

**KEY INNOVATION DRIVERS IN THE ADOPTION OF E-BANKING PRACTICES  
IN KENYA: A CASE STUDY OF NIC BANK KENYA LTD**

**BY**

**JEREMIAH W. KIWANUKA**

**SUPERVISOR**

**VICTOR MONAYO**

**RESEARCH PROJECT SUBMITTED IN PARTIAL FULFILLMENT OF THE  
REQUIREMENT FOR THE AWARD OF MASTER OF SCIENCE IN MARKETING  
DEGREE IN THE SCHOOL OF BUSINESS AT THE UNIVERSITY OF NAIROBI**

**NOVEMBER 2016**

**DECLARATION**

I, the undersigned, declare that this project is my original work and that it has not been presented in any other university or institution for academic credit.

Name: Kiwanuka Jeremiah Wang'ang'a

Reg. No. D65/71550/2014

Signed.....

Date.....

**Supervisor**

This proposal has been submitted for examination with my approval as university supervisor.

Name: Victor Monayo

Signed.....

Date.....

## **ACKNOWLEDGEMENT**

I would like to acknowledge and appreciate the support I received from various people during the research process. I would like to especially thank The University of Nairobi in particular the School of Business for the opportunity to study with them, my supervisor Mr. Victor Monayo for the academic direction and patience throughout the process. I would also like to sincerely thank my bank colleagues for being part of this study. I am forever thankful.

## **DEDICATION**

This research project is dedicated to my daughter, Ivy, and to the entire Kiwanuka family. Thank you for the encouragement, belief and prayers. God bless you.

## TABLE OF CONTENTS

DECLARATION .....	I
ACKNOWLEDGMENT .....	II
<b>DEDICATION .....</b>	<b>III</b>
<b>LIST OF TABLES.....</b>	<b>IV</b>
<b>LIST OF FIGURES.....</b>	<b>V</b>
<b>ABBREVIATIONS AND ACRONYMS.....</b>	<b>VI</b>
<b>ABSTRACT .....</b>	<b>VII</b>
<b>CHAPTER ONE: INTRODUCTION.....</b>	<b>1</b>
1.1 Background of the study.....	1
1.1.1 Concept of Innovation.....	2
1.1.2 Consumer Adoption Process.....	3
1.1.3 E-banking Practices.....	3
1.1.4 The Kenyan Banking Industry.....	4
1.1.5 NIC Bank (K) Ltd.....	5
1.2 Research Problem.....	6
1.3 Research Objective.....	9
1.4 Value of the Study.....	9
<b>CHAPTER TWO: LITERATURE REVIEW.....</b>	<b>10</b>
2.1 Introduction.....	10
2.2 Theoretical Frameworks.....	10
2.2.1 Technology Acceptance Model.....	10
2.2.2 Innovation Diffusion Theory.....	11
2.2.3 Theory of Reasoned Action.....	12
2.3 Drivers of innovation adoption.....	12
2.4 Electronic banking channels.....	13
2.5 Technology and Service Delivery .....	14
<b>CHAPTER THREE: RESEARCH METHODOLOGY.....</b>	<b>16</b>
3.1 Introduction.....	16
3.2 Research Design.....	16
3.2 Data Collection.....	16

3.3 Data Analysis.....	17
<b>CHAPTER FOUR: DATA ANALYSIS, RESULTS AND DISCUSSIONS.....</b>	<b>18</b>
4.1 Introduction.....	18
4.2 Response Rate.....	18
4.3 General Information of the Respondents.....	18
4.3.1 Level of Education.....	18
4.3.2 Length of continuous service in the banking industry.....	19
4.3.3 Current Position and period held at NIC Bank Ltd.....	20
4.4 Theme I: Impact of innovation on e-banking practices.....	20
4.4.1 Theme I: Code co-occurrence mapping and comparison.....	23
4.5 Theme II: Evaluation of innovation impact on e-banking practices in NIC Bank Ltd.....	24
4.6 Theme III: Influence of innovation on customer adoption of e-banking practices.....	26
4.7 Theme II: Key innovation drivers in the adoption of e-banking practices.....	28
4.7.1 Frequency of primary codes quotes by respondents.....	29
4.7.2 Innovation and e-banking practices channels.....	30
<b>CHAPTER FIVE: SUMMARY, CONCLUSIONS &amp; RECOMMENDATIONS...32</b>	
5.1 Introduction.....	32
5.2 Summary and discussion of findings.....	32
5.3 Conclusions.....	34
5.4 Recommendations.....	35
<b>REFERENCES.....</b>	<b>36</b>
<b>APPENDICES</b>	
APPENDIX I: Interview Guide .....	42
APPENDIX II: Letter of Introduction.....	45
APPENDIX III: List of Commercial Banks in Kenya.....	46

## LIST OF TABLES

<b>Table 4.0</b>	Response Rate.....	18
<b>Table 4.1</b>	Respondents level of education.....	19
<b>Table 4.2</b>	Length of continuous service in the banking industry.....	20
<b>Table 4.3</b>	Position in NIC Bank Ltd.....	20
<b>Table 4.4</b>	Primary codes for the study.....	21
<b>Table 4.5</b>	Theme I: Codes, descriptions and frequency of quotations.....	22
<b>Table 4.6</b>	Theme II: Codes, descriptions and frequency of quotations.....	27

## LIST OF FIGURES

<b>Figure 4.1</b>	Theme I: Frequency of codes.....	23
<b>Figure 4.2</b>	Theme 1: Co-occurrence analysis of codes with primary codes.....	24
<b>Figure 4.3</b>	Theme II: Frequency of code occurrence in the interviewee responses.....	25
<b>Figure 4.4</b>	Theme II: Comparative analysis matrix of co-occurring codes.....	26
<b>Figure 4.5</b>	Theme III: Codes variations analysis for co-occurrence of innovations influencing adoption of e-banking practice.....	28
<b>Figure 4.6</b>	Theme III: Comparative analysis matrix of primary code co-occurrence.....	29
<b>Figure 4.7</b>	Theme III: Frequency of primary code quotes by respondents.....	30
<b>Figure 4.8</b>	Theme III: Comparative analysis matrix of Co-occurrence of innovations and e-banking practices channels.....	31
<b>Figure 4.9</b>	Theme II: Comparative analysis bar graph of co-occurrence of innovation and e-banking practices channels.....	31



## **ABBREVIATIONS AND ACRONYMS**

<b>ATM</b>	Automated Teller Machine
<b>CBK</b>	Central Bank of Kenya
<b>CRM</b>	Customer Relationship Module
<b>EFT</b>	Electronic Funds Transfer
<b>HPOs</b>	High performance organizations
<b>HR</b>	Human Resources
<b>ICT</b>	Information and Communication Technologies
<b>IT</b>	Information Technology
<b>MNO</b>	Mobile Network Operator
<b>MPESA</b>	Mobile wallet service provided by MNO Safaricom Kenya Ltd
<b>NIC</b>	National Industrial Credit
<b>NSE</b>	Nairobi Securities Exchange
<b>PIN</b>	Personal Identification Number
<b>PC</b>	Personal Computer
<b>PDF</b>	Proprietary Format
<b>POS</b>	Point of Sale
<b>ROI</b>	Return on Investment
<b>RTGS</b>	Real Time Gross Settlement
<b>SME</b>	Small and Medium size Enterprises
<b>SMS</b>	Short Message Service
<b>SWIFT</b>	Society for Worldwide Interbank Financial Telecommunication
<b>USSD</b>	Unstructured Supplementary Service Data
<b>WAP</b>	Wireless Application Protocol
<b>WBDRG</b>	World Bank Development Research Group

## **ABSTRACT**

Today the pace of innovation change in the banking industry is fast and unrelenting. The effect on the day to day operations of banks and customer interactions with the institutions is fundamental and industry changing. New technologies have created new markets and opportunities for the banking sector, and thus managing and satisfying the customers in this new banking environment has become a key issue for industry players. Using NIC Bank (K) Ltd as a case study, this research will study the drivers for the adoption of e-banking practices in Kenya. The objectives of the study are: describe how innovation influences consumer adoption of e-banking practices in order to make credible conclusion and recommendations on future innovations inclinations that will impact on e-banking practices based on the current trends. The theoretical frameworks to guide the study are the innovation diffusion theory, theory of reasoned action, and technology acceptance model. Based on a review of the literature and the research objective, three key thematic areas are established: Industry-wide impact of innovation on e-banking practice; Innovation and e-banking practice in NIC Bank Ltd; and Influence of innovation on customer adoption of e-banking practices. For the research method the study qualitative methodology utilizing semi-structured individual in-depth interviews for data collection. The study will interview five senior officers in NIC Bank who actively engage in business strategy, planning and agenda setting at the financial institution. The collected data will be coded and analysed through qualitative content analytical tool ATLAS.ti version 7.5 and the findings presented in texts, charts, and tables. The study found that innovation for convenience, innovation for ease of use, innovation for safety, and innovation for reliability are fundamental in driving adoption of e-banking practices. Financial institutions are advised to conduct audits on their e-banking products and services with the mentioned innovations as key benchmarks to ensure that they focus strategy and implementation mechanics toward enhancing innovation for convenience, innovation for ease of use, innovation for safety, and innovation for reliability. This study will be useful to banks management and banking industry regulators to better understand the dynamics of innovation in influencing adoption of e-banking practices and to provide better ways of promoting e-banking and related cashless technology to their customers.

## CHAPTER ONE: INTRODUCTION

### 1.1 Background of the study

The impact of technological innovations on the day to day operations of banks and customer interactions with their financial institutions is changing fundamentally. Technological innovation by its nature is meant to ease people's efforts and to speed up performance (Clarke III, & Flaherty, 2005). Innovation is a key driver in the changing the banking industry, new technologies have created new markets, new opportunities as well as new risks for the banking sector, and thus managing and satisfying the customers in this new banking environment has become a pivotal issue for bank management and key stakeholders. Innovation offer the opportunity to rapidly scale up access to financial services using mobile phones, retail point of sales, and other broadly available access technological points. Financial inclusion is broadly defined as both access to and usage of appropriate, affordable, and accessible financial services (WBDRG, 2014). However the innovation must be in-line with the consumer behaviour trends in order to drive adoption. Consumers choose payments mode that reduce potentially time-consuming activity. Banking channels strategies needremodelling, in-line with consumer behaviour patterns paying credence to the emerging need for time-saving (ease of use), ease of access of channels (reliability), 'on-the-go' convenience, safety, social acceptance, price among others.

Firms need to be adaptive to environmental change (Dreyer & Gronhaug, 2004). Adaptation is a crucial challenge for organizations and an important theme in the strategy and organization theory (Sharfman & Dean, 1997). A business model refers to the logic of the firm, the way it operates and how it creates value for its stakeholders (Casadesus-Masanell & Ricart, 2009). In the financial industry, the adoption of e-banking is a business model strategy which departs from existing business operations and processes toward the creation of new value intrinsically and extrinsically.

This study utilizes theories established in social psychology to describe key innovations which are currently influencing the uptake of e-banking practice. Whereas the theories will be expounded on in detail in the next chapter in brief they include: The Innovation Diffusion Theory (Rogers, 1983) which posits that innovation adoption is a process of uncertainty reduction. The Theory of Reasoned Action (Fishbein & Ajzen, 1980) that argues that consumer behavior is predicted by the individual's intention to engage in a given behavior

and/or actions. And the Technology Acceptance Model (Davis, 1989) that guides on user acceptance and usage behaviour of information technology products and services.

According to CBK annual report 2015, NIC Bank is a second tier bank – ranked 10<sup>th</sup> in wallet share - among other commercial banks. The bank is locally owned and is listed in the NSE. It has been in operation for over 57 year in the Kenyan market. NIC Bank has a total of 35 branches in Kenya, 6 branches in Tanzania and 2 branches in Uganda. In April 2016 NIC Bank was appointed as receiver manager of Imperial Bank Limited In Receivership (IBLIR) by CBK. The regulator put the bank under receivership in October 2015 and sought NIC Bank's expertise as consultant in the receivership process due to its adherence to sound banking practice and its enviable position in the areas of asset finance and institutional banking.

### **1.1.1 Concept of Innovation**

Innovation is a dynamic, continual and commercialized idea that originates from an invention or innovator (Fagerberg, 2003). Kline and Rosenberg (1986) posits “it is a serious mistake to treat an innovation as if it were a well-defined, homogenous thing that could be identified as entering the economy at a precise date – or becoming available at a precise point in time.” In 1995 Well Fargo was the innovator of internet banking offering account statements on the Web and Security First Network Bank became the first Internet-only bank (Gandy, 1995). But this basic and structurally unsound offerings shy, in the face, of today's innovations that are complex, functional, far-reaching and structurally sound e-banking ecosystems.

Consequently, technological change importantly depends upon the transformation of inventions into suitable innovations and the subsequent adoption and diffusion of such innovation (Dicken, 2010). The innovation ecosystem is alive and continuous with every level requiring inputs of knowledge, alive in skilled persons and specialized equipment, and investment of time in using these resources. Innovations can be categorized by product or process: Product innovation is the introduction of a new product, or a significant enhancement in an existing product. Process innovation: the introduction of a new process for making or delivering goods and services. According to (Schumpeter, 1942) this can be

further be captured as; new products, new methods of production, new sources of supply, exploitation of new markets and new ways to organize business.

### **1.1.2 Consumer Adoption Process**

(Hawkins, Yen & Chou 2000) describe consumer adoption process as complex, disorganized, nonconscious, organic, and circular featuring several factors triggering problem recognition, information processing, brand (alternative) evaluation, purchase, use, disposition and evaluation. The adoption or rejection of an innovation begins when “the consumer becomes aware of the innovation” (Rogers & Shoemaker, 2001). Howard and Moore (2002) emphasized that adoption “consumers must become aware of a new brand.” This therefore predicates the need for implementation of precise marketing mix strategies that communicate clearly the features that address or generate the consumer problem.

An empowered or rational consumer uses available information to evaluate brands in order to select the best alternative. Schiffman and Kanuk (2007) describe a rational consumer decision as one where the consumer is aware of all the product features, where they have capability to correctly rank alternatives in terms of benefits and disadvantages and they are able to identify the best alternative. Consumers derive satisfaction and a sense of well-being from the purchase of brands and the quality of their possessions and any means that would enable consumers to satisfy their consumption needs is bound to be adopted (Ger & Belk, 1996).

The knowledge of consumer behaviour is critical for influencing decisions and therefore seeking to collect information about the target consumers involved in the marketing decision-making. Consumer attitudes toward a product will heavily influence how they go about building marketing campaigns (Wright, 2006): Analysing consumer utilization of the various e-banking alternate channels offerings for instance credit card, ATM, mobile and online banking access usage numbers that are readily available for banks significantly contribute in consumer trend mapping and sales forecasting.

### **1.1.3 E-Banking Practices**

The wave of technological development has intensified in recent years and is viewed as key toward growth in the sector (CBK report 2015). This is because e-banking innovations secure new and existing customers while reducing operational costs, reducing number of

middlemen, quick order execution, faster realisation of money, and global reach. Broadly, in banking, the essence of the popularity of the e-banking practice is in its capacity to reach the

customer outside the bank premises. Siau and Shen (2003) state that the features of alternative channels services like mobile banking, which can be seen as key drivers for adoption are: mobility, reachability, localisation and personalisation.

E-banking practices' are characteristic of this paradigm shift from the brick-and-mortar model of banking to a brick-and-click model. They include and are not limited to, as innovation is dynamic, retail and corporate internet banking. Innovation mediated transactional interaction with the core bank system by the customer for instance consumer initiated and completed online wire transfers like RTGS and non-transactional engagements like checking account status. As well third party models, like agency banking that authorize bank agents to conduct banking business outside the bank premises, like card payment systems. E-banking practice also facilitates customer service delivery modules like online CRM systems allowing for account activity notifications, direct interactions between customers and bank personnel, customer information mapping and analysis. Identified benefits of the innovations that have contributed to e-banking practice adoption include 24 hours availability, do it yourself convenience of accessibility away from the bank branch, it is viewed as key feature for a customer-centric financial institution, increased ROI as a consequence of reduced operational costs, and expansion this technologies are not bound by geographical location and therefore can attract a customer base from any part of the country or globe (Dicken, 2010).

#### **1.1.4 The Kenyan Banking Industry**

Banking in Kenya traces its history to 1910 when banking services became available to the indigenous African population. The Post Office Saving Bank by 1911 had 1,231 accounts of which 684 belonged to Africans (Kenya Bankers Association). Banking and other financial institutions in Kenya are incorporated under the Companies Act (Chapter 486) of the Laws of Kenya. The banks are regulated by the Banking Act, the Central Bank of Kenya (CBK) Act, and other supplementary operational guidelines issued by CBK. The banks also practise self-regulation through the Kenya Bankers Association (KBA), which is also the main lobbying body for Kenyan banks. Currently the banking sector comprises 42 commercial banks of which 3 are public financial institutions, 10 banks listed on the NSE, 12 deposit taking microfinance institutions, 8 representative offices of foreign banks, 14 money remittances providers, 80 foreign exchange bureaus, 2 banks under statutory management

(Charterhouse Bank and Dubai Bank), 1 Bank in Receivership (Imperial Bank) and 3 Credit Reference Bureaus (CBK Report June 2016).

The current trend in the banking industry in Kenya is a push for full financial inclusion, this, mainly being driven by mobile money, and agency banking. Banks are also reaching to be players in the provision of insurance services. Agency banking is strongly emerging with the amendment of the banking act in 2009 that permitted banks to recruit third parties as outlets for certain banking services: By December 2015, 17 commercial banks and 3 microfinance banks had contracted 40,592 and 1,154 agents, respectively, this a significant increase from 4,745 banks' agents and 1,096 microfinance agents in 2014. Bancassurance entails the collaboration between insurance companies and banks. Banks sell and distribute insurance products. The bank only acts as a distribution channel for the provision of insurance products but does not undertake or engage in underwriting of risks. By the end of 2015, seven commercial banks had been granted approval to collaborate with insurance companies to provide Bancassurance services (CBK Annual Report 2015).

#### **1.1.5 NIC Bank (K) Ltd**

National Industrial Credit (NIC) Bank Limited was incorporated in 1959 obtaining a commercial banking licence in 1995. Today the institution has a total of 35 branches in Kenya, 6 branches in Tanzania and 2 branches in Uganda being served by a workforce of 1,111 employees. As at end of 2015 NIC bank had a total asset base of Kenya Shillings 165 billion with Kenya Shillings 112 billion held in customer deposits. The bank has strategic correspondent banking partnerships with Postbank in Kenya and Centenary Bank in Uganda. NIC Bank's mission is scaling growth through innovation (NIC Annual Report 2015).

The host of features customers can access on NIC bank e-banking portal include transaction and non-transaction services. These include: viewing of account balances, viewing of account details and transaction history; viewing of accounts associated with the main account such as term deposits, loans, and downloading and printing of statements in PDF or Excel formats, customers are also able to check their loans facility details, with highlights on the interest rates, interest accrued, principal outstanding, monthly repayment amounts and others. The transactional features real-time online payments RTGS and SWIFT; domestic and international transfers; amenities payments for instance water and electricity payments; airtime top up; make deposits to third party mobile wallet MPESA; and card payments.



The Bank provides numerous ATMs for secure and convenient access to customer accounts using a debit card. Through collaborative arrangements with various channel vendors like VISA, vastly improving the bank's ATM network and customer reach. NIC Bank's mobile banking service has been designed to make banking easier and convenient for the customer. It is accessible through two channels USSD, or the NOW mobile banking app. NOW banking is a dynamic online platform that provides customers with a secure, real-time, and fully-transactional financial management solution, all from the convenience of a smart phone. Among other things, the app enables the customer to make balance enquiry, top up their mobile phone with airtime, transfer money from their mobile money account (M-PESA) into their bank account, initiate RTGS transaction, pay for amenities, transfer funds from account to M-PESA, change their PIN number and request a mini statement(NIC Annual Report 2015).

## **1.2 Research Problem**

Innovations in ICT have now overcome most of the challenges of time and space in business. Without the advancement in ICT today's intricate digitized economic systems would not simply exist. With innovation at the heart of change, traditional business models are being remodelled or replaced with digitized models to maximize value for both businesses and customers. A premium is now placed on innovation toward exemplary service delivery by financial institutions. Banks are rapidly integrating end-user technologies like mobile banking into their business models (Hawkins, Yen & Chou, 2000), thus making it possible for consumers to link directly with core banking systems. This has led to more consumers becoming banked, as well as more interactive, inclusive and personalized banks. This is a major paradigm shift from the reclusive, intimidating and opaque banking hall of the past. However the transition from the traditional model to a flexible electronic business requires clear thinking, planning and investments in regards to the key innovations being propagated to influence sustainable growth for banks.

E-business practice can be viewed as the evolution of e-commerce from the buying and selling over the internet. "E-business refers primarily to the digital enablement of transactions and processes within a firm, involving only the information systems under the control of the firm" (Laudon and Traver, 2008).In the intensely competitive banking environment the introduction of continuous stream of innovative solutions becomes essential to a firm's

profitability and indeed its future prospects (Dicken, 2010). E-banking practice is a business model that not only generates additional revenue for financial institutions but also value addition including improving customer service, cost effective proprietary marketing and communication channels, and lower operational expenditure (Munyoki & Ngigi, 2011).

NIC Bank is a Kenyan owned and managed financial institution that is listed on the NSE. The bank's mission statement is scaling growth through innovation (NIC Annual Report 2015). The bank anchors its future growth strategies on leveraging on present technologies, enhancing technologies and investing in new technologies. Through the innovations NIC bank continually looks to grow its brand equity and market share. The bank has a dedicated research and development arm embedded within the IT department that is tasked with ensuring that bank's products and services are market competitive in terms of technological agility, usefulness and customer value addition qualities. And through the marketing and communication department every quarter the bank commissions' competitor research and analysis projects, in order to evaluate current trends innovation and technology based service delivery in the industry.

Internationally studies have been conducted in E-practices, Erasmus & Lebani(2009) on consumers' use of and satisfaction with store cards in shopping malls in Botswana, found that among others social factors, was a key influencers in adoption of the electronic payment product. The consumers' urge to improve their social status and to be accepted among their peers may become an important driving force to adopt store cards.

Further, Mlahotra, Normalini, and Ramayah, (2014) on factors affecting adoption of internet banking in India found that internet banking is an innovation as it embodies the creation of new products and the development of innovative enhancement of the existing offerings. It therefore constitutes an innovation both in the processes of production and in the distribution of financial services.

The study attributed low consumer adoption to the use of internet banking in India to the lack of trust consumers have in the electronic channel and in online merchants. Horst (2003) determinants of adoption of E-government services in the Netherlands, established that with the adoption by government and the citizenry of E-government services, questions around the security and integrity of online channels were raised. The main concern that information is sent electronically, and information is stored electronically implying that third parties can intercept, read and modify the information.

The concern for risk as key influencer in the adoption of e-banking practices services can be summarized to; the perception of risk compared on the actual risk, exposure of risk on previous experiences with the technology, and on the individual's perception to be able to control the consequences of the risk and the individual's level of trust in his own competences to cope with the risk.

Locally, various key studies on E-business practices have conducted (Munyoki & Ngigi, 2011) in their study challenges of E-banking adoption among commercial banks in Kenya found that E-banking is a manifestation of e-commerce due to the payment models and channels that are feature to E-commerce. The study points to two crucial factors that will influence the adoption of e-banking by the consumer. One, the need to have access to the internet in order to utilize the service and, second, the consumers need to first learn how to use the service.

Competitiveness and the subsequent need of differentiation are important concepts in the advancement of e-business innovations. Through a process of doing and learning banks like other businesses are continually evolving the electronic delivery channels in order for their products and services to be viewed as unique and most value adding to the customer. Findings of a study by Makokha (2012) internet banking acceptance model: evaluating behavioural intentions in the adoption of internet banking established that market share, or the strength of a bank, is positively related to its decision to provide internet banking. This is related to the need to provide their customers with the latest financial products and services.

Mutua, Oteyo and Njeru (2013) in their study, the extent of E-commerce adoption among small and medium enterprises in Nairobi conceived that SMEs cited that they benefited most from e-commerce "through improved marketing capabilities, access to global markets, support sales process and improved customer service". The study cites ignorance about E-commerce benefits as the main inhibitor to its adoption.

Muthoni and Kahonge (2015) E-verification: The missing component in E-recruitment a research thesis on online recruitment practice using coded algorithms to be shared between employers and learning institutions in order to verify authenticity of certificates, found that an electronic system not only improves security and data integrity by eliminating any phony certificates but also improves efficiency by reducing the process of authentication down to seconds.

The above cases fail to show how specific innovation (for instance innovation for convenience) affects adoption of e-banking practices in the financial industry. This study therefore describe what key innovations drive e-banking practices, how innovation influences consumer adoption of e-banking practices, and makes recommendations on future innovation inclinations that will impact on e-banking practices based on the current trends. The study aims to fill this gap through research on the patterns of innovation and the effect on banking consumers' behaviour.

This study examines how innovations influence the acceptance of e-banking practices in Kenya, with NIC Bank Kenya Limited as a case study.

### **1.3 Research Objectives**

The aim of this study is to establish the key innovation drivers of the adoption of e-banking practices at NIC Bank (K) Limited

### **1.4 Value of the study**

Commercial banking is undergoing rapid change as traditional avenues of income generation for the businesses are being significantly challenged. Commercial banks need to have a clear understanding of consumer attitudes toward their innovations– identifying this will provide better information to direct future planning for enhancement in e-banking practice for instance the emergent contactless point of sale terminal. This study will enable Kenyan banks adopt new strategies to cope with challenges and meet the specific customer needs in the use of e-banking facility.

This study provides useful insights for bank management on key findings in order to formulate strategies to successfully harness and oversee the potential in e-banking within its existing and pipeline customer base by facilitating a deeper understanding of key concerns around in e-banking practice for instance convenience, safety, reliability, product enhancements with practical recommendations.

From an academic view, the use of case study research strategy plays a major function in generation of hypothesis and building theory. This study, therefore, will be an important addition to existing discourse on digital technologies in the financial sector through qualitative content analysis.

The study will also provide different perspective on product and/or service adoption; and the influence of innovations as a major driver of the phenomenon.

## **CHAPTER TWO: LITERATURE REVIEW**

### **2.1 Introduction**

This chapter examines issues on the topic of this study, covering the theoretical framework, electronic banking channels, as well as technology and service delivery literature review.

### **2.2 Theoretical frameworks**

This study anchors on the following theories; the innovation diffusion theory (Rogers, 1983), theory of reasoned action (Fishbein & Ajzen, 1980), and technology acceptance model (Davis, 1989).

#### **2.2.1 Technology Acceptance Model (TAM)**

The Technology Acceptance Model (TAM) (Davis, 1989) offers a powerful explanation for user acceptance and usage behaviour of information technology products and services. It is one of the most influential models widely used in the studies of the determinants of technology acceptance (Venkatesh & Davis, 1996). That is because the theory has good applicability in understanding and predicting customer intention to use e-banking services. TAM suggests that attitudes predict intentions, and intentions predict behavior. According to the TAM, adoption behavior is determined by the intention to use a particular system, which in turn is determined by the perceived usefulness and perceived ease of use of the system.

TAM posits that an individual's behavioral intention to adopt a system is determined by two beliefs, perceived usefulness and perceived ease of use. Perceived usefulness is defined as "the degree to which an individual believes that using a particular system would enhance his or her productivity" while perceived ease of use is defined as "the degree an individual believes that using a particular system would be free of effort" (Davis, 1989). Between these two, perceived ease of use has a direct effect on both perceived usefulness and technology usage (Adams et al., 1992).

Pikkarainen et al. (2004) utilized the TAM to indicate that online-banking acceptance is influenced by perceived usefulness and knowledge concerning online banking services. Ma and Liu's (2004) findings from analysis of the TAM results in 26 selected empirical studies suggested a strong correlation between usefulness, ease of use, and acceptance.

The studies concluded that the relationship between ease of use and usefulness cannot be ignored, and that ease of system use has a strong impact on the consumers' perception of overall usefulness.

Davis (1989) has also found that there is a relationship between users' beliefs about a technology's usefulness and the attitude and the intention to use the technology. However, perceived usefulness exhibits stronger and more consistent relationship with usage than did other variables reported in the literature. In addition, an individual may adopt a technology if he or she perceives it as convenient, useful and socially desirable even though they do not enjoy using the technology (Quintane, Casselman, Reiche & Nylund, 2011). Consumer perception is highly influenced by the information made available on the usefulness, practicality and convenience of the IT systems. Therefore the study found that the need to communicate effectively to consumers using non-technical terms is crucial driving adoption. Awareness is also highlighted as being driven through user experience and information sharing 'word of mouth' with the early adopters communicating through a trickledown effect on the efficacy or otherwise lack of a particular IT based solution.

### **2.2.2 Innovation Diffusion Theory**

The earliest theory on technology acceptance is based on (Rogers, 1983) theory of diffusion of innovations (IDT). According to this theory, innovation adoption is a process of uncertainty reduction. To reduce uncertainty about the new technology, individuals will gather and synthesize information about the technology. Based on three decades of innovation study, five key attributes affecting the adoption of any innovation were suggested (Rogers, 1995). The five stages of the innovation decision process: knowledge of and access to the innovation; persuasion of a favorable attitude toward the innovation; decision to adopt; implementation of the innovation; and confirmation and repeat behavior of the innovation.

The theory posits that there will be an increased rate of diffusion and the decision to adopt an innovation if it is perceived to have a relative advantage, is compatibility with existing values, needs, and experiences, it is not unnecessarily complex, it is testable, and offers visibly, positive results (Rogers, 2003). Innovations vary in the degree of behavioral change required for their adoption. Resistance to innovations may be overcome when the innovation is perceived to provide value, involve minimal consumer learning, involve relatively high certainty, and is viewed as high in social relevance, legitimacy, and adaptability (Scarborough, 2013).

The internet represents information technology diffusion as well as a forum for the introduction of other technology and communications. Researchers have used (Rogers, 2003) Diffusion of Innovations theory to analyze the adoption process of computers and internet acceptance, consumer behavior, new market and product development (Aggarwal, 2000). Results concur that the compatibility and relative advantage of the internet has led to its quick diffusion in these applications. The internet has been found to be compatible with and enhance the efficiency of many business support functions like sales management through its various features allowing for fast and flexible communication, retrievable records, and cost effectiveness.

### **2.2.3 Theory of Reasoned Action**

The Theory of Reasoned Action (TRA) looks at beliefs within the individual to explain the adoption behavior (Morris & Dillon, 1997). The TRA hypothesizes that consumer behavior is predicted by the individual's intention to engage in a given behavior and/or actions.

TRA has been widely applied in a variety of research settings, from predicting the intention to seek psychological services for alcohol abuse (Codd & Cohen, 2003) to predicting the consumption of fats and oils (Saba & Di Natale, 1998). One of the key drivers of this phenomenon of reasoned action is the radically reduced cost of conducting transactions electronically (Minakakis & Rao, 1999). Thus most of the players in the financial services industry have recognised the fact that electronic banking is an area of major importance, and various versions of online banking are offered by all the major banks.

### **2.3 Drivers of Innovation Adoption**

Adoption can be defined as acceptance and continued use of a product, service or idea (Sathye, 1999). Innovation adoption by a consumer entails “a process in knowledge, conviction, decision and confirmation” (Rogers and Shoemaker, 2001), before they are ready to adopt a new product or service. O'Connell (1996) demonstrated that the explanation for slow growth of e-banking innovations as being caused by lack of knowledge about availability of such a service, unfriendly e-banking platforms, and security/reliability concerns.

Customer awareness of the availability of a service and its benefits has a critical impact on the adoption of the services (Pikkarainen, 2004). Sathye (1999) noted that low awareness of online banking is a key factor in causing customers not to adopt internet banking. In addition

Howcroft et al. (2002) found that lack of awareness of Internet banking services and its benefits is one of the reasons for consumers' reluctance to use Internet banking services.

Kotler and Keller (2008) cite key customer issues in e-commerce channels as absence of pleasurable experience (ease of use). Cooper (1997) identifies "ease of use" as one of the main characteristics from a customer's perspective for adoption of innovative service. Ease of use can be defined in the current context as a factor in which the self-service activity provides a clear interface and simple process to ensure customers can use it effectively. Davis (1989) defined ease of use as the degree to which a person believes that using a particular system would be free of effort. Given that internet-based transactions might seem complex and intimidating to many customers, ease of use becomes a key variable that must be conferred due attention if e-banking solutions are to receive widespread acceptance.

Safety and reliability of transactions over the internet is an important factor in technology driven services. An e-payment channel will not be effective and could even have undesirable effects if it does not work well. Some customers avoid electronic banking as they perceive it as being susceptible to hacking and other fraudulent acts like unacknowledged data mining. This is the individual's perception of risks and benefits as influencing adoption of e-banking practice. Perceived risk has formally been defined as a combination of uncertainty plus seriousness of outcome involved (Featherman & Pavlou, 2002). This perception can damage consumers' confidence of the online system. According to a study conducted by (Sathye, 1999) 73% of respondents avoided the adoption of online banking because they are concerned about the security of transactions over the internet. A reliable payment system should also have safeguards to protect against fraud and cyber-attacks (Allen et al., 2012)

#### **2.4 Electronic Banking Channels**

Channel strategy is concerned solely on how product and service will be delivered to a customer, factors to be considered when choosing a distribution network include whether the end customer is a consumer or another business (Hooley, et. al 2008). The distribution channel can be as short as a direct transaction from the vendor to the consumer, or may include several interconnected intermediaries before reaching the consume (Freidman, 1999). E-banking channels in this study will be defined in the term of e-banking practice as the provision of information, transactional and non-transactional services by a bank internally and to its customers via electronic wired or wireless channels, for example internet, mobile phone or smart (interactive) television (Daniel, 1999).



The internet of things has greatly remodelled the distribution strategies for many businesses. For instance in the entertainment industry – the need to purchase a Compact Disc (CD) is almost obsolete as the internet provides a channel that is less expensive, and personalized for the user to select, purchase and download music. The key as identified in a study by online giant firm *Amazon*, is to ensure that the efficiency in which customer are able to request product or services online is the same efficiency that their request is delivered through their preferred channel (emphasis on convenience).

In addition, to offering branch-based services via innovation, e-banking practices allows banks to offer new value-add services which are only available in an electronic environment, such as personalised financial information menus, account notifications on SMS and real-time financial brokerage. The wireless device has exponentially expanded the reach and scope of the Internet. Internet and mobile phone technology, both individually and as convergent innovations, have already profoundly impacted consumers (Barnes & Corbitt 2003). Through their capacity for provision of immediate and real-time information, the Internet and the mobile phone have allowed an unparalleled personalisation (Wah, 1999). This has seen then the provision of the time-critical information needed to conduct high value transactions, including participation in mobile auctions and the execution of mobile stock-trading. Financial institution profitability can be enhanced through increased penetration of existing markets or expansion into new markets (new branches). This is can be a limiting approach consequently the introduction of a continuous stream of new products becomes essential to a firm's profitability. Key to technological development is that it is gradual and incremental – a process of 'learning by doing' and 'learning by using' (Dicken, 2011).

## **2.5 Technology and Service Delivery**

Today technology runs through every part of the banking business, and the banking industry has provided fertile ground for the application of technological innovation since banking activities are easily digitised and automated (Bradley & Stewart 2003). Technological service delivery, in the form of either product or process innovations also generate competitive advantages based on cost and/or differentiation, which provide the firm with a greater competitive capacity (Eriksson et al., 1997). Many companies have included a brick-to-click model after seeing how much value is generated online. Innovations in the payment sector have led to the emergence of electronic payment service providers able to facilitate formal

payments even in the absence of traditional bank accounts, such as over-the-counter payments, mobile money payments, and payment cards. The digitization of financial service delivery leads to competitive solutions in the market and increases the availability of reliable, safe, and secures financial systems. “Empowering a diverse range of private-sector providers will increase competition, reduce costs, empower consumers, increase the scale needed for sustainability, and drive financial inclusion”, (WBDRG Report, August 2014).

To improve customer interaction and convert the interaction into transaction banks must make their websites fast, simple and easy to use. The widespread penetration of cell phones and smartphones allows people to connect to the internet and businesses to place orders, make enquiries or give feedback. The existence of mobile channels and media can keep consumers connected and interacting with a brand throughout their day-to-day lives (Kotler & Keller, 2008). The way consumers make daily payments has changed significantly in recent years due to innovations such as debit, credit and prepaid cards, online banking and mobile payments among others. Financial service delivery through electronic channels reduces the cost and increases the convenience of transactions, and may expand the pool of eligible account users and encourage existing account holders to use their accounts with greater frequency and for the purpose of saving (Allen et al., 2012). Time savings, usefulness and convenience are concepts which measure performance expectancy and positively influence the perception of service delivery. Evidently, technology’s impact on improved speed and timely delivery, contrasts to cash payments that travels at the speed of its carrier, innovation driven channels like mobile banking can be virtually instantaneous, regardless of whether the sender and receiver are in the same geographical country or continent.

To make e-banking technologies cost effective and sustainable for especially low-income populations will require the congruent application of various e-banking innovations like ATMs, POS terminals and online services. From a social view the widespread use of mobile phones in low-income strata means that the e-payment channels is key as it provides away to make or meet important financial obligation for instance making school fees payments, paying medical bills among others within social groups. Meaning developing an adequate physical network to deliver digital payments to all corners of the country is a significant challenge, one that is often underestimated (Zimmerman et al., 2014).

## **CHAPTER THREE: RESEARCH METHODOLOGY**

### **3.1 Introduction**

This chapter presents the research methodology for the study. It discusses the research design, data collection and analysis methods.

### **3.2 Research design**

A research design is the program that guides the investigator in the process of collecting, analysing, and interpreting observations (Frankfort-Nachmias & Nachmias, 2008). It is an action plan for getting answers to a given set of questions. In the study individual in-depth interviews is applied toward data collection. This study adopted a case study as a research strategy. Yin (2003), “the distinctive need for case studies arises out of the desire to understand complex social phenomena. The case study method allows investigators to retain the holistic and meaningful characteristics of real-life events”. This study used descriptive case study which deals with issues or events which have or are taking place.

### **3.3 Data collection**

For the in-depth interviews semi-structured interview guide were applied to collect primary data. In-depth interview is qualitative research technique that involves conducting intensive individual interviews with a small number of respondents to explore their perspectives on a particular idea, program, or situation (Boyce & Neale, 2006). The interview guide comprises 10 open-ended questions divided into 3 key themes: Each theme leading to the research objective, describing the effects of innovation as drivers affecting uptake of e-banking practice in chapters 1 and 2. Based on judgement sampling technique, the study interviewed four senior officers in NIC Bank who actively engage in business strategy, planning and agenda setting at the financial institution. Judgement sampling technique is used to collect data from people whose opinion is pivotal to the research because of their expertise and experience (Harrell & Bradley, 2009).

The identified respondents are: Senior Manager IT department; Head of Operations Nairobi region; Senior Officer Marketing and Communication; Assistant Manager Retail Banking; and Manager Alternate Channels & Money Transfer Services. The interviews will be done face-to-face or on telephone depending on the availability of the respondent.

### **3.4 Data Analysis**

The qualitative data collected in the research is analyzed through qualitative content analysis tool ATLAS.ti version 7.5. This involved structuring the primary data and the research question, achieved by dividing the interview guide based on three themes: Impact of innovation on e-banking practice; Evaluation of Innovation and e-banking practice in NIC bank; and Influence of innovation on customer adoption of e-banking practice. The analysis identified links and places these data in categories (Mayring, 2000) based on deductive assignment of codes. Categories are thus similar to variables because they, too, are constructs that can assume different states depending on the empirical phenomena they describe” (Glaser & Laudel, 2011). Analysis of the codes using the analytical software is carried out; the codes generate patterns based on frequency of quotation, code integration and code-co-occurrence mapping thus describing the themes. Finally the patterns are interpreted for meaning relying telling and relevant relationships as per the research question.

The study checked for reliability through member checking and peer review. Member checking involved the resubmission of data and interpretations back to the respondents, and verifying its plausibility while peer review entailed discussion of the process of the study and the congruency of emerging findings and the tentative interpretations with colleagues (Dodge, 2011). The results of the analysis of the codes was presented through structured content (prose), charts and tables reporting as per the identified thematic areas.

## CHAPTER FOUR: DATA ANALYSIS, INTERPRETATIONS AND DISCUSSIONS

### 4.1 Introduction

The purpose of this research was to establish the key innovation drivers of the adoption of e-banking practices in Kenya, with particular reference to NIC Bank (K) Ltd. In this chapter, the results of the research are presented. The study used a semi-structured interview and analysis conducted using ATLAS.ti version 7.5.

### 4.2 Response Rate

For the reasons of respondents' discretion and effective data analysis the interviewees were assigned the pseudonyms P1, P2, P3 and P4. The in-depth interviews were conducted face-to-face with only one conducted via telephone due to unavailability of the respondent (P 2) for a face to face session. The interviews were audio recorded with consent of the respondents and then later the researcher transcribed the recording using selective transcription. (See Appendix I – Interview Guide).

**Table 4.0 Respondent Rate**

Category	Frequency	Percentage
Respondents	4	80
Non-Respondents	1	20

**Source: Research data (2016)**

The researcher was able to interview four of the five prequalified respondents in full. This represented an 80% response rate which is considered a good response rate for face-to-face to in-depth interviews (Punch, 2003).

### 4.3 General information of the respondents

The individual demographics are reported below based on the academic background; length of service in banking; and position at NIC Bank Ltd.

#### 4.3.1 Respondents levels of education

In this section the researcher sought to establish the highest level of education of qualifications of the respondents. The results are highlighted in Table 4.1

**Table 4.1 Respondents Level of Education (n=4)**

<b>Category</b>	<b>Frequency</b>	<b>Percentage</b>
<b>Post Graduate</b>	1	25
<b>Undergraduate</b>	4	100
<b>Professional Course (Tertiary College)</b>	3	75
<b>Secondary Education</b>	4	100

**Source: Research data (2016)**

From Table 4.1 all of the respondents have attained a University degree, and 75% going ahead to complete professional courses in line with their career objectives with one having completed a post-graduate degree

#### **4.3.2 Length of Continuous Service in the banking Industry**

In this section the research sought to establish the respondents' length of continuous service within the banking industry. The results are highlighted in Table 4.2

**Table 4.2 Length of continuous service in the banking industry**

<b>Category</b>	<b>Frequency</b>	<b>Percentage</b>
<b>5 years</b>	1	25
<b>6 – 10 years</b>	1	25
<b>11 – 15 years</b>	1	25
<b>15 years and beyond</b>	1	25

**Source: Research data (2016)**

Table 4.2 shows an even distribution in consideration of five year block experience, with one respondent having over 15 years experience in banking.

### 4.3.3 Current position at NIC Bank Ltd

**Table 4.3 Position in NIC Bank Ltd**

<b>Category</b>	<b>Frequency</b>	<b>Percentage</b>
<b>Departmental Head</b>	1	25
<b>Senior Manager</b>	1	25
<b>Manager</b>	1	25
<b>Assistant Manager</b>	0	0
<b>Senior Officer</b>	1	25

**Source: Research data (2016)**

Table 4.3 indicates that the respondents have diverse capacities in NIC Bank Ltd from departmental head to senior officer with 25% each.

### 4.4 Theme I: Impact of innovation on e-banking practices

To guide the study researcher used three key themes identified to address the research question the themes are: Impact of innovation on e-banking practice; Innovation and e-banking practice in NIC Bank Ltd; and Influence of innovation on customer adoption of e-banking practice at NIC Bank Ltd.

The researcher sought to establish categories for the three thematic areas of the study, to do this primary (codes) phrases were used as shown in Figure 4.0. As described in Chapter 3, codes provide the basis for linking and drawing patterns to describe the themes through analysis. The codes were developed per thematic area however in order to ground the analytics on the research question the code [Innovation drivers in the] \*Adoption of e-banking practices was set as root code. The root code provides a base for code quotation frequency analysis, linkage counts, co-occurrence analysis and drawing of meaningful patterns.

**Table 4.4 Primary codes for the study**

<b>Category</b>	<b>Description</b>
[Innovation drivers in the] Adoption of e-banking practices	This code will be used whenever there is reference to the adoption of e-banking practices
Innovation for convenience	This code will be used whenever there is reference to the innovation, convenience and e-banking practices
Innovation for cost	This code will be used whenever there is reference to the innovation, cost and e-banking practice
Innovation for ease of use	This code will be used whenever there is reference to the innovation, ease of use and e-banking practices
Innovation for Perceived Usefulness	This code will be used whenever there is reference to the innovation, perceived usefulness and e-banking practices
Innovation for safety	This code will be used whenever there is reference to the innovation, safety and e-banking practices
Innovation for reliability	This code will be used whenever there is reference to the innovation, reliability and e-banking practices

**Source: Research data (2016)**

The study sought to describe the impact of innovation on e-banking practices. In order to do this the below phrases were used. They were analysed for frequency of occurrence, quotation by the four respondents and co-occurrence (links) with the primary codes.

**Table 4.5 Theme I: Codes, Description and Frequency of Quotation**

<b>Category</b>	<b>Description</b>	<b>Frequency</b>	<b>Percentage</b>
<b>Banking and Innovation</b>	This code will be used whenever there is a reference to banking and innovation in Kenya	14	41.2
<b>E-banking practices</b>	This code will be used whenever there is a reference to e-banking practices	2	5.9
<b>E-banking practices and innovation</b>	This code will be used whenever there is a reference to e-banking practices and innovation	2	5.9

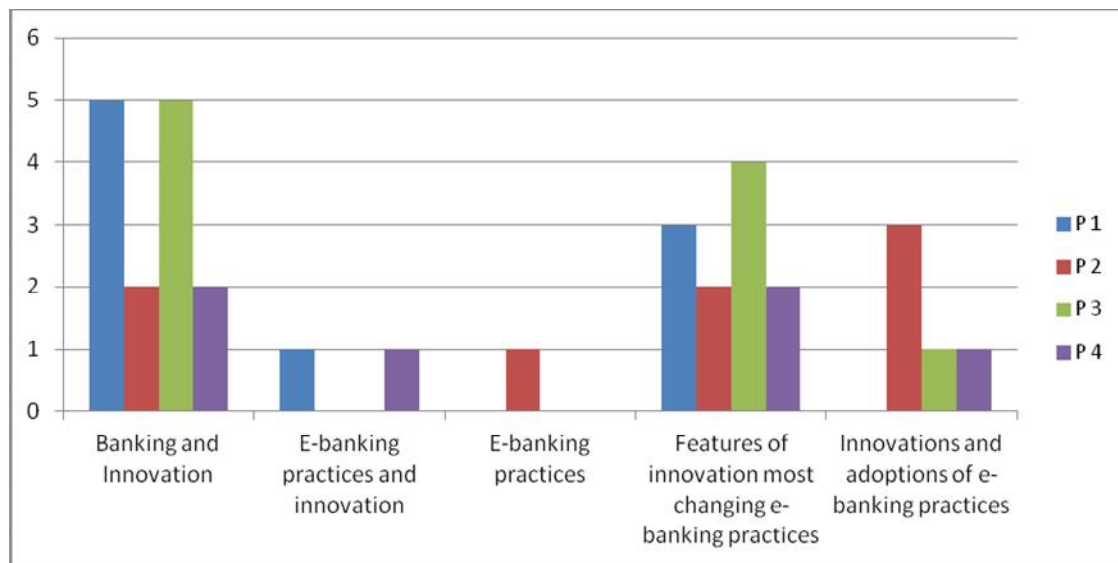


<b>Feature of Innovation most changing e-banking practices</b>	This code will be used whenever there is a reference to specific innovation features changing e-banking practices	11	32.4
<b>Innovation and adoption of e-banking practices</b>	This code will be used whenever there is a reference to innovation and adoption of e-banking practices	5	5.9

**Source: Research data (2016)**

The data analysis found that respondent the frequency of banking and innovation quotation to be highest with 41.2% frequency while features of innovation most changing e-banking practice second with 32.4%. This is further shown in the chart below.

**Figure 4.1 Theme I: Frequency of Codes**



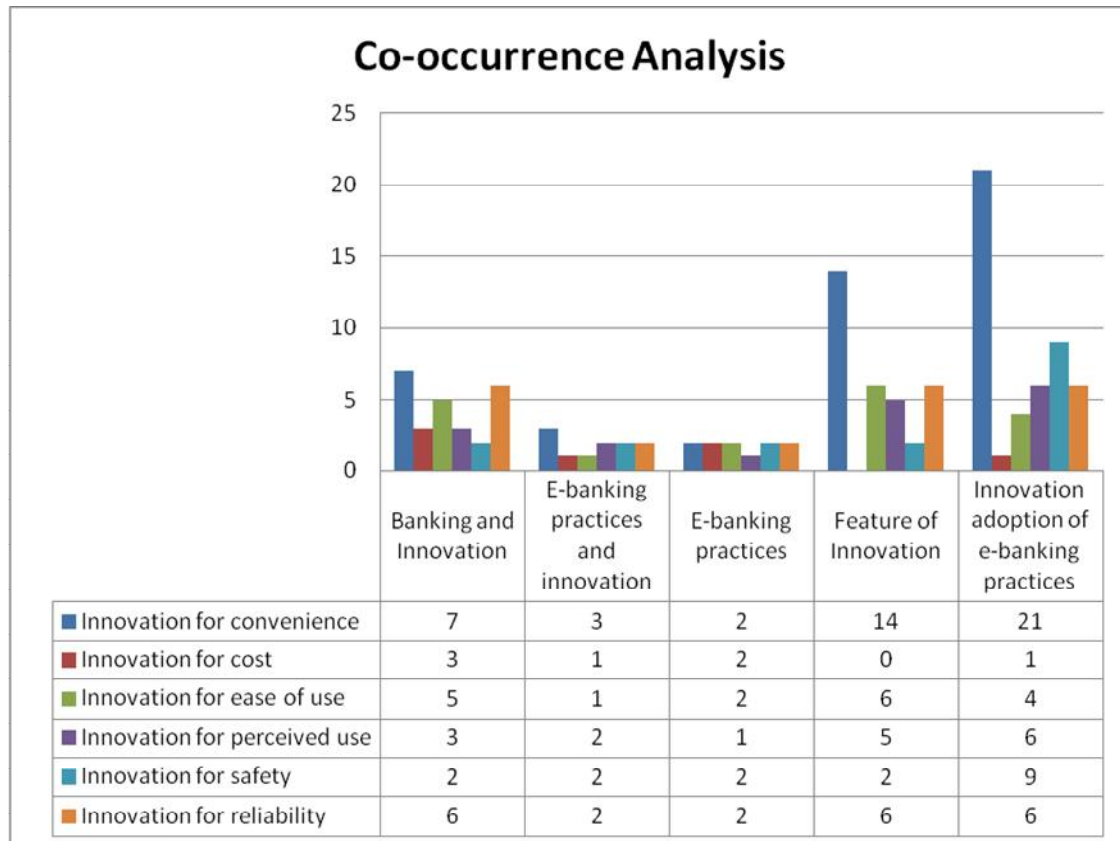
**Source: Research data (2016)**

The results indicate that banking and innovation as well features of innovation most changing e-banking practice is cited by all the respondents. The least quoted code are e-banking practices in Kenya, and e-banking practices and innovation in Kenya. The result also show that P1 and P3 equally quote banking and innovation with 5 mentions in the section and P2 and P4 quote the codes equally with 2 each.

#### 4.4.1 Theme I: Code Co-occurrence mapping and comparison

The study sought to establish whether a pattern emerges from the findings in theme 1, analysis is done on co-occurrence with the primary codes (refer to Table 4.4) the results are displayed in Figure 4.1 below.

**Figure 4.2 Theme 1: Co-occurrence analysis of codes with primary codes**



**Source: Research data (2016)**

The results show the codes innovation features influencing adoption of e-banking practice is most quoted with 26 counts and co-occurs 8 times along other codes. This is can be interpreted to mean the respondents attribute characteristics of innovations to be most impacting on the e-banking in the financial industry. The below is a direct quote from the transcript of respondent P 2 on Theme 1, Question 2.

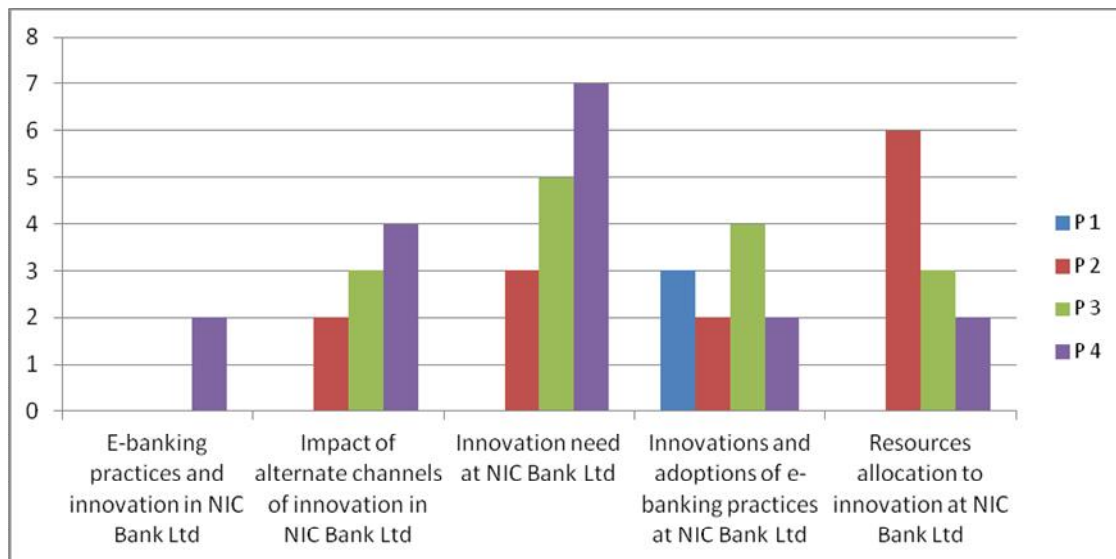
“Significant paradigms shifts have occurred in banks as a result of engaging various innovative technologies like online banking which has created the virtual banker, reducing interaction with the physical branch as a middleman between customer and bank”

This is an indication of the specific innovations that are viewed to most impact e-banking practices in the banking industry.

#### 4.5. Theme II: Evaluation of innovation impact on e-banking practices in NIC Bank Ltd

In this section the study sought to describe the impact of innovation on e-banking practices. In order to do this code were filtered based on the theme. These codes were analysed for frequency of occurrence, quotation by the four respondents and co-occurrence (links) with the primary codes in order to view meaningful patterns in the finding.

**Figure 4.3 Theme II: Frequency of code occurrence in the interviewee responses**



**Source: Research data (2016)**

The results from Figure 4.7 show that overall Innovation need at NIC is most frequently quoted by three of the respondents, 15 times. However the finding also show that innovations and adoption of e-banking practices is the only code mentioned by all respondents 11 times. The study therefore sought to describe what innovation need, and how drives the adoption of e-banking practice NIC Bank Ltd, further investigation is done through a comparative matrix as discussed below.

**Figure 4.4 Theme II: Comparative analysis matrix of co-occurring codes**

	Adoption of e- banking practices	E-banking practices and innovation in NIC Bank Ltd	Impact of alternate channels innovation on NIC Bank Ltd	Innovation need at NIC Bank Ltd	Innovations and adoptions of e-banking practices in NIC Bnk LTD	Resources allocation to innovation at NIC Bank Ltd	Totals
Adoption of e-banking practices	0.00	0.09	0.44	0.13	0.15	0.31	1.12
E-banking practices and innovation in NIC Bank Ltd	0.09	0.00	0.31	0.47	0.24	0.04	1.15
Impact of alternate channels innovation on NIC Bank Ltd	0.44	0.31	0.00	0.50	0.25	0.11	1.61
Innovation need at NIC Bank Ltd	0.13	0.47	0.50	0.00	0.28	0.04	1.42
Innovations and adoptions of e-banking practices in NIC Bank LTD	0.15	0.24	0.25	0.28	0.00	0.04	0.96
Resources allocation to innovation at NIC Bank Ltd	0.31	0.04	0.11	0.04	0.04	0.00	0.54
Totals	1.12	1.15	1.61	1.42	0.96	0.54	6.8

**Source: Research data (2016)**

From figure 4.3 co-occurrences of the codes in theme II with root code Adoption of e-banking practices. Of key interest to the study is that it shows a pattern with the impact of alternate channels (online, mobile, card banking, agency, cheque tracking and bulk cashless transactions) at NIC Bank being comparatively high at 44% toward adoption of e-banking practices. However the data also indicated a need for resource investment in innovations, as innovation need at NIC bank and resource allocation score 13% and 31% respectively.

**4.6 Theme III: Influence of innovation on customers adoption of e-banking practices**

In this section the study sought to describe the influence of innovation on customer adoption of e-banking practices. In order to do this code were filtered based on the theme. These codes were analysed for frequency of occurrence, quotation by the four respondents and co-occurrence (links) with the identified primary codes in order to view meaningful patterns in the finding.

**Table 4.6 Theme II: Codes, Description and Frequency of Quotation**

<b>Category</b>	<b>Description</b>	<b>Frequency</b>	<b>Percentage</b>
<b>Customer and e-banking channels</b>	This code will be used whenever there is a reference to customers and e-banking channels	6	28.6
<b>Customers and e-banking practices adoption</b>	This code will be used whenever there is a reference to customer, e-banking practices and adoption	7	33.3
<b>Innovation influencing corporate customers in the adoption of e-banking practices</b>	This code will be used whenever there is a reference to corporate customers, e-banking practices, adoption and innovation	3	14.3
<b>Innovation influencing corporate customers in the adoption of e-banking practices</b>	This code will be used whenever there is a reference to retail customers, e-banking practices, adoption and innovation	5	23.8

**Source: Research data (2016)**

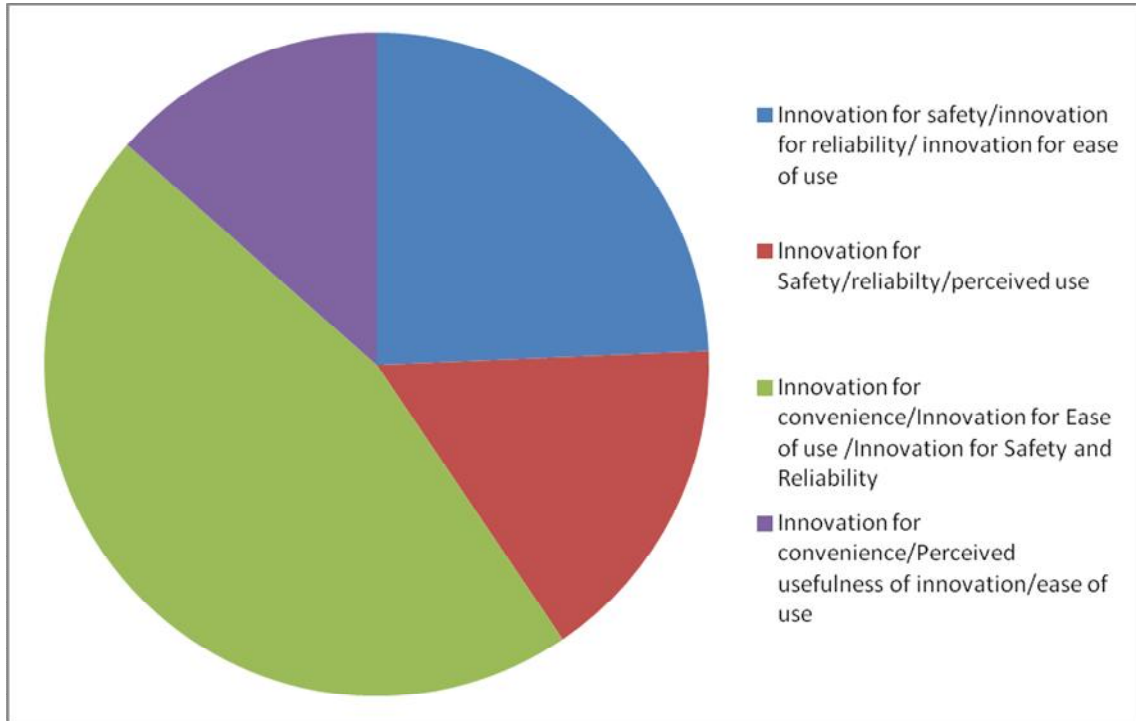
The results from Table 4.5 show that customer and e-banking practices adoption is most quoted at 33.3% by the respondents. The quote below from P 3, Theme 3 Question 8, an indication of the above assertion

“The adoption and repeated use of e-banking products is entirely dependent on convenience, and utility in other words the usefulness the customer aims to derive from the service.”

The study sought to show a clear pattern between the codes in theme I and the primary codes therefore further analysis on the co-occurrence of the between the set of codes was carried out in order to show the relationship. The codes specifically address status, features, and

influence of innovation, on adoption, use, or concern of e-banking, e-banking channels, and e-banking practices by customers. The results are shown below.

**Figure 4.5 Theme III: Codes variations analysis for co-occurrence of innovations influencing adoption of e-banking practice**



**Source: Research data (2016)**

The data analysis show that the respondents believe that adoption of e-banking practices is majorly influenced by innovations for convenience, innovation for ease of use and innovation for safety, and innovation for reliability of the customer.

**Figure 4.6 Theme III: Comparative analysis matrix of primary code co-occurrence**

	Innovation for convenience	Innovation for cost	Innovation for ease of use	Innovation for perceived usefulness	Innovation for safety	Innovation for reliability	Totals
Innovation for convenience	0.00	0.00	0.20	0.27	0.21	0.07	0.75
Innovation for cost	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Innovation for ease of use	0.20	0.00	0.00	0.07	0.06	0.06	0.32
Innovation for perceived usefulness	0.27	0.00	0.07	0.00	0.00	0.00	0.34
Innovation for safety	0.21	0.00	0.00	0.00	0.00	0.04	0.25
Innovations for reliability	0.07	0.00	0.06	0.00	0.04	0.00	0.17
Total	0.75	0.00	0.33	0.34	0.25	0.17	1.83

**Source: Research data (2016)**

Figure 4.6 presents a matrix that calculates based on fractions of 1, the co-occurrence of the primary codes. It shows a pattern where convenience of innovation and safety and reliability having the most links and concurrence are the attributes of innovation the respondents think most influence adoption of e-banking practices. On the other hand cost consideration of innovation is the least quoted code meaning that the respondents do not view the variable as a strong influencing factor in the adoption e-banking practices. Further, the matrix allowed the researcher to begin to understand which set of innovation permutation drive the adoption of e-banking practice uptake the most. For instance by combining innovation for convenience, innovation for ease of use (0.20), innovation for perceived usefulness (0.27), innovation for safety and reliability (0.21) and innovation for reliability (0.07) yields a 0.75 (three quarters) results of being cited as key to influencing adoption of e-banking practice by the respondents

#### **4.7 Key Innovation drivers in the adoption of e-banking practices**

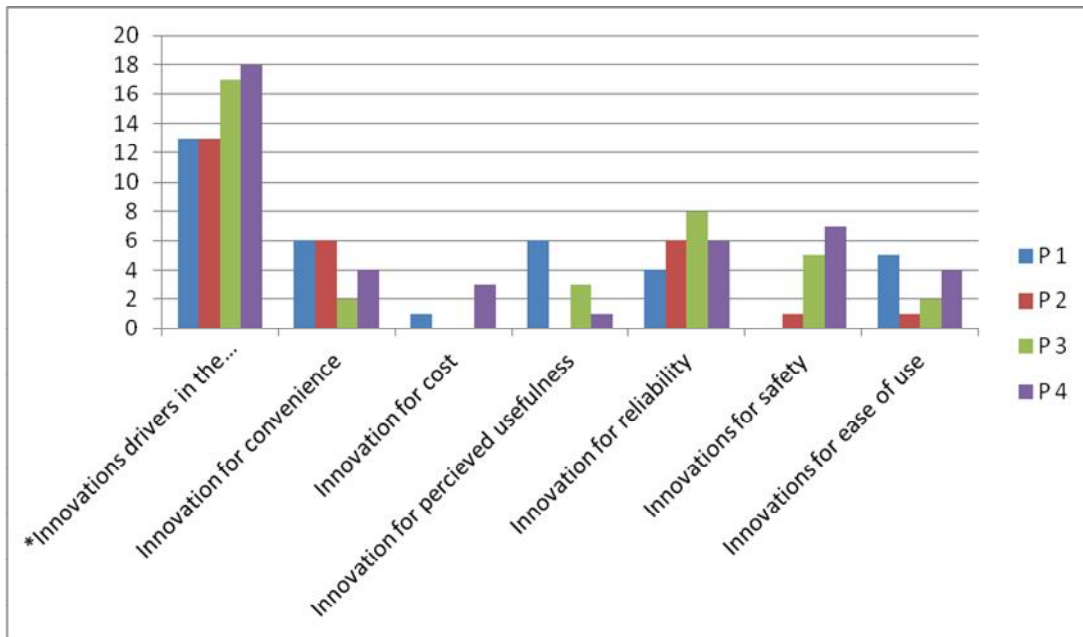
In this section the findings from themes I, II and III are further analysed for the specific innovation feature or channels in e-banking practices for instance cheque tracking, card systems or online banking that are co-concurrently cited with the codes “innovation for convenience”, “innovation for ease of use”, “innovation for safety” and “innovation for reliability” each and in combination. First however the primary codes are investigated

similarly for frequency of occurrence by respondents and their linkages. The results are shown below.

#### 4.7.1 Frequency of primary codes quotation by respondents

The study sought to establish links between the number of times each of the seven phrases (codes) were quoted by the respondents with (innovations drivers in the) adoption of e-banking practices as root code, the results are indicated below

**Figure 4.7 Frequency of primary code quotes by respondents**



**Source: Research data (2016)**

From Figure 4.9 the below findings are described:

Respondent P4 quotes 6 key codes, a total of 28 times with the code innovation for safety most mentioned 7 times.

Respondent P1 quotes 5 key codes mentioning innovation for convenience most 6 times and not mentioning innovation for safety.

Respondent P3 quotes 5 key codes mentioning innovation for reliability most 8 times while not mentioning innovation for cost

Respondent P2 quotes 4 key codes mentioning innovation for convenience and innovation for reliability the most 6 times each and 0 quotes for innovation for cost and innovation for perceived usefulness.



The data analysis indicates the frequency of quote of the key codes by the four respondents to be as follows: Innovation for convenience 18 times; Innovation for cost 4 times; Innovation for perceived usefulness 10 times; Innovation for reliability 24; Innovation for safety 13 times and Innovation for ease of use 12 ranking highest in frequency of quote after the root code.

#### 4.7.2 Innovation and E-banking practices channels

The study sought to establish the co-occurrence rates between the e-banking practices channels at NIC Bank Ltd and with of the seven phrases (codes) as quoted by the respondents

**Figure 4.8 Comparative analysis matrix of Co-occurrence of innovations and e-banking practices channels**

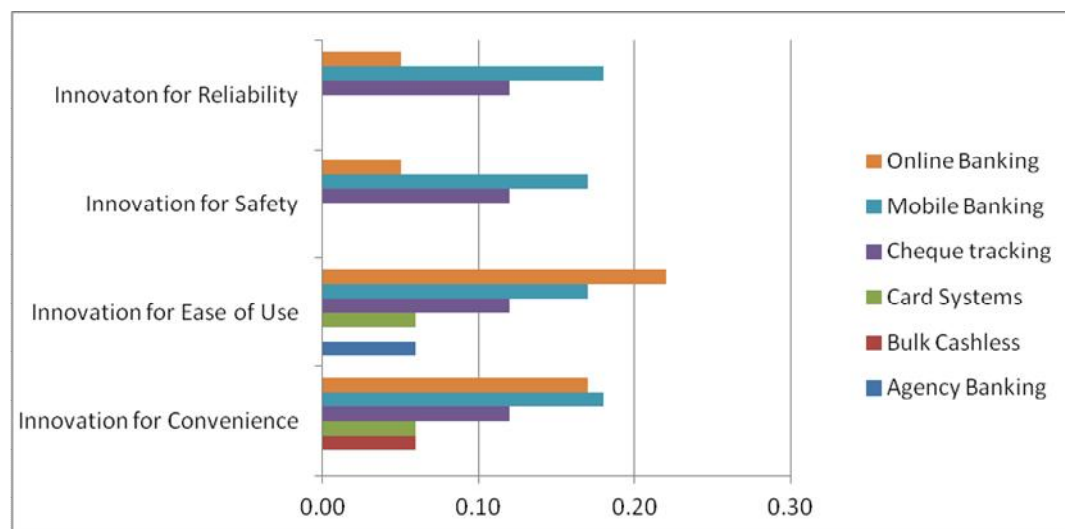
	Agency	Bulk Cashless	Card Syster	Cheque tracking	Mobile	Online
Innovation for convenience	n/a	0.06	0.06	0.12	0.18	0.17
Innovation for ease of use	0.06	n/a	0.06	0.12	0.17	0.12
Innovation for safety	n/a	n/a	n/a	0.12	0.17	0.05
Innovaton for reliabilty	n/a	n/a	n/a	0.12	0.18	0.05

**Source: Research data (2016)**

The analysis show that e-banking practices are most adopted as innovation for convenience with mobile banking viewed as most pervasive in regards to innovation for convenience. However innovation for ease of use is also viewed as key toward service delivery and therefore customer adoption.

Figure 4.6 contrast the innovations and the e-banking practices channels.

**Figure 4.9 Comparative analysis bar graph of co-occurrence of innovation and e-banking practices channels**



From figure 4.6 we see the respondents indicating that innovations that create or facilitate convenience are more desirable in regards to influencing uptake of e-banking service as well as innovations of safety and reliability. Convenience for innovation appears 18 times quoted by the 4 respondents and it has linkages to all the codes except cost consideration: While safety and reliability of innovation appears 11 times quoted by 3 respondents and co-occurs with other codes except cost consideration affirming where the pattern of the codes again emerging as key in influencing adoption of e-banking practices.

According to the findings the category features of innovation most changing e-banking practice was most frequently cited by the respondents quoted 11 times by all four respondents. This means that the respondents attribute specific characteristics that define an innovation and not the technologies in general to drive e-banking practice. The study concludes that innovation focused on enhancing convenience, innovation facilitating assurance of safety and reliability, as well as innovation for ease of use are the most impactful on e-banking practices in the banking industry in Kenya.

## **CHAPTER FIVE: SUMMARY, CONCLUSIONS AND RECOMMENDATIONS**

### **5.1 Introduction**

The purpose of this research was to study key innovation driver of the adoption of e-banking practices with NIC Bank Ltd as case study. The research was conducted through semi-structured interview with four respondents with senior positions (middle and upper management level) at the bank, experts in the industry, who are policy-makers and implementers in regard to innovations and e-banking practices at NIC bank. This chapter contains an analysis of the research findings that were presented in Chapter Four. Also included are the meaning and implication of the research results, recommendations and suggestions for further studies.

### **5.2 Summary and discussion of findings**

The objective of this study was to describe key innovations which are currently driving the adoption of e-banking practices in Kenya with particular reference to NIC Bank Ltd. The study was guided by three themes that were developed from the research objective: Industry-wide impact of innovation on e-banking practice; Innovation and e-banking practice in NIC bank; and Influence of innovation on customer adoption of e-banking practice. The researcher used semi-structured interviews to collect data. According to (Esterberg, 2002) semi-structured in-depth interviews adopt a process that is less rigid, than structured interviews, allowing for an open exchange between the interviewer and respondent. Four senior bank employees at NIC Bank Ltd were interviewed guided by the mentioned themes on their expert-view of innovation and e-banking practices on industry wide and bank specific perspectives.

According to the findings the category features of innovation most changing e-banking practice was most frequently cited by the respondents quoted 11 times by all four respondents. This means that the respondents attribute specific characteristics that define an innovation and not the technologies in general to drive e-banking practice. To be specific the category e-banking practices and innovation were analysed for contextual co-occurrence with the code features of innovation most changing e-banking practices, and the primary codes and the findings adduced that innovation for convenience co-occurred 3 times,

innovation for safety 2 times, innovation for reliability 2 times and innovation for ease of use 1 time. The study established that innovation focused on enhancing convenience, innovation facilitating assurance of safety and reliability, as well as innovation for ease of use are the most impactful on e-banking practices in the banking industry in Kenya.

The category innovation need at NIC Bank Ltd is most frequently cited in theme II, with 3 of the respondent mentioning the code a total of 15 times. The implication from results is the need for continued assertion of innovation at NIC Bank by investing resources in enhancing existing technologies, obtaining skilled professionals, and sustaining e-banking (alternate) channels. In a comparative matrix on the impact of E-banking channels specifically online banking, mobile banking, card banking, agency banking, bulk cashless transactions and cheque tracking on e-banking practices adoptions, the results showed 44% concurrence on the impact of the channels on adoption. The study concluded that there is a need for innovation at NIC Bank Ltd to drive adoption of e-banking practices channels are viewed as critical in driving adoption however there is room for further allocation of resources toward innovations by the bank's management with 31% concurrence by respondents that this would drive adoption of e-banking practices by the bank's customers.

According to the findings the category customer and e-banking adoption is frequently quoted in responses to questions in theme III. The frequencies draw attention to specific innovation features or traits that are viewed to most effect on the adoption of e-banking practices by customers, further comparative analysis yielded that permutations of innovations best suited to influence adoption of e-banking practice and not a single technology or innovation. The study found that variations of innovation of convenience, innovation for ease of use, innovation for safety and innovation for reliability were the most desired by management by customers and therefore most likely to drive adoption of e-banking practice. However the other variations are important too and require attention they include innovation for safety, innovation for convenience, innovation for ease of use and innovation for perceived use. The study also established how specific e-banking channel technologies impact or influence adoption of e-banking practice as discussed next. Of the identified e-banking practices channels at NIC Bank most quoted by respondents as a driver for adoption of e-banking practice are online and mobile banking with 5 contextual co-occurrences in the theme III.

Further investigation into how innovation drive e-banking practices channels adoption – comparative co-occurrence analysis of the three themes reveals that online banking and mobile banking are most desirable. For instance innovation of convenience features is attributed by the respondents to online banking at 17% as compared to bulk cashless payments at only 6% as shown in Figure 4.14.

### **5.3 Conclusions**

The study objective was to describe key innovations which are currently driving the adoption of e-banking practices in Kenya with particular reference to NIC Bank Ltd. As posited in the background of the study back in 1995 Well Fargo was the innovator of internet banking offering account statements on the Web and Security First Network Bank became the first Internet-only bank (Gandy, 1995), the particular technologies were rudimentary as compared to today's e-banking practices that are complex, functional, and structurally sound e-banking ecosystems. Important to note is that the foundations of online banking are the same today as they were then, however the dynamism of innovation have completely mutated the service delivery capacities. This study has established that innovation that focus on further improving the convenience, ease of use, safety, reliability and usefulness have the most positively accepted effect on the end user and therefore are key in driving adoption. The study has also shown that variably combining innovations the stronger the desirability of the product and therefore the more likely to be adopted by the end user. This was shown using specific e-banking practice channels at NIC Bank with analysis indicating that the channels combining the above innovation experience higher adoption these are mainly online and mobile banking channels. Conversely those that are viewed to be low on the mentioned innovations have low impact in regards to customer pull factor. For instance in the case of agency banking NIC Bank Ltd to turnaround the product there needs to be considerable investment in innovation for convenience (probably improving and better scanning for agents and locations), innovation for ease of use (to revisit the process to ensure it is ease for both vendor and customer) and as well as innovations for reliability (look into ensuring 95% and above transaction completion rates), this could favourably improve the market response for the e-banking channel.

#### **5.4 Recommendations**

It is evident that e-banking practices in Kenya are widely used with most banks currently offering the services. E-banking practices have been established as source of revenue as well as business process that reduces operational costs. Noting this, there's currently heavy competition for an informed customer base, this implies that successful bank must use innovation to differentiate their product or process in order to provide exceptional experience for the end users. This paper establishes that innovations focused on attributes that customer endear to is the key to drive adoption at NIC Bank vis-à-vis the industry. Innovation for convenience, innovation for ease of use, innovation for safety, and innovation for reliability are fundamental in driving adoption of e-banking practices. Financial institutions are advised to conduct audits on their e-banking channels with the mentioned innovation as key benchmarks in an effort to improve on current short comings in their offerings. This study therefore also recommends that future trends and implementation by banks focus on variations of the above innovations in order to drive adoption of e-banking practices.

## REFERENCES

- Aggarwal, R., Prasad, J. (1997). The Role of Innovation Characteristics and Perceived Voluntariness in the Acceptance of Information Technologies. *Decision Science*, 28(3), 557-582.
- Ajzen, I., Fishbein, M. (1980). *Understanding Attitudes and Predicting Social Behavior*. Englewood Cliffs, NJ: Prentice-Hall Inc.
- Ajzen, I. (1991). The Theory of Planned Behavior. *Organizational Behavior and Human Decision Processes*, 50, 179-211.
- Allen, F., Demirgüç-Kunt, A., Klapper, L., Peria, M (2012). *The Foundations of Financial Inclusion: Understanding Ownership and Use of Formal Accounts Policy Research Working Paper 6290*. World Bank.
- Barnes, S. J., Corbitt, B. J., (2003). Mobile Banking: *Concept and Potential*. *Journal of Mobile Communication* 1(3): 273 -288
- Bradley, L., Stewart, K. (2003). The Diffusion of Online Banking. *Journal of Marketing Management*. 10 (19), 1087–1109
- Boyce, C., Neale, P. (2006). *Conducting In-Depth Interview: A guide for Designing and Conducting In-depth Interviews for Evaluation Input*. Pathfinder International Tool Series, Monitoring and Evaluation-2. Retrieved from: [http://www.pathfind.org/site/DocServer/m\\_e\\_tool\\_series\\_indepth\\_interviews.pdf?docID=6301](http://www.pathfind.org/site/DocServer/m_e_tool_series_indepth_interviews.pdf?docID=6301)
- Bowen, A. G. (2009). Document Analysis as a Qualitative Research Method. *Qualitative Research Journal*, 9(2).
- Casadesus-Masanell, R., Ricart, J. E. (2010). From Strategy to Business Models and Onto Tactics. Retrieved from: [www.elsevier.com/locate/lrp](http://www.elsevier.com/locate/lrp)
- Central Bank of Kenya, Developments in the Kenyan banking sector for the quarter ended 30th June 2015. Retrieved at: <https://www.centralbank.go.ke/>
- Central Bank of Kenya.(2015). Central Bank of Kenya, Annual Report 2015. Retrieved at: <https://www.centralbank.go.ke/>
- Chau, P. Y. K. (1996). An Empirical Assessment of a Modified Technology Acceptance Model, *Journal of Management Information Systems*, 12 (2), 185-204

Clarke III, I., Flaherty, T. B. (2005). *Advances in Electronic Banking*. Hershey: Idea Group Publishing



- Collis, J., & Hussey, R. (2009). *Business Research a Practical Guide for Undergraduate and Postgraduate Students*. Palgrave Macmillian
- Codd, R.T., Cohen, B.N. (2003). Predicting college student intention to seek help for alcohol abuse. *Journal of Social and Clinical Psychology*, 22(2), 168-190.
- Cooper, R.G. (1997). *Examining some myths about new product winners*. UK: Oxford University Press
- Day-Yang Liu, Shou-Wei Chen and Tzu-Chuan Chou (2011), Resource fit in digital Transformation Lessons learned from the CBC Bank global e-banking project, *National Taiwan University of Science and Technology, Taipei, Taiwan, Management Decision* Vol. 49 No. 10, pp. 1728-1742, [www.emeraldinsight.com](http://www.emeraldinsight.com)
- Dicken, P. (2011). *Global Shift: Mapping the Changing Contours of the World Economy*. London: The Guilford Press.
- Davies, F., Moutinho, L. (1996). "ATM user attitudes: a neural network analysis" *Marketing Intelligence & Planning* vol.14 No. pp. 26-32
- Davis F. D. (1993). User Acceptance of information technology: System characteristics, user perceptions, and behavioural impacts, *International Journal of Man Machine Studies*, 38, 475-487
- Dodge, P., R. (2011). *Managing School Behavior: a qualitative case study*. US: Iowa State University
- Dreyer B., Grønhaug K. (2004), "Uncertainty, flexibility, and sustained competitive advantage", *Journal of Business Research*, 57, pp.484– 494
- Daniel (1999), "Provision of electronic banking in the UK and the Republic of Ireland", *International Journal of Bank Marketing*, Vol. 17(2), pp.72 – 83
- Erasmus, C.A., Lebani, K. (2007). Consumers' Use of and Satisfaction with Store Cards. *Journal of Family Ecology and Consumer Sciences*, Vol. 35 pp. 59 -70
- Esterberg, K., G. (2002). *Qualitative methods in social research*. Boston, MA: McGraw-Hill.
- Fagerberg, J., Mowery, D. C., and Nelson, R. R. (2005). *The Oxford Handbook of Innovation*. UK: Oxford University Press
- Featherman, S. M., Pavlou, P. A. (2002). Predicting E-Services Adoption: A perceived risk

- facet perspective. *English American Conference on Information Systems*. Retrieved from: [www.hp.com/solutions1/e-services/](http://www.hp.com/solutions1/e-services/)
- Fishbein, M., and Ajzen, I. (1975). *Belief, Attitude, Intention and Behavior: An Introduction to Theory and Research*, Reading, MA: Addison-Wesley Publishers.
- Friedman, T., Furey, T. (1999). *The Channel Advantage*. 1<sup>st</sup>ed., ButterworthHeinemann
- Frankfort-Nachimias, C., Nachimias D. (2008). *Research methods in the social science*. 7<sup>th</sup> Ed. Worth Publishers.
- Gandy, T. (1995). Banking in E-space. *The Banker*, Vol. 145, December, 74—75.
- Ger, G., Belk, W. R. (1996). I'd Like to Buy the World a Coke: Consumptionscapes of the "Less Affluent World". *Journal of Consumer Policy* 19: 271-304, 1996.
- Harrell, M. C., Bradley, A. M. (2009). *Semi-Structured Interviews and Focus Groups*. US: RAND National Defense Research Institute
- Hawkins, S., Yen, D. C., Chou, D. C. (2000). "Awareness and challenges of Internet security", *Information Management & Computer Security*, Vol. 8(3), pp.131– 143
- Hooley, G., Nicoulaud, B., Piercy, N. (2011). *Market Stratgey and Competitive Positioning*. UK: Prentice Hall.
- Horst, M., Gutteling, J.M. (2003). "Perceived Usefulness, Personal Experiences, Risk Perception and Trust as Determinants of Adoption of E-government Services in the Netherlands." Netherlands: University of Twente. Paper Submitted to: *Computers in Human Behavior*
- Howcroft, B., and Hamilton, R., and Hewer, P. (2002). Consumer attitude and the usage and adoption of home-banking in the United Kingdom. *International Journal of Bank Marketing*. Vol. 20 (3), pp. 111-121.
- Hu, P. J., Patrick, Y. K., Chau, O. R., Liu Sheng, and Kar Yan, T. (1999). Examining the Technology Acceptance Model Using Physician Prance of Telemedicine, *Journal of Management Information Syatem*, 16(2), 91-112.
- Jayawardhena, C., Foley, P. (2000). Changes in the banking sector—The case of Internet banking in the UK. *Internet Research: Electronic Networking Applications And Policy*, 10(1), 19–30

- Kline, S.J., Rosenberg, N. (1986). "An overview of innovation." *The Positive Sum Strategy: Harnessing Technology for Economic Growth*. Washington, D.C.: National Academy Press.
- Kothari, C., 2004. *Research Methodology: Methods & Techniques*. 2<sup>nd</sup> ed. Dehli: New Age International Ltd.
- Kotler, P., Keller, K. L. (2008). *Marketing Management*. 5<sup>th</sup> ed. Pearson Education.
- Liao, Z., Cheung, M.T. (2002). Internet-based e-banking and consumer attitudes: an empirical study. *Information & Management* 39: 283–295
- Labuschagne, A. (2003). Qualitative Research - Airy Fairy or Fundamental?. *The Qualitative Report*, 8(1), 100-103. Retrieved from <http://nsuworks.nova.edu/tqr/vol8/iss1/7>
- Laudon, K. C., Carol, G, T.(2003) *E-Commerce: Business, technology and society*. 2<sup>nd</sup>ed. Boston: Pearson Addison Wesley.
- Makokha, L. W. (2012). Internet Banking Acceptance Model: *Evaluating Behavioural Intentions in the Adoption of Internet Banking*. Nairobi: Strathmore University. Faculty of Information Technology
- Malhotra, P., Normalini, M, K., Ramayah, T. (2014). Factors Affecting Adoption of Internet Banking: A Case Study from India. *Asia-Pacific Journal of Business*, Vol.5 (2)
- Marshall, C., and Rossman, G, B. (2011). *Designing Qualitative Research*. 5<sup>th</sup>ed. Wahington D.C.: Sage Publishers.
- Mayring, P. (2000). Qualitative Content Analysis. *Forum, Qualitative and Social Research*, Vol. 1(2)
- Minakakis, Louis, and Bharat R. (1999). 'Competing in Online Markets: Financial Services as a Case in Point', In: Schmid, Beat F.; Selz, Dorian: [EM - International MIS, Electronic Commerce and Financial Services], *International Journal of Electronic Markets*, Vol. 9(4), 11-99
- Morris, M.G., Dillon, A. (1997). How user perceptions influence software use. *IEEE Software*, 14(4), 58-65.
- Mouton, J. (1996). *Understanding Social Research*. Van Schaik Publishers.
- Mugenda MO, Mugenda GA (1999). *Research Methods: Qualitative and Quantitative Approaches*. Nairobi: Acts Press.

Munyoki, J. M., Ngigi, E. N. (2011). Challenges of E-banking Adoption Among the Commercial Banks in Kenya. *Paper Submitted for Presentation at the ORSEA conference in Nairobi, Kenya October 2011*

- Muthoni, J. M., Kahonge, A. M. (2015). E-verification: *The missing component in E recruitment Systems*. Nairobi: University of Nairobi. Retrieved from: <http://erepository.uonbi.ac.ke:8080/xmlui/handle/11295/96704>
- Mutua, J., Oteyo, I, N., and Njeru, A, W. (2013). The Extent of E-commerce Adoption among Small and Medium Enterprises in Nairobi, Kenya. *International Journal of Business and Social Science*, Vol. 4 (9).
- Norman, R. G., Streiner, L. D. (2003). PDQ Statistics. USA: Walsworth Printing Company.
- O'Connell, B. (1996). Australian Banking on the Internet- Fact or Fiction? *The Australian Banker*, pp. 212-214.
- Pikkarainen, T., Pikkarainen, K., Karjaluoto, H., & Pahnila, S. (2004). *Consumer acceptance of online banking: An extension of the technology acceptance model*. *InternetResearch*, 14(3), 224-235.
- Quintane, E. R., Casselman, M. B., Reiche, S., Nylund, P. A. (2011). "Innovation as a knowledge-based outcome", *Journal of Knowledge Management*, Vol. 15(6), pp.928-47
- Quinn, R.B., Mueller, J.A. (2001). Transferring Research Results to Operations, in Tushman and Moore, ed., *Readings in the Management of Innovation*, Pitman, M.A, pp. 62
- Punch, K. F. (2005). *Survey Research: The Basics*. London: Sage Publications Ltd
- Rogers, M. (2003). Diffusion of Innovations. *Journal of Marketing Research*, 31(1): 1 -4
- Rogers, E. M., Shoemaker, F. (2001). *Communications in Innovation*. New York: Free Press.
- Saba, A. & Di Natale, R. (1998). Attitudes, intention and habit: their role in predicting actual consumption of fats and oils. *Journal of Human Nutrition and Diatetics*, 11 (1, 1 -65)
- Sathye M (1999). Adoption of Internet banking by Australian consumers: An Empirical Investigation. *International Journal of Bank Marketing*, 17(7), pp. 324-334
- Scarborough, N. (2013). *Effective Small Business Management*. New York: Pearson Education.
- Schiffman, L., Kanuk, L. (2007). *Consumer Behavior*. 9<sup>th</sup> ed. Pearson Education.

Simpson J (2002). The Impact of the Internet in Banking: Observations and Evidence from Developed and Emerging Markets. *Telematics and Informatics*, 19, pp. 315-330

- Schumpeter, J. A. (1942). *Capitalism, Socialism and Democracy*. Reissued 1975. New York: Harper & Row.
- Sharfman M. P. and Dean, JR, J. W. (1997), "Flexibility in strategic decision making: Informational and ideological perspectives." *Journal of Management Studies*, 34(2), pp. 2222-2380.
- Stake, R. E. (1995). *The Art of Case Study Research*. Sage Publications
- The Opportunities of Digitizing Payments. A report by the World Bank Research Group. Prepared for the G20 Australian Presidency on August 28, 2014. Retrieved from: [www.worldbank.org](http://www.worldbank.org)
- Venkatesh, V., & Davis, F. D. (1996). A Model of the Antecedents of Perceived Ease of Use: Development and Test, *Decision Sciences*, 27 (3), 451-481
- Wah, L. (1999). Banking on the Internet. *American Management Association*, Vol. 88(11), pp. 26-48
- Wang, Y., Wang, Y., Lin, H., & Tang, T. (2003). Determinants of user acceptance of Internet banking: An empirical study. *International Journal of Service Industry Management*, 14(5), pp. 501-519.
- Wright, A. R., Whitley, M.E., Everhart, R.M. (2006). Measuring Return On Investment of Outreach by Community Health Workers. *Journal of Health Care for the Poor and Underserved*, Vol. 17(1), pp. 6-15
- Zimmerman, J., Bohling K., & Rotman P, (2014). "Electronic G2P Payments: Evidence from Four Lower-Income Countries." CGAP (Consultative Group to Assist the Poor)

## **APPENDIX I: INTERVIEW GUIDE**

### **NIC BANK (K) LTD**

Hello. As we agreed, I am here (calling you) to gather information from you about NIC Bank's E-banking practices, as you are key stakeholder in the business. Again, I want to thank you for agreeing to take part in this interview and to reassure that it is for academic purposes only. Please note the interview should take approximately 12 to 15 minutes. Do you have any questions before we begin?

#### **A: Individual Demographics**

- i. Kindly tell me a bit about yourself in regards to career and educational background
- ii. How long have you been in the banking industry
- iii. What is your current position or role at NIC Bank Ltd

#### **THEME I: Impact of innovation on e-banking practices on banking based on NIC Bank Ltd**

1. Please provide a brief description of innovation in the banking industry from your perspective
2. How are innovations changing e-banking practices? In the past two –three years which specific innovation have created the biggest impact in the e-banking practices at NIC bank?
3. Which prominent features of innovations do you think are most influencing change in online banking practices?



**THEME II: Evaluation of Innovation and e-banking practices in NIC Bank Ltd**

4. Kindly provide a status overview of innovation at NIC bank? Please be specific in regards to resources allocations, major milestones and ROI
5. Is e-banking practice a strategic business model at the bank? What or which resources are allocated toward e-banking innovations, please specify?
6. Please assess the impact of alternate banking channels like online, mobile banking, agency banking, card banking, bulk cashless payment and cheque tracking on NIC Bank e-banking practices? Kindly also be specific in regards to adoption of the channels by NIC Bank Ltd customers?

**THEME III: Influence of innovation on customers' adoption of e-banking practices in NIC Bank Ltd**

7. How has awareness of availability of e-banking practice in NIC bank customers? Which of e-banking service delivery channels, is most subscribed to by the consumers?
8. Kindly advice which of NIC bank's customer base is most interested in using e-banking for instance retail customers, or large to medium corporate customers?
9. What are the major customers concerns in adopting e-banking? Has innovation provided mitigation for the issues?
10. How important is enhancement of existing technology toward adoption of e-banking practice?

**B: Comment/ Conclusion of Interview**

- i. Do you have anything to add that you feel might be helpful to the topic? Please feel free.

Thank you for your time.

Please note the complete study can be made available to you on request.

### APPENDIX III: LIST OF COMMERCIAL BANKS

African Banking Corporation Limited	Habib Bank Ltd
Bank of Africa Kenya Limited	Habib Zurich Bank Ltd
Bank of Baroda (K) Limited	Imperial Bank Limited – In Receivership
Bank of India	I & M Bank Limited
Barclays Bank of Kenya Limited	Jamii Bora Bank Limited
CfCStanbic Bank Limited	KCB Bank Kenya Limited
Charterhouse Bank Limited – Under Statutory Management	Middle East Bank (K) Limited
Chase Bank (K) Limited – In Receivership	National Bank of Kenya Limited
Citibank N.A Kenya	NIC Bank Limited
Commercial Bank of Africa Limited	Oriental Commercial Bank Limited
Consolidated Bank of Kenya Limited	Paramount Bank Limited
Co-operative Bank of Kenya Limited	Prime Bank Limited
Credit Bank Limited	Sidian Bank Limited
Development Bank of Kenya Limited	Standard Chartered Bank Kenya Limited
Diamond Trust Bank Kenya Limited	Trans-National Bank Limited
Ecobank Kenya Limited	UBA Kenya Bank Limited
Equatorial Commercial Bank Limited	Victoria Commercial Bank Limited
Equity Bank Kenya Limited	
Family Bank Limited	
Fidelity Commercial Bank Limited	
First Community Bank Limited	
Guaranty Trust Bank (K) Ltd	
Giro Commercial Bank Limited	

Source: CBK 2016

## APPENDICIES

### APPENDIX I: LETTER OF INTRODUCTION

THE UNIVERSITY OF NAIROBI

School of Business

30 August 2016

Dear Sir, Dear Madam,

**Re: ACADEMIC RESEARCH EXERCISE**

My name is Jeremiah Kiwanuka I am student at the University of Nairobi (UoN), pursuing a Master of Science in Marketing Degree. In partial fulfilment of the requirements for the degree, I am required to carry out a research project on an individually chosen, relevant problem.

I have identified the following topic as the focus of my research paper:

**“Key Innovative Drivers in the Adoption of E-banking practice in Kenya: A Case of NIC Bank (K) Ltd”.**

I kindly request you to provide the required information to the best of your knowledge through interview question that I will email go through with you in person, or telephone or one email depending on your availability.

The information is strictly for academic purposes and will be treated in the strictest confidence. A copy of the completed research project will be made available to you on request.

Your kind assistance will be highly appreciated.

Sincerely,

Jeremiah Wang'anga' Kiwanuka

Researcher – MSc. Marketing student

Telephone: +254721795980

Email:

jeremiah.kiwanuka@gmail.com

