

**E-BANKING SERVICES AND CUSTOMERS' SATISFACTION
IN THE RWANDAN BANKING INDUSTRY:
*A CASE OF BANQUE POPULAIRE
OF RWANDA (BPR) LIMITED***

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(BA IN ECONOMICS, NUR)

A DISSERTATION SUBMITTED IN PARTIAL FULFILLMENT OF THE
REQUIREMENTS FOR THE AWARD OF THE DEGREE
OF MASTER OF BUSINESS ADMINISTRATION OF
KAMPALA INTERNATIONAL UNIVERSITY
(BANKING AND FINANCE)

OCTOBER, 2012



DECLARATION

I, Placide Simbizi, hereby declare that this research dissertation is my original work, that all reference sources have been accurately reported and acknowledged, and that this study has not been presented for a degree or any other academic award in any university or institution of learning.

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APPROVAL

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DEDICATION

I dedicate this work especially to Almighty God for His abundant blessings and protection, to the memory of my parents, sisters and brothers, to my family and friends.

ACKNOWLEDGEMENT

I wish to express my sincere gratitude to my supervisor, Mr Manyange Michael, for his patience, support and guidance. I am grateful to those who agreed to participate in this research by completing the questionnaire.

I wish to express a word of gratitude to the Management and staff of Kampala International University (KIU). Especially, I would like to thank all Lecturers of KIU for the knowledge they delivered without any reserve.

My special thanks go to Bizimungu Emmanuel and his Family for invaluable support and encouragement, they deserve a credit.

Words can not express enough my appreciation to my family members for their support during the entire academic period. I am also thankful to the management of Bank populaire of Rwanda (BPR) Limited to have agreed to give me all the required data needed to make this study a quality. I also appreciate all my friends and, everyone who has helped either directly or indirectly to the completion of this project.

Above all, I glorify the Almighty God for the strength, courage, wisdom and inspiration throughout the period of my studies.

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LIST OF ACCRONYMS/ABBREVIATIONS

%	: Percentage
ATM	: Automated Teller Machine
B.A	: Bachelor of Art
B.K	: Banque de Kigali
BCR	: Banque Commerciale du Rwanda
BPR Ltd	: Banque Populaire du Rwanda Limited,
BRD	: Banque Rwandaise de Développement
COGEBANQUE	: Compagnie Générale de Banque
EAC	: East African Community
Ebanking	: Electronic Banking
E-Channels	: Electronic channels
EDI	: Electronic Data Interchange
ICT	: Information Communication Technology
IVR	: Interactive Voice Response System
KCB	: Kenya Commercial Bank
KIU	: Kampala International University
Mbanking	: Mobile banking
NBR	: National Bank of Rwanda
NGO	: Non-Governmental Organisations
PC	: Personal computer
PDA	: Personal Digital Assistant
POS	: Point of Sales
Rabobank	: Raiffeisen-Boerenleenbank

RWF	: Rwandan Francs
SERVQUAL	: Service Quality
SIMTEL	: Société Interbancaire de Monétique et de télécompensation
SITEQUAL	: Site Quality
SMS	: Short Message Service
UBPR	: Union des Banques Populaires du Rwanda (UBPR)
UK	: United Kingdom
UOB	: Urwego Opportunity Bank,
WWW	: World Wide Web

ABSTRACT

The purpose of this study was to assess the level of ebanking services usage and customers' satisfaction in the Rwandan Banking Industry in Bank Populaire of Rwanda Limited. The main objectives of the study were to assess the level of ebanking services usage by BPR customers; to determine BPR customers' view of their overall e-service quality with ATM and Mobile banking services and to analyze the customer satisfaction with the existing ebanking services in terms of loyalty and retention.

The researcher used exploratory, descriptive, cross-sectional and correlational studies. Both qualitative and quantitative techniques were applied. A sample size of 400 respondents was selected. Totally, 368 questionnaires were considered for this study, representing a response rate of 92%. Usable data were entered into SPSS for analysis.

The findings of the study revealed that BPR Ltd customers are fully aware of ebanking services offered by the Bank (97.8%) and most of the respondents indicated that they have a year of experience with ebanking services. The findings showed that customers enjoying electronic banking services are still not very satisfied with their quality and efficiency although a bigger percentage of the customers are satisfied. The satisfaction within all e-service quality attributes of ATM and Mobile banking is high with 67.4% and 69.6% respectively.

Although a bigger percentage of the customers are satisfied (63%), the results analysis indicated that an important proportion of customers were neither dissatisfied nor satisfied with quality attributes, meaning that BPR should improve its e-service quality to meet customers' expectations or exceed them.

Based on the research findings, it was recommended that the service quality should be improved in BPR Limited, the reduction of service charges, increase in the number of ATMs as well as provision of deposit ATMs.

CHAPTER ONE:

INTRODUCTION

1.0 Introduction

In this chapter, consideration is given to the background of the study, research problem, purpose of the study, objective of the study, research questions, significance of the study, conceptual framework as well as the scope of the study.

1.1 Background of the study

This section presents the historical, theoretical, conceptual as well as the contextual perspectives of the study.

1.1.1 Historical Perspective

According to Good (1998), electricity was invented in 1873 and took 46 years for mass adoption. It took 35 years for telephones, 25 years for radio, and 16 years for PCs. For the World Wide Web, it has taken only 6 years (as cited in Pyun, Scruggs, & Nam, 2002).

The inception of the World Wide Web (WWW) and users' response to this technology has opened opportunities for many businesses, ranging from small to large corporations, including financial institutions. Banks are currently amongst the largest beneficiaries of this technology (Muniruddeen, December 2007). The development of inexpensive computer processing and the rise of the Internet have changed the structure and the nature of banking.

The Internet offers a wide range of services for customers and companies. There are huge advantages for both parties, the main benefit is cost savings. Banks first began to offer tailored solutions online only for companies. In the late 90s banks started offering services online to individuals and today they can do their errands with Internet banking (Maida, Bengtsson, & Valentina, 2011).

With today's technology it is possible for customers to do their errands with Internet banking and satisfy their needs by themselves. Technology is changing the way customers and companies interact, but customer's expectations and desire have not changed. People still

want apologies, flexibility, out-comes and easy access, they still want good service. *Customers expect the same service exactly like it was provided by a person (Bitner, 2001).*

Virtual banking has played an increasing role in the banking industry, but brick-and-mortar bank branches *continue to be built, and a majority of payments made using checking accounts still involve paper checks.* The trend toward substituting electrons for paper in the banking industry seems clear, though. (Glenn Hubbard & O'Brien, 2012, p. 301).

BPR finds its origin back in 1975. In 1986, as these autonomous savings and credit schemes grew bigger and stronger, an umbrella bringing them together was put in place, with its headquarters in Kigali, under the name "Union des Banques Populaires du Rwanda (UBPR). In 2008, UBPR transformed to become a commercial bank but while retaining its cooperative roots. 65% of the shares were retained by the former cooperative members, while 35% were acquired by a strategic partner, Rabobank. The latter having the main mission to help upgrade "BPR" into a fully-fledged retail bank (Banque Populaire du Rwanda, 2012). BPR has a large network of 191 offices across the country (18 branches, 109 sub-branches and 64 outlets/counter offices), 1,600 staff, 100,000 credit files and 1.3 million clients. (Banque Populaire du Rwanda, 2012).

To facilitate customers in executing their financial needs and to follow through with BPR's more modern image, *BPR Ltd has put in place new modern banking tools, namely ATMs and BPR Mobile Banking.* With over a million clients, BPR is focusing on improving its services in modern payment technology going forward. BPR was the first bank to offer mobile banking services and card-less cash withdrawals from ATM's.

E-banking system in BPR Ltd failed to provide error free service and meet customers' expectations. *Complaints against BPR Ltd are increasing day-by-day regarding service fees, ATM theft and withdrawal failure, failed transactions on mobile banking, long queues in BPR halls, fraud and information integrity and problem resolution (Bosco, 2011).*

1.1.2 Theoretical Perspective

Researches' relating to ebanking realized that, the Automated Teller Machine (ATM) is one type of innovation that can mechanically accept deposits, issue withdrawals, transfer funds between accounts, and collect bills. It has altered the relationship between banks and their depositors, as well as the level of service quality of banking services (Davies & M, 1996); Mcandrews, 2003; Komal & Singh, 2009). Researchers identified that secure and convenient location, adequate number of ATM, user-friendly system, and functionality of ATM plays important role in customers' satisfaction. Joseph & Stone (2003); Mobarek (2007) and Dilijonas, Sakalauskas, & Simutis, 2009) mentioned that adequate number of ATMs, convenient and secure location and user-friendly system, speed, minimum errors, high uptime, cash backup, cost, and service coverage are essential service quality aspects of ATM service.

Mobile banking is an extension of Internet banking, but with its own unique characteristics given that a cell phone is used rather than a web browser on a personal computer (Brown, Cajee, Davies, & Stroebel, 2003). Jun & Cal (2001) identified six dimensions for online sustems quality: contents, accuracy, ease of use (compatibility, user friendly, easy login, speed, accessibility, functions and easy navigation), timelines (up-to-date information), aesthetics (attractiveness) and security (privacy and information transaction safety).

Service quality and customer satisfaction are two dimensions that strongly belong together. Bernhardt (2005, as cited in Kadic, Bengtsson, & Vuniqui, 2011) emphasizes the importance to understand the relationship between service quality and customer satisfaction.

Quality of a service delivery depends on the whole delivery process and the outcome that result in customer satisfaction or dissatisfaction of the service. A Study done by Sang & Seung, (2004) showed that service quality is significantly associated with customer satisfaction. Service quality has a positive effect on customer satisfaction and the level of satisfaction have an influence on customer retention.

Several researchers attempted to find the interrelationships between service quality, customer satisfaction and customer loyalty in the banking sector. Researchers argue that service quality and customer satisfaction are the predictors of customer loyalty (Tariq and Moussaoui, 2009;

Han *et al.*, 2008; Ehigie, (2006 as cited in Siddiqi, 2011). Veloutsou *et al.* (2004) found the *positive relationship among service quality, customer satisfaction and customer loyalty in the banking sector*. Caruana (2000) mentioned that service quality, customer satisfaction and service loyalty are related to each other. Service quality has received much attention because of its *obvious relationship with costs, financial performance, customer satisfaction, and customer loyalty and retention*.

To provide greater understanding of the main issues relating to service quality in the virtual marketplace and customer satisfaction, this study was based on SERVQUAL model.

The model was originally introduced by Parasuramn A., Valerie Zeithaml and Leonard L. berry in 1995 in the arc of service quality. It was developed based on the view of the customer's assessment. SERVQUAL is a multi-item scale developed to assess customer perceptions of service quality in service and retailing businesses (Parasuraman, Zeithaml, & Berry, 1988). SERVQUAL scale has been used to measure service quality in various service industries, and some studies have applied the SERVQUAL model to measure service quality in the context of e-service by rewording its items (Hongxiu Li, 2009).

1.1.3 Conceptual Perspective

FinCen (2000) defines e-Banking as an umbrella term for the process by which a customer may perform banking transactions electronically without visiting a brick-and-mortar institution (as cited in Awuondo, 2005). For the purpose of this research, it is defined as the delivery of banking services and products through the use of electronic means irrespective of place, time and distance. To gain a strategic advantage and survive in today's ever-increasing banking competitive environment, banks are heavily investing in electronic banking (ebanking) systems to meet customers' requirements and striving to exceed them whenever possible. For better service opportunities to provide their customers, banks are transforming from their traditional approach of "bricks and mortar" into a "clicks and mortar" one under the emergence of electronic commerce and business (Chau & Lai, 2003).

According to Asubonteng *et al* (1996), service quality can be defined as " the difference between customers' expectations for service performance prior to the service encounter and

their perceptions of the service received". Gefan (2002) defined service quality as the *subjective comparison that customers make between the quality of the service that they want to receive and what they actually get*. According to Parasuraman, Zeithaml, & Berry (1988), service quality is determined by the differences between customer's expectations of services and their *evaluation of the services they received*. Customer satisfaction is related to the whole consumption experience, the fulfillment and terms of pleasure of the service (Grigoroudis & Siskos, 2010). Customer satisfaction is a measure of how products and services supplied by a company meet or surpass customer expectation (Musiiime & Biyaki, 2010).

Customer satisfaction has become important for commercial banks to stay competitive as the customer is the *crucial source of revenue for any business*. The main reasons for this are that high customer satisfaction has been linked to customer retention, market share, loyalty, and by extension, higher company's profits (Szymanski & Henard, 2001).

Electronic banking is a complete new domain of service that adds value to existing portfolio by substituting or complementing personal interactions with service personal through technology (Jun & S., 2001). With online banking, individuals can check their account balances and make payments without having to go to the bank hall, using. The delivery channels are quite numerous as mentioned here, Automatic Teller Machine (ATM), Point of Sales (POS), Mobile Banking, Smart Cards, Internet Banking, etc. This is gradually creating a cashless society where consumers no longer have to pay for all their purchases with hard cash.

1.1.3 Contextual Perspective

Statistics from the World Bank on internet Usage (2011) showed that Internet usage in Rwanda has increased from 2.1 users per 100 people in 2007, to 13.0 users in 2010. Banking industry in Rwanda is among the leading sectors in adopting and utilizing the internet. Banks have started to offer ebanking services to their customers by introducing new delivery channels for traditional products and services, namely ATMs, Mobile Banking and Internet Banking. Bank Populaire of Rwanda (BPR) has heavily invested in electronic banking. In July 2010, the bank had 3 ATMs and 1,500 ATM cards in the market. One year later, it had

43 functioning ATMs and 68,000 ATM cards (Bosco, 2011). Now, the Bank has 77 functioning ATMs around the country and over 100,000 customers using its mobile banking platform. The main branch has 7,000 customers registered for e-banking services.

There have been no specific studies on ebanking services and customers's satisfaction in the Rwandan banking industry. Thus, there is a need to find out whether these e-banking services satisfy existing customers or not, in the context of Rwanda. Therefore, this study will examine the level of ebanking services usage (ATMs and Mobile Banking) and customers's satisfaction whithin Bank Populaire of Rwanda Limited.

1.2 Statement of the Problem

The arrival of the internet technology has generally changed the structure and the nature of banking. Most banks are faced with the challenge of delivering effective services which can satisfy their customers. In the effort to deliver effective services, the banking sector undertakes numerous approaches and among them is the use of electronic banking system (Glenn Hubbard & O'Brien, 2012).

In recent years, banks in Rwanda have also tried to introduce Internet-based banking systems to improve their operations. Most banks are now offering ebanking services such as ATMs, mobile banking and internet banking. The customers on the other hand, stand to enjoy the benefit of quick service delivery, reduced cost of transactions, frequency of going to banks physically and reduced cash handling either through internet, telephone or other electronic delivery channels (National Bank of Rwanda, 2011).

Peter (2008) stated that despite the banking sector using information technology we see the problem of lack of accessibility of banking services, fear of high banking charges a customer is required to pay, long queues and poor banking systems (as cited in Musiime & Biyaki, 2010). As a growing number of commercial banks are adopting online banking to make customer's banking experience more convenient, efficient, and effective, it becomes even more essential to ascertain the customers' view of their overall satisfaction with the existing ebanking services.

Customers still withdrawal enormous cash and spend a lot time on queues in BPR counters, complain about high service fees and security of ebanking services (Rwembeho, 2012).

Measuring customer satisfaction can provide banks useful information about customer loyalty and retention. No significant studies have focused on ebanking services and customers's satisfaction in the Rwandan banking industry. Thus, there is a need to examine the level of ebanking services usage, e-service quality and customers's satisfaction in Rwanda and consequently, to find out whether available e-banking services satisfy existing customers or not.

This study examined the level of ebanking services usage (ATMs and Mobile banking), e-service quality and customers' satisfaction, with a focus on Banque Populaire du Rwanda Limited.

1.3 Purpose of the study

The purpose of the study was to assess the level of ebanking services and customers' satisfaction in the Rwandan Banking Industry.

1.4 Objectives of the study

The main objectives to be achieved by this study were:

- (i) To assess the level of ebanking services usage by BPR customers;
- (ii) To determine BPR customers' view of their overall e-service quality with ATM and Mobile banking services;
- (iii) To analyze the customer satisfaction of BPR customers with the existing ebanking services, in terms of royalty and retention.

1.5 Research questions

The study answered the following questions:

- (i) What is the level of ebanking services usage by BPR customers?
- (ii) What is the customers' view of their overall e-service quality with ATM and Mobile banking service?



(iii) What is the customer satisfaction of BPR customers with the existing ebanking services, *in terms of royalty and retention?*

1.6 Scope of the study

The study was concerned with electronic Banking Services and Customers' Satisfaction in the Rwandan Banking Industry. It was conducted in BPR Ltd main Branch located in Kigali City, in Rwanda. It was conducted between March 2012 and September 2012 and focused on two ebanking services namely ATMs and Mobile banking.

1.7 Significance of the study

This study will benefit other researchers and academicians, commercial bank managers, policy makers, and the users. It will add more knowledge to the existing literature in this area of study and also provide a framework for further research.

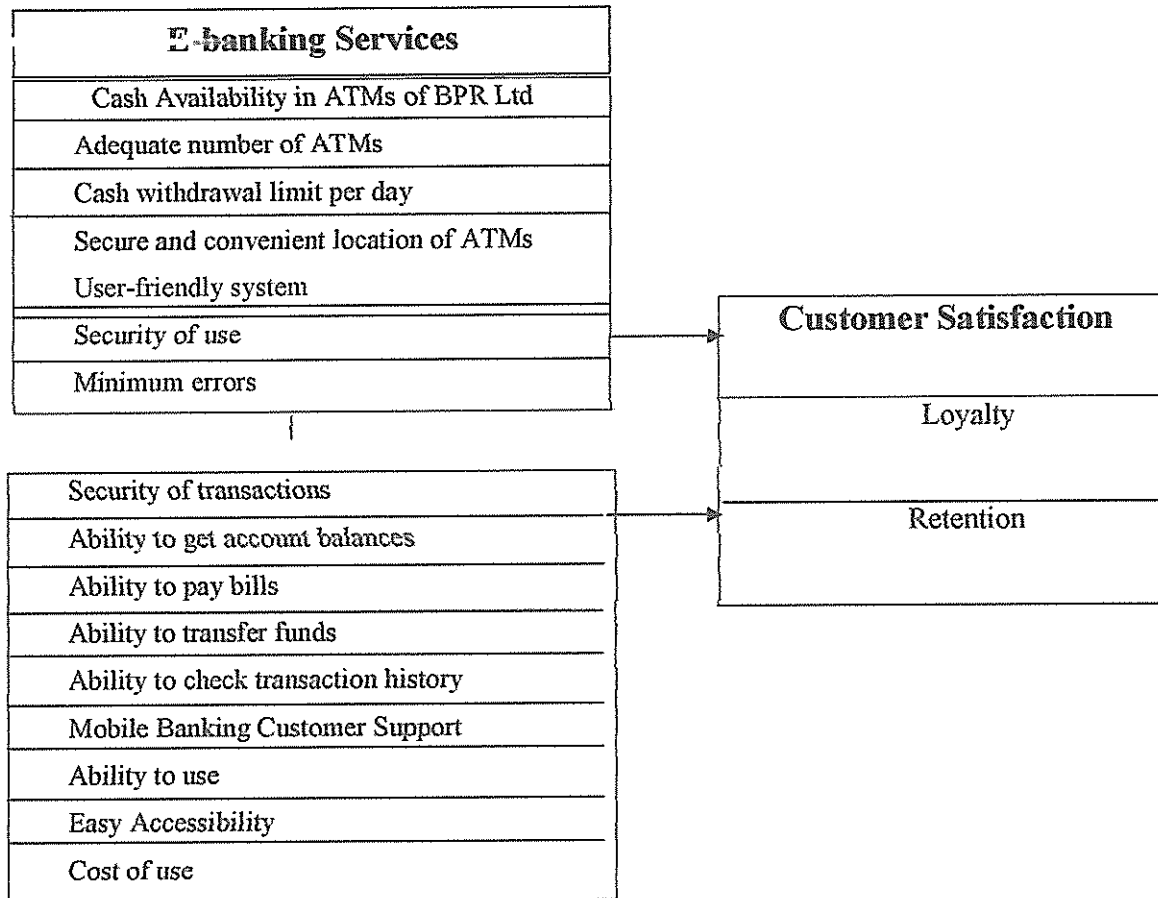
The significance of this study can also be seen in the fact that the outcome will be used by practicing managers of banks in Rwanda to improve current ebanking services. The study will also provide a deep understanding of customers and the level of ebanking services usage and might show which needs and attitudes are missing and relevant towards conducting banking services nowadays.

Specifically, the study will help especially the BPR Limited and other local banks to formulate and rethink marketing strategies to promote ebanking systems in the future.

Understanding how customers perceive online banking services and their overall satisfaction will help policy makers, namely National Bank authorities and the ministry of ICT, in elaborating strategic objectives for the prosperity of e-commerce in Rwanda.

1.8 Conceptual framework

Figure 1.1: Conceptual framework



Source as modified from: (Henry C. Lucas, JR., 1997). *Information Technology*; (Joseph and Stone, 2003). *Effective service delivery & Customer satisfaction*.

CHAPTER TWO:

LITERATURE REVIEW

2.1 Introduction

This chapter presents a review of relevant literature that gives an overview of the research context. It covers electronic banking services, e-service quality, customer satisfaction and banking industry in Rwanda.

2.2. Level of E-Banking services Usage

In its very basic form, e-banking can mean the provision of information about a bank and its services via a home page on the World Wide Web (WWW). More sophisticated e-banking services provide customer access to accounts, the ability to move their money between different accounts, and making payments or applying for loans via e-Channels (Shah & Clarke, 2009, p. 2). *The term e-banking will be used in this study to describe the latter type of provision of services by an organization to its customers. Such customers may be either personal customers or business customers. Many banks and other organizations are eager to use this channel to deliver their services because of its relatively lower delivery cost, higher sales and potential for offering greater convenience for customers (Shah & Clarke, 2009, p. 2).*

2.2.1 E-commerce

E-commerce is about buying and selling information, products and services via computer networks such as the Internet and Electronic Data Interchange (EDI). Ebanking is one form of e-commerce. The term commerce is viewed rather narrowly by some as transactions conducted between business partners. Kalakota and Whinston (1994, 1995, as cited in Shah & Clarke, 2009, p. 19) define e-commerce from the following perspectives: *Communications: e-commerce is the delivery of information, products/ services, or payments over telephone lines, computer networks, or any other electronic means; Business process: e-commerce is the application of technology towards the automation of business transactions and workflow; Service: e-commerce is a tool that addresses the desire of firms, consumers, and management*

to cut service costs while improving the quality of goods and increasing the speed of service delivery; *Online: e-commerce provides the capability of buying and selling products and information on the Internet and other electronic channels such as EDI. For firms, e-commerce brings different and arguably lower barriers to entry, opportunities for significant cost reduction, the capacity to rapidly re-engineer business processes and greater opportunities to sell across borders. Each and all of these potential benefits provides for increased competition and the ability to wrest market leadership from established players. For consumers the potential benefits are more choice, better value for money obtained through greater competition, more information, better tools to manage and compare information and faster service.*

2.2.2 From E-commerce to E-banking

Rayport and Sviokla highlighted in their study the differences between the physical market place and the virtual market place, which they describe as an information-defined arena (as cited in Shah & Clarke, 2009, p. 20). In the context of e-banking, electronic delivery of services means a customer conducting his transactions from a remote location (e.g. home) rather than visiting a local branch. Automated teller machines (ATMs) were the first means of providing electronic access to retail customers, made possible through the introduction of computer networks. Telephone banking arrived next, which was a revolutionary concept since it made banking possible from anywhere as long as telephones were available.

With the arrival and widespread adoption of The World Wide Web, banks renewed their interest in this area and started developing a web presence. The goal was for a bank's website to provide many, if not all, of the services offered at a branch. This may include transactions as well as information, advice, administration, and even cross-selling. However, the interactive nature of the Web not only allows banks to enhance these core services, but also enables banks to communicate more effectively and expand customer relationships. When combined with the improving analytical capabilities of data mining and related technologies, the potential for enriching the relationship with customers is unlimited. Most banks and other financial institutions in the developed world have established an Internet presence with various objectives. Some banks are there because their competitors have done it. Others

prefer a 'wait and see' practice. Some are using it as a banking channel being part of their *distribution /delivery management* (Shah & Clarke, 2009, p. 22).

E-banking largely came into being as a result of technological developments in the field of computing and communications but there have been a number of other factors or challenges which played an important part in its development. According to Jayawardhena and Foley (2000, as cited in Shah & Clarke, 2009, p. 22). The challenges for banks are fourfold. First, they need to *satisfy customer requirements that are complex and ever changing*. Second, they need to deal with increased competition from old as well as new entrants coming into the market. Third, they need to address the pressures on the supply chain to deliver their services quickly. Finally, they must continually develop new and innovative services to differentiate themselves from the competition, as having a large branch network is no longer seen as a main source of competitive advantage. E-banking is seen by many banks as a key tool to address these challenges. Other reasons for the adoption of e-banking by banks may include achieving competitive advantage (at least in short term), creating new distribution channels, improving image, and reducing costs.

2.2.3. Evolution of E-banking

There have been significant developments in the e-financial services sector in the past 30 years. According to Devlin (1995), until the early 1970s functional demarcation was predominant with many regulatory restrictions imposed. One main consequence of this was limited competition both domestically and internationally. As a result there was heavy reliance on traditional branch based delivery of financial services and little pressure for change. This changed gradually with deregulation of the industry during 1980s and 1990s, whilst during this time, the increasingly important role of information and communication technologies brought stiffer competition and pressure for a faster pace of change.

The Internet is a relatively new channel for delivering banking services. Its early form 'online banking services', requiring a PC, modem and software provided by the financial services vendors, were first introduced in the early 1980s. However, it failed to get widespread acceptance and most initiatives of this kind were discontinued (Shah & Clarke, 2009, p. 3). With the rapid growth of other types of electronic services since mid 1990s, banks

renewed their interest in electronic modes of delivery using the Internet. The bursting of the Internet bubble in early 2001 caused speculation that the opportunities for Internet services firms had vanished. The “dot.com” companies and Internet players struggled for survival during that time but e-commerce recovered from that shock quickly and most of its branches including e-banking have been steadily, and in some cases dramatically, growing in most parts of the world (Shah & Clarke, 2009, p. 3). One survey conducted by the TechWeb News in 2005 (as cited in Shah & Clarke, 2009) found e-banking to be the fastest growing commercial activity on the Internet. The spread of online banking has coincided with the spread of high-speed broadband connections and the increasing maturation of the Internet user population. Another factor in e-banking growth is that banks have discovered the benefits of e-banking and have become keener to offer it as an option to customers.

2.2.4. E-banking tools

E-banking is defined as the automated delivery of new and traditional banking products and services directly to customers through electronic, interactive communication channels. E-banking includes the systems that enable bank customers to access accounts, transact business, or obtain information on financial products and services through a public or private network, including the Internet. Customers access e-banking services using an intelligent electronic device, such as a personal computer (PC), personal digital assistant (PDA), automated teller machine (ATM), kiosk, or telephone (Rajagopalan, 2012).

2.2.4.1 Internet Banking

Internet banking is a new age banking concept. It uses technology and brings the bank closer to the customer. Broadly, the levels of banking services offered through internet can be categorized in to three types: the basic level service is the banks’ web sites which disseminate information on different products and services offered to customers and members of public in general. It may receive and reply to customers’ queries through e-mail, in the next level are Simple Transactional Websites which allow customers to submit their instructions, applications for different services, queries on their account balances, etc, but do not permit any fund-based transactions on their accounts, the third level of Internet banking services are offered by Fully Transactional Websites which allow the customers to operate on their

accounts for transfer of funds, payment of different bills, subscribing to other products of the bank and to transact purchase and sale of securities, etc. The above forms of Internet banking services are offered by traditional banks as an additional method of serving the customer. There are also banks that deliver banking services primarily through Internet or other electronic delivery channels. Some of these banks are known as 'virtual' banks or 'Internet-only' banks and may not have any physical presence in a country despite offering different banking services (Rajagopalan, 2012).

2.2.4.2 Tele / Phone Banking

Telebanking is a service that helps customers to access authentic, instantaneous information regarding their account, by using a telephone from any place, anytime. It not only gives the comfort of round the clock telebanking, but also enables the customers to access information about their account from anywhere just by making a local call. In telebanking a facility called IVR is generally used for providing the required service. IVR is the abbreviation for Interactive Voice Response System. This is an automated Phone Banking system which allows customers to access confidential account information after dialing the authentication details. Some of the common basic services offered by banks in telebanking are account balance enquiry, cheque status Enquiry, Ordering a Cheque Book Account Statement , Stopping Payment of cheques , Loan Related queries, Information about banking products, Enquiry about latest Interest/ Exchange rates , Reporting loss of ATM/Debit Card (Rajagopalan, 2012).

2.2.4.3 Mobile Banking

The customer while applying for this facility will have to give his mobile number which will be registered with the bank. This will facilitate authentication by the bank and will also enable the bank to send instant alerts. The bank may prescribe a default limit (monetary limit) to trigger SMS alerts that is if the account is debited or credited for more than the prescribed limit an alert will be sent. The customers may send SMS with some keywords describing the enquiry and will get the reply as SMS on his cell phone (Rajagopalan, 2012).

2.2.4.4 ATM

Barclays Bank in UK claims to have installed the first cash dispenser in the world in June 1967. It used paper vouchers bought from tellers in advance (LLC, 2003). The first generation machines were off-line; they were not connected to the bank's computers. The next major step forward occurred in 1972, when Lloyds Bank in the UK installed in the first on-line "Cash-Point" machines, which have been developed by IBM (Rajagopalan, 2012). Since the introduction of the first cash dispenser, the cash dispenser and the automated teller machine (ATM) have gradually become the electronic face of banking for the most customers.

2.2.5 Future of e-banking

It is notoriously difficult to predict the future, but some educated guesses can be made using past and current experiences. The next developments in ebanking will involve new products and services that were not feasible in traditional banking models. This could involve enabling instant payments using mobile devices, or tools to help people manage their multi-bank financial portfolio, simultaneously. Internet may also become more viable as the functionality of e-banking systems grows, and customers adapt to the new ways of conducting their financial activities. International banking might become a reality for ordinary consumers as banking payments systems are increasingly harmonized across borders. For example, in Europe, new measures are being introduced by the European Union to allow cross-border provision of e-commerce services by providing a single payment system. Similar initiatives are due to be implemented in other parts of the world (Shah & Clarke, 2009, p. 25).

E-banking has the potential to be a very rich and pleasant experience, and may provide more opportunities for banks to develop mutually satisfying, tailor made services to enrich relationship with customers. As technology evolves, the opportunities to extend the relationship beyond what is possible in the physical world continue to grow and will only be limited by a bank's ability to innovate or commitment to e-banking (Shah & Clarke, 2009, p. 25). Schneider (2005) suggested that all of the infrastructure in the world cannot succeed without innovation and the willingness to take risks. The ATM is an example of technologies that consumers would never have requested, but nonetheless have been keen to embrace.

2.2.6 Reasons for Implementing e-Banking

This section summarizes some of the reasons for implementing e-banking as developed by Shah & Clarke, (2009).

Customers Demands

With the emergence of the digital economy the balance of power seems to be shifting to customers. Customers are increasingly demanding more value, 24 hours availability, with goods customised to their exact needs, at less cost, and as quickly as possible. To meet these demands, banks need to develop innovative ways of creating value, and e-banking is seen as one of those innovative ways to meet customers' expectations.

Selling More to Existing Customers

The financial services markets in most developed countries have matured considerably and there is very limited scope for creation of new markets. This means that the most common route to growth is to sell more products to existing customers.

Changes in the Environment

There have been some significant shifts in the importance of different sectors of the economy. In most western countries, primary (such as mining, agricultural) and secondary (manufacturing) have been steadily declining, whilst the service (e.g. financial services) sector is growing in importance. This has increased the prominence of service sector organizations, resulting in more pressure on them to diversify their offerings and look beyond their immediate markets to create value.

E-Banking is a Hygiene Factor

Some banks are offering e-banking because their competitors have done it, and not doing so will mean losing an important customer segment to traditional competitors as well as new entrants to the financial sector. If this is their sole reason for doing so, they often drag behind their competitors and lack of enthusiasm prevents them from using e-banking to boost other sources of innovation, which are often enabled by the new technologies.

Achieving Competitive Advantage

Most organizations aspire to achieve competitive advantage, but few attain truly succeed, and even if attained, few are able to sustain this. As Internet banking has spread widely, it is no longer a source of competitive advantage on its own, at least in developed world. E-banking with the help of other technologies such as data mining can however help in other sources of

competitive advantage such as faster product development, superior customers' service and cross selling. To gain competitive advantage, banks must continually develop new and innovative services to differentiate themselves from the competition, as having a large branch network or even e-banking is no longer seen as a main source of competitive advantage.

To Achieve Efficiencies

Some banks look at e-banking from a cost savings point of view, as it is widely reported in e-commerce literature (Shah et al., 2007 as cited in Shah & Clarke, 2009) that cost per transaction is much lower than for other service delivery channels. E-banking can also help lower operational costs since, to offer e-banking, banks have to fine tune their business processes, systems and the ways in which employees communicate with one another.

2.2.7 Benefits of e-banking

Many banks and other organizations have already implemented or are planning to implement e-banking because of the numerous potential benefits associated with it (Shah & Clarke, 2009). Some of these major benefits are briefly described below.

Choice and Convenience for Customers

In the fierce battle over customers, providing a unique experience is the compelling element that will retain customers. A 'customer first' approach is critical for success in e-banking. Customers hold the key to success and companies must find out what different customers want and provide it using the best available technology, ensuring that they are acting on the latest, most up-to-date information. In modern business environments, customers want greater choice. They want the traditional range of banking services, augmented by the convenience of online capabilities and a stronger focus by banks on developing personal relationships with customers.

Attracting High Value Customers

E-banking often attracts high profit customers with higher than average income and education levels, which helps to increase the size of revenue streams. For a retail bank, e-banking customers are therefore of particular interest, and such customers are likely to have a higher demand for banking products. Most of them are using online channels regularly for a variety of purposes, and for some there is no need for regular personal contacts with the bank's branch network, which is an expensive channel for banks to run. (Berger & Gensler, 2007).

Some research suggests that adding the Internet delivery channel to an existing portfolio of service delivery channels results in nontrivial increases in bank profitability (Young, 2007, as cited in Shah & Clarke, 2009). These extra revenues mainly come from increases in noninterest income from service charges on deposit/current accounts. These customers also tend to be of high income earners with greater profit potential.

Enhanced Image

E-banking helps to enhance the image of the organization as a customer focused innovative organization. This was especially true in early days when only the most innovative organizations were implementing this channel. Despite its common availability today, an attractive banking website with a large portfolio of innovative products still enhances a bank's image. This image also helps in becoming effective at e-marketing and attracting young/professional customer base.

Increased Revenues

Increased revenues as a result of offering e-channels are often reported, because of possible increases in the number of customers, retention of existing customers, and cross selling opportunities.

Easier Expansion

Traditionally, when a bank wanted to expand geographically it had to open new branches, thereby incurring high start up and maintenance costs. E-channels, such as the Internet, have made this unnecessary in many circumstances.

Load Reduction on Other Channels

E-Channels are largely automatic, and most of the routine activity such as account checking or bill payment may be carried out using these channels. This usually results in load reduction on other delivery channels, such as branches or call centres.

Cost Reduction

The main economic argument of e-banking so far has been reduction of overhead costs of other channels such as branches, which require expensive buildings and a staff presence. It also seems that the cost per transaction of e-banking often falls more rapidly than that of traditional banks once a critical mass of customers is achieved.

Organizational Efficiency

To implement e-banking, organizations often have to re-engineer their business processes, integrate systems and promote agile working practices. These steps, which are often pushed

to the top of the agenda by the desire to achieve e-banking, often result in greater efficiency and agility in organizations.

2.3 E-Service quality

2.3.1 Introduction

According to Asubonteng et al (1996), service quality can be defined as “ the difference between customers’ expectations for service performance prior to the service encounter and their perceptions of the service received”. Gefan (2002) defined service quality as the subjective comparison that customers make between the quality of the service that they want to receive and what they actually get. According to Parasuraman, Zeithaml, & Berry (1988), service quality is determined by the differences between customer’s expectations of services and their evaluation of the services they received. They further argued that perceived service quality is a global judgement, or attitude relating to the superiority of the service, whereas satisfaction is related to a specific transaction. They emphasized that service quality is determined by the differences between customers’s expectations of service provider’s performance and their evaluation of the services they received.

2.3.2 Traditional service quality dimensions

Service quality has been the subject of considerable interest by both practitioners and reseachers in recent. Parasuraman et al (1985) identified ten detailed determinantsof service quality through focus group studies: tangibles, reliability, responsiveness, communication, access, competence, courtesy, credibility, security, understanding/knowledge of customer. Later these ten dimensions were further purified and developed five dimensions (tangibles, reliability, responsiveness, assurance ans emphathy to measure service quality, SERVQUAL (Parasuraman, Zeithaml, & Berry, 1988).

2.3.2.1 SERVQUAL

SERVQUAL is a multi-item scale developed to assess customer perceptions of service quality in service and retailing businesses. This method is based on the idea of possible gaps between customers perceived and expected quality from the service (Parasuraman, Zeithaml, & Berry, 1988). The scale decomposes the notion of service quality into five constructs as

follows: Tangibles: physical facilities, equipment, and appearance of personnel; Reliability: ability to perform the promised service dependently and accurately; Responsiveness: willingness to help customers and provide prompt service; Assurance: knowledge and courtesy of employees and their ability to inspire trust and confidence and Empathy: Caring, individualized attention the firm provides its customers. SERVQUAL scale has been used to measure service quality in various service industries, and some studies have applied the SERVQUAL model to measure service quality in the context of e-service by rewording its items (Hongxiu Li, 2009). However, employing SERVQUAL scale by rewording its items seems to be inefficient in the context of e-service (Parasuraman, Zeithaml, & Malhotra, 2005). According to Lee & Lin (2005), e-service is quite different from traditional service, with three aspects: (i) the absence of sales staff: in e-service, there is no service encounters between the customers and the sales staff as in the traditional service; (ii) the absence of traditional tangible element: in e-service, service process is almost completed in the virtual environment with some intangible elements; (iii) self-service of customers: in e-service, customers conduct self-service in purchasing and realize control in business process.

2.3.3 E- Service quality

According to Jessica (2003) e-service quality is defined as overall customer assessment and judgment of e-service delivery. E-service quality is important in many aspects; it is easy for customer to compare different offerings in addition to the traditional way, such as go to the bank. Customers that use online services expect equal or higher level of service quality than the traditional way (Jessica, 2003). The Internet has many positive aspects such as compare and evaluates products and services quickly. According to Zeithaml et al., (2000) when the customer evaluates e-service quality it does not matter if it is a product or a service, the service or product will later be used to evaluate the delivery of e-service quality. According to Jessica (2003) a customer's overall evaluation and opinion of the level of quality delivered by the virtual marketplace can be defined as e-service quality. By having an increased e-service quality online, it can create and make a company more efficient and attractive in comparison with other companies and help to reach and accomplish a larger level of customer satisfaction.

According to Daniel (1999) electronic banking is the delivery of banks' information and services by banks to customers via different delivery platforms that can be used with different terminal devices such as personal computer and mobile phone with browser or desktop software, telephone or digital television. Electronic banking, therefore, could be categorized into Internet banking, TV-based banking, and Mobile/Telephone based banking. It is a construct that consists of several distribution channels. Internet banking is the situation where "customers can access their bank account via the internet using a PC or mobile phone and web-browser" (Arunachalam and Sivasubramanian, 2007). Internet banking has received considerable interest from scholars and practitioners as a result of the value and usefulness customers derive from internet banking, as well as the practical value of implications it offers marketers. According to Zeithaml et al. (1996) a bank could enhance its reputation, customer retention, get new customers and increase financial performance by delivering superior quality internet banking services to its valued customers.

Many past studies have developed various models for understanding relevant e-service quality dimensions relevant to internet banking. Joseph et al. (1999) propose six dimensions of online banking service quality including: convenience/accuracy, feedback/complaint management, efficiency, queue management, accessibility and customization. Zeithaml (2001) contends that attributes of internet service quality include: access, ease of navigation, efficiency, flexibility, reliability, personalization, security, responsiveness, assurance, site aesthetics and price knowledge. Jun and Cai (2001), in a study of online banking, found that web site design, information, ease of use, access, courtesy, responsiveness, and reliability are significant dimensions that determine service quality. Yoo and Donthu (2001) propose four dimensions, termed SITEQUAL, that include ease of use, aesthetics design, processing speed and security. Drawing on many service quality elements identified by Grönroos (1984) and Parasuraman (1985, 1991), Broderick and Vachirapornpuk (2002) propose a five-dimension service quality model of internet banking that identifies customer expectation, customer participation, image and reputation, service encounter and service setting as significant determinants of internet banking service quality.

Automated service quality is defined as the customer's overall evaluation of the excellence of the provision of services through electronic networks such as the internet, Automated Teller

Machine (ATM), and telephone banking (Santos 2003). Researches' relating to especially ATM service quality realized that, the Automated Teller Machine (ATM) is one type of innovation that can mechanically accept deposits, issue withdrawals, transfer funds between accounts, and collect bills. It has altered the relationship between banks and their depositors, as well as the level of service quality of banking services (Davies & M, 1996); Mcandrews, 2003; Komal & Singh, 2009). Researchers identified secure and convenient location, adequate number of ATM, user-friendly system, and functionality of ATM. Plays important role in customers' satisfaction. While, Joseph & Stone (2003); Mobarek (2007) and Dilijonas, Sakalauskas, & Simutis, 2009) mentioned that adequate number of ATMs, convenient and secure location and user-friendly system, speed, minimum errors, high uptime, cash backup, cost, and service coverage are essential service quality aspects of ATM service.

Mobile banking may be considered an extension of Internet banking, but with its own unique characteristics given that a cell phone is used rather than a web browser on a personal computer (Brown, Cajee, Davies, & Stroebel, 2003). Jun & Cal (2001) identified six dimensions for online sustems quality: contents, accuracy, ease of use (compatibility, user friendly, easy login, speed, accessibility, functions ans easy navigation), timelines (up-to-date information), aesthetics (attractiveness) and security (privacy and information transaction safety).

Considering the differences between traditional service quality and e-service, obviously the SERVQUAL scale is not appropriate for measuring e-service quality. E-service is different from traditional service, which is based on interactive information flow between customers and service providers. On the basis of review, it may further be concluded that there is no consensus among researchers with regard to dimensions service quality. For the purpose of measurement of service quality of services involving face-to-face interactions between the service provider and the customer, SERVQUAL scale is most commonly used. But there are no generally accepted dimensions and no such standard scale for measuring service quality in case of ATM and mobile banking. Literature on ATM and mobile banking service quality is conducted in western countries which have different government approach, socio-economic, industrial and cultural settings. Not much focus is given on developing countries such as Rwanda, especially in the banking service industry. Studies in the West have limited applicability to developing countries (Jaganathan, 1998). Therefore, for the purpose of this

study, ATM and mobile banking service quality attributes were modified and adapted to the Rwandan setting.

2.4 Customer Satisfaction

The word satisfaction is a label of attitudes and feelings customers hold about their experiences with a company (Hill & Allen, 2007 as cited in Kadic, Bengtsson, & Vuniki, 2011). Customer satisfaction is related to the whole consumption experience, the fulfillment and terms of pleasure of the service (Grigoroudis & Siskos, 2010). Customer satisfaction is when an organization meets or exceeds the customer expectations, their needs or wants.

Customer Satisfaction is one of the most important outcomes in the marketing literature. It serves to link processes culminating purchase and consumption with post purchase phenomena such as attitude change, repeat purchase, and brand loyalty (Surprenant & Churchill, 1982). This definition is supported by Jamal and Naser (2003) and Mishra (2009 as cited in Siddiqi, 2011). According to Oliver (1980), the customer satisfaction model explains that when the customers compare their perceptions of actual products/services performance with the expectations, then the feelings of satisfaction have arisen. Any discrepancies between the expectations and the performance create the disconfirmation. Oliver (1980) identified three types of disconfirmation. Positive disconfirmation occurs when Product/service performance exceeds expectations. In this case, the customers are highly satisfied. Negative disconfirmation occurs when Product/service performance is less than expectations. In this case, the customers are highly dissatisfied. Zero disconfirmation occurs when Product/service performance = expectations. Giese & Cote (2000) identified the following components of satisfaction: customer satisfaction is one kind of response (cognitive or emotional); the response emphasizes on a particular focus (product, consumption experience, expectations etc.); the response occurs at a particular time (after choice, based on accumulated experience, after consumption).

2.4.1 Outcomes of Customer Satisfaction

In this section the research spotlights on the relevant literature on the concept of satisfaction and its outcomes (loyalty and retention).

2.4.1.1 Customer Loyalty

A loyal customer expresses characteristics like, repurchasing, cross-purchasing, recommendation to other customers and resisting competitive offers (Griffin, 1995). It implies faithfulness and trust in an organization. Singh & Sirdeshmukh (2000) suggested the customer loyalty as “the market place currency of the twenty-first century”. Ndubisi (2005) and Pfeifer (2005) pointed out that the cost of serving a loyal customer is five or six times less than a new customer. This statement shows the importance of customer loyalty. Walsh *et al.* (2005) mentioned that it is better to look after the existing customer before acquiring new customers. Gee *et al.* (2008) stated the advantages of customer loyalty as: the service cost of a loyal customer is less than new customers; they will pay higher costs for a set of products; and for a company, a loyal customer will act as a word-of-mouth marketing agent.

According to Foss and Stone (2001), customer loyalty relates to what customers think and do (or try to do). Most customer loyalty experts would agree that loyalty is best defined as a state of mind, a set of attitudes, beliefs, desires, etc. Loyalty is developed by approaches which reinforce and develop a positive state of mind and the associated behaviours. The exchange of information is one of the keys of loyalty, and provides a critical bridge between state of mind and behaviour. Loyal customers are more likely to give information to the service provider (because they trust the service provider and expect from the service provider to use the information with discretion and to their benefits). Managing loyalty is important because it means not only managing behavior but also managing a state of mind. Garland and Gendall (2004) supported that a loyal customer uses few banks, the highest likelihood of increasing business with the main bank, and the lowest probability of defection from that bank. Regression analysis disclosed that attitude and behaviour were the most important determinants of the number of banks used. Palmer *et al* (2007) suggested that in addition to measuring repurchase manager should also consider the likelihood of a customer recommending an organization’s product or service to another customer. The willingness to

recommend can be seen as a measure of the level of attitudinal customer loyalty. Levesque and McDougall (1996) pointed out that by increasing loyalty, a bank decreases its servicing cost (i.e. customers do not open or close their accounts); fulfils customers need and gains knowledge of financial affairs and has an opportunity to cross-sell existing and new products and services.

2.4.1.2 Customer retention

Customer retention occurs when a customer is loyal to a company, a brand, or a specific product or service, expressing long-term commitment and refusing to purchase from competitors (Frederick & Thomas, 1996). A company can adopt a number of strategies to retain its customers. Critical importance to such strategies is the wider concepts of customer service, customer relations, and relationship marketing. Companies can build loyalty and retention through the use of a number of techniques, including database marketing, the issue of loyalty cards redeemable against a variety of goods or services, preferential discounts, free gifts, special promotions, newsletters or magazines, members' clubs, or customized products in limited editions. It has been argued that customer retention is linked to employee loyalty, since loyal employees build up long-term relationships with customers.

There are two types of retention i.e. direct retention and indirect retention. The direct retention is based on the customer benefit effect and the indirect retention is based on the consequence of the knowledge effect (Reichheld & Sasser, 1990). Previous studies have identified the benefits that customer retention delivers to an organization (Reichheld and Sasser, 1990; Storbacka et al., 1994). The literatures have found that the costs of customer retention activities are less than the cost of acquiring new customers. Here we take example that financial implications of attracting new customers may be five as costly as keeping existing customers (Rust & Zahorik, 1993). Customer satisfaction and retention are critical for retail banks because they have an impact on profit (Levesque and McDougall, 1996). Regarding customer retention, proven concept of operationlization that was applied it includes the emotional cognitive retention constructs (Liking, identification, commitment, trust) as well as behavioral intentions (willingness to recommend and repurchase intention) (Diller, 1997 as cited in Saeed, 2011). A considerable body of research has tested the main effect of satisfaction on retention (Anderson and Sullivan, 1993; Rucci et al, 1998; Bansal

and Taylor, 1999; Cronin et al, 2000 as cited in Saeed, 2011). Previous research has generally found a significant positive effect of satisfaction. So satisfaction is the strongest driver of customer retention.

2.4.2 Customer Satisfaction, Customer Loyalty and Retention

Bowen and Chen (2001) said that having satisfied customers is not enough, there has to be extremely satisfied customers. This is because customer satisfaction must lead to customer loyalty. According to Bansal and Gupta (2001), building customer loyalty is not a choice any longer with businesses; it's the only way of building sustainable competitive advantage. Building loyalty with key customers has become a core marketing objective shared by key players in all industries catering to business customers. The strategic imperatives for building a loyal customer base are as: Focus on key customers, Proactively generate high level of customer satisfaction with every interaction, Anticipate customer needs and respond to them before the competition does, Build closer ties with customers, Create a value perception". Sivadas and Baker-Prewitt (2000) said "there is an increasing recognition that the ultimate objective of customer satisfaction measurement should be customer loyalty". Fornell (1992) said "high customer satisfaction will result in increased loyalty for the firm and that customers will be less prone to overtures from competition". This view was also shared by Anton (1996) who said that "satisfaction is positively associated with repurchase intentions, likelihood of recommending a product or service, loyalty and profitability". Thus satisfaction in itself will not translate into loyalty. However, satisfaction will foster loyalty to the extent that it is a prerequisite for maintaining a favourable relative attitude and for recommending and repurchasing.

According to Storbacka and Lintinen (2001), customer satisfaction is not necessarily a guarantee of loyalty. They said that in certain industries up to 75% of customers who switch providers say that they were 'satisfied' or even 'very satisfied' with the previous provider. Customers may change providers because of price, or because the competitor is offering new opportunities, or simply because they want some variation. Satisfaction is a measure of how well a customer's expectations are met while customer loyalty is a measure of how likely a customer is to repurchase and engage in relationship activities. Loyalty is vulnerable because even if customers are satisfied with the service they will continue to defect if they believe

they can get better value, convenience or quality elsewhere. Therefore, customer satisfaction is not an accurate indicator of loyalty.

Satisfaction is a necessary but not a sufficient condition of loyalty. In other words, we can have satisfaction without loyalty, but it is hard to have loyalty without satisfaction". McIlroy and Barnett (2000), "in a business context loyalty has come to describe a customer's commitment to do business with a particular organisation, purchasing their goods and services repeatedly, and recommending the services and products to friends and associates". Anderson and Jacobsen (2000) said customer loyalty is actually the result of an organisation creating a benefit for a customer so that they will maintain or increase their purchases from the organisation. They said that true customer loyalty is created when the customer becomes an advocate for the organisation, without incentive. Yet the evidence shows that the old rules of successful and profitable management still hold good: customer retention is still a key to long-term profits, while on the other side of the coin there is a high cost-penalty to low loyalty.

Indeed, the very fact that customers can so readily assess the competing services and products on offer and then so easily make the new purchase does in itself give added weight to the importance of building strong ties of loyalty with customers". Bowen and Chen (2001): "It is commonly known that there is a positive relationship between customer loyalty and profitability. Today, marketers are seeking information on how to build customer loyalty. The increased profit comes from reduced marketing costs, increased sales and reduced operational costs. Finally, loyal customers cost less to serve, in part because they know the product and require less information. They even serve as part-time employees. Therefore loyal customers not only require less information themselves, they also serve as an information source for other customers". Day (1994) said that the identification and satisfaction of customer needs leads to improved customer retention. Clark (1997) urged that: "Customer retention is potentially one of the most powerful weapons that companies can employ in their fight to gain a strategic advantage and survive in today's ever-increasing competitive environment. It is vitally important to understand the factors that impact on customer retention and the role that it can play in formulating strategies and plans".

2.4.3 Customer satisfaction and service quality

Service quality and customer satisfaction are two dimensions that strongly belong together. Bernhardt (2005, as cited in Kadic, Bengtsson, & Vuniki, 2011) emphasizes the importance to understand the relationship between service quality and customer satisfaction. The difference is between customers' expectations and the service level they experience. If the expectations are exceeded, the service quality is high and the customer is very satisfied. If the expectations do not meet customers' requirements, it results in low perceived quality and the customer is dissatisfied.

Quality of a service delivery depends on the whole delivery process and the outcome that result in customer satisfaction or dissatisfaction of the service. A Study done by Sang & Seung, (2004) showed that service quality is significantly associated with customer satisfaction. Service quality has a positive effect on customer satisfaction and the level of satisfaction have an influence on customer retention. They emphasized that service quality leads to customer satisfaction and, furthermore, an increase in customer retention.

Several researchers attempt to find the interrelationships between service quality, customer satisfaction and customer loyalty in the banking sector. Researchers argue that service quality and customer satisfaction are the predictors of customer loyalty (Tariq and Moussaoui, 2009; Han *et al.*, 2008; Ehigie, 2006 as cited in Siddiqi, 2011). Veloutsou *et al.* (2004) found the positive relationship among service quality, customer satisfaction and customer loyalty in the banking sector. Caruana (2000) proposed a meditational model that links the service quality to the service loyalty via customer satisfaction. Caruana (2000) mentioned that service quality, customer satisfaction and service loyalty are related to each other. He applied this model to the customers of retail banking in Malta. The results proof the above mentioned relationship. The result confirms that service quality is an important input of customer satisfaction and depicts 53% of its variance. He stated that management should mainly focus on customer satisfaction and, of which service quality is an important antecedent. Finally, he concluded that a better understanding of this model can help managers ensure better targeting of limited marketing resources. Most of the researchers pointed out that there is a positive relation between the service quality and customer satisfaction and customer satisfaction is positively related to customer loyalty.

2.5 Rwandan banking industry

The main missions of the National Bank of Rwanda (NBR) are to ensure and maintain price stability; to enhance and maintain a stable and competitive financial system without any exclusion; to support Government's general economic policies without prejudice to the first missions (BNR, 2008). All Financial institutions are subject to supervision and regulation by the NBR under the Banking Law n° 007/2008 of June 8th 2008 (National Bank of Rwanda, 2008).

According to NBR, the main objective of the financial sector development plan is to facilitate the access to financial services by the population. This objective will be achieved by the expansion of the banking agencies network and the licensing of new banks. On the 1st August 2012, the Rwandan banking sector was made up of fourteen (14) banks: Banque de Kigali (BK), Banque Rwandaise de Développement (BRD), FINA Bank Rwanda, Compagnie Générale de Banque (COGEBANQUE), Banque Commerciale du Rwanda (BCR), ECOBANK RWANDA, Urwego Opportunity Bank (UOB), ACCESS BANK Limited, Banque Populaire du Rwanda Limited, Kenya Commercial Bank (KCB), ZIGAMA CSS, UNGUKA BANK, AGASEKE BANK and EQUITY BANK.

2.5.1 E-banking in Rwanda

Banking industry in Rwanda is among the leading sectors in adopting and utilizing the internet. Banks have started to offer ebanking services to their customers by introducing new delivery channels for traditional products and services, namely ATMs, Mobile Banking and Internet Banking. Banque Populaire du Rwanda (BPR) has heavily invested in electronic banking. In July 2010, the bank had 3 ATMs and 1,500 ATM cards in the market. One year later, it had 43 functioning ATMs and 68,000 ATM cards (Bosco, 2011). Now, the Bank has 77 functioning ATMs around the country and over 100,000 customers using its mobile banking platform.

The most capitalised bank in Rwanda, Bank of Kigali, has also invested in technology. The bank now offers a range of products in electronic banking. These range from card based banking services, internet and mobile banking. So far, the Bank has 26 ATM machines, a total of 800 customers on internet banking and over 31,000 people using mobile banking (The Chronicle's Economic Desk, 2011). Equally, other banks such as Commercial Bank of

Rwanda (BCR), COGEBANQUE, ECOBANK, KCB Rwanda, Fina Bank, etc, are also adopting the technology to enhance ebanking services to their customers

2.5.1.1 Card based payments system

Regarding the card based payment system, in 2011 the banks continued to issue payment cards and RSwitch (former SIMTEL) as a common platform ensured that the infrastructure is interoperable. On one hand, RSwitch continued to issue to banks proprietary cards. On the other hand, several initiatives were taken by banks in order to provide electronic banking services to their clients. More efforts have been put on improving ATMs up time which increased from 58% in January 2011 to 85% in December 2011. The ATMs transactions have increased significantly as well. The number of ATMs has doubled (from 98 to 168) and the number of POS has tripled (from 99 to 298) from 2010 to 2011. The number of payment cards has increased five times compared to the year 2010. In order to promote the cards usage on POS (Point of Sales), the merchants were trained and the surcharges (fees or other charge that is added to the cost of a good or service for having used a card on POS) were prohibited (National Bank of Rwanda, 2011). Additionally, concerted effort was put on the interoperability of the ATMs. 81% of ATMs were interoperable using domestic cards. Regarding international acquiring, 59 ATMs and 202 POS were accepting international VISA cards and 71 POS accepted prepaid cards (ZIPP cards). Some banks are negotiating with different international payment card service providers to ensure all international cards are accepted on Rwanda payment terminals (National Bank of Rwanda, 2011).

Table 2.1: Evolution of Card based payments system

Instruments	2010	2011
Number of Automated Teller Machines (ATMs)	98	168
Number of Point of Sale (POS) terminals	99	298
Number of debit cards	41,377	208,767
Number of credit cards	172	526
Number of prepaid cards	0	3,270
Number of transactions		
Debit cards	393,088	1,933,811
Credit cards	20,036	42,545
Transactions on POS		38,440
Value settled (Rwandan francs millions)		
Debit cards	26,983	117,838
Credit cards	2,897	4,698
Balance on prepaid cards	-	73
Transactions on POS	-	6,438

Source: BNR, Annual report 2011

2.5.1.2 Electronic payments and money transfer services

In a bid to attain financial inclusion, in 2010, the NBR opened up for nonbank based mobile payment solutions to be rolled out on the market. In 2011 TIGO RWANDA joined MTN Rwanda to provide mobile payment services and was fully licensed to operate the “TIGO Cash.” Moreover, seven financial institutions were providing mobile banking solutions on an intra-bank basis as well. In the domain of remittances, other three companies have been licensed as money transfer services providers bringing the total number to 12 companies.

Table 2.2: Electronic payments statistics Jan – Dec 2011

	Number of providers	Agents/ Branches	Subscribers	Number of transactions	Value (Million RWF)
Mobile payments	2	1,387	639,673	697,497	7,955
Mobile banking	7	215	155,986	527,300	5,215
Internet banking	2			1,493	708

Source: BNR, Annual report 2011.

2.5.1.3 Visa Partnership

An important partnership between Visa inc. and the Government of Rwanda was signed in November 2011 aiming at developing localized payment solutions to extend access to financial services to local and international consumers throughout the country. This

partnership covers 3 areas (National Bank of Rwanda, 2011): Lay the Foundations for Electronic Payments—Install the basic infrastructure requirements to enable country-wide use of electronic payments, including: facilitating the widespread issuance and acceptance of payment cards; and localizing clearing and settlement services. Promote Electronic Payments Innovation—Enable Rwanda to take advantage of mobile phone technologies to reach Rwandans who are under-served by traditional payments infrastructure. Capacity Building—Develop training programs and facilitates knowledge-transfer in order to ensure the long-term sustainability of financial systems throughout the country.

2.5.2 BPR E-channels

To facilitate customers in executing their financial needs and to follow through with BPR's more modern image, BPR Ltd has put in place new modern banking tools, like ATMs and BPR Mobile Banking. With over a million clients, BPR is focusing on improving its services in modern payment technology going forward. BPR was the first bank to offer mobile banking services and card-less cash withdrawals from ATM's. The product is called IZI cash and enables people that do not have a bank account to withdraw money from the ATM without a debit card. This new service launched in November 2011, allows BPR mobile banking users to transfer money to none account holders, who withdraw it from a BPR ATM.

BPR Mobile banking

With BPR Mobile Banking, customers are able to carry out all sorts of banking and payments services from their own home, workplace or on the-go. BPR has launched a branch and customer support Call Centre as well, enabling customers to get customer service via the telephone as well (Banque Populaire du Rwanda, 2012). BPR Mobile Banking was launched in September 2010 and has today over 110,000 users. Transactions that can be done using this service include: check your account balance, get a mini-statement, transfer money to other BPR accounts, purchase electricity, top up airtime(MTN or TIGO), pay your postpaid phone bills (MTN), pay Star times TV, Pay DSTV, get Salary SMS alerts and Order for a cheque book.

Automated Teller Machines (ATMs)

BPR branch network has been further supported by a large increase in the number of ATM's, which amounted to 65 at the end of 2011 (Banque Populaire du rwanda, 2012). Currently, BPR has over 95 ATMs around the country with a target of 120 ATMs by the end of 2012. ATMs services allow customers to spend less time at the bank and more time attending to their other daily business matters or personal interests.

CHAPTER THREE:

RESEARCH METHODOLOGY

3.0 Introduction

This chapter describes the methodological approach and techniques used in carrying out this study. It gives details on how the research was conducted and describes the research design, the population of the study and sampling techniques, data collection and analysis methods, quality control, limitations of the study as well as ethical considerations.

3.1 Research design

Exploratory, descriptive, cross-sectional and correlational studies were used in this study. Exploratory and descriptive studies are appropriate when doing survey. For the purpose of this study, the researcher has used exploratory and descriptive studies since survey questionnaires were used. This study is also cross-sectional because it is carried out at one point in time only. Since this study focuses on the e-banking services and customer satisfaction, it is correlational in nature.

Both qualitative and quantitative techniques are applied in exploratory research. On one hand, words were used in explaining and describing data, which makes it a qualitative research. On the other hand some numerical data will be collected and analyzed such as the number of customers who are satisfied and those who are not satisfied with electronic banking services quality. With this study we want to understand BPR customers that use e-banking and analyze their level of satisfaction or dissatisfaction with the offered online services. To find new insights the researcher described, analyzed, and explained to fulfill the purpose of the study.

3.2 Population and Sampling

According to Zikmund (2003, p. 369) a population is any complete group of people, companies, hospitals, stores, college students or the like that share some set of characteristics and have the answers to your research questions. The sampling technique is to select representative elements from the total population in registered commercial banks in Rwanda.

3.2.1 Target population

The target population of this study consists of 7,000 users of ebanking services (ATM and Mbanking) of BPR Ltd, at the Main Branch (this is because this was the headquarter area of the bank) located in Kigali City, Nyarugenge District as of March, 2012. BPR Ltd was selected because it is the most popular commercial Bank in Rwanda with 191 branches, over 1.3 million clients and more customers using ebanking services (over 100,000) (Rwembeho, 2012).

3.2.2 Sample Size

Out of 7,000 ebanking services users, a sample size of 400 respondents was selected. In selecting the 400 respondents, a simple random sampling method was used to obtain the required respondents. A significance level of 0.05 was chosen. The researcher used the table developed by Krejcie and Morgan to arrive at the sample size (Krejcie & Daryle, 1970, p. 608).

3.2.3 Sampling Techniques

The simple random sampling technique was adopted to conduct survey in this study. The sample selected was designed to obtain adequate and diverse views pertaining to e-banking usage and the level of customer satisfaction.

3.3 Data collection

Data is often collected from a variety of different sources (Saunders, Lewis, & Thornhill, 2003). The researcher used both the primary and secondary data in the study. The primary data were collected by the researcher through the use of questionnaire while the secondary data were collected from the literature, academic books, websites, and scientific articles, reports, etc. The research questionnaire was designed based on research questions and frame of reference. The questionnaire design was pre-tested and redesigned.

3.3.1 Instrumentation

According to many scholars, in the use of survey strategy, the main instruments used are self administered/interviewer, administered or structured/unstructured interviews and questionnaires or a combination of both (Saunders *et al.*, 2000; Cooper & Schindler, 2006; and Malhotra, 2007). They further agree that, generally, the questionnaire can be used for descriptive or explanatory study, and must have a good layout, unambiguous questions, complete items, non-offensive but relevant items, logical arrangements of items, and the ability to elicit willingness to answer in respondents.

As a result, in this study, a self-administered, structured questionnaire was used to collect data from respondents. The survey questionnaire consisted of three sections. The first section focused on the respondent's identification. The identification variables included: age, gender, occupation, level of education and experience with BPR Ltd. The second section focused on e-banking services usage and the level of satisfaction of respondents. Respondents were asked to rate their level of satisfaction with ATMs and Mobile banking services using a the following scale: Very unsatisfied (1) Unsatisfied (2), Neither Satisfied nor Unsatisfied (3), Satisfied (4) and Very satisfied (5). The last section focused on the item that measures the overall satisfaction (dependent variable) with the e-banking services (independent variables), their likelihood to swicth to other banking institutions and whether they would recommend BPR Ltd to others.

3.3.2 Research procedure

The primary data were got from research questionnaire as data collection instrument because of its cost effectiveness in a survey involving literate respondents. Firstly, the researcher requested for an introduction letter from Kampala International University office to be addressed to the management of BPR Ltd for the reseacher to be permitted to collect data. The questionnaire was administered to the target sample through personal contact by the researcher. Informed consent information, which is a document that explains the purpose of the questionnaire and assures respondents of anonymity and confidentiality, was attached to the questionnaire for the respondents. All questionnaires retrieved were checked to ensure they are completely filled out. The data gathered was organised, collated, summarised,

statistically treated and drafted in tables, graphs, charts, etc, using appropriate programs (SPSS, Microsoft Excel and other operating systems).

3.4. Quality Control

Scientific methodology needs to possess the characteristic of credibility in terms of validity and reliability, which are important at every stage of the research work.

3.4.1 Validity

Validity refers to whether the findings are really about what they appear to be about (Saunders, Lewis, & Thornhill, 2003). Different steps were taken to ensure the validity of the study: data was collected from the reliable sources, from respondents who use e-banking services, namely ATMs and mobile banking; the survey questions were made based on literature review and frame of reference to ensure the validity of the results; the questionnaire was given to the supervisor of this research and other senior academic staff who gave feedback to improve the questionnaire; the questionnaire has been pre-tested by ten persons before starting the survey; data has been collected through three weeks, within this period of time no major event has been changed with the related topic. Finally, the questionnaire was translated in French and Kinyarwanda languages to avoid any misunderstanding or misinterpretation.

To ensure validity, a content validity index was computed and items on the questionnaire purified and a CVI of 0.75 was got.

3.4.2 Reliability

According to Saunders et al. (2003), reliability refers to whether a measurement instrument is able to yield consistent results each time it is applied. In this study since the reliability of the research instrument has been examined in previously validated studies, it was deemed reliable for this study. The questionnaire was used as a research instrument and to minimize the errors in the research study, simple language and simple words have been used in the questionnaire. All the theories chosen for the study were discussed clearly and research questions were constructed on prior theories.

3.5 Data Analysis

Processing and analyzing data involves a number of closely related operations which are performed with the purpose of summarizing the collected data and organizing these in a manner that they answer the research questions/objectives (Kumar, 2005). The data processing operations include editing: a process of examining the collected raw data to detect errors and omissions and to correct these when possible. Editing is the first step in processing raw data after it has been collected. This process of editing is also called cleaning and the focus thereof is to ensure that the data is free from inconsistencies and incompleteness. Classification: a process of arranging data in groups or classes on the basis of common characteristics and the nature of phenomenon involved. Tabulation: the process of summarizing raw data and displaying the same in compact form for further analysis. It is an orderly arrangement of data in columns and rows.

The study used descriptive statistics in analyzing the data, such as the simple frequencies, percentages, means, correlations of variables, and sums. These would be presented in tables and charts. Descriptive statistics allowed the researcher to present the data in a more meaningful way for simpler interpretation.

3.6 Ethical Considerations

3.6.1 Privacy and Confidentiality

To ensure confidentiality of information provided by the respondents and to ascertain the practice of ethics in this study, the respondents were coded instead of reflecting their names to provide anonymity. All the information got from the respondents was handled with high level of Privacy and confidentiality and was not used for other purpose than academic.

3.6.2 Anonymity

The survey was completely anonymous and no identifying information was reported in this study report. In any sort of report that might be published, no information was used that would make possible to identify the participants in this study.

3.6.3 Researcher's Responsibility

In this study, all authors quoted are acknowledged through citations and referencing. The researcher further assured the management of BPR Ltd that the Bank will not be harmed by the participation in the survey. The researcher was careful with all ethical issues throughout the research process.

3.6.4 Informed Consent

The respondents were informed about the objectives and purpose of the study as well as the privacy and confidentiality of the information they were provided and requested to sign in the informed consent form.

3.7 Limitations

From the limitations perspective, the researcher claimed an acceptable 5% margin of error in view of the following threats to validity with relevance to study: Instrumentation: the research instrument is not standardised. A validity and reliability test was used to produce a credible research tool. (ii) Extraneous variables: the researcher did have control over the extraneous variables such as honesty of the respondents and personal biases. For untruthfulness where some of the respondents are expected to say the truth, the researcher probed the responses further to establish the truth when it deemed necessary. The personal biases were also avoided by the researcher. Attrition: not all questionnaires were returned completely answered or even retrieved back due to circumstances on the part of the respondents such as sickness, travel and refusal to participate. In anticipation to this, the researcher reserved more respondents by exceeding the minimum sample size. The respondents were also reminded not to leave any items in the questionnaire unanswered and were closely followed up as to date of retrieval. The retrieval rate of questionnaires was 92%.

CHAPTER FOUR:

DATA ANALYSIS AND PRESENTATION OF FINDINGS

4.0 Introduction

In this chapter, the researcher presents, analyses and interprets the findings of the study. The presentation in this chapter shows the results according to the objectives of the study. The chapter begins with the description of the sample using frequency tabulations, percentages, charts and graphs. This is followed by tabulations of variables that directly captured the objectives. Data consists of the gathered data from the questionnaire. Totally there were 400 questionnaires collected and 32 questionnaires were not completed and were excluded. Totally 368 questionnaires were considered for this study, representing a response rate of 92%. Though the questionnaire covered various issues, only the relevant findings are reported here below.

4.1 Profile of the respondents

The tables below presents the 368 completed questionnaires that will be used for the analysis. First we present the respondents by age, gender, occupation, education level and their experience with BPR Ltd.

Table 4.1: Respondents' age

Age group		Frequency	Percent
Valid	under 20	16	4.3
	20-29	136	37.0
	30-39	96	26.1
	40-49	64	17.4
	50-59	48	13.0
	More than 60	8	2.2
	Total	368	100.0

Source: Primary Data

This table shows the respondents' age group. 37% represents respondents between 20-29 years old, 26% represents respondents between 30-39 years age bracket, 17.4 % represents respondents between 40-49 years, 16% represents respondents less than 20 years old, 13% represents respondents between 50-59 years old and 8% represents respondents having

more than 60 years old. Thus, as it can be seen most of respondents are young, meaning that they adopt ebanking services faster than old persons.

4.2.2 Respondent's Gender

Table 4.2: Respondents's Gender

		Frequency	Percent
Valid	Female	136	37.0
	Male	232	63.0
	Total	368	100.0

Source: Primary Data

This table above shows the gender of the respondents. Men represents 63% of the respondents and 37% are woman. The researcher got a higher frequency of men with a total 103 respondents and 75 women which we believe is a good distribution between the sexes.

Table 4.3: Respondent's occupation

		Frequency	Percent
Valid	unemployed	16	4.3
	Employed	176	47.8
	self-employed	128	34.8
	Student	48	13.0
	Total	368	100.0

Source: Primary Data

In the survey it was revealed further that 47% of the respondents were employed, 34.8% were self-employed while 14% are unemployed. The number of students represents 16%. These set of people was captured in the study thus making the sample present a fair representation of the population under study.

Table 4.4: Respondent's level of Education

		Frequency	Percent
Valid	Other	8	2.2
	Primary	32	8.7
	Secondary	120	32.6
	University	208	56.5
	Total	368	100.0

Source: Primary Data

Question 4 of the questionnaire asked about the level of education of the respondents. The results above show that 56.5% represents university level followed by secondary education level with a percentage of 32.6%, while 8.7% represents primary education level. Other levels of education represent 3% and this include master's and PhD holders.

Table 4.5: Respondent's Experience with BPR Ltd

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	One year	88	23.9	23.9	23.9
	One to three years	160	43.5	43.5	67.4
	Three to eight years	48	13.0	13.0	80.4
	More than eight years	72	19.6	19.6	100.0
	Total	368	100.0	100.0	

Source: Primary Data

Question 5 of the questionnaire asked about the experience of the respondents with BPR Ltd. The results in Table above, reveals that most the respondents have an experience between one and three years followed by those with one year of experience with the Bank (23.9%). 19.6% have more that 8 years and 48 respondents have an experience between 3-8 years with BPR Ltd.

Table 4.6: Ebanking services used

		Frequency	Percent
Valid	I use ATM only	8	2.2
	I use Both services	360	97.8
	Total	368	100.0

Source: Primary Data

As for the question to know whether the respondents are aware of ebanking services offered by BPR Ltd, all respondents revealed that they are aware of them, specifically ATM and Mobile Banking. With reference to the table above, the results show that 97.8% of the respondents use both services and 2.2% (8 respondents) use only ATM Banking.

Table 4.7: Experince with ebanking services

		Frequency	Percent
Valid	Less than 6 months	72	19.6
	1 year	176	47.8
	1-2 years	104	28.3
	More than 2 years	16	4.3
	Total	368	100.0

Source: Primary Data

Question 8 of the questionnaire asked about how long the respondents have been using ATM and Mobile banking services and the results show that 47.8% of the respondents have been using both services for 1 year, 28.3% for 1-2 years followed by 19.6% for less than 6 months and 4.3% for more than 2 years.

Table 4.8: Visits before the introduction of ebanking

		Frequency	Percent
Valid	Rarely	32	8.7
	Frequently	192	52.2
	Very frequently	144	39.1
	Total	368	100.0

Source: Primary Data

The table shows that 52.2% of the respondents frequently visited the bank for transaction before the introduction of ebanking, 39.1% very frequently and 8.7% rarely. It is expected that introduction of electronic banking products and services will go a long way in significantly reducing number of visits to the banks.

Table 4.9: Visits after the introduction of ebanking

		Frequency	Percent
Valid	Never	9	2.2
	Once	144	39.1
	Twice	87	23.9
	Thrice or more	128	34.8
	Total	368	100.0

Source: Primary Data

The results in the table above show that 39.1% of the respondents visit their Bank Branch at least once in a month, 34.8% thrice or more in month and 23.9% of the respondents visit their

Bank twice in a month. 8% of the respondents never visit their Bank for transaction after the introduction of ebanking services.

One of the implications of electronic banking is that it should reduce the need to visit bank branches. In fact, the electronic banking delivery channels are often considered as potential substitutes for brick and mortar bank branches. However, contrary to expectations, the survey results indicated that 39.1% of the respondents visit their bank branch at least once every month. This would indicate that consumers of banking services in Rwanda still find it useful to visit their bank branches regularly every month to perform some banking transactions.

Table 4.10: Importance of employees

		Frequency	Percent
Valid	Very important	144	39.1
	Important	217	58.7
	Not important	7	2.0
	Total	368	100.0

Source: Primary Data

From the table above, 58% of the sampled respondents indicated that they find human tellers important and 39.1% of the respondents indicated that they still very important and 7 (2%) respondents indicated that human tellers are not important after the introduction of ebanking services. This would indicate that bank customers in Rwanda do quite value the importance of the personal touch in banking services. In fact, many customers prefer coming physically to the bank to make inquiries instead of using telecommunication means.

4.2 Customers' view of their overall e-service quality with ATM banking

Table 4.11: Use of ATM

		Frequency	Percent
Valid	everyday	16	4.3
	At least weekly	112	30.4
	At least monthly	160	43.5
	Less than once a month	80	21.7
	Total	368	100.0

Source: Primary Data

Question 12 of the questionnaire asked how often respondents use ATM Banking. The results reveal that majority of the respondents (43.5%) perform ATM services at least monthly and 30.4% use ATM at least weekly. 21.7% of respondents use it less than once in a month and 16 respondents use it everyday.

Table 4.12: Reason of choosing ATM

		Frequency	Percent
Valid	To avoid queue	200	54.3
	Avoid needlessly carrying cash	56	15.2
	Make transactions during nonbanking hours	112	30.4
	Total	368	100.0

Source: Primary Data

Question 14 asked respondents to prioritize the reasons for using ATM in order of their importance. The results show that the majority of the respondents use ATM services to avoid queue (54%), 30% to make transactions during nonbanking hours and 15% to avoid needlessly carrying cash.

Table 4.13: Cash availability in ATMs

		Frequency	Percent
Valid	Unsatisfied	16	4.3
	Neither satisfied nor unsatisfied	120	32.6
	Satisfied	208	56.5
	Very satisfied	24	6.5
	Total	368	100.0

Source: Primary Data

From the table above, it can be seen that most respondents are satisfied with cash availability in ATMs (56.5%) while 32.6% of respondents are neither satisfied nor dissatisfied. 6.5% of respondents are very satisfied and 4.3% are dissatisfied.

Table 4.14: Adequate number of ATMs

		Frequency	Percent
Valid	Very unsatisfied	16	4.3
	Unsatisfied	8	2.2
	Neither satisfied nor unsatisfied	88	23.9
	Satisfied	248	67.4
	Very satisfied	8	2.2
	Total	368	100.0

Source: Primary Data

The results in the table above show that respondents are satisfied with the adequate number of ATMs (67.4%). In addition, 23.9% of the respondents are neither satisfied nor unsatisfied while 4.3% are very unsatisfied.

Table 4.15: Cash withdrawal limit per day

	Frequency	Percent
Valid Very unsatisfied	8	2.2
Unsatisfied	24	6.5
Neither satisfied nor unsatisfied	80	21.7
Satisfied	232	63.0
Very satisfied	24	6.5
Total	368	100.0

Source: Primary Data

The above table indicates that 63% of the respondents that use ATM services are satisfied with the Cash withdrawal limit per day of RWF 150,000. 21.7% of the respondents are neutral (neither satisfied nor unsatisfied) and 6.5% of the respondents are dissatisfied.

Table 4.16: Secure and convenient location of ATMs

	Frequency	Percent
Valid Unsatisfied	8	2.2
Neither satisfied nor unsatisfied	56	15.2
Satisfied	240	65.2
Very satisfied	64	17.4
Total	368	100.0

Source: Primary Data

The table shows that 65.2% admitted that they are satisfied with secure and convenient location of ATMs, 17.4% are very satisfied and 15.2% are neither satisfied nor unsatisfied.

Table 4.17: User friendly system

	Frequency	Percent
Valid Unsatisfied	24	6.5
Neither satisfied nor unsatisfied	120	32.6
Satisfied	184	50.0
Very satisfied	40	10.9
Total	368	100.0

Source: Primary Data

This table shows if the ATMs are easy to use. The results show that 50% are satisfied with this statement, 32.6% are neither dissatisfied nor satisfied with this statement and 10.9% are very satisfied. 6.5% are dissatisfied.

Table 4.18: Security of use

		Frequency	Percent
Valid	Unsatisfied	48	13.0
	Neither satisfied nor unsatisfied	144	39.1
	Satisfied	144	39.1
	Very satisfied	32	8.7
	Total	368	100.0

Source: Primary Data

From the table above, it can be observed that respondents are not quite assured about the security to use ATM services. 39.1% are neither dissatisfied nor satisfied and those satisfied represent also 39.1%. Respondents which are not satisfied with this statement represent 13%.

Table 4.19: Minimum errors

		Frequency	Percent
Valid	Very unsatisfied	16	4.3
	Neither satisfied nor unsatisfied	80	21.7
	Satisfied	256	69.6
	Very satisfied	16	4.3
	Total	368	100.0

Source: Primary Data

The question asked respondents to indicate the extent to which they are satisfied or dissatisfied with ATM minimum errors. The results revealed that greater proportion (69.6%) of the respondents are satisfied with this statement while 21.7% are neither dissatisfied nor satisfied.

Table 4.20: Overall satisfaction with ATM Banking

		Frequency	Percent
Valid	Neither satisfied nor unsatisfied	104	28.3
	Satisfied	248	67.4
	Very satisfied	16	4.3
	Total	368	100.0

Source: Primary Data

This chart shows the overall satisfaction with ATM banking. 4.3% are very satisfied with this statement, 67.4% are satisfied and 28.3% are neither dissatisfied nor satisfied. None of the respondents was dissatisfied with this statement. Satisfied and very satisfied show a high percentage followed by neither dissatisfied nor satisfied with 104 respondents who could not choose any option.

4.3 Customers' view of their overall e-service quality with Mobile banking

Table 4.21: Security of transactions

		Frequency	Percent
Valid	Unsatisfied	16	4.3
	Neither satisfied nor unsatisfied	96	26.1
	Satisfied	232	63.0
	Very satisfied	16	4.3
	Total	360	97.8
Missing	System	8	2.2
Total		368	100.0

Source: Primary Data

The table shows customers opinions on the security of transactions with mobile banking. 63% are satisfied with the assurance of security by BPR Ltd, 26.1% are neither dissatisfied nor satisfied, 4.3% are dissatisfied and 4.3% are very satisfied. Very high percentages of the respondents are satisfied with the security of transaction. We can also notice the percentage of those neutral is also significant. This factor is crucial in online banking and should be a priority because clients need to feel secure in order to use the ebanking services.

Table 4.22: Ability to get account balance

		Frequency	Percent
Valid	Neither satisfied nor unsatisfied	8	2.2
	Satisfied	320	87.0
	Very satisfied	32	8.7
	Total	360	97.8
Missing	System	8	2.2
Total		368	100.0

Source: Primary Data

From the table above, it can be observed that respondents are quite satisfied with the ability to check the account balance. 87, 8.7 are satisfied, 8.7% are very are satisfied and 2.2% are neither dissatisfied nor satisfied.

Table 4.23: Ability to pay bills

		Frequency	Percent
Valid	Unsatisfied	8	2.2
	Neither satisfied nor unsatisfied	24	6.5
	Satisfied	312	84.8
	Very satisfied	16	4.3
	Total	360	97.8
Missing	System	8	2.2
Total		368	100.0

Source: Primary Data

As regards the ability to pay bills with mbanking, the results indicate that 84.8% are very satisfied, 4.3% are very satisfied, 6.5% are neither satisfied nor unsatisfied and 2.2% are dissatisfied. Here we notice that the big proportion of the respondents is satisfied with this statement.



Table 4.24: Ability to transfer funds

		Frequency	Percent
Valid	Unsatisfied	16	4.3
	Neither satisfied nor unsatisfied	24	6.5
	Satisfied	264	71.7
	Very satisfied	56	15.2
	Total	360	97.8
Missing	System	8	2.2
Total		368	100.0

Source: Primary Data

Results in the table reveal that majority of the respondents in this study are satisfied with the ability to transfer funds by mobile banking (71.7%) and 15.2% are very satisfied. A smaller proportion of the sample 6.5% is neither satisfied nor unsatisfied while 4.3% of respondents are dissatisfied.

Table 4.25: Ability to check transaction history

		Frequency	Percent
Valid	Very unsatisfied	8	2.2
	Neither satisfied nor unsatisfied	56	15.2
	Satisfied	224	60.9
	Very satisfied	72	19.6
	Total	360	97.8
Missing	System	8	2.2
Total		368	100.0

Source: Primary Data

From the table above, results show that majority of the respondents in this study are satisfied with the ability to check transaction history with mobile banking (60.9%) and 19.6% are very satisfied. A smaller proportion of the sample 15.2% is neither satisfied nor unsatisfied while 2.2% of respondents are dissatisfied.

Table 4.26: Mbanking customer support

		Frequency	Percent
Valid	Unsatisfied	16	4.3
	Neither satisfied nor unsatisfied	104	28.3
	Satisfied	176	47.8
	Very satisfied	64	17.4
	Total	360	97.8
Missing	System	8	2.2
Total		368	100.0

Source: Primary Data

The table above shows the opinions of the customers about Mobile banking customer support. 47.8% are satisfied, 17.4% of the respondents are very satisfied while 28.3% are neither satisfied nor dissatisfied. In addition, 4.3% of the respondents are dissatisfied the statement.

Table 4.27: Ability to use it

		Frequency	Percent
Valid	Unsatisfied	16	4.3
	Neither satisfied nor unsatisfied	88	23.9
	Satisfied	208	56.5
	Very satisfied	48	13.0
	Total	360	97.8
Missing	System	8	2.2
Total		368	100.0

Source: Primary Data

With reference to the table above, most of the respondents are satisfied with their ability to use mobile banking features. 56.5% are satisfied, 13.0% are very satisfied and 23.9% are neither satisfied nor dissatisfied with this statement.

Table 4.28: Easy accessibility

		Frequency	Percent
Valid	Very unsatisfied	8	2.2
	Neither satisfied nor unsatisfied	120	32.6
	Satisfied	192	52.2
	Very satisfied	40	10.9
	Total	360	97.8
Missing	System	8	2.2
Total		368	100.0

Source: Primary Data

The results of the study showed that most of the respondents have easily access to Mobile banking services. 52.2% are satisfied while 32.6% are neither satisfied nor dissatisfied. 10.9% of the respondents are very satisfied. A very low percentage of the respondents are dissatisfied and the high percentage indicates that customers are satisfied with the statement.

Table 4.29: Cost of use of Mbanking service

		Frequency	Percent
Valid	Very unsatisfied	128	34.8
	Unsatisfied	72	19.6
	Neither satisfied nor unsatisfied	96	26.1
	Satisfied	56	15.2
	Very satisfied	8	2.2
	Total	360	97.8
Missing	System	8	2.2
Total		368	100.0

Source: Primary Data

When asked how they perceived Mobile banking in terms of costs, majority of the customers perceived Mobile banking as costly and though very dissatisfied (34.8%). 19.6% of the respondents are unsatisfied while 26.1% are neither satisfied nor dissatisfied. 15.2% indicated that Mobile banking services are cheap (satisfied) while 2.2% are very satisfied.

Table 4.30: Mbanking service overall satisfaction

		Frequency	Percent
Valid	Unsatisfied	16	4.3
	Neither satisfied nor unsatisfied	80	21.7
	Satisfied	256	69.6
	Very satisfied	8	2.2
	Total	360	97.8
Missing	System	8	2.2
Total		368	100.0

Source: Primary Data

As it can be observed in the table above, most of the respondents are satisfied with Mbanking service (69.6%), 21.7% are neither satisfied nor dissatisfied while 4.3% are unsatisfied. It can be seen that a bigger proportion of the respondents is satisfied with the overall mobile banking service.

Table 4.31: Customer satisfaction with ebanking services

		Frequency	Percent
Valid	Unsatisfied	8	2.2
	Neither satisfied nor unsatisfied	80	21.7
	Satisfied	232	63.0
	Very Satisfied	48	13.0
	Total	368	100.0

Source: Primary Data

This table shows the overall satisfaction with ebanking services. 63% of the respondents are satisfied, 21.7% neutral and 13% revealed that they are very satisfied with ebanking services. This question is based on general opinions about the service delivery where the respondents should not take details into consideration. The question is very important since it can reflect back on the other statements and explain how much of the overall satisfaction can be linked to other details/features.

Indeed, only “very satisfied” customers will recommend the Bank and will create delight which will then lead to repurchases. BPR Ltd, with 63% of satisfied customers and 13% very satisfied, is on the good path to reach customer loyalty.

Table 4.32: Switch to other banks

		Frequency	Percent
Valid	Very unlikely	32	8.7
	Unlikely	80	21.7
	Neither likely nor unlikely	184	50.0
	Likely	56	15.2
	Very likely	16	4.3
	Total	368	100.0

Source: Primary Data

As regards the likelihood to switch to other banks, the results reveal that 50% of the respondents are neither likely nor unlikely to switch to other banks while 15.2% are likely. 21.7% are unlikely and 8.7% very unlikely.

Table 4.33: Recommending BPR to others

		Frequency	Percent
Valid	Very unlikely	8	2.2
	Unlikely	24	6.5
	Neither Likely nor unlikely	192	52.2
	Likely	104	28.3
	Very likely	40	10.9
	Total	368	100.0

Source: Primary Data

Question 22 asked how likely is it customers would recommend BPR Ltd to friends, relatives and associated. The results in the table above show that only 28.3% of the sampled respondents in the study would recommend others to BPR Ltd and 10.9% are very likely. Majority of the respondents are neither likely nor unlikely to recommend the Bank (52.2%), 6.5% are unlikely and 2.2% are very unlikely to recommend it to other persons.

Table 4.34: Improvement in service quality

		Frequency	Percent
Valid	Better customer service	256	69.6
	Increase in number of ATMs	32	8.7
	Increase of security	80	21.7
	Total	368	100.0

Source: Primary Data

Most of the respondent of the survey indicated that BPR Ltd needs to improve service quality by a better customer service (69.6%), increase in the number of ATMs and the increase of security of using e-banking services. As for other comments from respondents, they recommended that BPR Ltd should get deposit ATMs, increase of the withdrawal limit per day as well as the increase of the number of human tellers since csutomers have not fully adopted ebanking services.

The Pearson (r) correlations were used to examine the nature of the relationships between the variables in the study (table 4.35 below).

Table 4.35: Relationships between the Variables

	Customer satisfaction	Mobile banking service	ATM banking
Customer satisfaction	1	.543	.491
Mobile banking service	.543	1	.353
ATM banking	.491	.353	1

Source: Primary Data

Mobile banking service and customer satisfaction: The results revealed that mobile banking service can improve Customer satisfaction by around 54.3%. These results show that the better mobile banking service is offered, the more the customer will be contented, satisfied and pleased with the services of the bank (BPR Ltd).

ATM Banking and customer satisfaction: The results revealed that ATM banking is positively related to customer satisfaction ($r = .491^{**}$, $p < .01$). These results show that the moment customers perceive that ATM services that the bank is supposed to offer is quite good, the more the customers will be satisfied with the bank services.

CHAPTER FIVE:

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.0 Introduction

This chapter summaries the study and its main findings, discusses the implications of the findings, and makes appropriate recommendations.

5.1 Summary of the study

The main purpose of this study was to assess the level of ebanking services and customers' satisfaction in the Rwandan Banking Industry, with a focus on Bank Populaire of Rwanda (BPR Ltd). Specifically, it sought to evaluate the level of ebanking services usage by BPR customers, to determine BPR customers' view of their overall e-service quality with ATM and Mobile banking services and to analyze the overall satisfaction of BPR customers with the existing ebanking services.

The survey questionnaire consisted of three sections. The first section focused on the respondent's identification. The identification variables included: age, gender, occupation, level of education and experience with BPR Ltd. The second section focused on e-banking services usage and the level of satisfaction of respondents. Respondents were asked to rate their level of satisfaction with ATMs and Mobile banking services using a the following scale: Very unsatisfied (1) Unsatisfied (2), Neither Satisfied nor Unsatisfied (3), Satisfied (4) and Very satisfied (5). The last section focused on the item that measures the overall satisfaction (dependent variable) with the e-banking services (independent variables), their likelihood to swicth to other banking institutions and whether they would recommend BPR Ltd to others.

5.1 Summary of findings

Based on the objectives of the study, the following are the main findings of the study:

5.1.1 Assessment of the level of ebanking services usage by BPR customers

The first objective was to assess the level of ebanking services usage by BPR customers and the findings (table 4.6) revealed that the customers are fully aware of the positive developments in information technology and telecommunications which led to the introduction of new delivery channels for banking products and services. Out of the 368 respondents surveyed, 97.8% indicated that they use ebanking services (ATM and Mbanking) with their bank compare to 2.2% that do not use both services. It was also revealed that that 47.8% of the respondents have been using both services for 1 year, 28.3% for 1-2 years followed by 19.6% for less than 6 months and 4.3% for more than 2 years.

It was further found that 52.2% of the respondents frequently visited the bank for transaction before the introduction of ebanking, 39.1% very frequently and 8.7% rarely (table 4.8) while after the introduction of ebanking services, 39.1% of the respondents visit their Bank Branch at least once in a month, 34.8% thrice or more in month and 23.9% of the respondents visit their Bank twice in a month. Thus, most customers still go to the bank branches and find interaction with human tellers as important. It also shows that customers enjoying electronic banking services are still not very satisfied with their quality and efficiency. This is expressed in the number of times customers physically visit the bank branch. This would also indicate that consumers of banking services in Rwanda still find it useful to visit their bank branches to perform some banking transactions.

5.1.2 Customers'view of the overall e-service quality

The second objective of the study was to determine BPR customers' view of their overall e-service quality with ATM and Mobile banking services. The findings of the study are summarised below.

5.1.2.1 ATM Banking

The analysis and finding of the research proved that most customer respondents of the BPR Ltd, Main Branch, are satisfied with ATM banking attributes in following order: ATM

minimum errors (69.6%), adequate number of ATMs (67.4%), secure and convenient location of ATMs (65.2%), cash withdrawal limit per day (63%), cash availability in ATMs (56.5%), user friendly system (50%) and security of use (39.1%). The results further indicated that a significant number of respondents surveyed is neither satisfied nor dissatisfied with ATM banking especially with the security of use (39.1%), cash availability (32.6%), user friendly system (32.6%) and adequate number of ATMs (23.9%).

Briefly, the results showed that the majority of the respondents are satisfied with the overall ATM performance (67.4%). This means that the overall satisfaction within all e-service quality attributes is high and that customers are comfortable with the service.

Many researchers identified secure, convenient location, adequate number of ATM, user-friendly system, and functionality of ATM as main attributes of e-service quality that play important role in customers' satisfaction. Joseph & Stone (2003); Mobarek (2007) and Dilijonas, Sakalauskas, & Simutis (2009) mentioned that adequate number of ATMs, convenient and secure location and user-friendly system, speed, minimum errors, high uptime, cash backup, cost, and service coverage are essential service quality aspects of ATM service.

5.1.2.2 Mobile Banking

The findings of the study showed that most of the respondents surveyed are satisfied with e-service quality attributes of mobile banking as follows: ability to get account balance (87%), ability to pay bills (84.8%), ability to transfer funds (71.7%), security of transactions (63%), ability to check transaction history (60.9%), ability to use it (56.5%), easy accessibility (52.2%) and mbanking customer support (47.8%). The study revealed also that the respondents are very unsatisfied with the cost to use mbanking service (34.8%), 19.6% are unsatisfied and 26.1% are neutral. Only 15.2% of the customer respondents are satisfied with the service charge.

At last, the results in table 4.10 further indicate that despite the dissatisfaction towards service fees and charges, in general most customers are satisfied with mobile banking service (69.6%) while 21.7% are neutral.

5.1.3 Satisfaction of Customers with Existing Ebanking Services

The third objective of this study was to analyze the overall satisfaction of BPR customers with the existing ebanking services, focusing on ATM and Mobile banking services. The analysis and findings of study showed that the satisfaction with ebanking services is good. 63% of the surveyed respondents are satisfied, 21.7% neutral and 13% revealed that they are very satisfied with ebanking services (table 4.31). Indeed, only “very satisfied” customers will recommend the Bank and will create delight which will then lead to repurchases. A customer is satisfied when the company meets the customer’s expectations and needs (Nowacki, 2003).

When customers’ needs are satisfied, they will create and form attitudes towards it. The customer’s attitudes will affect the future performance and if the customer is satisfied, it will lead to loyalty and retention. Sang & Seung, (2004) argued that service quality is significantly associated with customer satisfaction. Service quality has a positive effect on customer satisfaction and the level of satisfaction have an influence on customer retention.

Veloutsou *et al.* (2004) found the positive relationship among service quality, customer satisfaction and customer loyalty in the banking sector. Caruana (2000) mentioned that service quality, customer satisfaction and service loyalty are related to each other. Other Researchers argued that service quality and customer satisfaction are the predictors of customer loyalty (Tariq and Moussaoui, 2009; Han *et al.*, 2008; Ehigie, (2006, as cited in Siddiqi, 2011). Therefore only very satisfied customers become loyal and stay with a company for a longer time, buying more and recommending it. Customer retention implies that the customer stays with the organization and does not switch to competition. The findings of the study (table 4.33) indicated that 50% of the respondents are neither likely nor unlikely to switch to other banks while 15.2% are likely to switch to competition.

A loyal customer expresses characteristics like, repurchasing, cross purchasing, recommendation to other customers and resisting competitive offers (Griffin, 1995). The results of the study showed that the majority of the respondents are neither likely nor unlikely

to recommend BPR Limited services to others (52.2%). Only 28.3% of the sampled respondents in the study would recommend others to BPR Ltd services and products.

This result is in conformity with other past studies. Anton (1996) who said that satisfaction in itself will not translate into loyalty. However, satisfaction will foster loyalty to the extent that it is a prerequisite for maintaining a favourable relative attitude and for recommending and repurchasing. Storbacka and Lentinen (2001) argued that customer satisfaction is not necessarily a guarantee of loyalty. They found that in certain industries up to 75% of customers who switch providers say that they were 'satisfied' or even 'very satisfied' with the previous provider.

BPR Ltd, with 63% of satisfied customers and 13% very satisfied, is on the good path to reach customer loyalty as well as customer retention.

Respondents further recommended that BPR Limited should service the ATMs regularly and make receipts available all times because the receipts are very important in the ATM usage. Customers responded that more ATM features such as cash deposits should be introduced. Customers added that more ATM machines should be provided. ATM Cards delivery and renewal should be easy.

In summary, ebanking service quality and consequently customer satisfaction, in BPR limited are high but referring to the findings of this research, there is more room for improvement in order to promote customer service, satisfaction as well as customer retention and loyalty.

5.2 Conclusion

1. Level of ebanking services usage by BPR customers

The data were collected from the customers of Bank Populaire of Rwanda limited, the main branch at Kigali. Based on the summary of major findings, it was revealed that the customers are fully aware of ebanking services offered by the Bank and most of the respondents indicated that they use ebanking services. But, most customers still go to the bank branches and find interaction with human tellers as important.

2. Customers' view of the overall e-service quality

The findings also showed that customers enjoying electronic banking services are still not very satisfied with their quality and efficiency. The overall satisfaction within all e-service quality attributes of ATM and Mobile banking is high and customers are satisfied with the

online services offered. An important proportion of customers were neither dissatisfied nor satisfied with quality attributes, meaning that BPR should improve its e-service quality to meet customers' expectations or exceed them. There were very small percentages of dissatisfied customers. One dimension that stood out with highest dissatisfaction was cost of use of Mbanking and the majority of customers perceived it as costly and though very dissatisfied.

3. Satisfaction of Customers with Existing Ebanking Services

From the data collected, the findings further indicated that customers are satisfied with ebanking services. But most customers revealed that they are neutral to recommend BPR Limited services to others and to switch to other banks. Thus, the researcher could conclude that customer satisfaction needs to be improved in order to achieve loyalty and lead to longterm relationships, which is a central factor in banking industry. Ebanking has become important phenomenon in the Rwandan banking industry and it will continue as more developments are made in information technology. The banking industry thus is gradually experiencing transformation from cash based system to a paperless system, which is more convenient and reliable.

5.3 Recommendations

Based on the findings of this research, it is recommended that:

- BPR limited should organise public exhibitions and talk shows and make products accessible to all customers. In addition, BPR Ltd should improve their service delivery to justify the benefits of electronic banking products and services;
- Cost of use/service charge of Mobile banking is also something that BPR Limited could reduce in order to improve customer satisfaction;
- BPR Ltd should increase the number of ATMs, security of transaction and also provide deposit ATMs;
- Government should provide adequate regulatory framework that will ensure customer protection, and security of transaction. That way, bank customers' confidence in electronic banking would be secured.

5.4 Areas for further research

After conducting this study several issues for further research has been found that could be of interest. One interesting aspect could be “Ebanking adoption by Customers in the rurals areas.

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Appendices

Appendix 1: Questionnaire for BPR Ltd Customers

Dear Respondent,

I am Placide Simbizi, an MBA student at Kampala International University conducting a research study on Electronic banking services and customers' satisfaction in the Rwandan banking industry. A case study of Banque Populaire of Rwanda Limited. The purpose of this survey is to measure customer satisfaction based on your experience on e-banking services.

Instruction: Please indicate the extent to which you are satisfied or unsatisfied with the following statements by using the scale below. All responses will remain anonymous.

I. Identification

1. What is your age?

- ☐ Under 20
- ☐ 20-29
- ☐ 30-39
- ☐ 40-49
- ☐ 50-59
- ☐ More than 60

2. Gender

- ☐ Male
- ☐ Female

3. Occupation:.....

4. Education:

- ☐ Primary
- ☐ Secondary
- ☐ University
- ☐ Other (Please specify).....

5. Experience with BPR:

- ☐ less than 1 year
- ☐ 1-3 years

- ☐ 3-8 years
- ☐ more than 8 years

II. E-banking Services Usage

6. Are you aware of e-banking services?

- ☐ No
- ☐ Yes

7. Which of the BPR e-banking services do you use?

- ☐ ATM
- ☐ Mobile banking
- ☐ Both

8. How long have you been using it/them:

- ☐ Less than 6 months
- ☐ 1 year
- ☐ 1-2 years
- ☐ more than 2 years

9. Before the introduction of e-banking, how frequent in a month did you visit the bank for transaction?

- ☐ Rarely
- ☐ Frequently
- ☐ Very frequently

10. With the introduction of e-banking, how many times in a month do you now visit the bank for transaction?

- ☐ Never
- ☐ Once
- ☐ Twice
- ☐ Thrice or more

11. How important do you still consider BPR employees (tellers, Front office staff, etc) after introduction of e-banking services?

- ☐ Very important
- ☐ Important
- ☐ Not important

II.1 Your ATM Usage

12. How often do you use an ATM?

- ☐ Everyday
- ☐ At least weekly
- ☐ At least monthly
- ☐ Less than once a month

13. Other than withdrawing cash, what is the next most common reason that you use ATMs?

- ☐ Transfer of Funds
- ☐ Check my Account Balance
- ☐ Pay a bill
- ☐ I don't do anything but withdraw cash from an ATM

14. Why are you using ATMs?

- ☐ To avoid queue at teller counters
- ☐ Avoid needlessly carrying cash
- ☐ To make transactions during nonbanking hours
- ☐ Other (please specify).....

15. Please indicate the extent to which you are satisfied or unsatisfied with the following ATM features by using this scale:

1= *Very dissatisfied* 2= *Dissatisfied* 3= *Neither Satisfied nor Dissatisfied*

4= *Satisfied* 5= *Very Satisfied*

	ATM Feature	Tick (✓) only one option 1 – 5				
		<i>Very dissatisfied</i>		<i>Very Satisfied</i>		
		1	2	3	4	5
1.	Cash Availability in ATMs of BPR Ltd	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.	Adequate number of ATMs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

3.	Cash withdrawal limit per day	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4.	Secure and convenient location of ATMs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5.	User-friendly system (easy to use)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6.	Security of use	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7.	Minimum errors	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

16. What is your overall level of satisfaction from current ATM service?

- ☐ Very Satisfied
☐ Satisfied
☐ Neither Satisfied nor Dissatisfied
☐ Dissatisfied
☐ Very Dissatisfied

II.2 Your Mobile Banking Usage

17. How satisfied are you with each of the following BPR Mobile Banking features?

(Tick in the appropriate column ✓)

1= Very dissatisfied 2= Dissatisfied 3= Neither Satisfied nor Dissatisfied

4= Satisfied 5= Very Satisfied

	Mobile Banking features	Tick (✓) only one option 1 – 5				
		Very dissatisfied		Very Satisfied		
		1	2	3	4	5
1.	Security of transactions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.	Ability to get account balances	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.	Ability to pay bills	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4.	Ability to transfer funds	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5.	Ability to check transaction history	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6.	Mobile Banking Customer Support	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7.	Ability to use it	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

	Easy Accessibility	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Cost of use/Service charges	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

18. Are you satisfied with the overall performance of BPR Mobile Banking services?

- ☐ Very Satisfied
- ☐ Satisfied
- ☐ *Neither Satisfied nor Dissatisfied*
- ☐ Dissatisfied
- ☐ Very Dissatisfied

III. Your Overall satisfaction

19. How would you rate your satisfaction with BPR e-banking services (ATM& Mobile banking)?

- ☐ Very satisfied
- ☐ Satisfied
- ☐ *Neither Satisfied nor Dissatisfied*
- ☐ Unsatisfied

20. How likely are you to switch to another Banking institution?

- ☐ Very likely
- ☐ Likely
- ☐ Neither likely nor unlikely
- ☐ Unlikely
- ☐ Very unlikely

21. How likely is it that you would recommend BPR Ltd to your friends, relatives and associates?

- ☐ Very likely
- ☐ Likely
- ☐ Neither likely nor unlikely
- ☐ Unlikely

☐ Very unlikely

22. Where do you feel BPR Ltd needs to improve service quality?

- ☐ Better customer service
- ☐ More user friendly systems
- ☐ Prompt card delivery
- ☐ Increase in number of ATMs
- ☐ More withdrawal limit
- ☐ Increase of security
- ☐ Others (Please specify):
- ☐

23. Any other information would you like to give? Kindly comment below:

.....
.....
.....

Thank you for completing this questionnaire and assisting me in my research.

Kind Regards

Appendix 2: Table for determining the sample size

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

Note: "N" is population size
 "S" is sample size

Appendix 3: Informed consent form

CONSENT TO PARTICIPATE IN RESEARCH

1. I volunteer to participate in a research conducted by Mr. Placide SIMBIZI from KAMPALA INTERNATIONAL UNIVERSITY. I understand that the Survey is designed to gather information about academic work. The purpose of this survey is to measure customer satisfaction based on my experience on e-banking services.
2. My participation in this project is voluntary. I understand that I will not be paid for my participation. I may withdraw and discontinue participation at any time without penalty.
3. I have read and understand the explanations provided to me. I have had all my questions answered to my satisfaction, and I voluntarily agree to participate in this study. I have been given a copy of this consent form.

Name of Participant

Date

Signature

Name of Researcher

Date

Signature