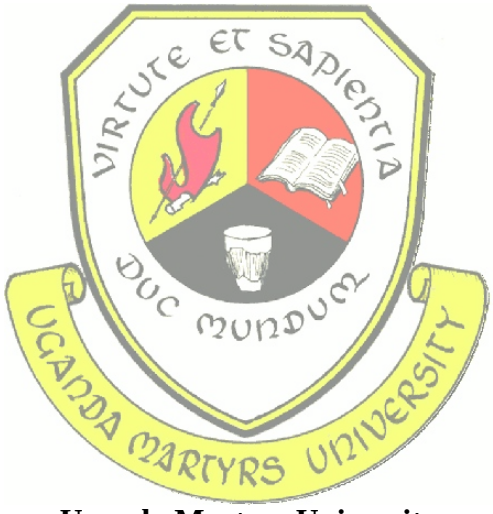
E-Banking Service Innovations and Customer Loyalty in the Banking Industry:

A Case Study of Centenary Bank

Batte Ronald

Registration Number: 2012-M102-20009



Uganda Martyrs University

SEPTEMBER, 2018

E-Banking Service Innovations and Customer Loyalty in the Banking industry:

A Case Study of Centenary Bank

A postgraduate dissertation

Presented to

Faculty of Business Administration and Management

In partial fulfillment of the requirements for

The award of a Masters' Degree in Business Administration

Uganda Martyrs University

Batte Ronald

Registration Number: 2012-M102-20009

SEPTEMBER, 2018

DEDICATION

This work is dedicated to my Nakate Noeline, Nagujja Maria Nicole, Nalubula Nieves Alikowatudde, Nassanga Maria Novella and my wife Sarah Nanfuka Batte.

ACKNOWLEDGEMENT

The successful completion of this research is attributed to a number of people to whom I am deeply indebted:

Primarily, I am greatly indebted to my research supervisor, Mr. Edward Segawa for his professional input throughout the process of this study. His expert advice greatly enhanced the quality of the study. I am especially grateful for his devotion, concern and parental guidance exhibited towards the successful completion of the study.

My deep thanks further go to my research assistants for their assistance in speeding up the data collection process. This greatly contributed towards the successful completion of the research. In a special way, I thank Mr. Kaggwa Charles Richard for his oversight role in the field activities and for patiently reading through and editing all the manuscripts to ensure that any omissions and ambiguities were rectified. The commitment of all persons who facilitated the field activities greatly inspired the spirit of subsequent activities leading to the completion of the study. In this aspect, I am greatly indebted to my research supervisor for his professional input towards improving the style of presentation adopted in this research.

I also wish to express sincere gratitude to the clients of Centenary bank who participated in this study for the support and co-operation rendered to make this study a success. I must in a special way thank my family for the quality time and support offered while conducting this study. I am deeply grateful to the Brothers of Christian Instruction Kisubi for the financial assistance extended to me during my stay at the University for my Undergraduate and the parental guidance exhibited during my academic carrier while at Uganda Martyrs University. I thank Brother

Joseph Mubiru and Brother Gerald Byaruhanga for the financial support and words of encouragement towards my education.

I thank my course-mates at Uganda Martyrs University for standing with me during the critical times of the entire course. Their unreserved co-operation and encouragement towards my success enabled the fulfillment of requirements of the Masters programme.

Above all, thousands of kisses to the Most High God - You know I am nothing without you, thank you for ideas and being there when no one was available but you; thank you for granting me favours in funding and working space. You are really the best that has ever happened in my life.

Table of Contents

LIST OF FIGURES

LIST OF TABLES

LIST OF ACRONYMS AND ABBREVIATIONS

APS	:	Automated Payment System
CVI	:	Content Valid Index
PC	:	Computer Banking
POS	:	Point of Sale
SPSS	:	Statistical package for social sciences
TAM	:	Technology Acceptance Model

ABSTRACT

This study explored the contribution of E-Banking Service Innovations towards Customer Loyalty in the Banking industry. The major objective of the research was to establish the relationship between e-banking service innovations and customer loyalty in Centenary Bank-Uganda Ltd. Specifically; the study examined the relationship between Automated Payment Systems, PC Banking services and Point of Sale services, and Customer Loyalty in Centenary Bank. The study was guided by the Davis' (1989) Technology Acceptance Model which deals with the prediction of the acceptability of an information system (i.e. innovation adoption). The study adopted a case study research design and a mix of research approaches was employed. Overall, 264 respondents from different related study populations participated in the study. Data collection was done using questionnaires and interviews. The results indicated that the that APS users appreciated the ATM services for being easily accessible in making withdrawals, cash deposits and obtainance of bank statements at their convenience. They were, however, constrained to effect internal transfers and payment of utilities across the ATM. Mobile phone linkage with account innovations was most appreciated APS as majority used it to effect utility bills payment, transfer payments and load airtime with accurate transactions reflected on their accounts. The study found a high and positive significant relationship ($r = 0.607^{**}$ and $p = 0.000$) between APS innovations and customer loyalty suggesting that the efforts to use self-serving technologies of ATM and mobile phone enabled transactions to effect payment significantly contributed to customer loyalty in the bank. The study also found out that a low level of rolling out of PC banking services innovations to corporate entities as they could only access prompt and accurate bank statements but could not affect supplier, salary and NSSF payment using PC banking at their premises. The study found no significant relationship ($r = -0.002$ and $p = 0.986$) between PC banking and customer loyalty implying that an increase in the prevailing status of PC banking self-serving technologies would contribute negatively towards targeted PC customer loyalty. Further, the study found out that POS users could easily operate the POS device which offered them flexibility, relived them of burden to of carrying cash and charges were accurate and affordable. The Centenary POS system was, however, not regularly used to effect payments for goods or services or cash withdraws in the areas it was deployed. The study found a high positive significant relationship ($r = 0.651^{**}$ and $p = 0.000$) between POS innovations and customer loyalty suggesting that the efforts to use POS if rolled out expeditiously will significantly contribute to customer loyalty in the bank. The study concluded that the e-banking innovations where they have significantly been rolled out like in areas of APS and POS have been instrumental in contributing to customer loyalty in Centenary Bank. Efforts directed to expeditious rolling out and strengthening of the e-banking platform will significantly enhance customer loyalty in the indigenous bank. The study observes that there was a significant low use of ATM services to effect internal transfers and payment of utilities, low level of rolling out PC banking and distribution of POS to high potential areas of use. It is on this basis that this study recommends that the management of the bank should engage the e-banking technology providers to expedite the rolling out process of the PC and POS self-servicing technologies for enhanced customer loyalty. Additionally, the e-banking unit in liaison with internal and external stakeholders should undertake development of rollout work plans, their monitoring and reporting for management action.

CHAPTER ONE

GENERAL INTRODUCTION

1.0 Introduction

This chapter presents the background to the study, objectives of the study, research questions, study hypotheses, scope of the study, significance of the study, conceptual framework, and operational definition of terms and concepts.

1.1 Background to the study

Malak (2007) traces the history of Electronic innovation in banking industry back to 1970, when the computerization of financial institutions gained momentum, although the actual use of computers was in the 1980, notably with the introduction of ATM. Innovation in the sector has grown since then, aided by technological developments in the telecommunications and information technology industry.

Sohail and Shanmugham (2003) equally note that the early decade of the 1990s witnessed the emergence of automated voice response (AVR) technology where banks offer telephone banking facilities for financial services. With further advancements in technology, banks were able to offer services, through PC owned and operated by costumers at their convenience, through the use of intranet propriety software. The users of these services were, however, mainly corporate customers rather than retail ones. The security first network bank was the first Internet banking in the world that was built in 1995 in USA. After that some famous banks introduced their internet banking one after another, such as Citibank and bank of America and it offered service advantages such as convenient, comfortable, and easy way to do whatever monetary transaction you wish to do with your bank, Provides 24/7 services as the e-bank never closes and has no cutoff time , Smart and interactive with auto-solutions and troubleshooting functionalities,

Higher interest rate enabled through the cost savings achieved by digital firm capabilities, Speed and easiness of conducting the digital transactions compared to paper-based dealings with walk-in customers (Yu &Guo 2008; Rabi and Boostani, 2011).

The period between 1990 to date has been characterized by fundamental changes in the content and quality of banking business world over with now technology being discovered to be the main driving force of competition in the banking industry. A modern bank's operations are now performed electronically. Both the bank and customer have specialized equipment that can process real time transactions amongst the customer and the bank for convenience (Thandos, et al., 2010; Payton, 2009). E-banking has therefore enabled banking institutions to compete more effectively in the global environment by extending their products and services beyond the restriction of time and space (Turban 2008). However, mirroring the development of E-commerce, the adoption and diffusion of electronic banking (E-banking) system is not well developed in most developing countries Eriksson & Nielson 2007).

Banks in the East African region, like elsewhere, are crafting and implementing various strategies to attract new customers and also to increase existing customers' use of Internet banking services. To encourage the use of Internet banking, Herington and Weaver (2007: 415), for instance, noted that banks are both rewarding customers for using online services and penalizing customers for using offline services (Jagero and Abeka, 2011).

In Uganda, with increasing growth in the banking sector, virtually all commercial banks adopted the use of e-banking services for improved customer service and have similarly allocated substantial resources for e-banking adoption through building infrastructure to support a more reliable and quicker transfer of information to reach their customers (Mubaraka, Uba & Gokyalya, 2013). Today, there are 29 commercial banks which have opened business to its

customers including e-banking that goes beyond walls of the banking premises and borders of Uganda.

According to the Centenary Bank Annual Report (2013), the bank has adopted the use of e-banking and offers a range of services such as automated payment mechanism using CentePoint (ATM Services) automated payment system which is a 24hour electronic cashier for Centenary Bank customers which provides access into customers' accounts by use of CenteCards on the Banks ATM machines located on-site in all the Bank's branch offices and off-site in strategic places in the main towns around the country. The envisaged benefits of ATM include instant cash and cheques deposit, instant cash withdrawals, print mini statements and instant account balance inquiries. The bank is currently running a promotions on CenteMobile-Automated payment mechanism which is a 24/7 full banking service that allows customers to access their accounts using their mobile phones anytime and anywhere for balance inquiry, mini-statement, funds transfer(within Centenary Bank), airtime purchase, and bill payments.

Centenary e-banking platform also offers Computer banking services for institutions which hold accounts where they can electronically transact on their accounts while in their offices. One such service is E-NSSF Payments where the Bank on behalf of the National Social Security Fund accepts payments from organizations that have registered to remit their employees social contributions. The cash for the contributions is credited directly to NSSF's Collection.

The second feature of the e-banking innovations is the bank is the use of Point of Sale Services (POS) which is an electronic device that enables customers with active CenteCards (ATM cards) to access and transact on their bank account 24/7. By swiping in the CenteCard, one is able to make transactions using their PIN. Merchants are business entities using the Bank's POS terminals for accepting payments of goods and services purchased at their premises by Centenary

Bank ATM holders. Benefits of POS include payment of goods and services at POS terminals (supermarkets, petrol stations), withdrawal cash from POS terminals and ability to view account balances. A review of existing literature revealed no empirical evidence on the relationship between e-banking and Customer Loyalty in Centenary bank other than the subjective management reports on use of e-banking services.

In a nut shell, there is increasing e-banking service innovations now than before (with more to be developed) in the banking industry of Uganda, though with little empirical knowledge on the relationship between the e-banking service innovations and customer loyalty in commercial banks in Uganda. The influence of e-banking on customer loyalty might also stem from inadequacies in the theories applied. This study therefore intends to close the knowledge gaps by examining and providing empirical evidence on the relationship between e-banking service innovations and customer loyalty in Centenary Bank which could be generalized to other commercial banks.

1.2 Statement of the Problem

Despite the e-banking service innovations, customer loyalty in Centenary bank seems to be constrained leading to challenges to attain the desired key financial performance expectations (Centenary Bank Annual report, 2013). A review of customer loyalty related proxy indicators and their financial performance outcomes reveals that total assets grew at a rate of 20.7 % to close at Shillings 672.3 billion in 2013 up from Shillings 556.9 billion in 2012. Deposits grew by 18.0% (2012: 17.9%) to Shillings 965.9 billion in 2013 from Shillings 818.5 billion in 2012 a situation attributed to increased marketing efforts and an increase in the Bank's distribution channel. The funding mix equally remained rather stable in terms of value. However, even with the continued pursuit of an expansion strategy the bank closed the year 2013 with 1,240,077

customers representing a decline of 4.6% from 2012 (1,297,121). Similarly, the bank experienced shortfalls in the current accounts contributing 15.0% compared to 16.7% of total equity and liabilities in the 2013 and 2012 financial year respectively. Time deposits equally experienced a shortfall, contributing 7.5% of total equity and liabilities compared to 8.3% for 2012 (Centenary Bank Annual report, 2013).

With the advent of e-banking, scholars have mainly focused on factors affecting e-banking service innovations such as perceived ease of use, perceived usefulness, technological infrastructure and security (Sousa, et.al., 2009; Huettinger & Cubrinska; 2011; Teoh et.al., 2013), but there is scanty literature on the e-banking service innovations relating to customer loyalty. There is also need to examine the appropriateness of Davis' (1989) Technology Acceptance model, which suggests that the acceptance of a tool is influenced by its perceived usefulness and ease of use since perceived ease of use augments the choices individuals make before adopting a technological innovation; stressing that self-efficacy and instrumentality play complementary roles in orienting choices of individuals. This will help explain how e-banking innovations influences customer loyalty. This study therefore examined the effect of e-banking service innovations on customer loyalty in an effort to help cover the knowledge gaps.

1.3 Objectives of the study

1.3.1 General Objective

To establish the relationship between e-banking service innovations and customer loyalty in Centenary bank-Uganda Ltd.

1.3.2 Specific objectives

i. To establish the effect of Automated Payment Systems on customer loyalty in Centenary Bank between 2012 and 2014.

ii. To examine the impact of PC banking services on Customer Loyalty in Centenary Bank between 2012 and 2014.

iii. To assess the contribution of Point of Sale Services towards Customer Loyalty in Centenary Bank between 2012 and 2014.

1.4. Research questions

i. What is the effect of automated payment systems on customer loyalty in Centenary Bank between 2012 and 2014?

ii. What is the impact of PC banking services and Customer Loyalty in Centenary Bank between 2012 and 2014?

iii. What is the contribution of use of Point of Sale Services towards Customer Loyalty in Centenary Bank between 2012 and 2014?

1.5 Scope of the study

1.5.1 Content scope

The study focused on e-banking service innovations e-banking dimensions of Automated Payment System (APS), PC Banking services (PBS) and Point of Sale Services (POS) as the dimensions of the independent variable. The study's dependent variable is customer loyalty under the indicators of brand commitment and positive word of mouth. ICT knowledge and attitudes, technological infrastructure and transaction security are to serve as the indicators of intervening variables.

1.5.2 Geographical Scope

The study was carried out in the central region of Uganda, where the banks' customers have access to the e-banking facilities like the APS, POS and PBS but were being underutilized. The choice of this study area was on the premise that enhancing customer loyalty in the central region of Uganda which houses the highest banks portfolio would enhance the financial positions of the bank.

1.5.3 Time Scope

The study considered the period 2012 to 2014 the time banks experienced a decline in its clientele a situation attributed to a low perceived customer loyalty (Centenary Bank Annual report, 2013) but it had not been empirically tested other than the anecdotal management reports.

1.6 Justification of the Study.

Commercial banks are investing huge sums of their resources in e-banking service innovations to gain competitive advantage but there is no evidence that the huge capital investment and maintenance costs translates into competitive advantage gained from customer loyalty. There is also need for new empirical knowledge on perceptions of e-banking service innovations and their influence on customer loyalty. The motivation of this study was to fill the knowledge and theoretical voids and provide managerial implications in the use of e-banking services for enhanced customer loyalty.

1.7 Significance of the Study

The study will be useful in the following ways:

1. To the management of Centenary bank, the study helps establish customer feedback on e-banking services which will act as basis for generating informed e-banking policy

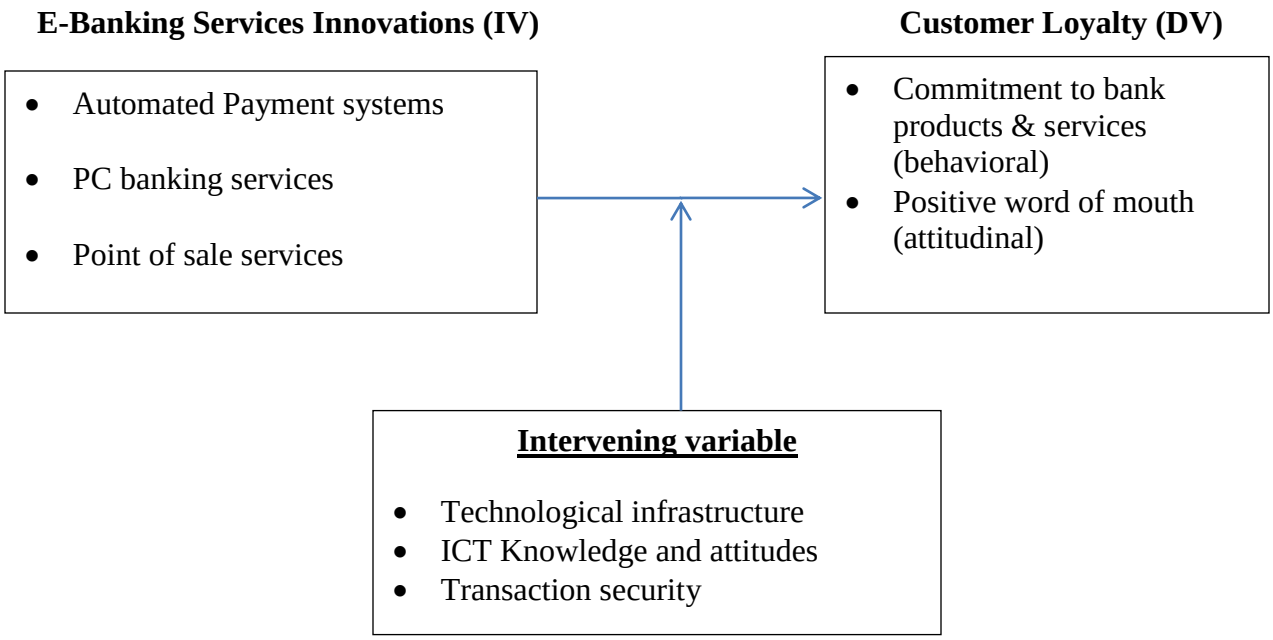
strengthening for enhanced customer loyalty which contributes to a health financial performance.

2. To the customers, the study offers an opportunity for them to express their concerns that management of Centenary bank needs to address for their brand commitment and positive word of mouth-Loyalty.
3. To the academia, the study helps generate new knowledge on the relationship between e-banking and customer loyalty. By so doing, the study helps fill literature gaps on the influence of e-baking on customer outcomes.

1.8 Conceptual framework

A widely cited model of customer loyalty is the typology proposed by Dick and Basu (1994) that depicts loyalty as a two-dimensional construct involving relative attitude and repeat patronage. They suggest that loyalty is the result of the interaction between a customer's relative attitude to a brand, or store, and their repeat purchase behaviour for that brand or store. The typology divides customers into four loyalty groups. Customers with high attitudinal and behavioural loyalty are described as 'true loyals', those with high behavioural loyalty but low attitudinal loyalty as 'spurious loyals', those with high attitudinal loyalty but low behavioural loyalty as 'latent loyals', and those with low attitudinal and behavioural loyalty as 'non loyals'. Implicit in the Dick and Basu model is the assumption that classification of customers into four loyalty groups on the basis of relative attitude and repeat patronage should then allow the prediction of other loyalty measures such as retention and defection. The model as allows development of predictor of customer loyalty which in this study is e-banking innovations which constitute of products and services from which customer declare their allegiance.

Fig 1: Conceptual Framework on E-Banking Services Innovations and Customer Loyalty.



Source: Adopted with modifications from Dick and Basu's (1994) Framework for Customer Loyalty Relationship.

The model above shows the relationship between e-banking service innovations and customer loyalty. E-banking service is the independent variable while customer loyalty is the dependent variable. The relationship between e-banking service innovations and customer loyalty may be constrained by some intervening variables such as technological infrastructure, ICT knowledge and attitudes and e-transaction security. The model therefore provides the framework for evaluating e-banking service innovations and customer loyalty through the formulated study objectives above.

1.9 Operational definition of terms and concepts

E-banking in this study refers to the use of automated payment system PC banking facilities and point of sale devices.

Automated Payment System includes the use of electronic payment system where customers can affect withdrawals and deposits or transferred without interfacing with the traditional human interface through use of devices such as automated teller machine (ATM).

PC banking is a web technology banking system in which Bank customers are able to conduct their business transactions with the bank through personal computers.

Point of Sale in this study refers to the system that allows consumers to pay for retail purchase with a check card registered with Centenary Bank, a new name for debit card

Customer Loyalty in this study refers to the commitment or repeated purchase of the banks products as well as the positive word of mouth about the banks brand.

Centecard in this study is a brand name referring to a card used in the Automatic teller machine (ATM) and Point of sale Devices (POS).

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

This chapter reviews both theoretical and conceptual literature on e-banking and customer loyalty. It also reviews the relationship between automated payment systems, PC banking services, point of sale services respectively and customer loyalty and summary of the literature.

2.1 Theoretical Review

A theory is a tentative explanation of phenomena based on constructs and laws that relate to each other (Mugenda and Mugenda, 2003).

Several studies demonstrate that perceived usefulness and perceived ease of use may be viewed from different perspectives (Hausa et al, 1994).

The Theory of Reasoned Action stipulates that technological innovation adoption is influenced by the purpose (behavioral intention), which is turn influenced by the individual's attitude towards the technological innovation and its perceived applicability. Davis (1989) argues that besides the attitude of the individual in the process of adopting technological change, the benefits that accrue from innovation adoption (the impact) on his/her performance is equally crucial to technological acceptance. Related to this study, the author points out that, initially reluctant individuals are most likely to adopt the technology if it proves beneficial to their performance. In this regard, the Technology Acceptance Model hypothesizes a direct link between perceived usefulness and perceived ease of use. Dillon and Morris argue that individuals are more likely to select a more useful technology than the one easier to use when both bear similar characteristics.

However, as Davis (1989) observes, perceived ease of use augments the choices individuals make before adopting a technological innovation, stressing that self-efficacy and instrumentality

play complementary roles in orienting choices of individuals. This is in line with Bandura's (1982) study which affirms that ease of use of a system influences the height of a user's sense of efficacy and therefore the level of intrinsic drive to action. A similar perception of user-friendliness and adoption is held by Lepper (1985) when he draws a link between perceived ease of use and attitude.

Roger's (1983) Diffusion of Innovation Theory (DIT), which defines an innovation as an idea, practice or object that has distinguishable features perceived to be new has an input in this study. Diffusion is a process by which the innovation is communicated through certain channels over time among the members of a social system. It is dependent on the perceived characteristics of an innovation.

Roger's (1983) DIT equally adds that an innovation has five (5) characteristics innovation characteristics that either increase or reduce the rate of acceptance of a technological innovation and they include relative advantages, compatibility, complexity, trialability and observability.

In terms of relative advantage, the use of new technology is highly dependent on the comparable benefits derived from its use. New technology is considered to possess a relative advantage over existing technology based on its perceived usefulness or its ability to enhance the user's state of well-being defined either economically, financially, physically or socially (Taylor & Todd, 1995).

Compatibility, the second dimension of DIT and refers to the extent to which the innovation is deemed to be aligned with customer values, past and potential wants and needs. Al-Majali and Nik Mat (2011) refer to compatibility as the extent to which the innovation supersedes all other options in meeting the desires and needs of the adopter. It generally refers to the ability of the technology to fit within the lifestyle of the customer. This informs this study users of E-banking

services in Centenary Bank may adopt the technology if it is compatible to their needs, wants and expectations.

The third dimension of DIT model is complexity which relates to the amount of physical and mental effort require understanding the innovation (Taylor & Todd, 1995; Davis, 1989). For example, the level of complexity of internet banking series in Centenary Bank is a function of the level of skill and expertise the customer has with the internet and computer required to use e-banking platforms.

Trialability allows the adopter the opportunity to test the innovation on a limited time scale before full adoption takes place. Rogers (1983) argued that trial of innovation reassures the adopter and reduces risks and uncertainty associated with adopting the technology. Al-Majali and Nik Mat (2011) in complement observed that there is a positive correlation between the likelihood of adopting innovative technology and the opportunity given to customers to experiment with this technology prior to adoption. The trailability assumption informs this study in relation to Centenary Bank customer's need to try out the e-banking services before they fully adopt it.

The fifth and last component of the DIT model is observability, which is the extent to which the technology is observable by others (Rogers, 1983). Because of the nature of the service under investigation, the relevance of this construct to the study's purpose was deemed redundant.

Rogers (1983) extended the diffusion of innovation theory by investigating characteristics of adopters likely to accept innovative technology. He identified five (5) clusters of adopters of new technology which varied according to the time the new product was adopted during its life cycle. These groups are: innovators, early adaptors, early majority, late majority and laggards. Each cluster differs according to the rate of adopting innovative technology.

The first group labeled as innovators, is generally a group of customers that exercise tremendous eagerness and thirst for new ideas. Innovators generally have higher incomes, are better educated, are more self-confident and rely less on group norms.

The second cluster labeled early adopters follow innovators in their adoption, and although they are not the first adaptors, they do so relative early in the product's life cycle. They are much more reliant on group norms and values compared to innovators and it is because of this group affiliation, they are more likely to become opinion leaders.

The third group of customers, early majority follows next. This group is likely to collect more information on products and services before adoption. Their tendency to adopt is highly dependent on recommendations and suggestions made by early adopters or opinion leaders. The late majority group adopt only after the product has been tried by other groups and proven to be successful. They are highly dependent on group norms and adoption is highly dependent on social compliance. Rogers (1983) classified this group as older with less education.

The final group of customers to adopt the product is referred to as laggards. By the time this group adopt the product, it is often superseded by something else. Laggards are suspicions about new product and are often alienated by rapidly advancing societies. They generally belong to the lowest socio-economic status.

The classification and characteristics of adaptors in the diffusion of innovations suggests that management of Centenary Bank need to put in place strategies that the different segments to enhance the adoption of e-banking services for enhanced customer loyalty.

This study was particularly guided by the Davis' (1989) Technology Acceptance Model which deals with the prediction of the acceptability of an information system (i.e. innovation adoption).

The choice of this theory was influenced by the understanding that the acceptability of a tool is not only a pre-requisite to innovation adoption, but it is also crucial in identifying the factors that must be taken into account to make the technology user-friendly and therefore sustainably popular to adopters. The Technology Acceptance model suggests that the acceptance of a tool is influenced by its perceived usefulness and ease of use. The extent to which a potential user believes that the system will be user-friendly and improve his/her performance is considered a crucial element in the acceptability of a tool or procedure. Davis (1989) suggested that ease of use refers to the extent to which the new system would require less physical and mental effort in getting output and is based on subjective opinions of customers. The assumption of relative advantage and perceived usefulness informs this study that account holders may adopt the use of e-banking services if the services enhance their state of economical, financial, physical or social wellbeing.

Several studies demonstrate that perceived usefulness and perceived ease of use may be viewed from different perspectives (Hausa et Shugan, 1980; Larcker et Lessig, 1980; Swanson, 1987).The Theory of Reasoned Action stipulates that technological innovation adoption is influenced by the purpose (behavioral intention), which is turn influenced by the individual's attitude towards the technological innovation and its perceived applicability. Davis (1989) argues that besides the attitude of the individual in the process of adopting technological change, the benefits that accrue from innovation adoption (the impact) on his/her performance is equally crucial to technological acceptance. Related to this study, the author points out that, initially reluctant individuals are most likely to adopt the technology if it proves beneficial to their performance. In this regard, the Technology Acceptance Model hypothesizes a direct link

between perceived usefulness and perceived ease of use. He further argues that individuals are more likely to select a more useful technology than the one easier to use when both bear similar characteristics.

However, as Davis (1989) observes, perceived ease of use augments the choices individuals make before adopting a technological innovation, stressing that self-efficacy and instrumentality play complementary roles in orienting choices of individuals. This is in line with Bandura's (1982) study which affirms that ease of use of a system influences the height of a user's sense of efficacy and therefore the level of intrinsic drive to action. A similar perception of user-friendliness and adoption is held by Lepper (1985) when he draws a link between perceived ease of use and attitude.

In a study to validate the Technology Acceptance Model, Davis (1989) demonstrates a stronger link between the intention to use an information system and its perceived usefulness than its perceived ease of use. Basing on the study, it may be argued that an individual's perception of the ultimate usefulness of a technology influences his/her decision to adopt it more than when its ease of use is considered.

However, while the applicability of the Technology Acceptance Model (TAM) was scientifically proven, there were other factors that it does not take care of. In this regard, Venkatesh and Davis (2000) classify the social influence processes individuals undergo and the cognitive functions among the factors that influence individuals' perceptions of the usefulness and the intention to adopt and use a technology. In addition, McFarland and Hamilton (2006) identify prior

experience of prospective adopters, nature of tasks to be performed with the technology, anxiety, system quality and organizational support to impact usage of a technological innovation. The study further identifies close connections of user motivation and intervening variables within the environment of work. The study conducted by Venkatesh and Bala (2008) has the implication that, when potential users of a technology are introduced to it, multiple factors emerge to influence their decision regarding why, how and when to embrace the innovation.

Hence, basing on the above studies, one can argue that, the attitude of bank customers towards using a technology like point of sale services, computer banking and automated payment systems can be predicted with some certainty. But given that technologies and skepticism prevail in the minds of decision-makers regarding technological adoption and use, it is useful to consider that people tend to prefer to learn the new technologies prior to using them rather than learn on-the-job (Bagozzi and Warshaw, 1992). The Technology Acceptance Model (TAM) was considered relevant in the study of the effect of e - banking innovations and customer loyalty in the baking industry, particularly Centenary Bank.

2.2 Overview on E-Banking Services Innovations

The importance of electronic based banking products is increasing day by day. It is undoubted that electronic based banking provides relatively low risk, high return and low cost advantages. It can be said that there are many studies addressing the impact of the performance based on the profitability of banks which offer electronic banking products. These studies can be divided into two groups according to the level of development of the countries. These are some of the studies dealing with the electronic and internet banking applications that effect bank's performance.

For example Sullivan (2000), DeYoung (2001), Hasan (2002), Pigni et al. (2002), Kagan (2005), Arnaboldi and Claeys (2008), Ciciretti et al. (2009), Weigelt ve Sarkar (2012). These studies showed that electronic banking applications required advanced technology increasing the overall profitability of the banks' in the US and European countries. It is essentially obtained that internet banking has a significant positive contribution to development of competition in the banking sector and banks' performance. Therefore, internet banking applications make bank to build the orientation of technological innovations up (Arnaboldi and Claeys, 2008, Ciciretti et al. 2009). It has been observed that technology-based and in particular internet banking products reduce the operational risk of the banks (Hasan 2002, Ciciretti et al., 2009). Internet banking applications increase the asset quality of banks and therefore increase the operational profitability and ROE performance directly (Kagan 2005).

Al-Samadi and Al-Wabal (2011), Khrawish and Al-Sa'di (2011), Sumra et al. (2011), Hosein (2013), Malhotra and Singh (2006, 2007, 2009), Gutu (2014) studies upon developing countries such as India, Pakistan, Jordan and Romania. Many of these studies show that electronic banking applications diminishing operational costs and increasing profitability performance of banks. It is necessary relatively short time to cope with and exceed initial setup cost of internet banking and other electronic-based activities. This situation is encouraging electronic banking activities in developing countries. However, customer portfolio must be expanded in order to increase the bank performance (Sumra et al., 2011).

Overall results concerning developing countries are consistent with those obtained from developed countries. On the other hand, for Jordan banks Khrawish and Al-Sa'di (2011), Al-Samadi and Al-Wabal (2011), for Asian countries Hosein'in (2013), and for Romania Gutu (2014) findings show that the impact on the profitability of some electronic banking is negative. Al-Samadi and Al-Wabal (2011) determined that the impact of the negative performance of electronic banking operations in Jordan, costumers still depending on traditional distribution channels. Khrawish and Al-Sadi (2011), Hosein (2013) and Gutu's (2014) studies show high infrastructure costs of internet banking despite lack of sufficient number of

customers effects the profitability of the banks in negatively in developing countries Gutu (2014) has determined that even higher advertising budget for internet banking has not changed this situation. It is shown that the customers in these countries where still demand the traditional branch based banking services. Therefore, the profitability of electronic banking services are adversely affected on account of not providing the expected cost reduction.

In developing countries, the lack of electronic banking infrastructure block impacts of the expected cost effectiveness and profitability. In some developing countries, there are not available strong effects on the profitability of electronic banking activities because of inadequate information technology infrastructure of the branch and ATM network are limited. The case is also real for online banking activities. Internet infrastructure based on relatively old technology blocks the achievement of expected performance of banks in developing countries (Alam et al., 2007, Gutu 2014).

On the other hand, internet banking generally has been activated by large banks in some of the developing countries (Malhotra and Singh, 2006, 2009). It is observed that large-scale private-owned banks had deposit volume is high, low branches and less fixed assets tend to internet banking. Generally, these are aimed to boost of the low market share. As a result of banks tends to internet banking, rivals accelerate the orientation of competitive activity in this field (Malhotra and Singh, 2007).

On the other hand, many recent studies on the effectiveness of electronic banking activities on performance of the banks in African countries that relatively lower level of development. For example, Abaenew et al. (2013), Hassan et al. (2013), Oyewole et al. (2013), Okiro and Ndung (2013) made studies on Nigeria and Adua and Kingoo (2012) and Nguyen Gakur Connection (2013) made studies on Kenya.

The electronic banking activities increase profitability on banks where in the majority of countries handled by the researchers. On the basis of a positive impact on the performance of the role of providing the cost-effectiveness of Internet banking is great. The cost of a transaction performed at the branch can be reduced by 40 to 80% when the same transaction did at web site, or ATM. The internet and other

electronic banking services costs reduce average operational costs and overhead physical expenses suffering by the banks (DeYoung, 2001). Banks using electronic banking services as intensive is classified as "innovative" and their distribution channels more than and their costs are below the sector average (Pigna, 2002). So, the importance of the electronic infrastructure used by banks is the great deal of the cost per transaction decreasing along with developed infrastructure. However, such as the level of education of the customer and including the functionality of the bank's website are base of factors contribute to the success of internet banking services. The costumers with high level of education demand internet banking services too much according to the ordinary bank customers (Sullivan, 2000). The number of bank customers using internet and other electronic banking services has not been increased, as long as the costs of such services will affect profitability of the banks.

Some research has been conducted on customers who prefer electronic banking show that customers develop skills in the use of such services. On the other hand, use of electronic banking services of customers also affects the cost and revenue structure of the bank. All banks have not increased profitability in the sector, when the banks used similar electronic-based services and not taking into account the sales capacity mutually. In contrast, when banks provide complementary services banks then operational expenses reducing and revenues increasing (Dubois et al. 2011, Brush et al., 2012).

How to increase the efficiency they use outsourcing firms in the promotion stage of technological innovation is an important issue. An optimal governance approach should be followed when event-related problems are quite complex. Some research based on a survey showed that providing resources from out of the bank increasing the effectiveness of online banking. On the other hand, a high level of technology caused efficiency adaptability in a trade-off between them. Banks are required to reflect technological developments to their services consistent with changing customer needs (Weigelt and Sarkar, 2012). It is also takes time to accustom to new technological products for customers. In this context, it is important the design and presentation of the product.

2.2.1 Automated Payment Systems

Technological innovations in finance and communications have internationalized financial activity and created a virtual worldwide commerce. Institutional adaptations to these radical changes may ultimately require some form of global financial architecture. Alagheband (2006) and Malak (2007) identify different forms of E-banking system to include (i) automated Teller Machines (ATM) - It is an electronic terminal which gives consumers the opportunity to get banking service at almost any time. To withdraw cash, make deposits or transfer funds between accounts, a consumer needs an ATM card and a personal identification number (PIN).

2.2.2 PC Banking Services

A variety of platforms are available under e-banking, and one of them is PC (personal computer) banking (or offline banking) whereby customers access these services using an intelligent electronic device, like PC, personal digital assistant (PDA). It is an electronic home banking system using web technology in which Bank customers are able to conduct their business transactions with the bank through personal computers (Alagheband, 2006).

2.2.3 Point of Sale Services

Point-of-Sale Transfer Terminals (POS), also known as kiosk or touch tone telephone refers to a system allows consumers to pay for retail purchase with a check card, a new name for debit card. This card looks like a credit card but with a significant difference. The money for the purchase is transferred immediately from account of debit card holder to the store's account**.** The wired POS terminal is an easy-to-use fixed line terminal. Our fast, secure and reliable POS terminals are contactless-enabled and can be conveniently integrated into your point-of-sale system. The wireless POS terminal, on the other hand, is a wireless handheld POS terminal allows you to accept debit and credit payments quickly and securely from almost any location. The portable

terminal is ideal for restaurants and bars that lack counter space or that have outdoor seating as well as hospitality, delivery or transportation operations.

2.3 Customer Loyalty

Different marketing scholars have defined customer loyalty in different contexts. For example, Oliver (1999) defined Customer Loyalty as a deeply held commitment to re-buy or re-patronize a preferred product or service in the future despite the situational influence and marketing efforts having the potential to cause switching behavior. Kotler and Keller (2006) defined the term loyalty as a lasting commitment to family, friends or country. However, Kotler and Keller (2006) posit that customer loyalty describes the tendency of a customer to choose one business or product over another for a particular need. Increased customer loyalty is the desired end result for any product.

Innovative banking is been viewed as a cost reduction and convenient channel by the customer and banks. It saves times and there is no geographical boundaries to it, bank customer residing in India can have their bank transactions worldwide through the information and communication technology.

Infrastructure is very important part of the innovative banking technology. In innovative banking technology, one added cost involved in terms of acquiring and maintenance of computer equipment. Most customers who have adopted internet banking services believes that it has got lot of advantages while on the other side some believes that because of security and privacy issues innovative banking has disadvantages.

Necessity of information and communication technology infrastructure as well as poor knowledge about the innovative banking technology restricts users from using innovative banking products. Information and communication technology is a pillar of the development and

play key role on the adaptability and workability (Edwin Agwu, 2012). First movers have adopted different strategies to target bank customers while followers would adopt different strategies for the same. Costanzo et al (2003) found that first movers who adopted a "value innovation" approach have been more successful than the second movers who adopted "conventional" logic to strategy formation. The term radical and incremental innovation got different meaning.

Radical innovation is about the creation of a new product from scratch, while incremental innovation is about improving the existing product. Incremental innovation requires a continuous advantage of the existing core competencies. The creation of radical innovation generally happens with redefining core business. Therefore, to create value for the customer requires radical innovation and it will help businesses to grow. Large organizations generally go for the incremental innovation rather than the radical innovation, as implementation of radical innovation is very costly and time consuming. Large size institutions generally avoid first adopters to the new technology.

Innovative banking has different channels to deliver services to the customers. Major growth driver behind innovative technology is growth of the Internet. Banks have to better understand their clients and should provide services to the customers in such a way that customer can easily adopt the new technology. The introduction of E- banking changes overall thinking of the customers and competitors'. Great promotional efforts require creating awareness for the new technology and benefits of it. Challenges for the E- banking being awareness, adaption of technology, trust, speed of service, internet use, and privacy of service. Easier technology has priority for better spread of service over technology or product centric approach. Adoption of

Innovative banking by the customers will add value to them and provides opportunity for the banks to provide service at the affordable cost and to boost incomes.

Innovative banking tools also provides feature to secure longer-term relationships with the bank by the customer, if it handled properly. There are so many behavioral issues like trust, security, reluctant to change towards new technology. The development of E-banking depends on factors like strategic, operational, demographic, and technical variables.

By adopting innovative banking technology bank need to focus more on the cost reduction, customer retention, responsiveness, trust, security and ease of use of using product and services. Innovating banking has multiple benefits for the banks as well as for the customers. Innovative banking adds value by providing better customer service and creating opportunities. Innovating banking treat customer as individuals and so customer would be more loyal towards institution. Innovative banking provides opportunity for banks to offers new banking experience to their clients.

Consumers use innovative banking as it provides benefits comparison to traditional banking channels. The important influential factor indicates that consumers are having more ability to use computer, mobile and internet becomes user of innovative banking. Ease of use, perceived risk, and quality of internet were most significant variable. Some studies found perceived risk as an important factor. Regardless of the penetration of the internet, cost and quality of internet remains the most important factors for adoption of internet banking (Amini et al (2011)).

Mobile banking is a part of innovative banking and it reduces cost of banking transaction for the banks as well as it is a revenue source for the telecom service providers. Mobile users have been growing very rapidly and despite the growth of the smartphone phone users and benefits of

mobile banking its growth has been short of industry expectations. One of the reasons is initial trust and privacy in the available services.

People found mobile banking is riskier than other innovative banking channel so it is important to build confidence to the customer. Banks should offer various assurance programmes to relieve uncertainties associated with the mobile banking usage, to mitigate its perceived risk and to earn people's trust early in the process. It is also important for banks to emphasize on the functional benefits and advantages of mobile banking to expand customer base (Kim, Shin, Lee, 2007). Reinartz and Kumar (2000) equally orate that loyalty to an object (brand, store, service or company) is shown by favourable propensities towards that object. These propensities may be behavioral (commitment) or attitudinal (positive word of mouth) that this study adopted and are detailed below.

2.3.1 Commitment to Products and Services

Oliver (1999) defines loyalty as 'a deeply held commitment to re-buy or re-patronize a preferred product/service consistently in the future, thereby causing repetitive same-brand or same brand-set purchasing, despite situational influences and marketing efforts having the potential to cause switching behavior'.

Loyalty to an object, brand, service or company is shown by favourable propensities towards that object. In industrial and service marketing, behavioral loyalty is viewed as retention of the brand (Reinartz and Kumar 2000). For services, particularly those in semi-continuous use such as mobile-phone airtime, such retention can be measured by the duration of time that the customer has used the service and, for durables, by the customer's repeat purchase of the brand. In markets such as groceries, where customers may use several brands in a category, researchers have used the share-of-category expenditure to measure customer loyalty (Baldinger and Rubinson 1996;

Bhattacharya 1997; Bhattacharya, Fader, Lodish and DeSarbo 1996; Deighton, Henderson and Neslin 1994). Another behavioural measure of customer loyalty, which was used by Hauser et al (1994), is portfolio size; this is the number of brands used in a period.

2.3.2 Positive word of Mouth

According to Kassim and Abdullah (2010) word-of-mouth communication is an emotionally expressed behavior that influences others' purchasing intentions by informing them of a superior experience. Chaniotakis and Lymperopoulos (2009) suggest that the potential for word-of-mouth communication to impact perceptions or actions depends on the nature of the sender-receiver relationship, the richness and strength of the message and its delivery.

Holetzky (2009) perceives customer loyalty as the behaviour of repeat customers offering favourable word of mouth to friends and family about a certain product and/or organization. He posits that the keys to happy customers are managing project profitably, lead them, build trust and create value. He also believes that, the term customer loyalty is used to describe the behavior of repeat customers, as well as those that offer good ratings, reviews, or testimonials. Some customers do a particular company a great service by offering favourable word of mouth, publicly regarding a product, telling friends and family, thus adding them to the number of loyal customers. Holetzky also went further to say that relationship management is a process, a program, or a group of programs geared towards keeping a client happy so he or she will provide more business. Bove and Johnson (2009) also note that consumers must hold a positive attitude towards a product or service in order to use it on a frequent basis.

2.4 Actual Review of Literature

2.4.1 Automated Payment Systems and Customer Loyalty

There has been a growing potential for use of ICT facilities to expand banking self-serving services. Cruz et al. (2010) for example observed that banks has very large potential to offer mobile banking services to people living in remote villages where only few computers are connected to the Internet. Acknowledging the limitations of Internet banking as opposed to widespread mobile phone penetration, Dasgupta et al (2011) suggested that the emerging mobile banking may give banks a good commercial opportunity providing their services to rural people who are unable to access the Internet. Hence, Dasgupta et al (2011) pointed out that main customer segments of mobile and Internet banking were not necessarily the same, which might explain why Sadi et al (2010) distinguished mobile commerce from other electronic commerce.
Bultum (2014) further reports that Card-based payment systems in Ethiopia have been growing fast in recent years with four commercial banks in the country emphasizing expanded use of debit or ATM cards. Commercial banks in Ethiopia also cited plans to use new technologies for remittance transfers, including mobile phone transfers and remittance linked financial products such as prepaid cards.

Some empirical studies have been carried out on the use of APS and customer loyalty one of which is Sousa, et al (2009) who investigates the determinants of students' loyalty in retail banks in Ghana and found that satisfaction with bank services, image of the bank, availability of electronic bank services and perceived service quality as the determinants of students' bank loyalty. Perceived service quality was, however, not significant in predicting students' loyalty to their bank. In complement, Buell et al (2010) examines the use of online billing and noted that

coefficients on online bill payment and online session usage yielded a significant differences in users satisfaction while the same test conducted on ATM and IVR usage yielded an insignificant difference in user satisfaction.

Sousa, et al (2009) found that ATM channel was the only self-service channel that exhibited a marginally significant impact on customer satisfaction relative to face-to-face teller transactions. The study also found out that customers, who utilized phone agent channels, were also statistically significantly less satisfied.

Chen (2011) compares the use traditional human touch service and self-serving technology-SST payment modes in relations to perceived service quality and concluded that SST was more capable to provide quality service than traditional human based services. Using traditional human based services in hospitality industry can add convenience to the guests experience; however, when it comes to service and relationship traditional human based services is a better choice. Huettinger and Cubrinska (2011) equally examine the use of SST payment systems and customer loyalty and found that consumers with a positive attitude towards self-service machines express an increased attraction to service providers.

Huettinger, and Cubrinska (2011) however report on some challenges in using SST and report that a major drawback of SST is the lack of functions followed by "no consultation" of what is natural. Yet, the low functionality may discourage some potential users who may be worried about low flexibility or lost premiums when addressing SST instead of personnel. Therefore, another marketing message should strengthen the technical (ease of use and many functions) side of automates to make sure customers are not afraid of being incapable.

Teoh et al (2013) examine the factors affecting customer perceptions of e-payment services in Malaysia and found that the multiple linear regression results reveal that benefits, self-efficacy, and ease of use exert significant influences on consumers' perception towards e-payment. Bultum (2014) equally examines the use of ICT in the banking sector of Ethiopia and noted that despite the recent improvements made by Ethiopian government on the national infrastructure, the overall ICT infrastructure in Ethiopia remains inadequate leading to low customer seeking behaviours for e-payment services.

2.4.2 PC Banking Services and Customer Loyalty

PC banking is where a customer can access his or her bank account via the Internet using personal computer or Smart mobile phone and web-browser (Arunachalam & Sivasubramanian, 2007). In addition, Ongkasuwan and Tantichattanon (2002) further defines e-banking service as banking service that allows customers to access and perform financial transactions on their bank accounts from their web enabled computers with Internet connection to banks' web sites any time they wish. PC banking service also enables bank customers to perform transactions such as transfer and payments, access of latest balance, statement viewing, account detail viewing, customization, print, downloading of statements and obtaining of a history statement on all accounts linked to the bank's customers. According to Khan (2007), PC banking includes the system that enables financial institution customers, individuals or businesses, access accounts, transact business, or obtain information on financial products and services (exception of cash withdrawals) on public or private network including Internet.

Ojokuku and Sajuyigbe (2012) in their study on the use of PC banking in Nigeria noted that electronic banking facilitates the customers' access to their accounts and executing transactions

electronically in an easier way through visiting the bank websites at any given time. In utilizing this facility, individuals and companies are saving a lot of their time and money. Siam, (2006) also agrees that PC banking services contribute in reducing costs, increasing profits, activating bank's management, increasing bank's effectiveness and its competitive degree. This reflects the direct relation between increasing client's needs to reduce time, costs and between electronic banking services.

Furthermore, Gbadeyan and Akinyosoye, (2011) believe that the use of e-banking has brought many benefits amongst which include no barrier limitations; it is convenient; services are offered at minimal cost; it has transformed traditional practices in banking; the only way to stay connected to the customers at any place and any time is through internet applications; it results in high performance in the banking industry through faster delivery of information from the customer and service provider; customers prefer the use of e-banking because it saves time; it makes possible the use of innovative product or service at a low transaction fees and it encourages queue management which is one of the important dimensions of PC banking service quality.

Some empirical studies have been carried out on the use of PC based banking and customer outcomes world over. The descriptive model given by Casalo, Flavian, Guinaliu (2008), for example, characterizes customer loyalty in the context of electronic banking and found that web site perceived reputation and satisfaction have a direct and significant effect on consumer loyalty to a financial services web site. The study concludes that the proper management of both customer needs and corporate reputation will help to increase customer loyalty and, as a consequence, the retention rate and profits in the e-banking business.

Sousa and Voss (2009) looks at the negative effects of computer based banking and reported that e-service failures have a negative effect on customer loyalty intentions however satisfaction with the recovery has a positive effect on customer loyalty intentions of e-commercial banking services. The study recommends that e-service delivery systems should be designed with a strong failure-prevention mindset and includes effective service recovery mechanisms.

Chang and Wang (2011) to examine the impact of e-service quality, customer perceived value, and customer satisfaction on customer loyalty in an online shopping environment. And found that e-service quality and customers perceived value influence customer satisfaction, and then influence customer loyalty. The study recommends that in the pre-purchase stage, online retailers should focus on attracting consumers by the quality of e-service.

Balogun, Ajiboye, and Abimbola (2012) investigate the factors influencing the customer satisfaction with PC banking in Nigeria and found that that quality services for electronic opening of account were the major factors that influence customer satisfaction significantly in Nigerian banks. The study also reveals that telephone banking and mobile banking had a positive influence on customer satisfaction.

Nasri (2011) equally examines the factors that influence the adoption of internet banking services in Tunisia and found that use of internet banking in Tunisia is influenced most strongly by convenience, risk, security and prior internet knowledge. Only information on online banking did not affect intention to use internet banking service in Tunisia. The study recommends that banks should develop a marketing strategy for internet banking while visibly demonstrating concern for security, reliability, with concrete solutions to improve trustworthy secure e- banking systems, and specifically protect personal information or security for payment transaction.

Nasri (2011) study found that perceived risk appears to be an important inhibitor to the adoption of internet banking. This underscores the fact that concerns about fraud and identity thefts are foremost in the minds of internet banking users. Thus, providing encryption and strong authentication to prevent fraud and identity theft should be a priority in banks management. In this context, banks should consider focusing on the prevention of intrusion, fraud and identity theft.

Gbadeyan and Akinyosoye, (2011) equally examines why many customers may not use PC banking in Nigeria and identify major problems of e-banking amongst which include: the case of Internet criminals and fraudsters attempt to steal customer information through various methods such as hacking. The study concludes that there is increased concern about privacy and security of customers' information as a result of the fragility of information collected and held electronically and transferred via computer mediated communications.

2.4.3 Point of Sale Services and Customer Loyalty

Point Of Sale Terminal is a mode of e-banking which handles cheques verification, credit authorization, cash deposit and withdrawal and cash payment. It enhances electronic fund transfer at the point of sales (Alagheb, 2006). Thus customers account would be debited immediately with the cost of purchase in an outlet such as a petrol station or supermarket and (Malak, 2007). The implication of this is that customers can make payment for goods and services without necessarily coming in contact with physical cash as the purchase price would be debited on the buyer's card and credited on the seller's account (Olanipekun et al, 2013).

There has been a stream of empirical studies on POS services and customer outcomes. Mahajar and Yunus (2010) examined the use of loyalty card on customer satisfaction and noted a

significant value between loyalty card program and customer's loyalty. Test value between other variables such as between attitude, trust, commitment and satisfaction with customer's loyalty are significant. Hence, customers who possess loyalty cards would influence their loyalty towards the store. Therefore, loyalty card program should be encouraged to increase the customer loyalty level.

Boateng (2011) examine the use of mobile phones as accessories for business support in Ghana and found that traders primarily used mobile phones to monitor goods and pricing strategies, scheduling deliveries, and addressing inquiries and complaints in during-trade activities and concluded that improving information management through mobile phones directly or indirectly contributes to the economic empowerment of the trader.

Balogun, Ajiboye, and Abimbola (2012) investigate the factors influencing the customer satisfaction with e-banking in Nigeria and found that that quality service (SMS alerts, E-mail alerts, and electronic opening of account were the major factors that influence customer satisfaction significantly in Nigerian banks. The study also reveals that telephone banking; point of sale terminals have positive influence on customer satisfaction. The paper recommends that management should improve on the service quality, increase the numbers of POS, confidentiality of consumer data should be protected.

2.5 Summary of Literature Review

The literature offered an insight into the theoretical underpinnings of e-banking series and customer loyalty as proposed by the DIT theory by Rogers (1983). Specifically the theory proposed the five characteristics of innovation attributes namely relative advantages, compatibility, complexity, trialability and observeability that will help guide this study in indentifying how the e-banking services comply with those innovation attributes for enhanced

adoption of e-banking services of PC banking. The theory equally proposes five characteristics of adaptors of new technology which varied according to the time the new product was adopted during its life cycle to include innovators, early adopters, early majority, late majority and laggards. The characteristics of adaptors help evaluate and design marketing interventions for accepting the e-banking innovations in the bank.

On the relationship between variables, the empirical studies identified in the literature offer no empirical evidence on the relationship between automated payment systems and customer loyalty indicators of commitment to bank's products and services especially in Africa and in Uganda specifically. The literature was also silent on the relationship between PC banking services and customer loyalty in the banking sector of developing nations with low technology infrastructures. Furthermore, the literature on POS and customer loyalty in the banking sector was scanty. This study therefore strived to fill the raised literature gap by examining and providing empirical evidence on the relationship between e-banking services of automated payment system, PC banking, POS respectively with customer loyalty attributes of commitment to Centenary bank products and positive word of mouth.

CHAPTER THREE

RESEARCH METHODOLOGY

1.0 Introduction

This chapter presents the methods that were employed in obtaining data to help achieved the study objectives. It includes the research design; study population; sample size and selection; sampling techniques and procedure; data collection methods and instruments; validity and reliability of research instruments; data processing and analysis; measurement of variables; ethical considerations and limitations of the study.

3.1 Research Design

The study used a case study design where both quantitative and qualitative approaches were adopted to determine the relationship between e-banking innovations and customer loyalty in the banking sector of Uganda. Yin (2004) argues that case study research strategies are appropriate for in-depth investigation and when the concern is to study contemporary issues over which the researcher has no control. The case study design also enables in-depth analysis, extraction of data and information specific to an organization to help answer the research questions and test the study hypotheses (Yin, 2004). The quantitative approach was used to quantify findings on the study variables using majorly the correlation and regression techniques while the qualitative approach was used to draw explanation (Amin, 2005) e-banking innovation mechanisms and customer loyalty.

3.2 Study Area

The study was carried out in Centenary Bank Kampala and Wakiso districts with 15 branches. These districts are considered because they have the better e-banking technology, have the

highest e-banking users and the highest banks portfolio that customer loyalty in these areas may significantly contribute to sustainable performance of the banks.

3.3 Study Population

The study was carried out on an accessible population of 355 respondents consisting of PC banking (150), POS (55) and selected Automated Payment Services (150) customers in Kampala and Wakiso districts (Centenary Bank e-banking Files, 2014). These are considered to be the major users of different e-banking services categories given the fact that the geographical areas chosen constitute to the major business area in the country. Additionally, majority of businesses that use the specified e-banking innovations (point of sale, automated payment systems and computer banking) are found in these districts.

3.4 Sample size and selection

The study selected up to 264 respondents as shown in table 3.1 below using Krejcie and Morgan (1970) sample size selection criteria (see appendix II).

Table 3.1: Sample size and selection

Category	**Target Population**	**Sample Size**	**Sampling Technique**
Point of Sale (POS)	55	48	Purposive
Computer Banking	150	108	Simple Random
Automated payment Systems	150	108	Simple Random
Total	**355**	**264**	

Source: Primary Data (2016)

3.5 Sampling technique

The study used purposive and simple random sampling by considering only those customers who happened to be using the e-banking facility at the time of the data collection. This is because the target respondents were permanent users of the e-banking facility.

3.6 Data collection Methods

The study adopted a survey approach where both primary and secondary data was collected on e-banking innovations and customer loyalty. There are several survey approaches however for the purpose of this study the questionnaire survey was used to collect primary data from the e-banking services. The questionnaire was self-administered where they were dropped and picked after being filled by the respondents. The justification of the use of questionnaire survey was that the variables cannot be observed such as views, opinions, perceptions and feelings of the respondents on e-banking service innovation quality and customer loyalty. The questionnaire was also thought to be less expensive for data collection (Amin, 2005).

3.7 Data Collection Instruments

Data was collected by use of questionnaire that catered for three e-banking services of POS, PC and automated payment services. The questionnaire was close ended and scored on a five (5) point Likert scale ranging from 5- Strongly agree; 4- Agree; 3- Not sure; 2- Disagree; 1- Strongly disagree. The study also collected data using an interview guide where two customers for the APS, PC banking and POS were purposively selected to establish their perceptions on the e-banking platforms. These were reached by phone using contact numbers attached to their respective accounts with the bank.

3.8 Validity and Reliability of Research Instruments

3.8.1 Validity

Validity refers to the accuracy and meaningfulness of inferences, which are based on the research results or the degree to which results obtained from the analysis of the data actually represent the phenomena under study (Mugenda and Mugenda, 1999). Amin (2005) also defines

validity as the ability to produce findings that are in agreement with theoretical and conceptual values. Reliability on the other hand refers to the capacity of an instrument to produce consistent results. It measures objectivity, precision, consistency, stability or dependability of data. It refers to the extent to which the instrument yields the same results on repeated measures.

In this study, validity of the data collection tool was tested using a Content Validity Index (CVI) to determine the degree to which elements of the questionnaire used are relevant and representative of the targeted variables considering only variables scoring above 0.70 accepted

$$CVI = \frac{\text{Total of items rated as relevant}}{\text{Total number of items in the questionnaire}}$$

(Adopted from Trochim, (2006): Validating Research Instruments, p.88)

Computation of content validity of the questionnaire:

$$CVI = \frac{\text{Total of items rated as relevant}}{\text{Total number of items in the questionnaire}} = \frac{(26)}{(35)}$$

CVI = 0.742

Trochim, (2006) points out that if the outcome of the computation is 0.7 and above, then the instrument should be regarded as a valid tool to use in the collection of data in a research study. Therefore, since the outcome was above 0.7, the instrument was valid.

3.8.2 Reliability

Reliability of a measure indicates the extent to which it is without bias and therefore ensures consistent measurement across time and across the various items in the statement suggesting that the finding would be consistently the same if the study was done over again (Mugenda & Mugenda, 1999). This study instruments was pretested for its reliability on a sample of 10 respondents Neighboring Mukono district. Cronbach's alpha coefficient value were then

computed to show how reliable the data is using Software Package for Social Sciences (SPSS) considering only variables scoring above 0.70 accepted for social sciences (Amin, 2005).

Table 3.2: Validity and Reliability results.

Variable	Content Validity index (CVI)	Cronbach's Alpha	No. of Items
PC banking	.750	.721	8
POS	.778	.761	9
APS	.80	.850	10
Customer Loyalty	.750	.718	8

Source: Primary Data (2016)

The results in table 3.2 shows that pc banking, POS, APS and Loyalty all yielded a validity and reliability result above 0.70 suggesting that the instrument was valid and reliable as supported by Nunnally and Bernstein (1994) that a validity and reliability above 0.70 is acceptable for social sciences.

3.9. Data Presentation and Analysis

Quantitative data was presented in form of descriptive statistics of mean and standard deviation. Pearson's correlation analysis was used to establish magnitude of the relationship between the automated payment system, PC and POS and customer loyalty to the bank.

3.10. Measurement of variables

E-banking was measured using Alagheband (2006) and Malak (2007) description of E-banking system while customer loyalty was measured using Kotler and Keller (2006) measures of customer loyalty. Constructs derived from available literature about study variables were used as a basis for measurement of these variables. These will then be channeled in a 5- Likert scale of 5-Strongly agree; 4- Agree; 3- Not sure; 2- Disagree; 1- Strongly disagree.

3.11. Ethical consideration.

As part of the ethical considerations, the researcher obtained an introductory letter from Uganda Martyrs University Nkozi, which was presented to the management of Centenary bank for allowing me use their premises and data for the study. Respondents also remained anonymous and were not asked to disclose their names. A copy of the final report was defended and shared with the management of Centenary Bank. The researcher further desisted from any tendencies towards plagiarism and imposition of personal viewpoints in the data.

3.12 Limitations of the Study

The study used a case study that has a limitation of generalization of the study results. Secondly the study relied on non-scientific methods of convenience sampling that does not eliminate biasness in the sample selected (Amin, 2005). To minimize the effect of biasness, the study used fairy large samples from each category. Additionally, the issue of non-response from some of the targeted respondents was a challenge, although those who responded were representative enough for the study.

CHAPTER FOUR

DATA PRESENTATION, INTERPRETATION AND DISCUSSION OF FINDINGS

4.0 Introduction

This chapter presents and discusses the study findings from the questionnaire and interview collected on e-banking innovations and customer loyalty in Centenary Bank. It specifically presents the response rate, the background information about the respondents, results of customer loyalty (the dependent variable), presentation and discussion of study findings in relation to the specific objectives of APS and customer loyalty, POS and customer loyalty, PC banking and customer loyalty.

4.1 Response Rate

A total of 264 questionnaires were distributed, but 201 useable ones were returned as giving a response rate of 76%. According to Mugenda (2003), a response rate of 50% is adequate for analysis and reporting; a rate of 60% is good and a response rate of 70% and over is excellent. Based on the assertion, the response rate of 76% is considered to be excellent, and is a good representation of the sample used in the study population. The highest response rate was associated with the high number of APS users who were assessed around the bank premises.

4.2 Characteristics of Respondents

The characteristics of the respondents reveal their ability to use the e-banking platforms and the resulting loyalty. This study therefore sought to establish the gender, level of education, occupation and time with Centenary bank and the findings are tabulated below.

Table 4.1: Characteristics of Respondents

Item	Description	Frequency	Percentage
Gender	Male	100	49.8
	Female	101	50.2
	Total	**201**	**100**
Level of Education	Primary	3	1.5
	Secondary	23	11.4
	Certificate	31	15.4
	Diploma	50	24.9
	Degree	75	37.3
	Postgraduate	19	9.5
	Total	**201**	**100.0**
Occupation	Government employee	41	20.4
	Private sector employee	84	41.8
	Business person	73	36.3
	Others in informal sector	3	1.5
	Total	**201**	**100.0**
Time taken Banking with Centenary bank	Less than a year	25	12.4
	1-4 years	36	17.9
	5-9 Years	65	32.3
	10+ Years	75	37.3
	Total	**201**	**100.0**
Type of account held by a customer in Centenary bank	Saving	122	60.7
	Fixed Deposit	15	7.5
	Current	59	29.4
	Both saving and Current	5	2.5
	Total	**201**	**100.0**

Source: Primary Data (2016).

Table 4.1 above shows that 50.2% of the respondents were female while the male constituted 49.8% of the total number of respondents meaning that an equal number of male and female e-banking users were accessed in the study.

In relation to level of education, 37.3% were degree holders, 24.9% diploma holder while the least (1.5%) had attained no education. The findings reveal varying levels of education with a reasonable number of customers having low level of education a situation that may affect their use of e-backing technology for illiteracy in operations of e-banking platforms.

Table 4.1 further shows that 41.8% of the respondents were private sector employees, 36.3% were business persons while 20.4% were government employees and only 1.5% were from other sectors. The implication was that there were diverse account holders who may need different e-banking platforms to effect transactions at their convenience in office or the workplace.

A total of 37.3% of the respondents had banked with Centenary Bank for more than 10 and more years, 32.3% has been with the bank for 5-9 Years while only 12.4 had been with the bank for less than one year. These findings were indicative of a customer loyalty since about 70% had been with Centenary Bank for more than 5 years.

Furthermore, table 4.1 shows that majority of 60.7% of the respondent were saving accounts holders while 29.4% held current accounts and only 7.5% held fixed deposit accounts. This finding suggests that the respondent by their nature of account could affect e-transactions since most of them operated saving and current accounts which they could use to transact with minimal restrictions.

4.3 Descriptive statistics on Automated Payment Systems

The first objective of the study was to examine the relationship between automated payment systems and customer loyalty to Centenary Bank. A total of 10 items scored on -point Likert scale ranging from (1) for strongly disagree (2) for disagree, (3) for not sure (4) for agree (5) for

strongly agree were used to collect data on APS and the results are presented below using descriptive statistics of percentages and mean and standard deviation.

Table 4.2: Descriptive statistics for Automated Payment System

Outcomes on APS	Disagree (%)		NS	Agree (%)		Mean	S.D
	SDA	DA		A	SA		
1. I can easily access Centenary bank ATM service	6.7	5.6	1.0	27.8	58.9	4.27	1.169
2. I can easily make withdrawals across the ATM	4.4	3.4	2.2	28.9	61.1	4.39	1.013
3. I can easily make cash deposits across Centenary bank ATM	5.6	5.6	7.8	44.4	36.7	4.01	1.086
4. I easily make bank statements across Centenary bank ATM	3.3	8.9	13.3	44.4	30	3.89	1.043
5. I easily make internal transfers across Centenary bank ATM	13.3	15.6	28.9	25.6	16.7	3.17	1.265
6. I can now effect utility bill payments using the ATM	16.7	12.2	27.8	24.4	18.9	3.19	1.335
7. I can now effect utility bill payments using my mobile phone	7.8	5.6	5.6	34.4	46.7	4.07	1.207
8. I can now transfer payment from my Centenary bank account using my mobile banking	5.6	3.3	3.3	33.3	54.4	4.28	1.071
9. I can now load airtime onto my phone using my Centenary bank account	7.8	5.6	4.4	34.4	47.8	4.09	1.205
10. Debits on my account using mobile banking are always accurate	4.4	6.7	6.7	32.2	50	4.17	1.104
Overall						**3.953**	**1.1498**

Source: Primary Data (2016)

Table 4.2 above shows that majority of 86.7% of the respondents agreed (mean = 4.27and S.D = 1.169) that they could easily access ATM services; 12.3% disagreed to the statement while 1.0% were not sure. When asked whether they could easily make withdrawals across the ATM, a total of 90.0% of the respondents (mean = 4.39 and S.D = 1.0313) agreed that they could easily make

cash deposits across Centenary bank ATM (mean = 4.01) while they also agreed (mean = 4.39) that they could easily obtain bank statement across their ATM. This study noted that the ATM users were satisfied with the self-serving services offered by ATM as it was easily accessible and enabled them to make withdrawals, deposits and obtain bank statements. Alagheband (2006) and Malak (2007) had earlier pointed out those ATMs as electronic terminals give consumers the opportunity to get banking cash withdrawal, deposits or transfer funds at almost any time wherever they access them.

The findings in table 4.2 however reveal that a reasonable number of respondents where either not sure is they could easily make internal transfers across the ATM (28.9%) or disagreed with the ATMs accessed being able to make internal transfers (28.9%). A total of 27.8% were also not sure if they could affect utility bills payments on the ATM while 28.9% indicated that they could not settle bills across the ATM they accessed. The implication was that the bank's customers appreciated the ATM innovation although there was need to upgrade available ATMs to make internal transfers and pay utility bills as a reasonable number of customer where either not aware of this option or did not have ATMs with such options. This view resonates with Huettinger and Cubrinska (2011) who highlight the challenges of lack of consultation; and low functionality in using SST may discourage some potential users who may be worried about low flexibility or lost premiums when addressing SST instead of personnel. Huettinger, and Cubrinska (2011) recommends the use of marketing message should strengthen ease of use and many functions side of automates to make sure customers are not afraid of being incapable.

The findings in table 4.2 above show that majority of 81.1% of the respondents agreed (mean 4.07) that they could can now effect utility bill payments using their mobile phone while 87.7% agreed (mean = 4.28) that they could now transfer payment from their Centenary bank account

using their mobile phones (mean = 4.09). A majority of 82.2% indicated that they could load airtime using their phones while they also agreed that mobile money debits were accurate (mean = 4.17). The implication is that there was a high level of satisfaction with the mobile phone banking innovation as about 8 in very 10 user appreciated the service for its opportunity it provides to pay utility bills, transfer payments from their accounts and use it to load airtime from their accounts at their convenience. The bank should promote the use of the mobile phone banking innovation for enhanced customer satisfaction. This view is supported by previous studies that had ventured into ATM innovation. Cruz et al. (2010) specifically notes that banks have very large potential to offer mobile banking services to people living in remote areas. In complement, Dasgupta et al. (2011) contends that the emerging mobile banking may give banks a good commercial opportunity by providing their services to rural people.

When asked about the challenges customers had faced in using the e-banking platform, one e-banking official interviewed noted:

> *"All the e-banking platforms have a challenge of network break down, sluggishness and equipment break-down. This has negatively affected the use of e-banking platforms. This further frustrates customers and the service providers of such e- banking platforms. In some instances customers are not aware of the requirements for one to join a given e- banking platforms".*

4.4 Descriptive statistics on PC banking at Centenary Bank

The second objective of the study was to examine the relationship between PC banking services and customer loyalty in Centenary bank. A total of 8 items scored on 5-point Likert scale ranging from (1) for strongly disagree (2) for disagree, (3) for not sure (4) for agree (5) for

strongly agree were used to collect data on PC banking innovation and the results are presented below using descriptive statistics of percentages and mean and standard deviation.

Table 4.3: Descriptive statistics for PC banking perceptions

Outcomes on PC Banking	Disagree (%)		NS	Agree (%)		Mean	S.D
	SDA	DA		A	SA		
1. I can easily access PC banking at the convenience of my office	4	5.3	4	62.7	24	4.20	.520
2. I always make PC banking payments to our suppliers without having to move to Centenary bank	25.3	52	4	12	6.7	2.23	1.158
3. I always make salary payments using PC banking without having to move to Centenary bank	30.7	49.3	4	12	4	2.09	1.093
4. I always make NSSF payments using PC banking without having to move to Centenary bank	24	52	4	13.3	6.7	2.27	1.166
5. I can now effect funds transfers on out accounts with PC banking at the convenience of my office	34.7	48	2.7	10.7	4	2.01	1.084
6. I can get our bank statement using PC banking	4	2.7		50.7	42.7	4.47	0.502
7. PC banking transactions are always prompt	4	5.3	1.3	57.3	32	4.35	0.502
8. PC banking transactions are always accurate	5.3	4	1.3	52	37.3	4.44	0.526

Source: Primary Data (2016)

Table 4.3 above shows that whereas 86.7% of the PC respondents agreed (mean = 4.20) that they could easily access PC banking at the convenience of their office, they 77.3% disagreed (mean = 2.23) that they used PC banking platform to effect payments to suppliers, 80% disagreed (mean = 2.23) with using PC platform to effect salary payments, 76% disagreed (mean = 2.27) using it to effect NSSF payments while 82.7% disagreed (mean = 2.01) using PC banking to effect funds transfers at the convenience of their office. A total of 93.4% of the PC banking users however

agreed (mean = 4.47) with using PC to get bank statement, 87.3% were satisfied with promptness and accuracy of PC banking transactions.

The study noted that PC banking innovation had not been adequately rolled out in the bank to intended users a factor which could be attributed to delays in deployment the necessary ICT infrastructure to effect supplier, salary, funds and NSSF payments by account holders at the convenience of their premises. It was necessary that the management of Centenary Bank undertake expedite the PC banking rollout plan to enable its users to effect transactions. Khan (2007) equally notes that PC banking includes the system that enables financial institution customers, individuals or businesses, access accounts, transact business, or obtain information on financial products and services exception of cash withdrawals on public or private network including Internet. In support of PC banking Ojokuku and Sajuyigbe (2012) commends PC banking as an electronic banking facility that enables customers' access to their accounts and executing transactions electronically in an easier way in a cost effective and less time consuming manner. Siam, (2006) also agrees that PC banking services contribute in reducing costs, increasing profits, activating bank's management, increasing bank's effectiveness and its competitive degree.

In an interview on what needs to be strengthened in the e-banking platform in Centenary Bank, one e-banking customer had this to say:

> *"The bank needs to improve on its network strength and speed in order to attract more customers to the e-banking platforms. There is also a need to market the service widely. This is because some customers are not fully aware of the service offered through certain e banking service. Example customers were not aware that someone can with draw cash from a POS machine other*

than purchase of goods from shopping centers and fuel stations. The bank needs to train and equip e-banking service providers with information about the other benefits of the intended e-banking services."

4.5 Descriptive statistics on POS Services at Centenary Bank

The third objective of the study was to examine the relationship between POS services and customer loyalty in Centenary Bank. A total of 9 items scored on 5-point Likert scale ranging from (1) for strongly disagree (2) for disagree, (3) for not sure (4) for agree (5) for strongly agree were used to collect data on POS service innovation and the results are presented below using descriptive statistics of percentages and mean and standard deviation.

Table 4.4: Descriptive statistics on POS services perceptions

Outcomes on POS	Disagree (%)		NS	Agree (%)		Mean	S.D
	SDA	DA		A	SA		
1. I can easily operate the POS device	2.8	8.3	13.9	55.6	19.4	3.81	.951
2. I can easily make payments for good purchased using POS	44.4	30.6	2.8	19.4	2.8	2.06	1.241
3. I can easily make payments for services using POS	44.4	27.8	2.8	19.4	5.6	2.14	1.334
4. I can easily withdrawal cash from POS terminals	50	25	2.8	16.7	5.6	2.03	1.320
5. Using the POS gives me flexibility in making my financial transactions	5.6	5.6	5.6	63.9	16.7	3.73	.985
6. Using the POS is secure to me	8.3	5.6	2.8	61.1	22.2	3.83	1.108
7. Using the POS relieves me from the burden of carrying cash	11.1	5.6	5.6	47.2	30.6	3.87	1.261
8. Debit on POS devices are always accurate	5.6	5.6	13.9	36.1	38.9	3.97	1.134
9. The charges for using POS are always minimal to me compared to if it was not there	8.3	5.6	13.9	36.1	36.1	3.86	1.222

Source: Primary Data, 2016

Table 4.4 shows that the respondents agreed that 75% of the respondents agreed (mean = 3.81) that they could easily operate the POS device while 80.6% agreed that using the POS services allowed them the flexibility in making their financial transactions. A total of 83.3% indicated that POS was secure while 77.6% indicated that it saved them the burden on carrying cash. This finding suggested the POS was a good innovation that gave users flexibility to make financial transactions, in a secure way reliving them of burden of carrying cash.

However, 75% of the respondents disagreed (mean = 2.06) that they could make payments for goods purchased using POS, while 71.9% disagreed (mean = 2.14) that they good make payments for services using POS devices and 75% disagree (mean = 2.03) with ease of using POS to make cash withdrawals from their account. The implication was that whereas the POS was useful and offered flexibility to effect transactions, it was not readily available in many places for customers to make payments for goods and services and making cash withdraws. There was need to wide distribution of POS devices where customer can use their Centenary accounts to effect payments and make cash withdraws.

In an interview on experiences with the e-banking platform used by Centenary Bank, an e-banking official noted:

> *"The e-banking platforms have many benefits to the customers; The POS machines are conveniently located in shopping centers and hence saving the customer time that would have spent in the banking halls lining to withdraw money and the burden of travelling with cash".*

4.6 Descriptive statistics on Customer Loyalty

Customer loyalty was the dependent variable used in the study and had the indicators of commitment to bank products or services and positive word of mouth measured using 8 items scored on 5-point Likert scale ranging from (1) for strongly disagree (2) for disagree, (3) for not sure (4) for agree (5) for strongly agree. The results of the customer loyalty are presented below using descriptive statistics of percentages, mean and standard deviation.

Table 4.5: Descriptive statistics on Customer Loyalty

Outcomes on Customer Loyalty	Disagree (%)		NS	Agree (%)		Mean	S.D
	SDA	DA		A	SA		
Commitment to bank products and services							
1. I seek Centenary Bank products/services because it is the best choice for me.	2.7	5.3	5.3	46.7	40	4.16	.945
2. If I had to seek for financial services, I would still look for Centenary bank products/services	4	5.3	12	62.7	16	3.81	.911
3. I intend to keep seeking financial products/services from Centenary bank	4	16	8	58.7	13.3	3.61	1.038
4. I can tolerate mistakes done by Centenary bank	45.3	26.7	10.7	13.3	4	2.04	1.213
5. I see no reason why I should leave Centenary bank	13.3	5.3	8	57.3	16	3.57	1.221
Word of Mouth							
6. I say positive things about Centenary Bank to the people I meet	26.7	32	20	17.3	4	2.40	1.174
7. I always recommend Centenary Bank to people who seeks my advice on commercial banks in Uganda	25.3	21.3	14.7	34.7	4	2.71	1.292
8. I have a positive emotional relation to Centenary Bank and I feel attached to it.	29.3	24	16	26.7	4	2.52	1.277

Source: Primary Data (2016)

Table 4.5 above shows that majority of 86.7% agreed (mean = 4.16) that they considered Centenary Bank products/services as their best choice with some (S.D = 0.945) having differing views about the statement; while 78.7% agreed (mean = 3.81) that they would always seek for

financial services only from Centenary Bank products/services. A S.D of 0.911 indicates that some of the respondents held views to the contrary. A total of 72% of the respondents agreed (mean = 3.61; S.D = 1.038) that they intended to keep seeking financial products/services from Centenary bank. However, a sizeable while 73.3% agreed (mean = 3.57) would not leave Centenary bank. However, a total of 72% disagreed (mean = 2.04) disagreed that they could tolerate mistakes done by Centenary Bank. The findings reveal high level of commitment to the bank products as more than 7 in every 10 customers preferred Centenary Banks products and would seek for financial services from the same bank, intended to continuously seek financial products/services from the bank and were not contemplating to leave the bank.

Table 4.5 however shows that majority of 58.7% of the respondents disagreed (mean = 2.40) saying positive things about Centenary Bank to the people they meet while a total of 46.6% of the respondents disagree that always recommend Centenary Bank to people who sought advice on commercial banks. A total of 53.3% disagreed having a positive emotional relation to Centenary Bank and felt attached to it. These findings reveal a low level positive word of mouth, as about half of the banks customers had not considered promoting the bank by sharing their positive experiences with the bank. There was need to explore the option of using the banks existing customers to promote the bank using positive word of mouth.

4.7 Correlation Analysis

4.7.1 Correlation results between Automated Payment Systems and Customer Loyalty at Centenary Bank.

To test the relationship between APS and customer loyalty, Pearson's correlation analysis was conducted at the 2-tailed level and the findings are presented below.

Table 4.6: Correlation Matrix between APS and Customer Loyalty at Centenary Bank

		APS	Loyalty
APS	Pearson Correlation	1	
	Sig. (2-tailed)		
Loyalty	Pearson Correlation	.607**	1
	Sig. (2-tailed)	.000	
**. Correlation is significant at the 0.01 level (2-tailed); P<0.05			

Source: Primary Data (2016)

Table 4.6 above shows Pearson's correlation coefficient r = 0.607** and p = 0.000 between APS and customer loyalty suggesting that there was a high positive significant relationship between the variables. This also means that improvement of APS innovations results into improved customer loyalty. The managerial implication is that customer loyalty to bank significantly depends on the e-banking service innovations where customers can be affected by automated payments using self-serving technologies. These study findings on the relationship between APS and customer loyalty are supported by Davis' (1989) perceptions on the use of technology where customers chose to use technology based on their perception of ease of use; or the need for less physical and mental effort in getting output and is based on subjective opinions of customers. He further contends that use of new technology offers relative advantage or perceived usefulness in form of improved economic, financial, physical or social wellbeing. The study findings on the relationship between APS self-serving innovations are supported by previous studies conducted by Sousa, et al (2009) citing a Ghanaian study which found that students' loyalty in retail banks in Ghana was based on availability of electronic bank services especially ATM. Huettinger, and Cubrinska (2011) equally found that consumers with a positive attitude towards self-service machines express an increased attraction to service providers leading to enhanced loyalty.

4.7.2 Correlation results between PC banking and Customer Loyalty at Centenary Bank.

To test the relationship between PC banking and customer loyalty, Pearson's correlation analysis was conducted at the 2-tailed level and the findings are presented below.

Table 4.7: Correlation Matrix between PC Banking and Customer Loyalty at Centenary Bank.

Variable		PC	Loyalty
PC	Pearson Correlation Sig. (2-tailed)	1	
Loyalty	Pearson Correlation Sig. (2-tailed)	- 0.002 .986	1
** Correlation is significant at the 0.01 level (2-tailed); P<0.05			

Source: SPSS Output, 2016

Table 4.7 above shows Pearson's correlation coefficient r = - 0.002 and p = 0.986 between PC banking and customer loyalty suggesting that there was a negative and insignificant relationship between the variables. This also means that an increase in the prevailing status of PC banking self-serving technologies would result into reduced loyalty of the targeted PC customers. There was need to revisit the strategy prior rolling out of PC banking technologies if PC customer loyalty is to be harnessed. The findings seem to agree with Sousa and Voss (2009) who acknowledge that there are negative effects of computer based banking; and that e-service failures have a negative effect on customer loyalty intentions. He recommends that e-service delivery systems should be designed with a strong failure-prevention. However, the findings contradict with the views of Casalo, Flavian, Guinaliu (2008) who in their study note that perceived reputation and satisfaction have a direct and significant effect on consumer loyalty to a

financial services web site. The study concludes that the proper management of both customer needs and corporate reputation will help to increase customer loyalty and, as a consequence, the retention-rate and profits in the e-banking business.

4.7.3 Correlation results between POS services and Customer Loyalty at Centenary Bank.

To test the relationship between POS services and customer loyalty, Pearson's correlation analysis was conducted at the 2-tailed level and the findings are presented below.

Table 4.8: Correlation Matrix between POS services and customer loyalty to Centenary Bank.

Variables		POS	Loyalty
POS	Pearson Correlation	1	
	Sig. (2-tailed)		
Loyalty	Pearson Correlation	.651**	1
	Sig. (2-tailed)	.000	
** Correlation is significant at the 0.01 level (2-tailed); P<0.05			

Source: SPSS Output, (2016)

Table 4.8 above shows Pearson's correlation coefficient r = 0.651** and p = 0.000 between POS and customer loyalty suggesting that there was a high positive significant relationship between the variables. This also means that improvement of POS service innovations would result into improved customer loyalty. The managerial implication was that customer loyalty to the bank significantly depends on the e-banking service innovations where customer can easily use POS devices to effect financial transactions. These study observations on the relationship between POS and customer loyalty echo previous studies such as Mahajar and Yunus (2010) who found a significant value between access to POS and customer's loyalty while Balogun, et al (2012)

found that use of secure POS terminals enhanced customer satisfaction with e-banking in Nigeria. Balogun, et al (2012) recommends that management should improve on the service quality, increase the numbers of POS while also ensuring security of data and transactions effected on the POS.

4.8 Conclusion

Conclusively, the chapter presented and discussed the study findings as per the tools of data collection on e-banking innovations and customer loyalty in Centenary bank. It specifically presents the response rate, the background information about the respondents, results of customer loyalty (the dependent variable), presentation and discussion of study findings in relation to the specific objectives of APS and customer loyalty, POS and customer loyalty, PC banking and customer loyalty. Some of the findings concurred with the existing literature while in some other cases, findings differed greatly hence creating a knowledge gap. It's on this premise that the study claims to have created knowledge over such areas under study.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.0 Introduction

This chapter provides a summary of findings, conclusions, and recommendations of the study based on the study finding and discussions of e-banking innovations and customer loyalty in Centenary bank. The first section presents the summary of the study findings. This is followed by the conclusions and recommendations of the study findings in relation to the study objectives.

5.1 Summary of Findings

5.1.1. Automated payment systems and customer loyalty at Centenary Bank

The study found out that APS users appreciated the ATM services for being easily accessible in making withdrawals, cash deposits and obtaining of bank statements at their convenience. They were, however, constrained to effect internal transfers and payment of utilities across the ATM. Mobile phone linkage with account innovations was most appreciated APS as majority used it to effect utility bills payment, transfer payments and load airtimes with accurate transactions reflected on their accounts.

The study found a high and positive significant relationship between APS innovations and customer loyalty suggesting that the efforts to use self-serving technologies of ATM and mobile phone enabled transactions to effect payment significantly contributed to customer loyalty in the bank.

5.1.2. PC banking and customer loyalty to Centenary bank

The study found out that a low level of rolling out of PC banking services innovations to corporate entities as they could only access prompt and accurate bank statements but could not

affect supplier, salary and NSSF payment using PC banking at their premises. The study finds no significant relationship between PC banking and customer loyalty implying that the prevailing status of PC banking self-serving technologies where not contributing to targeted PC customer loyalty.

5.1.3. PC banking Services and customer loyalty to Centenary bank

The study found out that POS users could easily operate the POS device which offered them flexibility, relived them of burden to of carrying cash and charges where accurate and affordable. The Centenary POS system was however not regularly used to effect payments for goods or services or cash withdraws in the areas it has been deployed. The study found a high positive significant relationship between POS innovations and customer loyalty suggesting that the efforts to use POS if rolled out expeditiously will significantly contribute to customer loyalty in the bank.

5.2. Conclusions of the Study

The study concluded that the e-banking innovations where they have significantly been rolled out like in areas of APS and POS, they have been instrumental in contributing to customer loyalty in Centenary bank. Efforts directed to expeditious rolling out and strengthening of the e-banking platform will significantly enhance customer loyalty in the indigenous bank.

5.2.1. Automated payment systems and Customer Loyalty at Centenary Bank

The study concluded that there were significant gaps in using ATM to effectively make use of internal transfers and payment of utilities, and that a combination of ATM and Mobile phone

banking innovations significantly contributed to customer loyalty through commitment to the bank products/service and positive word of mouth.

5.2.2. PC banking and Customer Loyalty at Centenary Bank

The study concludes that delays in expediting the roll out of PC banking modules where corporate entities can effect supplier, salary and NSSF payments using PC banking at their premises was constraining customer loyalty in the bank. There was need to expedite the process of rolling out PC banking for enhanced commitment to bank services and positive word of mouth among targeted PC banking users.

5.2.3. POS banking Services and customer loyalty to Centenary bank

The study concluded that although the POS devices were useful in enhancing customer loyalty in a significant segment of customers, its non-availability in key areas to be used to effect payments for goods or services or cash withdraws in the areas constrains customer loyalty. There is need for an expeditious process of rolling out the use of POS devices for enhanced customer loyalty.

5.3. Recommendations of the Study

The study findings point to significant low use of ATM services to effect internal transfers and payment of utilities, low level of rolling out PC banking and distribution of POS to high potential areas of use. It is on this basis that this study recommends that the management of the bank should engage the e-banking technology providers to expedite the roll out process of the PC and POS self-servicing technologies for enhanced customer loyalty. The e-banking unit in liaison with internal and external stakeholders should undertake development of rollout work plans, their monitoring and reporting for management action.

5.3.1. Automated payment systems and customer loyalty to Centenary bank

To enhance customer loyalty in Centenary bank, the study recommends that the management of bank should configure the ATM to make internal transfers and utility bill payments. Conducting of customer education promotion and awareness using the print and electronic media to equip users with the necessary knowledge and procedures should be sought.

5.3.2. PC banking and customer loyalty to Centenary bank

To enhance PC banking segment customer loyalty, the study recommends that the management of the bank in consultation with internal and external stakeholders should develop a work plan for expediting the roll out of PC banking modules where targeted corporate users of PC banking can affect supplier, salary and NSSF payments using PC banking at their premises. Bench marking with other international banks could be sought to aid the rolling out process.

5.3.3. POS banking Services and customer loyalty to Centenary bank

To enhance customer loyalty in Centenary bank, the management of the bank in liaison with internal and external stakeholders should link customer accounts with readily available POS device service providers through an interconnection switch and new Centenary bank POS devices where customer can effect payments for goods or services or cash withdraws especially in rural areas. Working with Microfinance institutions in rural areas, supermarkets, petrol stations and chain stores could be sought to enhance POS services.

5.4 Areas for further study

The study found that the use of mobile phone based financial transactions were the most widely used forms e-banking innovations albeit in urban areas. Other studies need to examine the

mechanisms for strengthening the use of commercial financial institutions with mobile money services for enhanced financial inclusion in rural areas of Uganda.

REFERENCES

Alagheband, P. (2006). Adoption of electronic banking services by Iranian Customers, MA thesis, Lulea University of Technology, http://www. epubl.ltu.se/1653-0187/2006/49/LTU

Al-Majali, M & Mat, N (2010), Application of Decomposed Theory of Planned Behavior on Internet Banking Adoption in Jordan. *Journal of Internet Banking and Commerce*. 15(2), 221-238.

Al-Samadi, M. O., & Al-Wabal, S. A. (2011). The impact of e-banking on the performance of Jordanian banks. Journal of Internet Banking & Commerce, 16(2), 1-10.

Arnaboldi, F., & Claeys, P. (2008). Internet banking in Europe: a comparative analysis. Research Institute of Applied Economics Working Papers, No. 2008/11.

Amin, M.E. (2005). *Social Science Research: Conceptions, methodology & Analysis*, Makerere University Printers, Kampala Uganda.

Arunachalam, L. and Sivasubramanian, M. (2007). The future of Internet Banking in India,

Academic Open Internet Journal, 20(3), 49-62.

Balogun, O.J., Ajiboye, F.A., and Abimbola. D.T. (2012). An Investigative Study on Factors

Influencing the Customer Satisfaction with E-Banking in Nigeria, *International Journal of Academic Research in Economics and Management Sciences*, 2 (6) 64-78

Baldinger, A.L. and Rubinson, J., 1996. Brand loyalty: the link between attitude and behavior.

Journal of Advertising Research, 36, 6, pp 22-35.

Bhattacharya S K (1997), "The Need of Optimizing Banking Industry Structure", The Journal of

Indian Institute of Bankers , Jan-Mar 1997.

Bhattacharya, C.B.; Fader, Peter S.; Lodish, Leonard M. and DeSarbo, Wayne S. (1996). "The

Relationship between the Marketing Mix and Share of Category Requirements", *Marketing Letters*, Vol. 7 Issue 1, p. 5-18.

Boateng, R. (2011). When the lights go out. A Resource-Based Theory Analysis of E-commerce in Developing Countries: The Case of Ghanaian Firms, Ghana: Pearl Richards Foundation and Craft Concepts

Bove, L.L. and Johnson, L.W. (2009), "Does 'true' personal or service loyalty last? A longitudinal study", *Journal of Services Marketing*, Vol. 23 No. 3, pp. 187-194.

Buell, R. W., Campbell, D. and Frei, F. X. (2010). "Are Self-Service Customers Satisfied or Stuck?" *Production and Operations Management*, Vol. 19, No. 6, pp. 679–697

Bultum, A.G. 2014, Factors Affecting Adoption of Electronic Banking System in Ethiopian Banking Industry, *Journal of Management Information System and E- commerce,* Vol. 1, No.1.

Casalo, L., Flavian, C, and Guinaliu, M. (2008). 'The Role of Perceived Usability, Reputation, Satisfaction and Consumer Familiarity on the Website Loyalty Formation Process', *Computers in Human Behavior,* 24(2), 325- 345.

Centenary Bank Annual report, 2013

Chang, H.C. and Wang, H. (2011). The moderating effect of customer perceived value on online shopping behaviour, *Online Information Review*, 35(3), 333 – 35

Chen,W.C, (2011). Technology Base Self Service in Hospitality Industry" (2011). UNLV Theses/Dissertations/Professional Papers/ Capstones. Paper 1094.

Ciciretti, R., Hasan, I., & Zazzara, C (2009). Do Internet activities add value? Evidence from the traditional banks. Journal of Financial Services Research, 35(1), 81-98.

Dasgupta, S., Paul, R., and Fuloria, S (2011). Factors affecting behavioral intentions towards mobile banking usage: Empirical evidence from India. *Romanian Journal of Marketing*, 3(1), 6-28.

Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS Quarterly*, 13(3), pp. 319–340.

Deighton, J., Henderson, C.M., & Neslin, S.A (1994). The effects of advertising on brand switching and repeat purchasing. Journal of Marketing Research,16, 28-43.

DeYoung, R. (2001). The financial performance of pure play Internet banks. Federal Reserve Bank of Chicago, Economic Perspectives, Issue Q1, 60-75.

Dick, A. and Basu, K (1994). Customer loyalty: towards an integrated framework. *Journal of the Academy of Marketing Science*, *22 (2),* 99-113.

Edwin Agwu (2012). A Qualitative Study of the Problems and Prospects of Online Banking in Developing Economies – Case of Nigeria. Journal of Internet Banking and Commerce, 17(3).

Eriksson K & Nilsson D. (2007). Customer acceptance of internet banking in Estonia. *International Journal of Bank Market, 23* (2), 200-216.

Furst, K. L., & Nolle, D.W. (2002), "Internet Banking," Journal of financial Services Marketing, Vol.22, Issue 1/2 pp.95

Gbadeyan R.A and Akinyosoye,O.O (2011). Customers' preference for e-banking services: A case study of selected banks in sierra Léon. *Australian journal of business and management research*. 1(4), 108-116.

Gimun Kim., BongSik Shin., & Ho Geun Lee (2009). Understanding dynamics between initial trust and usage intentions of mobile banking. Information Systems Journal, 19(1), 283-311.

Gutu, L. M (2014). The impact of internet technology on the Romanian banks performance. 12th Internetional Academic Conference, Prague, 1 September 2014.

Haniotakis, I., and Lymperopoulos, C (2009). Service quality effect on satisfaction and word-of-mouth in the healthcare industry. *Managing Service Quality*, 19(2), 229-242.

Hasan, I (2002). Do Internet activities add value? The Italian bank experience. Fondo Interbancario Di Tutela Dei Depositi, Essays, No. 2, July.

Hauser, J. R., Simester, D. I., & Wernerfelt, B (1994). Customer satisfaction incentives. *Marketing Science*, 13(4), 327-350.

Herington, C. and Weaver, S. (2007). 'Can banks improve customer relationship with high quality online services?' Managing Service Quality, 17: 404–427

Holetzky S. (2009). What is customer Loyalty? Wise GEEK features. Retrieved December 19, 2009, from www.wisegeek.com

Hosein, S. S. M. (2013). Consideration the effect of e-banking on bank profitability; Case study selected Asian countries. Journal of Economics & Sustainable Development, 4(11), 112-117.

Huettinger, M., and Cubrinska, V. (2011) Unmanned Bonds: the Impact of Self-Automated Service on Consumer Loyalty. *Engineering Economics*, 2011, 22(2), 203-213

Jagero N. and Abeka, S. O. (2011), Corporate Customers Usage of Internet Banking in East Africa, *International Journal of Computer Science Issues*, 8(5), 219-231.

Kagan, A Acharya, R. N., Rao, L.S., & Kodepaka, V. (2005). Does Internet banking affect the performance of community banks? American Agricultural Economics Association Annual Meeting, July 24-27, 2005, Providence, Rhode Island.

Kamrul, H.A.F.M. (2009). Electronic Money and Banking Activities in Bangladesh – Implications for Central Bank, *The Indian Journal of Commerce*, 57(1), 51-63

Kassim, N., & Abdullah, N. A (2010). The effect of perceived service quality dimensions on

customer satisfaction, trust, and loyalty in e-commerce settings: A cross cultural analysis. *Asia Pacific Journal of Marketing and Logistics*, 22(3), 351-371.

Khan, S. K. (2007). Adoption Issues of Internet Banking in Pakistani's Firms, Lulea University of Technology, Sweden. epubl.ltu.se/1653- 0187/2007/009/LTU-PB-EX-07009-SE.pdf

Khrawish, H. A., & Al-Sa'di, N. M (2011). The impact of e-banking on bank profitability: Evidence from Jordan. Middle Eastern Finance & Economics, Issue 13, 142-158.

Kotler, P., and Keller, K.L (2006). Marketing management 12th Edition, Upper Saddle River, New Jersey: Pearson Prentice Hall.

Krejcie, R.V. and Morgan, D.W (1970). Determining sample size for research activities. *Educational & Psychological Measurement*, 30, 607-610.

Laura A. Costanzo., Kevin Keasey., & Helen Short (2003). A Strategic Approach to the Study of Innovation in the Financial Services Industry: The Case of Telephone Banking. Journal of Marketing Management, 19, 259-281.

Malak, J 2007, Readiness of the Palestinian banking sector in adopting the electronic banking system: exploratory study, MA thesis, The Islamic University of Palestine.

Malhotra, P., & Singh, B. (2006). The impact of Internet banking on bank's performance: The Indian experience. South Asian Journal of Management, 13(4), 25-54.

Malhotra, P., & Singh, B. (2007). Determinants of Internet banking adoption by banks in India. Internet Research, 17(3), 323-339.

Malhotra, P., & Singh, B. (2009). The impact of Internet banking on bank performance and risk: The Indian experience. Eurasian Journal of Business & Economics, 2(4), 43-62

Mubaraka, C.M., Uba, Z., & Gokyalya, S. (2013). Adoption and use of e-technologies in selected commercial banks in Uganda; Global *Journal of science management perspective;* 2(3), 132-135

Mugenda, O.M.S., and Mugenda A.G. (1999). *Research Methods Quantities and Qualities approaches*. Nairobi Act press.

Mugenda ,O. M and Mugenda (2003). *Research Methods: Quantitative and Qualitative Approaches Acts Press, Nairobi Kenya*

Mohammad Taqi Amini., Mustafa Ahmadinejad., & Mohammad Javad Azizi (2011). Adoption of Internet Banking by Iranian Customer: An Empirical Investigation. The International Journal of Management Science and Information Technology, 1(1), 47-64.

Ojokuku R.M and Sajuyigbe A.S (2012).The Impact of Electronic Banking on Human Resources

Performance in the Nigerian Banking Industry. *International Journal of Economic Development Research and Investment* 3(2), 61-69.

Olanipekun, W.D, Brimah, A.N and Ajagbe, S.T (2013). Role of Electronic Banking in Enhancing Human Resource Performance and Customer Satisfaction: Evidence from Guaranty Trust Bank PLC, Nigeria. *International Journal of Business and Behavioral Sciences*. 3(4), 36-44.

Oliver, R. L. (1999). Whence Consumer Loyalty? *Journal of Marketing*, 63, Special Issue, (33-44).

Ongkasuwan M., & Tantichattanon, W. (2002). A Comparative Study of Internet Banking in Thailand.

Pigni, F., Ravarini, A., Tagliavini, M., & Vitari, C. (2002). Bank strategies and the Internet: An interpretation of the banking industry on the Italian retail market. Journal of Information Technology Case & Application Research, 4(3), 8-37.

Rabi, A. and Boostani, Z. (2011). Barriers of Electronic Banking Development Study Case: Saman Bank, *Interdisciplinary Journal of Contemporary Research In Business,3(5),* 311-324.

Reinartz, W. and Kumar, V., 2000. On the profitability of long-life customers in a noncontractual setting: an empirical investigation and implications for marketing. *Journal of Marketing*, 64 (4), 17-35.

Rogers, E.M. (1983). *Diffusion of Innovations.* Free Press: New York.

Sadi, A. H. M. S., Azad. I., & Noorudin, M. F. (2010). The prospects and user perceptions of m-banking in the Sultanate of Omen, *Journal of Internet Banking and Commerce*, 15(2), 1-11

Siam, A. Z. (2006). Role of the Electronic Banking Services on the Profits of Jordanian Banks. *American Journal of Applied Sciences,* 1999-2004.

Sohail,M.S., and Shanmugham, B.E. (2003). E-banking and customer preferences in Malaysia: an empirical investigation. *Information Sciences*, 150,207-17.

Sousa, R. and Voss, C (2009). The effects of service failure and service recovery on customer loyalty in e-services: An empirical investigation, *International Journal of Operations & Production Management,* 29(8), 834-864.

Sullivan, R. J. (2000). How has the adoption of Internet banking affected performance and risk in banks? Federal Reserve Bank of Kansas City, Financial Industry Perspectives, 1-16.

Sumra, S. H., Manzoor, M. K., Sumra, H. H., & Abbas, M. (2011). The impact of e-banking on

.

the profitability of banks: A study of Pakistani banks. Journal of Public Administration & Governance, 1(1), 31-38.

Taylor, S., & Todd, P (1995). Understanding information technology usage: A test of competing models. *Information Systems Research*, 6(2), 144–176.

Teoh, W.M., Chong, S.S., Lin, B., and Chau, J.W (2013). Factors affecting consumers' perception of electronic payment: an empirical analysis, *Internet Research*, 23(4), 465 – 485

Thandos, K., Christos, T. and Nicos, K (2010). Internet marketing in football clubs: a comparison between English and Greek website, *Soccer and Society*, 11(3), 291–307.

Turban, D. (2008). Electronic commerce: a managerial perspective, 4th Edition.

Weigelt, C., & Sarkar, M.B. (2012). Performance implications of outsourcing for technological innovations: Managing the efficiency and adaptability trade-off. Strategic Management Journal, 33, 189-216.

Yang, Y.J. (1997), The Security of Electronic Banking, 20th NISSC Proceedings, Baltimore, Maryland, October, Available at: http://csrc.nist.gov/nissc/1997/proceedings/041.pdf.

Yin, R.K (2004). *Case Study Research Design and Methods*, Sage, Newbory, Park

Yu, J. & Guo, C (2008). An exploratory study of ubiquitous technology in retail banking, *Academy of Commercial Banking and Finance*, 8(1), 7–12

Appendix I: Study Questionnaire

Dear Sir/Madam

I am a Master's of Business Administration student at Uganda Martyrs University. I am conducting a study on e-banking and Customer Loyalty at Centenary Bank as a partial requirement for the degree award. You have been selected in your category as a respondent to provide us with your views on this study based on your experiences in using the e-banking platform. Your views will be treated confidentially and at no moment will it be used against you.

SECTION A: BACKGROUND INFORMATION

1. Gender: Male [ ] Female [ ]
2. Highest level of education: Primary [ ] Secondary [ ] Certificate [ ] Diploma [ ] Degree [ ] Postgraduate [ ]
3. Occupation: Government Employee [ ] Private Sector Employee [ ] Business owner [ ] Others (specify)…….
4. Time taken Banking with Centenary bank: Less than a year [ ] 1-4 years [ ] 5-9 years [ ] 10+ years [ ]
5. Type of account held by a customer in Centenary bank: Savings account [ ] Fixed deposit account [ ] Current account [ ] Both Savings and Current account [ ]

SECTION B: AUTOMATED PAYMENT SYSTEM

Instructions

Indicate the extent to which you agree with the following observations on automated payment system by ticking (5) strongly agree (4) agree, (3) not sure (2) disagree (1) strongly disagree**.**

Variable	**1**	**2**	3	4	**5**
1. I can easily access Centenary bank ATM service	1	2	3	4	5
2. I can easily make withdrawals across the ATM	1	2	3	4	5
3. I can easily make cash deposits across Centenary bank ATM	1	2	3	4	5

4. I easily receive bank statements across Centenary bank ATM	1	2	3	4	5
5. I easily make internal transfers across Centenary bank ATM	1	2	3	4	5
6. I can now effect utility bill payments using the ATM	1	2	3	4	5
7. I can now effect utility bill payments using my mobile phone	1	2	3	4	5
8. I can now transfer payment from my Centenary bank account using my mobile banking	1	2	3	4	5
9. I can now load airtime to on my phone using my Centenary bank account	1	2	3	4	5
10. Transactions made from my account using mobile banking are always accurate	1	2	3	4	5

SECTION C: PC BANKING

Instructions

Indicate the extent to which you agree with the following observations on PC banking by ticking (5) strongly agree (4) agree, (3) not sure (2) disagree (1) strongly disagree**.**

Variable	**1**	**2**	3	4	**5**
1. I can easily access PC banking at the convenience of my office	1	2	3	4	5
2. I always make PC banking payments to our suppliers without having to move to Centenary bank	1	2	3	4	5
3. I always make salary payments using PC banking without having to move to Centenary bank	1	2	3	4	5
4. I always make NSSF payments using PC banking without having to move to Centenary bank	1	2	3	4	5
5. I can now effect funds transfers on out accounts with PC banking at the convenience of my office	1	2	3	4	5
6. I can get our bank statement using PC banking	1	2	3	4	5
7. PC banking transactions are always prompt	1	2	3	4	5
8. PC banking transactions are always accurate	1	2	3	4	5

SECTION D: Point of Sale (POS)

Instructions

Indicate the extent to which you agree with the following observations on using your Centenary bank the POS by ticking (5) strongly agree (4) agree, (3) not sure (2) disagree (1) strongly disagree**.**

Variable	**1**	**2**	3	4	**5**
1. I can easily operate the POS device	1	2	3	4	5
2. I can easily make payments for good purchased using POS	1	2	3	4	5
3. I can easily make payments for services using POS	1	2	3	4	5
4. I can easily withdrawal cash from POS terminals	1	2	3	4	5
5. Using the POS gives me flexibility in making my financial transactions	1	2	3	4	5
6. Using the POS is secure to me	1	2	3	4	5
7. Using the POS relieves me from the burden of carrying cash	1	2	3	4	5
8. Transactions made from account using POS devices are always accurate	1	2	3	4	5
9. The charges for using POS are always minimal to me compared to if it was not there	1	2	3	4	5

SECTION E: CUSTOMER LOYALTY

Instructions

Indicate the extent to which you agree with the following observations on customer loyalty by ticking (5) if strongly agree (4) if agree, (3) if not sure (2) if disagree (1) if strongly disagree

Variable	1	2	3	4	5
1. I feel secure whenever I enter Centenary bank premises	1	2	3	4	5
2. If I had to seek for financial services, I would still look for Centenary bank products/services	1	2	3	4	5
3. I feel comfortable whenever I transact with Centenary bank	1	2	3	4	5
4. I see no reason why I should leave Centenary bank	1	2	3	4	5

5. I say positive things about Centenary Bank to the people I meet	1	2	3	4	5
6. I always recommend Centenary Bank to people who seek my advice on commercial banks in Uganda	1	2	3	4	5
7. I have a positive emotional relation to Centenary Bank and I feel attached to it.	1	2	3	4	5
8. I orally oppose anyone who speak bad of Centenary Bank	1	2	3	4	5

Thank you very much for your contribution and valuable time

Appendix II: Interview Guide (for APS, PC-Banking and POS customers)

1. For how long have you offered e-banking services to Centenary customers?
2. What are your experiences with the e-banking platform used by Centenary bank?
3. What are the challenges your customers have faced in using the e-banking platform?
4. What needs to be strengthened in the e-banking platform in Centenary bank?
5. What do you tell other people about e banking services?
6. Do you intend to continue offering e banking services to Centenary customers?

Appendix III: Sampling Table Guidelines

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.

Krejcie, Robert V., Morgan, Daryle W., "Determining Sample Size for Research Activities",

Educational and Psychological Measurement, 1970.