounting is sometimes characterized as transaction-based banking services that revolve around a bank account and are availed using mobile devices. Not all Mobile Accounting services are however necessarily transaction-based. A more precise definition of Mobile Accounting would therefore characterize it as availment

of account-specific banking services of non-informational nature. Mobile Accounting services may be divided in two categories to differentiate between services that are essential to operate an account and services that are essential to administer an account. (Egan, 2001)

Mobile Financial Information refers to non-transaction based banking- and financial services of informational nature. Mobile Financial Information services include subsets from both banking and financial services and are meant to provide the customer with anytime, anywhere access to information. The information may either concern the bank and securities accounts of the customer or it may be regarding market developments with relevance for that individual customer. The information may be customized on the basis of preferences given by the customer and sent with a frequency decided by him. The information should be provided, ideally, on both, pull and push basis. (Ward 2006)

Information services are an integral part of Mobile Accounting and Mobile Brokerage but they may also be offered as a stand-alone, independent module, that is, Mobile Financial Information can be offered without offering Mobile Accounting or Mobile Brokerage but vice versa is not feasible,(Martin ,2004).

2.9 Efficacy of Telebanking on Customer Satisfaction

Chen(2001) argues that telephone banking is a service provided by a bank or other financial institution, that enables customers to perform financial transactions over the telephone, without the need to visit a bank branch or automated teller machine creating convenience for consumers hence high customer satisfaction.

Telephone banking times can be longer than branch opening times, and some financial institutions offer the service on a 24 hour basis. From the bank's point of view,

telephone banking reduces the cost of handling transactions by reducing the need for customers to visit a bank branch for non-cash withdrawal and deposit transactions which is very useful for the customers, (Bowen, 2001).

Telephone banking provides simple account management services at the consumers' comfort that include: Lower transaction costs**,** Independence from bank opening hours**,** Same-day processing. This provides convenience to consumers because they can be able to transact any business anytime of the day without restrictions, (Hedge, 2001).

Panther (2007) asserts that telebanking in general is carrying out financial transactions using telephones and/or computers. It is a way through which individuals do business with a bank using a computer or telephone. It is banking conducted over a computer network. The IVR based automated information system is the latest addition in the list of a bank's value-added services. This system not only provides the latest accurate information to the customers at their fingertips but also eases the job of bank's personnel resulting in enhanced productivity, reduced paper environment and streamlined staffing. Some value added services that any bank can offer its customers using Extend IVR are given below.

Services that can be offered in Tele-Banking include Bank Functions such as Account Balance, Mini Statement, Cheque Book Request, Cheque Status Enquiry, Stop Cheque Payment, Utility Bill Payment, Internet User-Id, and Mobile Banking Registration. The customers hence avoid long queues at the banks which brings about good customer satisfaction, (Gerrard, and Cunningham, 2003).

Telephone banking also provides Card Functions such as Outstanding Balance, Details of Last Statement, Details of Last Payment, Last Ten Transactions, Reward

Points Status, among others. Bonds Functions Information on Redemption, Information on Interest, and Information on Dispatch of Bonds Certificates, among others,(John Wiley ,2007).

Demat Functions like ISIN Query, Holding Statement, Transaction History, Submitting Delivery Instructions, Request for Instruction Booklet, among others are also provide and they increase customer satisfaction. Other Services provided could also include Replacement of lost Card, ATM PIN Re-issue, Fixing Bank Appointments, Status of Loan Application, Loan Installment Repayment Reminders, Standing Instructions, Complaints and Suggestions, Inquire about any of the bank's products and services, among others,(Joseph and Stone ,2003).

Mattila and Pento (2002) argued that an IVR System can Automatically handle every call from customers, answer calls on the first ring, 7 days a week, 24 hours a day, speak to callers in human tone of voice, Optional multi-lingual prompts, Provide accurate and reliable information, resources your present personnel for more productive work, Smoothens the status information process thus convenience for customers.

Expanded Customer Service Hours**,** Standardized Operational Procedures**,** Improved Customer Service**,** Enhanced Productivity**,** Streamlined Staffing**,** Lower Cost**,** Efficient Information Flow**,** Reduced Staffing Requirements**,** Reduced Paper Environment and Improved Customer Satisfaction, (Karsch, 2004).

2.10 Conceptual Framework

The conceptual framework shows the relationship between the independent and dependent variable and shows the relationship between the variables, when a moderator is introduced. It portrays the cause and effect relationship between the IV

and DV variables respectively, and the effect on the DV when a moderator is introduced.

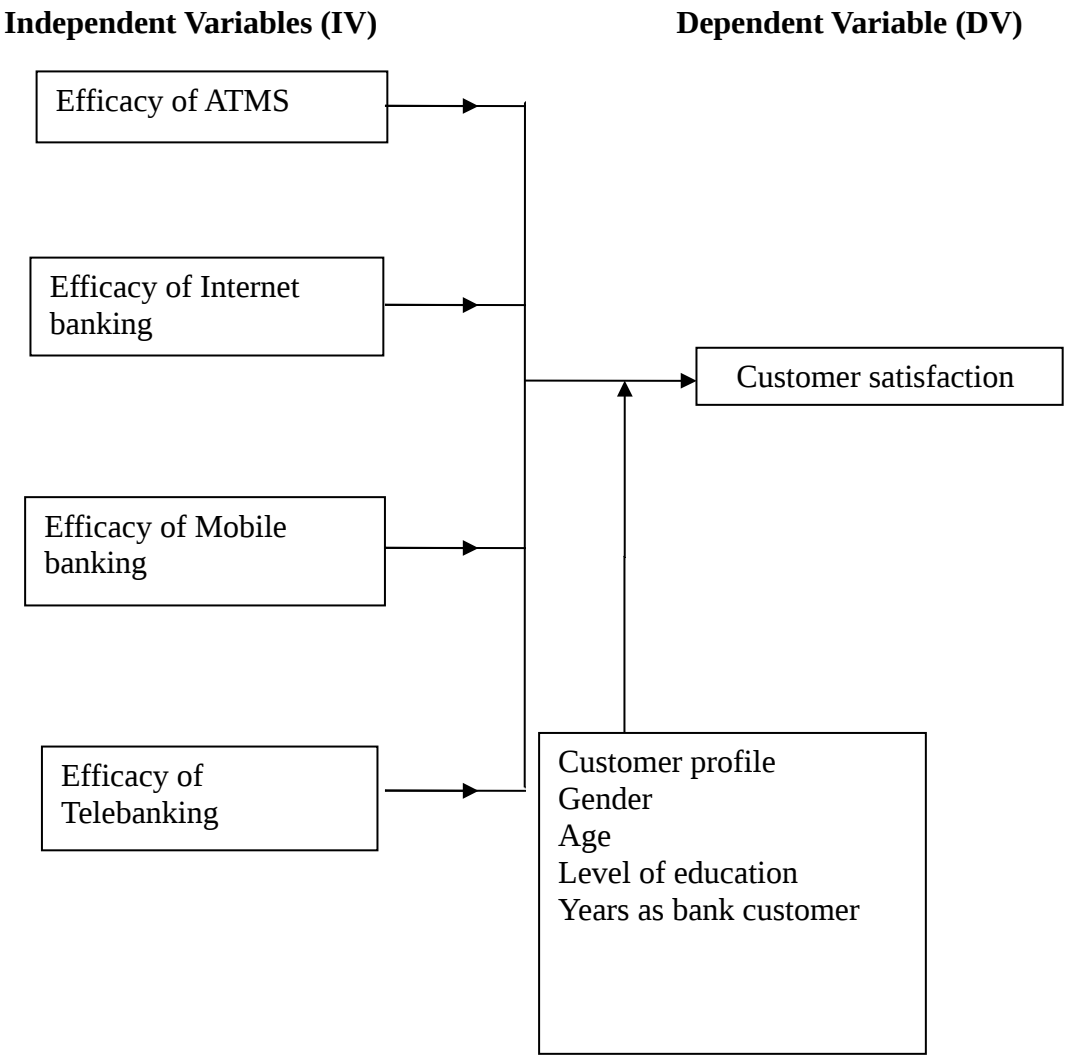

Figure 2.1 Conceptual Framework

Source: Researcher, (2015)

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Overview

This chapter has various sections. It covers the research design, target population, sampling procedure, data collection techniques and data analysis techniques.

3.2 Research Design

The study adopted explanatory research design. Explanatory research design focuses on why questions. In answering the 'why' questions, the study was involved in developing causal explanations. Causal explanations argued that phenomenon Y (customer satisfaction) was affected by factor X (e-Banking). This design was chosen because it applies closely to the research objectives of the study hence practical in testing the study hypothesis.

3.3 Target Population

A population is a collective term used to describe the total quantity of cases of the type which are the subject of a study. The target population of the study was registered banks customers from 12 selected commercial banks in Kisumu County, Namely Kenya Commercial Bank, Barclays Bank, Equity Bank, Transnational Bank, National Bank of Kenya, Co-operative Bank, CFC Stanbic Bank, Commercial Bank of Africa, Diamond Trust Bank, Imperial Bank, Bank of Baroda, and Family Bank. From the 12 selected banks database, there were an estimated 2,824,404 customers in the 12 selected banks using ATMs, Internet Banking, Mobile Banking or Telebanking.

Table 3.1: Target Population

Banks Names	No. Of Customers
Kenya Commercial bank,	233538
Barclays bank	134642
Equity bank,	656756
Transnational bank,	100729
National bank,	112430
CFC Stan-bic bank,	123532
Commercial Bank of Africa,	345628
Diamond Trust bank,	149227
Imperial bank,	120028
Bank of Baroda,	107725
Family Bank	340027
Co-operative Bank,	400142
Total	2824404

Source: Bank Database, (2013)

3.4 Sample Size and Sampling Procedures

The sample was obtained using a formula that was used by Nassiuma in his studies in the year 2000 as follows:-

$$¿\frac{N c^2}{c^2+(N-1)e^2}=\frac{2824404(0.3)^2}{0.3^2+(2824404-1)0.02^2} \quad = 224 \text{ customers}$$

Where, n=Sample size, N=Population, c=coefficient of variation, e = standard error

Using this formula a sample of 224 customers was selected.

The sample frame of the study stratified the banks into 12 banks. A stratified random sample was a useful blend of randomization and categorization, which enabled both a quantitative and qualitative process of research to be undertaken (Cohen, 2003). The advantage in stratified random sampling was that it ensured inclusion, in the sample of subgroups, which otherwise, would be omitted entirely by other sampling methods

because of their small numbers in the population. Neyman allocation formula was used to allocate customers into 12 banks (stratus). The purpose of the method was to maximize survey precision, given a fixed sample size. With Neyman allocation, the "best" sample size for stratum h was;

$$h=¿\left(\frac{N_h}{N}\right)n$$
$$n_¿$$

Where, $h=¿$ $n_¿$ is the sample size for stratum h, n is total sample size, N_h is the population size for stratum h, N is the total population. Hence,

Table 3.2: Sample Size

Banks Names	No. Of customers	Sample Size $h=¿\left(\frac{N_h}{N}\right)n$ $n_¿$
Kenya Commercial bank,	233538	20
Barclays bank	134642	12
Equity bank,	656756	52
Transnational bank,	100729	8
National bank,	112430	9
CFC Stan-bic bank,	123532	10
Commercial Bank of Africa,	345628	27
Diamond Trust bank,	149227	10
Imperial bank,	120028	10
Bank of Baroda,	107725	7
Family Bank	340027	27

		32
Co-operative Bank,	400142	
Total	2824404	**224**

Source: Survey Data (2013)

Systematic sampling was used in this study to individual customers

3.5 Data Collection, Instruments and Procedures

3.5.1 Data Types and Sources

The research utilized both primary and secondary data. The secondary data was obtained from textbooks related to the study, magazines, journals, presented conference papers and previous reports as well as the internet. The primary data on the other hand was obtained using questionnaires adopted for the study.

3.5.2 Data Collection Instruments

Questionnaires were used to obtain the primary data required for the research which were self-administered by the researcher in the field. Questionnaires were best suited for surveys (Saunder et al, 2007). This research employed a 5 likert scale in rating the various responses.

3.5.3 Data Collection Procedure

A research permit was obtained from the National Council for Research for Science and Technology. The researcher used the permit to contact managers of the 12 selected commercial banks to allow collection of data in their respective branches. Four research assistants were trained to help in distributing questionnaires to customers in the banks.

Pilot study was also conducted in the banks where 16 questionnaires were distributed in the banks .the purpose of this was to test the questionnaires which in turn improved the data collection instruments that was a replica of rehearsal of the main survey.

3.6 Validity and Reliability of the Instruments

3.6.1 Validity of the Instruments

According to Panton (2000) validity is the quality attributed to proposition or measures of the degree to which they conform to establish the truth. For this study, validity was achieved through a pilot test that was done in Kisumu County. The research employed the use of questionnaires.

The purpose of construct validity showed the items measure and were correlated with what they purported to measure, and that the items do not correlate with other constructs.

3.6.2 Reliability of the Instruments

Cronbach's alpha was used to determine reliability, where Cronbach's coefficient, having a value of more than 0.5 was considered adequate for such exploratory work, (Nunally, 1978). The study found cronbach alpha more than 0.7 for all variables.

Table 3.3: Reliability Statistics

	Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
Customer satisfaction.	0.727	0.73	3
Efficacy of Internet banking	0.762	0.767	3
Efficacy of Mobile banking	0.896	0.894	3
Efficacy of ATM	0.873	0.872	4
Efficacy of Telebanking	0.843	0.849	3

Source: Researcher's Survey and Compilation (2015).

3.7 Data Analysis and Presentation

Before processing the responses, the completed questionnaires were edited for completeness and consistency. The data were then coded to enable the responses to be grouped into various categories. This research employed quantitative methods of analyzing data. In analysis, ratio scale was used in data measurement and both inferential and descriptive statistics were used to analyze the data. In descriptive statistics the research employed software for data analysis known as SPSS which helped to describe the data and determine the extent used, also tables were used to present data.

3.7.1 Direct Effect of Independent on dependent variable

Multiple regressions and correlation as a form of inferential statistic analysis, was used in determining the relationship between the dependent and independent variables. Chi-square was used to determine the relation between the independent and dependent variable. This model is as expressed below;

$$y=\alpha+\beta_1 X_1+\beta_2 X_2+\beta_3 X_3+\beta_4 X_4++\varepsilon$$

3.7.2 Moderated Multiple Regression Model of Customer Profile on the Relationship between Efficacy of E-Banking and Customer Satisfaction.

$$y=\alpha+\beta_1 X_1+\beta_2 X_2+\beta_3 X_3+\beta_4 X_4+\beta_{5a} X_{5a}*Z_a+\beta_{5a} X_{5a}*Z_b+\beta_{5a} X_{5a}*Z_c+\beta_{5a} X_{5a}*Z_d+\beta_{5b} X_{5b}*Z_a+$$

Where;

y- Customer satisfaction.

α - This is the constant of an equation.

X_1 = Efficacy of Internet banking

X_2 = Efficacy of Mobile banking

X_3 X_3 = Efficacy of ATM

X_4X_4= Efficacy of Telebanking

ZZ= Customers profile

$X_{5a}*Z_a$ = Internet banking *gender

$X_{5a}*Z_b$ = Internet banking *age

$X_{5a}*Z_c$ = Internet banking *level of education

$X_{5a}*Z_d$ = Internet banking *years as bank customer

$X_{5b}*Z_a$ = Mobile banking *gender

$X_{5b}*Z_b$ = Mobile banking *age

$X_{5b}*Z_c$ = Mobile banking *level of education

$X_{5b}*Z_d$ = Mobile banking *years as bank customer

$X_{5c}*Z_a$ = ATM *gender

$X_{5c}*Z_b$ = ATM *age

$X_{5c}*Z_c$ = ATM *level of education

$X_{5c}*Z_d$ = ATM *years as bank customer

$X_{5d}*Z_a$=¿ Telebanking *gender

$X_{5d}*Z_b$ = Telebanking *age

$X_{5d}*Z_c$ = Telebanking *level of education

$X_{5d}*Z_d$ = Telebanking *years as bank customer

$\varepsilon\varepsilon$ _ This is random error term

β1, β2, β3, β4, – These are the coefficient of regression for, Efficacy of Internet banking Efficacy of Mobile banking, Efficacy of ATM and Efficacy of Telebanking

β5a, β5b, β5c, β5d, – These are the coefficient of regression for moderated factors

3.7.3 Assumption of linear regression model

In order to test for multi-collinearity among the predictor variables, variance-inflation factor (VIF) and tolerance was applied. The tolerance indicator for predictor variables greater than 0.1 and VIF values less than 10 indicates that there is no multi collinearity problem (Neter *et al*., 1996; Ott and Longnecker, 2001). Variables were tested at a significant level of 0.01 (1%) as shown in table 4.10,

Linear Relationship between DV and IV; Standard multiple regression can only accurately estimate the relationship between DV and IV if the relationships are linear in nature. This was tested using Pearson correlation which had significant linear correlation as shown in table 4.7.

DV and IV William *et al*. (2013) Variables are normally distributed; Regression assumes that variables have normal distribution; none normally distributed variables can distort relationships and significance tests. Normality-The assumption of normality states that the error terms at every level of the model are normally distributed. This was tested using skewness and kurtosis where the later had values approaching zero while the former had values between 1-0 hence normal distribution of the data, this is shown in table's 4.2, 4.3, 4.4, 4.5, and 4.6

3.8 Ethical Consideration Standards

Ethics are norms or standards of behaviour that guide moral choices about our behaviour and relationship with others (Cooper and Schindler, 2008). Ethics ensures that no one is armed or suffers adverse consequences from reserch activities. The reserch was conducted in such a way that participants do not suffer any physical pain, embarrasment or loss of privacy.The resercher upheld the right to privacy and confidentiality.

Ethical standards entailed the sending of a cover letter assuring the respondent mainly the Branch managers on the Confidentiality of the information provided on the subject matter. The researcher assured the respondents that information collected was to be treated with confidentiality without disclosing the respondent's identity.

Objectivity vs. subjectivity in the research was another important consideration. The research ensured no personal biases and opinions got in the way and that fair consideration was given.

CHAPTER FOUR

RESULTS AND DISCUSSIONS

4.1 Introduction

This chapter presents the analysis of collected data. The entire data analysis is divided into two parts: Descriptive statistics and inferential statistics. Descriptive and inferential analyses are two statistical techniques used in the data analysis. The program SPSS was used to analyze the collected data.Results were presented for each of the theme drawn from the objectives and were interpreted and discussed.

4.2 Response rate

Two hundred and twenty four questionnaires were distributed to the respondents and out of the 224 questionnaires, 139 of them were collected with a response rate of 62.05% which is considered acceptable.

4.3 Customer Profile Information

Customer profile information lays a basic foundation on which interpretations of the study are based. As a result, it was found necessary to establish the customer profile information paying close attention to gender, age bracket, level of education, and years as bank customer.

The study put into account the gender of the respondents. It was found necessary to establish the gender of the respondents since both male and female respondents expect to be treated equally. The results are as shown on table 4.1.From the findings, 56.8% (79) of the respondents are male whereas 43.2% (60) are female. Thus, majority of the respondents are more likely to adopt e-service since majority of them are male (Laukkanen & Pasanen, 2008; MacGregor & Vrazalic, 2006; Chen & Wellman, 2004; Venkatesh & Morris, 2000).

In reference to the age bracket, 46% (64) were between 26-30 years, 23.7% (33) were between 31-35 years, 17.3% (24) were between 36-40 years and 2.2% (3) were over 41 years. From the findings, it was evident that majority of the bank customers were between the age of 26-30 years. This is due to the fact that customers in this age bracket are more comfortable in using electronic banking since age affects the attitude of individuals towards internet banking.

The level of education of the respondents was also sought. The findings showed that 65.5% (91) are graduates, 17.3% (24) have a Diploma, 11.5% (16) have Masters and 5.8% (8) of the respondents had advanced to secondary level of education. This composition of the respondents was deemed to give relevant and first-hand information as far as the study was concerned.

Further findings revealed that 28.1% (39) of the respondents had been bank customers for less than a year, 28.1% (39) had been customers for between 9-12 years, 27.3% (38) for 1-4 years and 16.5% (23) for 5-8 years. The findings showed that the respondents have been customers long enough to be able to give relevant information as sought by the study.

Finally, the duration in which the customers use the bank's services in a typical month was also sought by the researcher to put emphasis on customer loyality. As evidenced from the findings,33.8% (47) of the respondents used the bank's services once a month,28.1% (39) of the respondents used the bank's services on a daily basis,23.7% (33) of the respondents use the bank's services once a week and 14.4% (20) several times per month.

Table 4.1: Customer Profile Information

	Frequency	Percent

Gender	Male	79	56.8
	Female	60	43.2
	Total	139	100
Age bracket	Less than 20	2	1.4
	21-25	13	9.4
	26-30	64	46
	31-35	33	23.7
	36-40	24	17.3
	above 41	3	2.2
	Total	139	100
Level of education	Secondary	8	5.8
	Diploma	24	17.3
	Graduate	91	65.5
	Master and above	16	11.5
	Total	139	100
Years as bank customer	less than 1 yrs	39	28.1
	1-4yrs	38	27.3
	5-8yrs	23	16.5
	9-12yrs	39	28.1
	Total	139	100
Times persons use bank Services in a month	Once a month	47	33.8
	Several times per month	20	14.4
	Once a week	33	23.7
	Daily	39	28.1
	Total	139	100

Source: Researcher's Survey and Compilation (2015).

4.4 Efficacy of Internet Banking

The advent of Internet banking has made it possible for customers to access accounts, transfer funds and buying financial products or services online. As such, the researcher found it necessary to establish Internet banking at the selected banks in Kisumu County. From the findings, 44.6% (62) of the respondents were not sure if they use the internet to check their bank statement (mean = 3.21).As well, 39.6% (55) of the respondents were undecided as to whether they use the internet to transfer their money online (mean = 3.22). Moreover, 30.9% (43) of the respondents were not sure

if they can withdraw money online (mean = 3.25), generally banking summed up to a mean of 3.23, standard deviation 0.77919, Skewness 0.058 and kurtosis 0.044. The findings are shown in Table 4.2

Table 4.2: Efficacy of Internet Banking

		SD	D	N	A	SA	Mean	Std. Deviation	Skewness	Kurtosis
I use the internet to check for my bank statement	f	2	27	62	36	12	3.21	0.905	0.169	-0.321
	%	1.4	19.4	44.6	25.9	8.6				
I use the internet to transfer my money online	f	12	12	55	53	7	3.22	0.986	-0.693	0.214
	%	8.6	8.6	39.6	38.1	5				
I can withdraw money online	f	9	22	43	55	10	3.25	1.022	-0.483	-0.319
	%	6.5	15.8	30.9	39.6	7.2				
internet banking							3.23	0.77919	0.058	0.044

Source: Researcher's Survey and Compilation (2015).

4.5 Efficacy of Mobile Banking

Mobile- banking is also new concept that emerged globally and has created new streaming in the fields of commerce and trade. It was found necessary to establish the use of mobile banking in the selected banks in Kisumu County. From the findings in table 4.3, 68.3% (95) of the respondents agreed that they can check their bank statement using their mobile phone (mean = 3.83). Further, 57.6% (80) of the respondents agreed that they find it easier to deposit or withdraw money from their bank account using a mobile phone (mean = 3.47). However, 58.3% (81) of the respondents were not sure if they can do any transaction in their bank account using a mobile phone (mean = 3.24).Generally, mobile banking summed up to a mean of 3.51, standard deviation 0.75, Skewness -0.45 and kurtosis 0.58.

Table 4.3 Efficacy of Mobile Banking

		SD	D	N	A	SA	Mean	Std. Deviation	Skewness	Kurtosis
I can check my bank statement by using a mobile phone	F	1	12	14	95	17	3.83	0.78	-1.2	1.78
	%	0.7	8.6	10.1	68.3	12.2				
I find it easier to deposit or withdraw money from my bank account using a mobile phone	F	12	19	14	80	14	3.47	1.12	-0.9	-0.1
	%	8.6	13.7	10.1	57.6	10.1				
I can do any transaction in my bank account using a mobile phone	F	9	2	81	40	7	3.24	0.84	-0.6	1.66
	%	6.5	1.4	58.3	28.8	5				
Mobile banking							3.51	0.75	-0.45	0.58

Source: Researcher's Survey and Compilation (2015).

4.6 Efficacy of ATM

According to Lovelock, (2000), effective delivery in ATM system guarantees quality, excellence as well as superior performance. Thus, it was necessary to establish if this was the case among the selected banks in Kisumu County. The findings in table 4.4 show that 59.7% (83) of the respondents agreed that the ATMs in their bank are reliable (mean = 3.69).Nonetheless,45.3% (63) of the respondents were not sure if they can purchase any good from supermarket using ATMs (mean = 3.42).In the same way,43.9% (61) of the respondents were not certain if they use ATM to deposit cash in their bank account (mean = 3.24).Further,38.8% (54) of the respondents were not sure if the bank has many ATMs which are convenient for them (mean = 3.26).Generally, the results on ATM summed up to a mean of 3.4,standard deviation 0.78,Skewness -0.5 and kurtosis -0.6.

Table 4.4 Efficacy of ATM

		SD	D	N	A	SA	Mean	Std. Deviation	Skewness	Kurtosis
The bank has many ATMS										
which are convenient for me	f	11	27	54	9	38	3.26	1.27	0.08	-1
	%	7.9	19.4	38.8	6.5	27.3				
I use ATM to deposit cash in										
my bank account	f	1	22	61	53	2	3.24	0.76	-0.3	-0.4
	%	0.7	15.8	43.9	38.1	1.4				
I can purchase any good from										
supermarket using ATMs	f	0	12	63	57	7	3.42	0.72	-0	-0.3
	%	0	8.6	45.3	41	5				
ATMs in my bank are reliable	f	9	11	15	83	21	3.69	1.04	-1.2	1.08
	%	6.5	7.9	10.8	59.7	15.1				
ATM							3.4	0.78	-0.5	-0.6

Source: Researcher's Survey and Compilation (2015).

4.7 Efficacy of Telebanking

Telebanking is also a convenient way to perform financial transactions over the phone without necessarily visiting the bank or the ATM (Chen, 2001).As a result it was deemed important to establish telebanking at the selected banks in Kisumu County. From the results in table 4.5, 57.6% (80) of the respondents agreed that the banks phones are very much reliable (mean = 3.69). However, 61.2% (85) of the respondents were uncertain if the banks telebanking services are adequate (mean = 3.01).Also,56.8% (79) of the respondents were not sure if they can perform any bank transaction using phone calls (mean = 3.17).The results on telebanking summed up to a mean of 3.29,standard deviation 0.69,Skewness -0.9 and kurtosis 0.41.

Table 4.5: Efficacy of Telebanking

		SD	D	N	A	SA	Mean	Std. Deviation	Skewness	Kurtosis
I can perform any bank transaction using phone calls	f	9	12	79	25	14	3.17	0.95	-0.1	0.53
	%	6.5	8.6	56.8	18	10.1				
The banks phones are very much reliable	f	9	14	12	80	24	3.69	1.08	-1.1	0.66
	%	6.5	10.1	8.6	57.6	17.3				
The banks telebanking services are adequate	f	5	21	85	24	4	3.01	0.77	-0.1	1.09
	%	3.6	15.1	61.2	17.3	2.9				
Telebanking							3.29	0.69	-0.9	0.41

Source: Researcher's Survey and Compilation (2015).

4.8 Customer Satisfaction

This section focused on customer satisfaction. From the results, 48.2% (67) of the respondents agreed that they are satisfied with how the bank treats its customers (mean = 3.6). Also, 36% (50) of the respondents agreed that they are happy being a customer in the bank (mean = 3.55). Finally, 30.2% (42) of the respondents neither agreed nor disagreed if they are contented with the banks internet banking services (mean = 3.1). Customer satisfaction summed up to a mean of 3.42, standard deviation 0.51, Skewness 0.62 and kurtosis 1.45.

Table 4.6: Customer Satisfaction

		SD	D	N	A	SA	Mean	Std. Deviation	Skewness	Kurtosis
Am contented with the banks internet banking services	f	11	27	42	55	4	3.1	1.01	-0.5	-0.6
	%	7.9	19.4	30.2	39.6	2.9				
Am satisfied with how the bank treats its customers	f	0	1	62	67	9	3.6	0.62	0.33	-0.5
	%	0	0.7	44.6	48.2	6.5				
Am happy being a customer in the bank	f	0	14	55	50	20	3.55	0.86	0.06	-0.6
	%	0	10.1	39.6	36	14.4				
Customer satisfaction							3.42	0.51	0.62	1.45

Source: Researcher's Survey and Compilation (2015).

4.9 Correlation betweeen E- banking and Customer Satisfaction

Pearson Correlations results in table 4.7 showed that Internet banking was positively and significantly correlated with customer satisfaction ($r=0.585$, $\rho<0.01$). Thus, Internet banking explains 58.5% (0.585^2) of the variation in customer satisfaction.

Mobile banking was also positively correlated with customer satisfaction ($r=0.498$, $\rho<0.01$). As a result, mobile banking explained 49.8% (0.498^2) of the variation in customer satisfaction. Further, the efficacy of ATM was highly and positively associated with customer satisfaction ($r=0.745$, $\rho<0.01$) hence it contributes about 74.5% (0.745^2) of the variation in customer satisfaction.

In the same way, telebanking was positively and significantly correlated with customer satisfaction($r=0.732$, $\rho<0.01$) hence telebanking explained 73.2% (0.732^2) of the variation in customer satisfaction. Findings provided enough evidence to suggest that there was linear relationship between Internet banking, mobile banking, ATM and telebanking with customer satisfaction. Moreover, this provides enough ground support for multiple regression models to be performed.

Table 4.7|: Correlation Results

	Customer satisfaction	Internet banking	Mobile banking	ATM	Telebanking
Customer satisfaction	1				
Sig. (2-tailed)	0				
Internet banking	.585**	1			
Sig. (2-tailed)	0.000				
Mobile banking	.498**	.751**	1		
Sig. (2-tailed)	0.000	0.000			
ATM	.745**	.793**	.663**	1	
Sig. (2-tailed)	0.000	0.000	0.000		
telebanking	.732**	.505**	.660**	.706**	1
Sig. (2-tailed)	0.000	0.000	0.000	0.000	

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

Source: Researcher's Survey and Compilation (2015).

4.10 Multiple Regression Statistics for Effect of E-Banking on customer Satisfaction

The regression results from table 4.8 shows that the study multiple regression model had a coefficient of determination (R^2) of about 0.664. This means that 66.4% variation of customer satisfaction is explained/predicted by joint contribution of the independent variables. Durbin–Watson statistic is within the thumb rule value of 1 to

2, thus from the table, Durbin Watson statistics value was 1.38 indicating lack of serial correlation.

Table 4.8: Multiple Regression Statistics

R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
.815a	0.664	0.654	0.29977	1.38

a Predictors: (Constant), telebanking, Internet banking, mobile banking, ATM

b Dependent Variable: customer satisfaction

Source: Researcher's Survey and Compilation (2015).

4.11 ANOVA Model

Table 4.9 reveals that the F-value of 66.094 with a p value of 0.00 significant at 5% indicate that the overall regression model is significant, hence, the joint contribution of the independent variables was significant in predicting customer satisfaction.

Table 4.9: ANOVA Model

	Sum of Squares	df	Mean Square	F	Sig.
Regression	23.757	4	5.939	66.094	.000b
Residual	12.041	134	0.09		
Total	35.799	138			

a Dependent Variable: customer satisfaction

b Predictors: (Constant), telebanking, Internet banking, mobile banking, ATM

Source: Researcher's Survey and Compilation (2015).

4.12 Hypotheses Testing

From table 4.10, the VIF for all the estimated parameters was found to be less than 4 which indicate the absence of multi-Collinearity among the independent factors. As a result, the variation contributed by each of the independent factors was significant independently and all the factors should be included in the prediction model.

H_{O1}: The efficacy of ATMS has no significant effect on customer satisfaction in selected commercial banks in Kisumu County

Moreover, study results in table 4.10 showed that ATM had coefficients of estimate which was significant basing on $\beta_3 = 0.364$ (p-value = 0.001 which is less than $\alpha = 0.05$). This indicates that for each unit increase in effective service delivery in ATM system, there is up to 0.364 units increase in customer satisfaction, hence rejecting the null hypothesis.

H_{O2}: The efficacy of Internet banking has no significant effect on customer satisfaction in selected commercial banks in Kisumu County

Further, findings in table 4.10 showed that Internet banking had coefficients of estimate which was significant basing on $\beta_1 = 0.226$ (p-value = 0.029 which is less than $\alpha = 0.05$) thus we conclude that Internet banking has a significant effect on customer satisfaction. This suggests that there is up to 0.226 unit increase in customer satisfaction for each unit increase in Internet banking, hence rejecting the null hypothesis.

H_{O3}: The efficacy of Mobile banking has no significant effect on customer satisfaction in selected commercial banks, in Kisumu County

Research findings in table 4.10 also showed that mobile banking had coefficients of estimate which were significant basing on $\beta_2 = 0.268$ (p-value = 0.003 which is less than $\alpha = 0.05$) implying mobile banking has a significant effect on customer satisfaction. This indicates that for each unit increase in mobile banking, there is 0.268 units increase in customer satisfaction, thereby rejecting the null hypothesis

$H_{O4:}$ The efficacy of Tele-banking has no significant effect on customer satisfaction in selected commercial banks, in Kisumu County

Finally, findings in table 4.10 showed that telebanking had coefficients of estimate which was significant basing on β_4 = -0.538 (p-value = 0.000 which is less than α = 0.05). This suggests that there is up to 0.538 unit decrease in customer satisfaction for each unit increase in telebanking, hence rejecting the null hypothesis.

H_{O5}: There is no significant moderating effect of gender on the relationship between the efficacy of e-Banking and customer satisfaction in selected commercial banks, in Kisumu County

Further, findings in table 4.11 showed gender was positively and significantly moderating the relationship between internet banking and customer satisfaction β= 0.432, ρ<0.05, also showed gender was positively and significantly moderating the relationship between mobile banking and customer satisfaction β= 0.221, ρ<0.05. However, use of internet banking and mobile banking among customer differs between genders, hence rejecting the null hypothesis.

H_{O6}: There is no significant moderating effect of age on the relationship between the efficacy of e-Banking and customer satisfaction in selected commercial banks, in Kisumu County

Further, findings in table 4.11 showed that age has a positive and significant moderating effect on the relationship between Internet banking and customer satisfaction (β= 0.187, ρ<0.05), Mobile banking and customer satisfaction (β= 0.123, ρ<0.05), and ATM usage and customer satisfaction (β= 0.219, ρ<0.05).Cognate to the results, Karjaluoto, (2002) posits that age influences consumer decision making

process in the adoption of internet banking. Specifically, age affects customer attitudes towards Internet banking and their ability to use it. Preferably, as individual get older they are more likely to use Internet banking, consequently rejecting the null hypothesis.

H_{O7}: There is no significant moderating effect of level of education on the relationship between the efficacy of e-Banking and customer satisfaction in selected commercial banks, in Kisumu County

Further, findings in table 4.11 showed that education significantly moderating the relationship between internet banking and customer satisfaction $\beta = 0.432$, $\rho < 0.05$. This implies that customer with more education were likely to be satisfied with use of internet banking, hence rejecting the null hypothesis.

H_{O8}: There is no significant moderating effect of years as bank customer on the relationship between the efficacy of e-Banking and customer satisfaction in selected commercial banks, in Kisumu County

Further, findings in table 4.11 showed the relationship between mobile banking and customer satisfaction was significantly and negatively moderated by customer loyalty ($\beta = -0.344$, $\rho < 0.05$). Thus, those customers who have been in the bank for long time were likely to be dissatisfied in mobile banking, thereby rejecting the null hypothesis.

Table 4.10: Coefficient of Estimates

	Unstandardized Coefficients		Standardized Coefficients			Collinearity Statistics	
	B	Std. Error	Beta	T	Sig.	Tolerance	VIF
(Constant)	1.436	0.136		10.551	0.000		
Internet banking	0.147	0.066	0.226	2.214	0.029	0.641	1.143
Mobile banking	0.188	0.062	0.268	3.03	0.003	0.722	1.108
ATM	0.238	0.067	0.364	3.557	0.001	0.74	1.172
telebanking	-0.399	0.061	-0.538	-6.572	0.000	0.675	1.666

a Dependent Variable: customer satisfaction

Source: Researcher's Survey and Compilation (2015).

4.13 Stepwise Regression for Moderated Effect of Customer Profile on The Relationship between e-Banking and Customer Satisfaction

The beta value (β= 0.187, ρ<0.05) in table 4.11 shows that age has a significant moderating effect on the relationship between Internet banking and customer satisfaction. Further, age also has a positive and significant moderating effect on the relationship between mobile banking and customer satisfaction (β= 0.123, ρ<0.05). Further, findings showed that education and gender had significant and positive moderating effect on relationship between internet banking and customer satisfaction

(β= 0.301, ρ<0.05 and β= 0.432, ρ<0.05 respectively). Study results also indicated a significant and negative moderating effect of customer loyalty on relationship between internet banking and customer satisfaction (β= -0.344, ρ<0.05). The study findings also showed that gender moderated the relationship between mobile banking and customer satisfaction.

Table 4.11: Stepwise Regression for Moderated Effect of Customer Profile on The Relationship Between e-Banking And Customer Satisfaction

	Model 1		Model 2		Model 3		Model 4	
	Beta	**T**	**Beta**	**T**	**Beta**	**T**	**Beta**	**T**
(Constant)	1.401	0.127	5.384*	1.23	-4.709*	6.587	15.476*	2.362
Internet banking	0.255*	2.692	0.341*	7.923	0.335*	6.888	0.159*	3.663
Mobile banking	-0.381	-4.461	0.571*	13.197	0.203*	4.166	0.588*	13.448
ATM	0.207	1.903	0.252*	5.611	0.365*	7.189	0.012*	0.272
Telebanking	0.757*	8.401	0.18*	4.216	0.103*	-2.133	0.336*	7.778
Internet banking*age	0.187*	2.572						
Mobile banking*age	0.123*	2.101						
ATM age	0.219*	2.515						
Telebanking age	-0.381	-4.341						

Internet banking*education level		0.301*	6.868			
Mobile banking*education level		-0.108	-2.302			
ATM*education level		0.082	1.482			
Telebanking* education level		-0.037	-0.704			
Internet banking*gender				0.432*	8.721	
Mobile banking*gender				0.221*	4.165	
ATM*gender				0.081	1.303	
Telebanking* gender				0.026	0.436	
Internet banking*loyalty					0.018	0.412
Mobile banking*loyalty					-0.344*	-7.263
ATM*loyalty					0.037	0.67
Telebanking* loyalty					-0.073	-1.379
R Square	*0.721*	*0.63*		*0.625*	*0.619*	
Adjusted R Square	*0.704*	*0.0613*		*0.607*	*0.605*	
Durbin-Watson	*1.175*	*1.301*		*1.771*	*1.002*	
F	*42.023*	*44.386*		*39.112*	*42.916*	
Sig.	*0.000*	*0.000*		*0.000*	*0.000*	

a Dependent Variable: customer satisfaction

Source: Researcher's Survey and Compilation (2015).

CHAPTER FIVE

SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter presents the summary of the findings and conclusions based on the results analyzed. Recommendations are made based on the conclusions and the chapter ends with suggestions for further research that are deemed important for the extension of this research.

5.2 Summary of Findings and Conclusions

The cognate purpose of this study was to investigate the moderating effect of customer profile on the relationship between efficacy of electronic banking and customer satisfaction. The target population comprised of registered bank customers from 12 selected commercial banks in Kisumu County. The study also made inference on the research hypotheses that; efficacies of ATMS, Internet banking, Mobile banking and telebanking have no significant effect on customer satisfaction. The study also made inference on the hypothesis that customer profile has no significant moderating effect on the relationship between efficacy of ATMs, internet banking, mobile banking, telebanking and customer satisfaction.

5.2.1 Efficacy of ATMS on Customer Satisfaction

The results of the study revealed that the efficacy of ATM contributes to an increase in customer satisfaction ((β= 0.364, ρ<0.05). Cognate to the results, Lovelock (2000) echoes that ATM service quality such as secure and convenient location, adequate number of ATM, user-friendly system, and functionality of ATM results in customer satisfaction. This is due to the fact that effective service delivery in ATM system guarantees excellence and superior performance. In conformity with the results,

Dilijonas *et al*. (2009) state that adequate number of ATMs, convenient and secure location and user-friendly system; important dimensions of operation of ATM maximum speed, minimum errors, high uptime and cash back-up are essential aspects of ATM service quality that enhance customer satisfaction. Further support to the study is by Islam *et al*. (2007) who examined the satisfaction level of ATM cardholders of a leading bank (HSBC) in Bangladesh and found out that ATM service quality has a significant relationship with customer satisfaction.

Moreover, the location, personnel response, quality of currency notes, promptness of card delivery and performance of ATM were positively and significantly related to customers' satisfaction. Similarly, Shamsuddoha *et al*. (2005) found that 24 hours service, accuracy and convenient locations were the main predictors of customer satisfaction. Similarly, Patrício *et al*. (2003) qualitative study of a Portuguese bank revealed that accessibility and speed of operations are strong predictors of customer satisfaction whereas technical failures cause dissatisfaction. As well, Mcandrews (2003) found out that secure and convenient location, adequate number of ATM and user-friendly system contribute to customer satisfaction. However, Kumbhar (2011) was of the opinion that system availability, fulfillments and efficiency, security and responsiveness, easiness, convenience, problem handling and contact were not significantly correlated with overall satisfaction in ATM service.

5.2.2 Efficacy of Internet Banking on Customer Satisfaction

The study has also shown that the efficacy of internet banking is positively associate with customer satisfaction ($\beta = 0.226$, $\rho < 0.05$).In conformity with the findings of the study, Polatoglu and Ekin (2001) in their study of acceptance of online banking services by the customers of Turkey found out that reliability, security, privacy,

accessibility of online banking heightens customer satisfaction. Moreover, Jun and Cai (2001) in their empirical investigation revealed that customers are satisfied with the dimensions of reliability, tangibles and assurance of online banking. Further support to the study results is by Pikkarainen *et al*., (2006) who found that establishing personalization and user interfaces that considers the diverse needs of customers makes them more satisfied of the banking services offered to them online. As well, Herington and Weaven (2009) posit that personal needs, site organization and user friendliness of online banking have a positive influence on the satisfaction level of customers. Additionally, with the use of SERVQUAL model to measure internet banking service quality, Santouridis *et al*., (2009) empirical investigation of internet banking in Greece revealed that the dimensions assurance, responsiveness and reliability have a significant and positive impact on customer satisfaction level. Besides, Sadeghi and Hanzaee (2010) investigation of factors contributing to customer satisfaction in the usage of internet banking services in Iran revealed that reliability, design of the website, image, accuracy and impression of the management of bank are found to have the most significant impact on the satisfaction level of customers satisfaction.

5.1.3 Efficacy of Mobile Banking on Customer Satisfaction

The results of the study have shown that mobile banking has a positive and significant effect on customer satisfaction ($\beta = 0.268$, $\rho < 0.05$).In line with the results of the study, Poon (2008) asserts that the adoption of mobile banking is of benefit to customers since they can perform banking transaction as they so wish with ease of use and enhanced security through encryption of banking transactions. As such, customers tend to be more satisfied of mobile banking since the security of their banking

transaction is guaranteed. As well, Ward (2006) asserts that mobile financial information services includes both banking and financial services that are meant to provide customers with anytime, anywhere access to information thereby resulting in customer satisfaction.

5.2.4 Efficacy of Telebanking on Customer Satisfaction

As evidenced in the previous chapter, telebanking has a negative and significant effect on customer satisfaction (β= -0.538, ρ<0.05).this could be because of delays in receiving customer requests at the banks call centers, hence customer needs are not met timely. Advertisements cover up most of the calls making customers recent telephone banking. Also the development of mobile banking has reduced the need for telephone banking as customers have to initiate the mobile transactions by following instructions on the phone, though this is Contrary to the results, Chen, (2001), argues that telephone banking enables customers to perform financial transactions over the telephone without the need to visit a bank branch or an ATM creating convenience for customers hence customer satisfaction. The results of the study are also contrary to Bowen (2001) findings that telephone banking reduces the cost of handling transactions by reducing the need for customers to visit a bank branch for non-cash withdrawal and deposit transactions which leaves customers more satisfied. Also, through telebanking customers are able to avoid long queues at the banks which brings about customer satisfaction (Gerrard, and Cunningham, 2003).Moreover, expanded customer service hours, improved customer service, enhanced productivity, streamlined staffing, low cost together with reduced paper environment are key attributes of telebanking that improve customer satisfaction(Karsch 2004).

5.2.5 Moderating Effect of Customer Profile

The regression results indicated that each of the predicted parameters in relation to the independent factor were significant thus we conclude that age has a positive and significant moderating effect on the relationship between Internet banking and customer satisfaction (β= 0.187, ρ<0.05) and mobile banking and customer satisfaction (β= 0.123, ρ<0.05).Cognate to the results, Karjaluoto, (2002) posits that age influences consumer decision making process in the adoption of internet banking. Specifically, age affects customer attitudes towards Internet banking and their ability to use it. Preferably, as individual get older they are more likely to use Internet banking. Further, findings showed that education and gender was significantly moderating the relationship between internet banking and customer satisfaction (β= 0.301, ρ<0.05 and β= 0.432, ρ<0.05 respectively). This implies that customer with more education were likely to be satisfied with use of internet banking. However, use of internet banking satisfaction among customer differs between genders. Also the relationship between internet banking and customer satisfaction was negatively moderated by customer loyalty (β= -0.344, ρ<0.05). Thus, those customers who have been in for a long time were likely to be dissatisfied in internet banking. The study findings also showed that gender moderated the relationship between mobile banking and customer satisfaction.

5.3 Conclusion

The findings of this study indicate that Internet banking, mobile banking, ATM and telebanking have a significant effect on customer satisfaction. Based on the findings under effective service delivery in ATM system there was increased customer satisfaction. However, the efficacy of tele banking has a negative influence on customer satisfaction.

Through Internet banking, customers are able to access accounts, transfer funds and also buy financial products or services online though it was not certain if the customers used the internet to check their bank statement, transfer their money online and also withdraw money online. It is clear that customers are not adopting Internet banking simply because they lack awareness regarding its advantages and also security issues.

Also, the results of the study showed that customers are able to check their bank statement using their mobile phone and it is easier for them to withdraw money from their bank account using their mobile phone. This tentatively implies that customers are able to perform banking transactions at their own convenience. Further, the security and responsiveness of mobile banking are an added advantage that satisfies customers. Particularly, the encryption of banking transaction gives customers the assurance that their transactions are secure. However, there was doubt if any transaction could be done in the bank with the use of a mobile phone.

Further, it was established that the ATMs in the banks were reliable though there was uncertainty if goods could be purchased from the supermarket with the use of ATMS and if ATMs can be used to deposit money in the bank account. As much as the ATM system guarantees excellence and superior performance there is lack of awareness by customers on the use of ATMs which has prevented them from enjoying the wide array of benefits that come with efficacy of ATMs. Important aspects such as the accuracy of transactions' information and the reliability of the ATMs seem to be unknown to the customers.

Finally, the results of the study revealed that the banks' phones are very much reliable though the adequacy of the banks telebanking services is in doubt. Besides, it was not

fully established if any bank transaction can be performed using phone calls. Despite the fact that telephone banking expands customer service hours and creates convenience for them since they need not visit a bank branch, telephone banking has not been embraced by customers.

5.4 Recommendations

From the study findings, it was deduced that Internet banking has a positive and significant effect on customer satisfaction. It is therefore necessary for banks to make it possible for customers to access accounts, transfer funds and also buy financial products or services online. Also, the bank management needs to make their systems more efficient and effective so as to provide satisfaction to the customers in usage of internet banking services. Banks should also raise awareness of the online banking and its advantages so that customers can adopt and embrace its use.

Mobile banking is also key in enhancing customer satisfaction though the customers seem unaware of its benefits. There is therefore need for banks to inform customers that it is possible to check the bank statement, withdraw money from the bank and also deposit money using their mobile phones. The banks should also assure customers that the security offered to them cannot be breached.

Likewise, the efficacy of ATMs contributes to the satisfaction of customers. It is therefore utmost necessary for banks to assure customers that their ATM system offers accuracy of transaction information and it is reliable. The banks need to make it possible for customers to purchase goods with the use of the ATM. The banks also need to locate their ATMs at secure and convenient places for customers, they should be adequate and the system needs to be user-friendly so as to enhance customer satisfaction.

Finally, telephone banking was shown to have a negative and significant effect on customer satisfaction. As a result, there is need for banks to make their phones reliable and adequate so as to make it easier and convenient for customers to use them. As well, customers need to be made aware of the fact that transactions can be performed using telebanking and that their banking hours are expanded through telebanking.

5.5 Suggestions for Further Research

Although the implications of the findings of the study indicate that age has a positive and significant moderating effect on the relationship between efficacy of electronic banking and customer satisfaction, more elaborate research is necessary to accurately establish if banks need to develop their internet banking services in accordance with the expectation of various customers basing on their demographic profile.

Also further research should be done in other counties to augment the findings in telebanking; this will assist banks to improve on their telebanking services so as to increase customer satisfaction.

Further, the study was limited to banks in Kisumu County and the information obtained largely depends on the attitudes of the respondents. Hence there is need for a replication study in another County to augment the findings. In addition, studies which compare the effect of or links customer profile and customer satisfaction need to be conducted. Given these considerations, conclusive results would be attained.

REFERENCES

Abdelghani, E. (2012). Applying Servqual to Banking Services: An Exploratory Study in Morocco. *Studies in Business and Economics*, 7(1), pp. 62-72.

Agathee, U. S. (2012). An Assessment on Service Quality in the Mauritian Banking Sector. *International Research Symposium in Service Management*, pp: 1-16.

Ahmad, D. A., & Zu'bi, D. H. (2011). E-Banking Functionality and Outcomes of Customer Satisfaction: An Empirical Investigation. *International Journal of Marketing Studies, Vol. 3* (1), 50-65.

Al-Ashban, A. A. & Burney, M. A. (2001). "Customer Adoption of Tele-Banking Technology: The Case of Saudi Arabia," *The International Journal of Bank Marketing*, 19(4/5), 191-200.

Al-Hawari, M., & Ward, T. (2006). "The impact of automated service quality on financial performance and the mediating role of customer retention." *Journal of Financial Service Marketing* 10(3), 228-43

Anderson, E. R. (1973). "Consumer dissatisfaction: the effect of disconfirmed expectancy on perceived product performance," *Journal of Marketing Research*, 10, 38-44.

Ankit, S. (2011). "Factors Influencing Online Banking Customer Satisfaction and Their Importance in Improving Overall Retention Levels: An Indian Banking Perspective." *Information and Knowledge Management, Vol. 1* (1), 45-55.

Athanassopoulos, A. (2000). 'Customer satisfaction cues to support market segmentation and explain switching behaviour', *Journal of Business Research*

Attaran, M (2000). "Managing Legal Liability of the Net: A Ten Step Guide for IT Managers", *Information Management and Computer Security*, Vol. 8, No. 2, pp. 98-100.

Bamdad, N., and Rafiei Mehr Abadi, N. (2009). "Customer Satisfaction Survey of Bank ATM Service Quality." *Journal of Humanities and Social Sciences and Management*, 31(4), pp. 39-58.

Bauer, H.H., Falk, T., and Hammer Schmidt, M. (2006) 'A transaction process-based approach for capturing service quality in online shopping', *Journal of Business Research*

Beerli, A., Martin, J.D., & Quintana, A. (2004). A model of customer loyalty in the retail banking market. *European Journal of Marketing, 38(1/2),* 253-75.

Bolton, R. N., & Lemon, K. N. (1999). "A dynamic model of customers' usage of services: usage as an antecedent and consequence of satisfaction." *Journal of marketing research*, 171-186.

Bolton, R.N., and Lemon, K.N. (1999). "A dynamic model of customers' usage of services: usage as an antecedent and consequence of satisfaction." *Journal of Marketing Research* XXXVI (May), 171-186.

Bowen, J., and Chen, S. (2001) 'The relationship between customer loyalty and customer satisfaction', *International Journal of Contemporary Hospitality Management*, Vol. 13, No. 5, pp.213–217.

Bowen, J., & Chen, S. (2001). "The relationship between customer loyalty and customer satisfaction." *International Journal of Contemporary Hospitality Management, 13(5), 213-7*.

Casalo, L., Flavian, C., and Guinaliu, M. (2007). "The impact of participation in virtual brand communities on consumer trust and loyalty." *Online Information Review*, 31 (6), 775-792

Chang, Y. (2002). *Dynamics of banking technology adoption: An application to Internet banking*, Working Paper, University of Warwick.

Chau, P.Y.K., & Lai, V.S.K. (2003), 'An empirical investigation of the determinants of user acceptance of Internet banking', *Journal of organization computing and electronic commerce*, vol. 13, no. 2, pp. 123-145.

Chinn, M.D. and Fairlie, R.W. (2004) "The determinants of the global digital divide: a cross-country analysis of computer and internet penetration, discussion paper series." *Institute for the Study of Labour*, Bonn.

Chu, R. (2002) "Stated-importance versus derived -importance customer satisfaction measurement." *Journal of Services Marketing*, 2002, Vol. 16, No 4, p. 285-301

Colgate, M., Buchanan-Oliver, M., Elmsly, R., (2005). "Relationship benefits in an internet environment." *Managing Service Quality* 15 (5), 426-36.

Cooper, C. R., & Schindler, P. S. (2008). *Business research methods* (10 ed.). Boston: McGraw-Hill.

Coulter, K.S. (2002) "Determinant of trust in a service provider: the moderating role of length of relationship" K.S. Coulter, R.A. Coulter (2002) *Journal of Services Marketing*, 2002, No 16/1, p. 35 -50.

Courtier, E., & Gilpatrick, K. (1999). "Home banking Missteps?" *Credit Union Management, 22*(3), 10-12.

Cronin, J. J. Jr., Brady, M. K., & Hult, G.T. M. (2000) "Assessing the effects of quality, value, and customer satisfaction on consumer behavioral intentions in service environments." *Journal of Retailing*, 76:193–218.

Daniel, C. N. and Berinyuy, L. P. (2010). "Using the SEVQUAL Model to Assess Service Quality and Customer Satisfaction: An Empirical Study of Grocery Stores in Umea," Master Thesis, Umea School of Business.

Daniel, E. (1999). "Provision of electronic banking in the UK and the Republic of Ireland." *International Journal of Bank Marketing*, Vol. 17 No. 2, pp. 72-82.

Dasgupta, P. (2002). "Future of e-Banking in India." Available online at: www.projectshub.com

Dawes, R., D. Singer & Lemons, P. (1972), "An experimental Analysis of the Contrast Effect and its Implications for Intergroup Communication and Indirect Assessment of Attitude." *Journal of Personality and Social Psychology*, 21(3), 281-295.

Dilijonas, D, Krikščiunien, D., Sakalauskas, V. & Simutis, R. (2009). "Sustainability Based Service Quality Approach for Automated Teller Machine Network." Retrieved November 14, 2009, from http://www.vgtu.lt/leidiniai/ leidykla/ KORSD_2009/PDF/241-246-p100-Dilijonas47.pdf.

Dovalienơ, A., A. Gadeikienơ, A. and Ž. Piligrimienơ (2007), "Trust as an Antecedent of Long-term Relationships with Service Customers: the Case of Odontology Services," *Economics and Management*, Vol. 12, pp. 246-355.

Dwivedi, Y. K. & Lal, B. (2007). "Socio – economics determinants of broadband adoption," *Industrial Management & Data Systems*, vol. 107, no. 5, pp. 654-671.

Dwivedi, Y. K., Choudrie, J., & Brinkman, W. P. (2006). "Development of a survey instrument to examine consumer adoption of broadband," *Industrial Management & Data Systems*, vol. 106, no. 5, pp. 700-718.

Egan, J. (2001). *Relationship Marketing: Exploring Relational Strategies in Marketing*. Prentice Hall,

Ekinci Y., & Sirakaya, E. (2004). 'An Examination of the Antecedents and Consequences of Customer Satisfaction'. In: Crouch G.I., Perdue R.R., Timmermans H.J.P., & Uysal M. Consumer Psychology of Tourism, *Hospitality and Leisure*. Cambridge, MA: CABI Publishing, p.190.

Ennew, C.T. (1999). "Impact of participative service relationships on quality, satisfaction, and retention: an exploratory study" C.T. Ennew, M.R. Binks *Journal of Business Research*, 1999, No 46, p. 121-132.

Eriksson K., and Nilsson, D. (2007). "Determinates of the Continued Use of Self-Services Technology: The Case of Internet Banking." *Technovation*, 27 (4), pp. 159-167.

Farquhar, J., & Panther, T. (2007). "The more the merrier? An exploratory study into managing channels in Relationships of Perceived Justice 21 Downloaded by [Universiti Sains Malaysia] at 11:31 26 February 2014 UK retail financial services." *International Review of Retail, Distribution and Consumer Research*, 17(1), 43–62.

Fassnacht, M., & Koese, I. (2006). "Quality of electronic services: conceptualizing and testing ahierarchical model." *Journal of Service Research, 9(1),* 19-37.

Festinger, L. A. 1957. *A Theory of Cognitive Dissonance*, Stanford, CA: Stanford University Press

Furst, K., Lang, W. W., and Nolle, D. E. (2002), "Internet banking", *Journal of Financial Services Research*, Vol.22, Issue ½, pp. 95-117.

Gan, C., Clemes, M., Limsombunchai, V., & Weng, A. (2006). "A Logit Analysis of Electronic Banking in New Zealand." *International Journal of Bank Marketing.* 24 (6), 360-383.

Garbarino, E., Johnson, M. S. (1999), "The Different Roles of Satisfaction, Trust, andCommitment in Customer Relationships", *Journal of Marketing*, 63 (2), 70-87.

Gerrard, P., & Cunningham, J. B. (2003).The Diffusion of Internet Banking among Singapore

Gikandi, J. & Bloor, C., (2010). "Adoption and effectiveness of electronic banking in Kenya*." Journal of Electronic Commerce Research and Applications 9 (2010) 277–282*

Gilaninia, S. H., and Moussavian, S. J. (2010). "Identifies the Factors Affecting the Propensity of Customers Using Electronic Banking Services." *Beyond the Management*, 11, pp.103–133.

Grigoroudis, E., Tsitsiridi, E., and Zopounidis, C. (2012). "Linking Customer Satisfaction, Employee Appraisal and Business Performance: An Evaluation Methodology in the Banking Sector." *Annals of Operations Research*, 205 (1), pp. 5-27.

Herington, C., & Weaven, S. (2009). "E-Retailing by Banks: E-Service Quality and its Importance to Customer Satisfaction." *European Journal of Marketing, Vol. 43* (9), 1220-1231.

Hoffman, K. D., and Bateson, J.SUCH AS. (2002) *Essentials of Services Marketing: Concepts, Strategies, and Cases*, 2nd, Ed. Harcourt college publishers

Hovland, C., O. Harvey & M. Sherif (1957). "Assimilation and contrast effects in reaction to communication and attitude change." *Journal of Abnormal and Social Psychology*, 55(7), 244-252.

Islam, R. M. D. (2012). "Application of Servqual Model in Customer Service of Mobile Operators: A Study from the Context of Bangladesh." *European Journal of Business and Management*, 4 (1), pp. 47-54.

Islam, R., Kumar, S., & Biswas, P. K. (2007). "Customer Satisfaction of ATM Service: A Case Study of HSBC ATM." Retrieved July 13, 2009, from http://papers.ssrn. com/sol3/papers.cfm?abstract_id=990242.

Jain, P.M. (2006), "E-payments and E-Banking", *The Indian Banker*, Vol.1, No.3, pp.108-113.

Jayawardhena, C., & Foley, P. (2000). "Changes in the banking sector: The case of Internet banking in the UK." *Internet Research: Electronic Networking Applications and Policy,* 10(1), 19-30.

Joseph, M., & Stone, G. (2003). "An empirical evaluation of US bank customer perceptions of the impact of technology on service delivery in the banking sector." *International Journal of Retail & Distribution Management, 31(4),* 190-202.

Jun, M., and Cai, S. (2001), "The key determinants of internet banking service quality: a contentanalysis", *International Journal of Bank Marketing*, Vol. 19 No. 7, pp. 276-91.

Karjaluoto, H., Mattila, M., & Pento, T. (2002). "Electronic banking in Finland: ConsumerBeliefs and Reactions to a New Delivery Channel." *Journal of Financial ServiceMarketing,6(4),* 346-361.

Karsch, W. (2004), Mobile Banking: Vor dem Durchbruch in Deutschland, *Die Bank*, 9, p. 72.

Kazemi, M., and Mohajer, S. (2010). "Ranking of Factors Affecting Customer Satisfaction of Service Quality in the EN Bank of Mashhad." *Journal of Industrial* Management, 10, pp. 91–103.

Kesseven, P., Sawkuk, R., and Boopen S. (2007), "Analyzing the Factors that Influence the Adoption of Internet Banking in Mauritius." Proceedings of the 2007 computer Science and IT Education Conference,

Khan, M.A. (2010) 'An empirical study of automated teller machine service quality and customer satisfaction in Pakistani banks', *European Journal of Social Sciences*

Komal, S. S. (2009). "Impact of ATM on Customer Satisfaction (A Comparative Study of SBI, ICICI & HDFC bank)." *Business Intelligence Journal* - August, *2(2),* 276-87.

Kondabagil, J. (2007). *Risk Management in Electronic Banking: Concept and Best Practices*, John Wiley and Sons Asia, Singapore.

Kumar, M., Kee, F. T. and Charles, V. (2010). "Comparative Evaluation of Critical Factors in Delivering Service Quality of Banks: An Application of Dominance Analysis in Modified SERVQUAL Mode." *International Journal of Quality and Reliability Management*, 27 (3), pp. 351-377.

Kumar, M., Kee, F.T., and Manshor, A.T. (2009). "Determining the Relative Importance of Critical Factors in Delivering Service Quality of Banks: An Application of Dominance Analysis in SERVQUAL Model." *Managing Service Quality*, 19 (2), pp. 211-228.

Kumbhar Vijay M. (2011). "Factors affecting on customer's satisfaction: An empirical investigation of ATM service", *International Journal of Business Economics and management Research*, 2011.2(3):144-156.

Kumbhar, V. M. (2011). "Factors Affecting the Customer Satisfaction in E- Banking: Some Evidences from Indian Banks." *Management Research and Practice*, 3 (4), pp. 1-14.

Laforet, S. and Li, X. (2005). "Consumer's Attitudes towards Online and Mobile Banking in China." *International Journal of Bank Marketing*, 23 (5),pp. 362-380.

Laukkanen, T. and Kivinieme, V. (2010). "The Role of Information in Mobile Banking Resistance." *International Journal of Bank Marketing*, 28 (5),pp. 372-388.

Lee M. C. (2009). Factors influencing the adoption of internet banking: An integration of TAM and TPB with perceived risk and perceived benefit, Electronic Commerce Research and Applications, Forthcoming.

Lee, Y-K., Park, J-H., Chung, N., and Blakeney, A. (2011). "A Unified Perspective on the Factors Influencing Usage Intention toward Mobile Financial Services." *Journal of Business Research*,65 (11), pp. 1-10.

Liao, Z. and M.T. Cheung, (2003)"Challenges to Internet E-Banking," *Communications of the ACM*, Vol. 46, No. 12: 248-250, 2003.

Liao, Z., & Cheung, M. T. (2002). "Internet-Based E-Banking and Consumer Attitudes: An Empirical Study." *Information and Management, 39,* 283-295.

Liu, X., Zeng, X., Xu, Y. and Koehi, L. (2008). "A Fuzzy Model of Customer Satisfaction Index in E-Commerce." *Mathematic and Computers in Simulation*, 77 (5-6), pp. 512-521.

Long, M., & McMellon, C. (2004). "Exploring the determinants of retail service quality on the internet." *Journal of Services Marketing, 18(1),* 78-90.

MacGregor, R.C., and L. Vrazalic, (2006). "E-Commerce Adoption Barriers in Small Business and the Differential Effects of Gender," *Journal of Electronic Commerce in Organizations* 4(2), 1-24.

Machauer, A., & Morgner, S. (2001). "Segmentation of bank customers by expected benefits and attitudes." *International Journal of Bank Marketing,* 19(1), 6–18.http://dx.doi.org/10.1108/02652320110366472

Madu, C.N., & Madu, A. A. (2002). "Dimensions of e-quality." *International Journal of Quality & Reliability Management, 19(3),* 246-58.

Mattila A., & O'Neill J.W. (2003). "Relationships between Hotel Room Pricing, Occupancy, and Guest Satisfaction: A Longitudinal Case of a Midscale Hotel in the United States", *Journal of Hospitality & Tourism Research*, 27 (3), pp. 328-341, Sage Publications.

McAndrews, J. (2003). "Automated Teller Machine Network Pricing A Review of the Literature." *Review of Network Economics*, Vol. 2, Issue 2, 146–158.

Mihelis, G., Grigoroudis, E., Siskos, Y., Politis, Y. and Malandrokis, Y. (2001). "Customer Satisfaction Measurement in the Private Bank Sector." *European Journal of Operational Research*, 301, pp. 347-360.

Mittal V., Katrichis, J.M., and Kumar, P., (2001). "Attribute performance and customer satisfaction over time: evidence from two field studies." *Journal of Services Marketing*, 15 (5), 343-356.

Mobarek, A. (2007). *E-Banking Practices and Customer Satisfaction - A Case Study in Botswana*. Retrieved on August, 14, 2009, from http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1011112.

Momeni, M., Kheiry, B., and Dashtipour, M. (2013). "Analysis the Effects of Electronic Banking on Customer Satisfaction and Loyalty (Case Study: Selected Branches of Melli Bank in Tehran)." *Interdisciplinary Journal of Contemporary Research in Business*, 4, 65-73.

Moutinho, L. and Smith, A. (2000), "Modeling Bank Customer Satisfaction through Mediation of Attitudes towards Human and Automated Banking," *International Journal of Bank Marketing*, 18 (3), pp. 124-134.

Newman, K. (2001). "Interrogating SERVQUAL: A Critical Assessment of Service Quality Measurement in a High Street Retail Bank." *International Journal of Bank Marketing*, 19 (3), pp. 126-139.

Nupur, J. M. (2010). "E-Banking and Customers' Satisfaction in Bangladesh: An Analysis." *International Review of Business Research Papers, Vol. 6* (4), 145-156.

Olsen, L. L., & Johnson, M. D. (2003). "Service equity, satisfaction, and loyalty: from transaction-specific to cumulative evaluations." *Journal of Service Research, 5*(3), 184.

Padhy, P. K. (2009). "Innovative Service Quality in the Banking Sector: An Assessment Based," *Int. J. Manag. Bus. Res., 2 (4), 352-361, Autumn 2012* 361

Patrı´cio, L., Fisk, R.P., & Cunha, J.F. (2003). "Improving satisfaction with bank service offerings." *Managing Service Quality, 13 (6),* 471-482.

Pikkarainen, T., Pikkarainen, K., Karjaluoto, H., & Pahnila, S. (2004). "Consumer acceptance ofonline banking: an extension of the technology acceptance model." *Internet Research: Electronic Networking Applications and Policy, 14* (3), 224-235.

Polatoglu, V. N., & Ekin, S. (2001). "An Empirical Investigation of the Turkish Consumers' Acceptance of Internet Banking Services." *International Journal of Bank Marketing, 19(4),* 156-165.

Poon, W-Ch. (2007). "Users Adoption of E-Banking Services: The Malaysian Perspective." *Journal of Business and Industrial Marketing*, 23 (1), pp. 59-69.

Rakesh, R. (2012). "Quality Assessment of Banking Industry Using the Servqual Model." *Indian Streams Research Journal*, 2 (2), pp. 1-4.

Rao, G. R. and Prathima, K. (2003), "Internet Banking in India", Mondaq Business Briefing, 11 April 2003.

Ravichandran, K., Prabhakaran, S., and Kumar, A. S. (2010). "Application of Servqual Model on Measuring Service Quality: A Bayesian Approach." *Enterprise Risk Management*, 1 (1), pp. 145-169.

Rexha, N., Russel, Kingshott, R. Ph. J., Shang Aw, A. Sh. (2003). "The Impact of the RelationalPlan on Adoption of Electronic Banking." *Journal of Services Marketing*, 17 (1), pp.53-67.

Rod, M., Ashill, N. J., Shao, J., & Carruthers, J. (2009). "An Examination of the Relationship between Service Quality Dimensions, Overall Internet Banking Service Quality and Customer Satisfaction: A New Zealand Study." *Marketing Intelligence & Planning, Vol.27* (1), 103-126.

Sadeghi, T., & Hanzaee, K. H. (2010). "Customer Satisfaction Factors (CSFs) with Online Banking Services in an Islamic Country: I.R. Iran." *Journal of Islamic Marketing, Vol. 1*(3), 249-267.

Salisbury, W.D., Pearson, R.A., Pearson, A.W., and Miller D.W., (2001). "Perceived security and World Wide Web purchase intention." *Industrial Management & Data Systems*, 101, 165-176.

Samadi, A., and Skandari, S. (2011). "The Effect of Service Quality on Customer Satisfaction MELibank of Toysergan City." (Based on SERVQUAL Model). *Journal of Management*, 21, pp. 30-40.

Santouridis, I., Trivellas, P., & Reklitis, P. (2009). "Internet Service Quality and Customer Satisfaction: Examining Internet Banking in Greece." *Total Quality Management & Business Excellence, Vol. 20* (2), 223-239.

Sathye, M. (1999). "Adoption of internet banking by Australian consumers: an empirical investigation." *International Journal of Bank Marketing, 17* (7), 324-334

Seranmadevi, R., and Saravanaraj, M. G. (2012). "An Empirical Study on Quality of Internet Banking Services in Indian." *European Journal of Economics, Finance and Administrative Sciences*, 25, pp. 65-79.

Shamsuddoha, M., Chowdhury, M.T., & Ahsan, A.B.M.J. (2005). *Automated Teller Machine: A New Dimension in the Bank Services of Bangladesh*. Retrieved May 13, 2009, from http://papers.ssrn.com/sol3/ papers.cfm? abstract_id=1302301

Singh, A. B. (2012). "Mobile Banking Based Money Order for India Post: Feasible Model and Assessing Demand Potential." *Procardia- Social and Behavioral Science*, 37, pp. 466-481.

Stavins, J. (2001) "Effect of Consumer Characteristics on the Use of Payment Instruments", *New England Economic Review*, No. 3, pp. 19-31.

Szymanski, David M. and David H. Henard (2001), "Customer Satisfaction: A Meta-Analysis of the Empirical Evidence," *Journal of the Academy of Marketing Science*, 29 (1), 16–35.

Taghavi-Fard, M. T. and Torabi, M. (2010). "The Factors Affecting the Adoption of Mobile Banking Services by Customers and Rank Them (Case Study: Bank Tejarat InTehran, Iran)." *Journal Excavations Business Management*, 3, pp. 136-162.

Tan, K.C., Xie, M., & Li, Y.N. (2003). “A service quality framework for web-based information systems.” *The TQM Magazine, 15(3),* 164-72.

Tan, M., & Teo, T. S. H. (2000). “Factors influencing the adoption of Internet banking, Journal of the Association for Information Systems, Consumers.” *International Journal of Bank Marketing, 21(1),* 16-28.

Tobbin, P. (2012). “Toward a model of Adoption in Mobile Banking by the Unbanked: A Qualitative Study.” *Info*, 14 (5), pp. 74-88.

Tojib, D., and Tsarenko, Y. (2012). “Post-Adoption Modeling of Advanced Mobile Service Use.” *Journal of Business Research*, 65 (7), pp. 922-928.

Tsoukatos, E., and Mastrojianni, E. (2010). “Key Determinants of Service Quality in Retail Banking.” *EuroMed Journal of Business*, 5 (1), pp. 85-100.

Udo, G. J., Bagchi, K. K., and Kirs, P. J. (2010). “An Assessment of Customer's E-Service Quality Perception, Satisfaction and Intention.” *International Journal of Information Management*, 30 (6), pp. 481-492.

Venkatesh, V., and Davis, F. D. (2000). “A Theoretical Extension of the Technology Acceptance Model: Four Longitudinal Field Studies,” *Management Science* (45:2), 2000, pp. 186-204.

Venkatesh, V., Morris, M. G., &. Ackerman, P. L. (2000). “A longitudinal field investigation of gender differences in individual technology adoption decision-making processes,” *Organizational Behavior and Human Decision Processes*, vol. 83, no. 1, 33-60.

Wan, W. W.N., Luk, C. L., & Chow, C. W.C. (2005). “Customers’ adoption of banking channels in Hong Kong.” *International Journal of Bank Marketing, 23(3),* 255-272.

Wirtz, J. (2003). “Halo in Customer Satisfaction Measures: The Role of Purpose of Rating, Number of Attributes and Customer Involvement.” *International Journal of Services Industry Management*, 14 (1), pp. 96-119.

Wood, J. (2008). “The effect of buyers’ perceptions of environmental uncertainty of satisfaction and loyalty.” *Journal of Marketing Theory and Practice, 16(4),* 309-20.

Yavas, U., Benkenstein, M., & Stuhldreier, U., (2004). “Relationship between service quality and behavioural outcomes: A study of private bank customers in Germany.” *The International Journal of Bank Marketing, 22(2/3),* 144-157.

Zekiri, J. (2011). “Applying SERVQUAL Model and Factor Analysis in Assessing Customer Satisfaction with Service Quality: The Case of Mobile Telecommunications in Macedonia.” *International Bulletin of Business Administration*, 11, pp. 86- 101.

Zuccaro, C., & Savard, M. (2010). “Hybrid segmentation of internet banking users.” *Journal of Bank Marketing*, 28(6), 448-464. http://dx.doi.org/10.1108/02652321011077698

APPENDICES

Appendix I: Questionnaire

Part A: Customer Profile Information: Use either of these marks (√) or (×) where applicable.

1. What is your gender? (Choose one.)

Male ☐ Female ☐

2. What is your age bracket? (Choose one.)

≤ 20 years ☐ 31-35 years ☐

21-25 years ☐ 36-40 year ☐

26-30 years ☐ ≥ 41 years ☐

3. What is your level of education? (Choose one.)

Primary school ☐ Graduate ☐

Secondary School ☐ Masters and above ☐

Diploma ☐

4. How long have you been customer of the bank?

Less than 1 year ☐ 1-4 yrs. ☐ 5-8 yrs. ☐ 9-12 yrs. ☐

Over 12 year ☐

5. How many times do you personally use bank Services in a month?

Once a month ☐ Several times per month ☐

Once a week ☐ daily ☐

PART B: E-BANKING

INTERNET BANKING

Please mark the number that best reflects your level of agreement in the following statements.

1 – Strongly Disagree, 2 – Disagree, 3- Neutral, 4- Agree, 5- Strongly Agree

	Circle your response	**SD**	**D**	**N**	**A**	**SA**
1	I use the internet to check for my bank statement	1	2	3	4	5
2	I use the internet to transfer my money online	1	2	3	4	5
3	I can withdraw money online	1	2	3	4	5

MOBILE BANKING

Please mark the number that best reflects your level of agreement in the following statements.

1 – Strongly Disagree, 2 – Disagree, 3- Neutral, 4- Agree, 5- Strongly Agree

	Circle your response	**SD**	**D**	**N**	**A**	**SA**
1	I can check my bank statement by using a mobile phone	1	2	3	4	5
2	I find it easier to deposit or withdraw money from my bank account using a mobile phone	1	2	3	4	5
3	I can do any transaction in my bank account using a mobile phone	1	2	3	4	5

ATM

Please make the number that best reflects your level of agreement in following statements.

	CIRCLE YOUR RESPONSE	SD	D	N	A	SA
1	The bank has many ATMS which are convenient for me	1	2	3	4	5
2	I use ATM to deposit cash in my bank account	1	2	3	4	5
3	I can purchase any good from supermarket using ATM cards	1	2	3	4	5
4	ATMs in my bank are reliable	1	2	3	4	5

TELEBANKING

Please mark the number that best reflects your level of agreement in the following statements.

CUSTOMER SATISFACTION

	CIRCLE YOUR RESPONSE	SD	D	N	A	SA
1	I can perform any bank transaction using phone calls	1	2	3	4	5
2	The banks phones are very much reliable	1	2	3	4	5
3	The banks telebanking services are adequate	1	2	3	4	5

Please mark the number that best reflects your level of agreement in the following statement.

CUSTOMER SATISFACTION	SD	D	N	A	SA
Am contented with the banks e-Banking services	1	2	3	4	5
Am satisfied with how the bank treats its customers	1	2	3	4	5
Am happy being a customer in the bank	1	2	3	4	5

Source: Researcher's Survey and Compilation (2015).

THANK YOU FOR YOUR PARTICIPATION.