

**ROLE OF SERVICE INNOVATION ON  
COMPETITIVE ADVANTAGE IN THE BANKING  
SECTOR IN KENYA**

**KAITHIA DAVID ARUNGAI**

**DOCTOR OF PHILOSOPHY**

**(Business Administration Strategic Management)**

**JOMO KENYATTA UNIVERSITY OF  
AGRICULTURE AND TECHNOLOGY**

**2015**

**Role of Service Innovation on Competitive Advan \_ in the Banking  
Sector in Kenya**

**Kaithia David Arungai**

**Thesis Submitted in Partial Fulfillment for the Degree of Doctor of  
Philosophy in Business Administration Strategic Management in the  
Jomo Kenyatta University of Agriculture and Technology**

**2015**

## DECLARATION

This Thesis is my own work and has not been presented for a degree in any other University

Signature.....Date.....

**Kaithia David Arungai**

This Thesis has been submitted with our approval as the University Supervisors

Signature..... Date.....

**Dr. Iravo M.A. (PhD)**

**JKUAT, Kenya**

Signature..... Date.....

**Dr. Sakwa M.M. (PhD)**

**JKUAT, Kenya**

## **DEDICATION**

I dedicate this work to my wife Monica, my son Ezra and daughter Rehema.

## **ACKNOWLEDGEMENT**

I am grateful to Dr. Iravo who was my first supervisor. He was always readily available for me and showed a lot of concern for my progress throughout the time I was conducting this research. He was passionate for my success in this work and at times intervened for me before the panelist. We related very well with him where finally he emerged as a friend and academic role model. Thank you Dr. Iravo.

Secondly, I thank Dr Maurice Sakwa who was my second supervisor. He was very strict, but readily available and provided a lot of insights regarding research methodologies which applied in this study. Also, he was very knowledgeable on the theme of the study. This boosted my grasp of the subject matter and content domain of the study. Thank you Dr. Sakwa. I also thank the JKUAT working staff for their willingness to assist me, particularly Harriet who was the secretary in the school of entrepreneurship. She willingly and speedily forwarded any request or a grievance which i made to the university management. Thank you, Harriet. I bountifully thank my wife Monica and my two siblings, Ezra and Rehema. They encouraged me and supported me morally. Monica would wake up very early in the morning to prepare breakfast for me before she left for her work place. She also spent many hours with me in the long nights as I read and wrote. She was always caring for my two children whenever I was away from home. None of my family businesses and commitment failed because she filled my gap. Thank you, Monica. Finally, thank you Dr. Waiganjo, my supervisor of corrections. You gave me a lot of insights during my final defense and also when I was making final corrections.

## TABLE OF CONTENTS

<b>DECLARATION.....</b>	<b>iv</b>
<b>DEDICATION .....</b>	<b>v</b>
<b>ACKNOWLEDGEMENT.....</b>	<b>vi</b>
<b>TABLE OF CONTENTS .....</b>	<b>vii</b>
<b>LIST OF TABLES .....</b>	<b>xi</b>
<b>LIST OF FIGURES .....</b>	<b>xii</b>
<b>LIST OF APPENDICES .....</b>	<b>xiii</b>
<b>LIST OF ABBREVIATIONS.....</b>	<b>xiv</b>
<b>DEFINITION OF TERMS.....</b>	<b>xv</b>
<b>ABSTRACT .....</b>	<b>xvii</b>
<b>CHAPTER ONE .....</b>	<b>1</b>
<b>INTRODUCTION.....</b>	<b>1</b>
1.1 Introduction.....	1
1.2 Statement of the Problem.....	7
1.3 Objectives of the Study.....	8
1.3.1 General Objective.....	8
1.3.2. Specific Objectives .....	9
1.4 Research Questions.....	9
1.5 Research Hypothesis.....	10
1.6 Significance of this Study .....	11
1.7 Scope of this Study.....	13
1.8 Limitations of this study .....	14
<b>CHAPTER TWO .....</b>	<b>17</b>
<b>LITERATURE REVIEW .....</b>	<b>17</b>
2.1 Introduction.....	17
2.2 Theoretical Models and Frameworks.....	17
2.2.1 Service innovation Models and Frameworks.....	18
2.2.2 Competitive Advantage Models and Frameworks.....	22
2.3 Conceptual Framework.....	26

2.3.1 Service marketing innovation.....	30
2.3.2 Service concept innovation .....	34
2.3.3 Service Process Innovation .....	37
2.3.4 Service Channel innovation .....	43
2.3.5 Organizational Form Innovation .....	47
2.3.6 Government regulation .....	51
2.3.7 Competitive Advantage .....	52
2.4 Critique of the existing literature relevant to the study.....	58
2.5 Research Gaps .....	59
2.6 Summary .....	60
<b>CHAPTER THREE.....</b>	<b>62</b>
<b>RESEARCH METHODOLOGY .....</b>	<b>62</b>
3.1 Introduction .....	62
3.2 Research Design .....	62
3.3 The Target Population .....	62
3.4 The Sampling Frame .....	63
3.5 Sample and Sampling Techniques .....	63
3.6 Research Instruments .....	66
3.7 Data Collection Procedures .....	67
3.8 Pilot test.....	69
3.9 Data analysis and presentation.....	70
<b>CHAPTER FOUR.....</b>	<b>75</b>
<b>RESEARCH FINDINGS AND DISCUSSION.....</b>	<b>75</b>
4.1 Introduction .....	75
4.2 Response rate.....	75
4.3 Factor analysis and test of reliability .....	76
4.5 Test of validity.....	77
4.5.1 Convergent validity .....	77
4.5.2 Content Validity.....	78
4.6 Test of Sampling Adequacy.....	78

4.7 Respondents Profile.....	79
4.7.1 Respondents Office capacity .....	79
4.7.2 Respondents years of experience.....	80
4.8 General Information related to the study.....	81
4.8.1 Bank ownership.....	81
4.8.2 Size of the bank .....	82
4.8.3 Prioritizing innovation through investment areas in the banking industry .....	83
4.8.3 Why banks are innovating their services.....	84
4.8.4 Drivers towards service innovation by bank size.....	85
4.8.5 Banks performance rating based on innovations started in last three years.....	86
4.9 Descriptive analysis of study objectives .....	88
4.9.1 Service Concept Innovation .....	88
4.9.2 Service Process Innovation .....	90
4.9.3 Service Marketing Innovation .....	92
4.9.4 Service Channel Innovation .....	93
4.9.5 Organization Form Innovation .....	96
4.9.6. Government Regulation .....	97
4.9.7 Competitive Advantage .....	98
4.10: Moderation, correlation and regression analysis of variables.....	101
4.10.1: Testing and controlling for effects of government regulation-the moderating variable .....	101
4.10.2 Correlations between Independent variables controlled by a moderating variable .....	106
4.10.3 Hypothesis testing.....	108
4.10.4 The influence of independent on dependent variables .....	110
4.10.5 Explained variation.....	112
4.10.6: Model fit .....	113
4.11 : General Questions Interview Results .....	113
4.11.1 Opinion of respondent on their banks innovations.....	113
4.11.2 Motivations behind innovations in the banking sector .....	114
4.11.3 Winning formula for the banking industry .....	115
4.12 Customer survey results.....	117

4.12.1 Type of customer interviewed.....	117
4.12.2 Customer’s evaluation of the banks surveyed .....	118
4.12.3 Reasons for rating the banks by customers .....	119
<b>CHAPTER FIVE .....</b>	<b>121</b>
<b>SUMMARY, CONCLUSIONS AND RECOMMENDATIONS .....</b>	<b>121</b>
5.1 Introduction .....	121
5.2 Summary of the findings .....	121
5.2.1 Objective 1: The level of service marketing innovation on competitive advantage in the banking sector in Kenya.....	121
5.2.2 Objective 2: The extent of service concept innovation on competitive advantage in the banking sector in Kenya.....	122
5.2.3 Objective3: The level of service process innovation on competitive advantage in the banking sector in Kenya .....	122
5.2.4 Objective 4: The Extent of service channel innovation on competitive advantage in the banking sector in Kenya.....	123
5.2.5 Objective 5: The Level of organizational form innovation on competitive advantage in the banking sector in Kenya.....	124
5.2.6 Objective 6: The extent of Government Regulation on competitive advantage of service innovation in the banking sector in Kenya .....	124
5.2.7 Competitive advantage .....	125
5.3 Conclusions .....	125
5.4 Recommendations.....	128
5.5 Areas for further research.....	131
REFERENCES .....	133
APPENDICES.....	161

## LIST OF TABLES

<b>Table 3.1:</b>	Target category, respondents and sample population.....	66
<b>Table 4.1:</b>	Reliability test results.....	77
<b>Table 4.2</b>	KMO test.....	79
<b>Table 4.3</b>	Drive towards service innovation.....	86
<b>Table 4.4:</b>	Banks performance rating .....	87
<b>Table 4.5:</b>	Service concept innovation.....	89
<b>Table 4.6:</b>	Service process innovation .....	91
<b>Table 4.7:</b>	Service marketing innovation.....	93
<b>Table 4.8:</b>	Service channel innovation.....	95
<b>Table 4.9:</b>	Organization form innovation.....	97
<b>Table 4.10:</b>	Government effects on bank service innovation.....	98
<b>Table 4.11:</b>	Competitive advantage metrics.....	100
<b>Table 4.12:</b>	ANOVA.....	102
<b>Table 4.13:</b>	Model summary.....	103
<b>Table 4.14:</b>	Coefficients.....	105
<b>Table 4.15:</b>	Correlations between independent variables.....	107
<b>Table 4.15:</b>	Beta Coefficients.....	112
<b>Table 4.6:</b>	Model summary.....	113
<b>Table 4.17:</b>	ANOVA table.....	113

## LIST OF FIGURES

<b>Figure 2.1:</b>	Conceptual framework.....	29
<b>Figure 4.1:</b>	Response Rate.....	76
<b>Figure 4.2:</b>	Respondents Office Capacity.....	80
<b>Figure4.3:</b>	Respondent years of experience.....	81
<b>Figure 4.4:</b>	Bank ownership by capital.....	82
<b>Figure 4.5:</b>	Size of the bank.....	83
<b>Figure 4.6:</b>	Innovation priorities.....	84
<b>Figure 4.7:</b>	Reasons for service innovations.....	85
<b>Figure 4.8:</b>	Respondents opinion on the banks innovation.....	114
<b>Figure 4.9:</b>	Why banks are innovating.....	115
<b>Figure 4.10:</b>	Winning formula for banks innovation.....	117
<b>Figure 4.11:</b>	Type of customers interviewed.....	118
<b>Figure 4.12:</b>	Customers evaluation of banks surveyed.....	119
<b>Figure 4.13:</b>	Why customers rated banks the way they did.....	120

## LIST OF APPENDICES

<b>Appendix 1:</b>	Letter to the Ministry of Education.....	161
<b>Appendix 2:</b>	The questionnaire.....	162
<b>Appendix 3:</b>	Interview guide for bank customers.....	189
<b>Appendix 4:</b>	Reliability test.....	190
<b>Appendix 5:</b>	Table showing quantitative measurement of variables.....	200
<b>Appendix 6:</b>	Table showing data collection procedure.....	201
<b>Appendix 7:</b>	Data analysis procedure.....	202
<b>Appendix 8:</b>	Budget.....	204
<b>Appendix 9:</b>	Research time scale.....	205
<b>Appendix 10:</b>	Self service innovation, Equity bank.....	206
<b>Appendix 11:</b>	Banking services, Equitorial Commercial bank.....	207
<b>Appendix 12:</b>	Banks classification, NSE Kenya.....	208
<b>Appendix 13:</b>	Banks head office location, Kenya.....	209
<b>Appendix 14:</b>	Number of banks branches in Nairobi.....	212

## **LIST OF ABBREVIATIONS**

<b>ANOVA</b>	Analysis of Variation
<b>ATM</b>	Automated Teller Machine
<b>CEO</b>	Chief Executive Officer
<b>EFMA</b>	European Financial Management Association
<b>FAQ</b>	Frequently Asked Questions
<b>HRM</b>	Human Resource Management
<b>KMO</b>	Kaiser Meyer Olkin
<b>MOE</b>	Ministry of Education
<b>NSE</b>	Nairobi Stock Exchange
<b>OECD</b>	Organization for Economic Cooperation and Development
<b>PC</b>	Personal Computer
<b>RBV</b>	Resource Based View
<b>SEM</b>	Structural Equation Modeling
<b>SPSS</b>	Statistical Package for Social Sciences
<b>UK</b>	United Kingdom
<b>UON</b>	University of Nairobi
<b>US</b>	United States

## DEFINITION OF TERMS

- Bank:** A business establishment in which money is kept for saving/or commercial services(American Heritage Dictionary, 2013)
- Commercial Bank:** An institution which accepts deposits makes business loans and offers related services(Investorwords.com, 2013)
- Competitive advantage:** Cole (2008) defined competitive advantage as an advantage gained over the competitors by offering customers greater value, either through lower prices or by providing additional benefits and service that justify similar or possibly higher prices.
- Innovation:** Implementation of a new or significantly improved good, service , process, a new marketing method or a new organizational method(OECD Oslo Manual,2005).
- Organizational innovation:** An organizational innovation is the implementation of a new organizational method in the firm's business practices, workplace organization or external relations(OECD2005).
- Service Channel Innovation :** Fundamentally, a distribution channel can be described as any improved delivery method through which a bank can provide services to customers. Louden (2004) innovation in service channels in banking relating to branches, ATMs,

internet banking and mobile banking

**Service Concept Innovation**

Hertog (2010), service concept refers to new or improved service offering (Frei, 2008) which depicts the value that is created between the service providers in collaboration with the customer.

**Service innovation**

Introduction of new or improved offerings which are intangible in nature (Tether and Bascovusoglu-moreau, 2012).

**Service marketing Innovation**

A marketing innovation is the implementation of a new marketing method involving significant changes in product design or packaging, product placement, product promotion or pricing(OECD Oslo Manual, 2005)

**Service Process Innovation**

Service process innovation is the implementation of new or significantly improved production or delivery method(OECD Oslo Manual, 2005).

## **ABSTRACT**

Banks in Kenya are rethinking how to innovate by focusing on services so as to gain competitive advantage. The main objective of this study was to investigate on the role of service innovation in the banking industry towards competitive advantage. Specifically this study addressed the following objectives: the level of service marketing innovation on competitive advantage in the banking sector in Kenya, the extent of service concept innovation on competitive advantage in the banking sector in Kenya, the level of service process innovation on competitive advantage in the banking sector in Kenya, the extent of service channel innovation on competitive advantage in the banking sector in Kenya, and the level of organizational form innovation on competitive advantage in the banking sector in Kenya and how each of these innovations are affected by the government regulation in a bid to achieve a competitive advantage. Literature was widely reviewed where a conceptual framework was constructed to guide the research study. The study added to the literature by focusing on the role of service innovation on competitive advantage and how this assumed relationship was moderated by the government regulations in the banking sector. The study also furthered literature by including a few questions regarding the innovation priorities, why banks were innovating services as well as banks performance rating based on innovations in the last three years in Kenya. The study was deemed to benefit the bankers, corporate managers, entrepreneurs, marketers, policy makers, academicians and researchers. The study adopted a descriptive cross sectional survey research design where a pilot study was conducted on five respondents away from the target scope. The target population included all the 44 banks incorporated in Kenya with special reference to banks located in Nairobi County. The target respondents in these banks comprised of the CEOs, the directors

of R&D, the directors of operations, the directors of marketing and the branch managers where the CEOs and the directors were drawn from the head offices whereas the branch managers were drawn from the selected branches of these banks. The study also included a few customers randomly selected from these banks. A multi stage sampling technique which involved a stratified simple random sampling method was applied to select officers from the banks whereas purposive sampling method applied to select the targeted customers. Primary data was collected by use of closed and structured questionnaires and interview guide whereas, secondary data was obtained from banking journals, central bank of Kenya, economic surveys, internet portals and websites. A total of 175 questionnaires were released to the respondents, whereby 94 of them were returned. This constituted 54% response rate which was considered satisfactory. Descriptive data was analyzed using descriptive statistics and presented in form of pie charts, bar graphs and tables. Cronbach alpha tests were employed in factor and reliability analysis. In addition, sampling adequacy was tested via KMO. In order to control for the interaction effects of the moderating variable-the government regulation, partial regression was done before Pearson correlation coefficients were computed. Additionally, ANOVA tests were done so as to explain the variations between independent variables and the dependent variable. In order to explain the influence of each predictor variable on the dependent variable, the Beta coefficients were computed before a regression model was fitted. The test of statistics was carried out at 5% significance level. The study established that service innovation strongly and positively influenced competitive advantage in the banking sector whereas the government moderated competitive advantage. Also, the study found that all the predictor variables i.e. service concept, service process, service marketing, service channel and organizational form innovations which were being

investigated in this study positively influenced competitive advantage in the banking sector. The study established that organizational form innovation posed a significantly greater influence on competitive advantage as compared to other types of service innovation followed by service concept innovation, service marketing innovation, service channel innovation and service process innovation in that order. The study recommends that banks seeking to gain competitive advantage through service innovation to heavily invest in areas like organization form innovation, service concept innovation, service marketing innovation, service channel innovation and service processes innovation in that order.



## CHAPTER ONE

### INTRODUCTION

#### 1.1 Introduction

In search of competitive advantage in the banking sector in Kenya, banks are aggressively leveraging information technologies, human resources, branch network, product offerings, relationship marketing, transactional processes, diversifications, among others. However, High competitor imitation is speedily watering down these innovations subsequently eroding competitive advantages in the sector (Bwaley, 2011). This coupled with recent developments in the banking industry such as high costs of operations, narrowing profit margins, high competition for market share, high regulatory changes, technology evolution and changing consumer demographics and behavior are impacting on the way banks in Kenya are innovating so as to be competitive. These banks have to look for creative methods of innovating into superior services so as to achieve competitive advantage (Kungu, Desta & Ngui, 2014). To this end, banks are rethinking how to innovate by focusing on services in a bid to win competitive advantage (Awuah, 2011).

A firm has a competitive advantage over its rivals when it offers its customers greater value, either through lower prices or by providing additional benefits and service that justify similar or possibly higher prices (Cole, 2008). In addition, real competitive advantage implies that companies are able to satisfy customer needs more efficiently than their competitors (Papulova & Papulova, 2006). In Kenya, the banking sector is very lucrative but offers homogeneous products and services. Marketing initiatives to differentiate and create a competitive advantage has increased over the years especially with improvement in modern technology. Given that

the overall goal of every bank is to achieve and sustain a competitive advantage, this however, has been a challenge in Kenya where products and services are homogeneous among players in the industry and competitor imitation is rapid (Chege, 2013).

Competing in the banking industry, especially in the banking financial innovations and the technology driven products and services, where new products and services are easily replicated by rivals, competitive advantage are very temporary and competitive parities are the order of the day. As a result, banks end up becoming vulnerable to thinning margins and capital requirements. In Kenya, these have combined to compel the industry to consider its competitive strength (Awuah, 2011). In order to cope, banks in Kenya have continually reinvented their service offerings in order to stay relevant to their clients' dynamic needs. In addition, in order to reach and expand the customer segment base, banks have leveraged a number of innovations such as: mobile services, internet services, agent banking, branchless banking which have been crucial in reaching the unbanked customer segments. Additionally, due to high competition pressures, the urge to migrate from traditional banking has been on the rise. Innovations such as those available in the ATMs, phone banking, internet banking, debit card banking, credit card banking, agency banking, smart phone applications are taking place at an overwhelmingly fast phase (Muiruri & Ngari, 2014).

There are numerous reasons underlying improvement in services in a bid to generate competitive advantage in firms. Awuah (2011) noted that the only way for banks to differentiate themselves from competition was by innovating into superior services quality, since this is the only area which competition did not easily erode. Additionally, service is

critical component in providing competitive advantage since it allowed new customers and retained the existing ones (Wang & Wang, 2006). Rekettye(2009) studied on the connection between perceived service innovation, service value, emotional intelligence, customer commitment and Loyalty in B2B in Orian, found that service innovation directly influenced customer loyalty. Saeed, Khan and Hussain studied on service innovations in 6 large telecom operators in Pakstan, found that service innovation positively influenced performance in this sector. Precisely, the how banks can engender competitive advantage using service innovation is founded on particular reasons. Laukkannen, Sinkkonen, Kivijarvi and Laukkannen (2007) found that service innovation drove competitive advantage into the banking sector through customer satisfaction and loyalties in companies.

The increasingly rising importance of services in the banking sector is attracting streams of ideas and research interest in this field, especially the one on service innovation is rapidly enrooting. It is also acknowledged that service innovation is an old field of academic. However, limited research focus has been done in this field (Dredjer, 2009: Okey 2007). Therefore, much about the role of service innovation and competitive advantage is not well known especially in the banking sector ((Komaladewi, Nanere, Suryan &Rufaidah, 2012). Additionally, although service innovation is not a new concept (Miles, 1993), innovation research in general tends to focus on technological innovation by manufacturing firms (Toivonen &Tuominen, 2009). With this view, innovation studies focus on product (e.g., goods) and process (e.g., production systems) innovation largely ignoring service innovation and its inherent opportunities. This narrowed focus likely stems from a traditional view of services as activities with low innovative frequency, and the product-centric orientation of

innovation literature ( Hauser, Tellis & Griffin, 2006) that reflects a setting in which manufacturing was the primary economic driver (Drejer, 2004). However, in developed economies, the service sector now dominates their gross domestic products, and its share continues to grow (Gallouj & Djellal, 2010; Gallouj & Windrum, 2009). Therefore, both services and service innovation represent central drivers of broader economic growth and innovation (OECD, 2005).

Service innovation is no longer regarded merely as a side activity to product innovation; it has become a research topic in its own right, accompanied by an increasing focus on services in major economies, a transformation sometimes referred to as the “servitization of society” (Toivonen & Tuominen, 2009, p. 897). Initially service domain was dominated by marketers; nevertheless, existing literature shows a great insurgence by other domains i.e. strategic management, entrepreneurship, social sciences, among others and has been on the increase. Stream of authors, reviews, studies and models have proliferated. Some of the models evolving in this field include for instance, the four dimensional model of service innovation by Hertog(2000), the service innovation triangle by Furseth and Cubertson(2013), the business model by Kowalkowaski(2012) and the six dimensional model of service innovation by Hertog, Weietz and Jong(2010).

Lovelock, Vandermerwe, lewis and Femie (2011), demonstrated peculiar traits that differentiate services from goods: Intangibility, perishability, heterogeneity, simultaneity, transferability and cultural specificity. This uniqueness of services from products poses great challenges to both marketers and strategist since they have nothing to show to customers. Oke

(2007), regretted that although service innovation is currently being acknowledged as a source of competitive advantage in the service firms, little importance has been attached on service innovation, keenly because of its characteristics. However, according to Gebauer, Gustaffsson and Witell(2011) these characteristics makes them a strategic opportunity and a source of sustained competitive advantage for companies. With the rise of internet, more opportunities are provided to make service more tangible than intangible. The internet makes it possible for service providers to show more additional evidence of services like frequently updated information, well designed web page, accurate information providing highly speed response, ease of navigation and presample of services.

Concerning inseparability, the internet makes services more easily customized since customers become more active participants in the process to point what themselves really won't by providing more individual information. Concerning heterogeneity, since e-services are electronically based, there will be less variation provided in service quality from one customer to another. In addition, conversation like typical problems identified and solved, appropriate responses to customers complain may assist further customer services. Finally, concerning perishability, since e-services can be available 24 hours per day, 7 days per week, it provides customers more freedom for purchase and much greater ease for service marketers to handle supply and demand (Hoffman & Bateson, 2002 in Wang & Wang, 2006).

Depending on the economic regions of the world, how innovation is implemented in the banking sector is varied. Pearson (2010) observed that innovation in the banking sector ranges from payments, channels, products, processes, customer relationship management and

customer experiences and have been implemented in different forms: online forums and blogs for customers, relationships, state of the art ATM design, augmented reality services including branch location and real estate, online banking, Card and mobile payment, prepaid card, eWallet mobile payments among others. Athmor (2013) found that in Europe innovations zero in on cost management, while in Pacific Asia, the priority is customer management. In America, the main focus for innovation is on personalized customer services. In the year 2000/2001, the priority focus of innovation in Asian countries was mainly bank office infrastructure, product, payments and channel management, while the second wave focused on customer relationships. Drivers such as demographics, technology and integration of systems and services were viewed key to the transformation of financial services in the future.

In Kenya, search for competitive advantage is overarching in the banking sector with some banks specializing on particular service innovations. For instance, Equity bank in Kenya identify itself with money transfer services, mobile banking, ATM services, card services, equity cash back, FAQs, Visa personal payments, online banking and agent banking. Consolidated Bank in Kenya is concentrating on internet banking, mobile banking, agent banking, Forex rates, ATM locations, Branches and debit cards. Chase bank in Kenya is focusing on bank teller, electronic banking, money transfer, safe deposit lockers, and night safe and executive management offices. Barclays bank in Kenya is currently capitalizing on investing in technology and system capabilities so as to offer more affordable and convenient products such as the internet banking, smart phone and tablet banking services to enhance service delivery to all customers wherever they are.

Additionally, in spite of the low internet use and reliability in Kenya as a medium of banking, the banks were partnering with mobile service companies in order to provide access to clients some form of payments and banking services. While some banks continued to use their branching network advantages, others resorted to branchless banking and more personalized customer banking and direct marketing. More sophisticated innovations like agent banking, extended business hours, religious-based accounts opening, PC banking, internet banking, mobile payments and deposit services were some of the few innovations anchored on technology to widen customer base. There are forty four banks in Kenya which form the focus of this study. These banks are classified on several basis; capital deposits, size and nature of banking activities. Out of the forty four banks, ten are assumed to be the largest banks and are listed in the Nairobi Stock Exchange (NSE). The rest are a total of thirty four small banks which are not enlisted with NSE. Generally, these banks can widely be classified banking institution, non banking institution, microfinance institution and foreign exchange bureaus.

## **1.2 Statement of the Problem**

Banks in Kenya are rethinking how to innovate by focusing on services so as to gain competitive advantage. Awuah(2011) who studied on ‘evaluation of strategies for achieving competitive advantage in the banking industry’ underscore that in a homogeneous industry like the banking sector, service is the only available option which such firms can apply to win competitive advantage over rivals, because this is the only area where competitors do not easily erode. However, according to Chege (2013), who investigated on the ‘effects of social responsibility on competitive advantage of commercial banks in Kenya’, in a homogeneous industry like the banking sector in Kenya, where products and services are similar among players and highly replicated by rivals, achieving competitive advantage tends to be a

challenge. Mantymaa (2013) regretted that managers are misguided to concentrate on costs and leveraging information technologies, yet service errors are the reasons companies are losing customers. Bolton, Grewal and Levy (2007) argued that, firms that leverage services can build strong relationships with customers that will generate barriers to competition, increasing customer loyalty and switching costs.

Ngugi and Karina (2013) studied on effects of innovation strategy on performance of commercial banks in Kenya. Letangule and Letting (2012) studied on effects of innovation strategies on performance of firms in the Telecommunication sector in Kenya. Bwaley (2011) studied on the relationship between innovation strategies and competitive advantage in the banking sector in Kenya. None of these studies focused on the role of service innovation on competitive advantage in the banking sector in Kenya. Despite the limited available studies in the sector, these banks have to look for creative methods to compete. There is need to put into focus how service innovation can lead to competitive advantage among the Kenyan banks in the midst of heightened competition.

### **1.3 Objectives of the Study**

In order to fully understand the subject matter being investigated in this study, this section was divided into general objective and specific objectives as follows.

#### **1.3.1 General Objective**

The general objective of this study was to investigate on the role of service innovation on competitive advantage in the banking sector in Kenya

### **1.3.2. Specific Objectives**

In order to study the main objective in this study, the information targeted was sought by setting the following specific objectives:

1. To establish the level of service marketing innovation on competitive advantage in the banking sector in Kenya
2. To estimate the extent of service concept innovation on competitive advantage in the banking sector in Kenya
3. To evaluate the level of service process innovation on competitive advantage in the banking sector in Kenya
4. To determine the extent of service channel innovation on competitive advantage in the banking sector in Kenya
5. To analyze the level of organizational form innovation on competitive advantage in the banking sector in Kenya
6. To assess the level of government regulation on the competitive advantage of service innovation in the banking sector in Kenya

### **1.4 Research Questions**

This study aimed at answering the following questions:

1. What is the level of service marketing innovation on competitive advantage in the banking sector in Kenya?
2. What is the extent of service concept innovation on competitive advantage in the banking sector in Kenya?
3. What is the level of service process innovation on competitive advantage in the banking sector in Kenya?
4. What is the extent of service channel innovation on competitive advantage in the banking sector in Kenya?
5. What is the level of organizational form innovation on competitive advantage in the banking sector in Kenya?

6. What is level of government regulation on the competitive advantage of service innovation in the banking sector in Kenya?

### **1.5 Research Hypothesis**

The study sought to test the following hypothesis drawn from the specific objectives:

1. There is no positive relationship between service marketing innovation and competitive advantage in the banking sector in Kenya

Ha: There is a positive relationship between service marketing innovation and competitive advantage in the banking sector in Kenya

2. There is no positive relationship between service concept innovation and competitive advantage in the banking sector in Kenya

Ha: There is no positive relationship between service concept innovation and competitive advantage in the banking sector in Kenya

3. There is no positive relationship between service process innovation and competitive advantage in the banking sector in Kenya

Ha: There is a positive relationship between service process innovation and competitive advantage in the banking sector in Kenya

4. There is no positive relationship between service channel innovation and competitive advantage in the banking sector in Kenya

Ha: There is a positive relationship between service channel innovation and competitive advantage in the banking sector in Kenya

5. There is no positive relationship between organizational form innovation and competitive advantage in the banking sector in Kenya

Ha: There is a positive relationship between organizational form innovation and

competitive advantage in the banking sector in Kenya

6. There is no positive government regulation on the competitive advantage of service innovation in the banking sector in Kenya

Ha: There is a positive government regulation on the competitive advantage of service innovation in the banking sector in Kenya

### **1.6 Significance of this Study**

This study was anchored against a backdrop of changing landscape in the banking sector in Kenya where of the 44 banks, at least 10 of them control the chunk of the market share, and control billions of customers deposits and providing billions of loans. The study was also laminated in an environment where financial innovation of products, processes, markets, channels and organizational forms is the order of the day as banks strategize to stay ahead of the competition.

Banks in Kenya continued to register billions of profits before taxes in spite of the government regulations. Some banks have not been able to match to the fierce competition and have opted to merge in order to reap the synergies associated with merging and/ or acquisition. This study was crucial in exposing how banks are innovating in services so as to deal with competition and how government control is affecting competitive advantage in Kenyan banking industry.

Existing literature linking service innovation and competitive advantage was very scanty especially in the banking industry. This study built on the existing limited literature on service innovation and competitive advantages by first focusing on how the Kenyan banks were innovating, what their focuses were in their innovative strategies and the extent to which these

innovations had achieved or otherwise competitive advantages over the years. As the information technology went viral in the innovation in the banking sector, the study focused on how those banks were carrying out those processes and the challenges they were facing.

There are numerous innovations which are taking place in other parts of the world in the banking sector. For instance the virtual banking innovations in US launched in 2011, hyped ‘SIMPLE’ which help customers to get control of their finances thus simplifying their banking experience, Mobile wallet , called Wallaby which is trialing a physical card and digital wallet which links together to a customer credit card , V.me launched in 2012 in Europe, Spain ,UK and France which is at the heart of visa future payments. In Australia, one of the largest banks, Commonwealth Bank of Australia in 2012 launched the Kaching online and mobile payments services which combine a wide range of state-of-the-art payments options for customers among other innovative products in the world banking sector. This study helped to bench mark innovations and the extent to which those innovations were home-grown or just a variation or ultimate duplication of innovations found in the developed countries. Furthermore, the analysis in this study challenged the banks to innovate within the realm of the Kenyan economic circumstance and come up with more creative and original innovations like Mpesa .- one of a kind in the world.

The concept of service innovation remained relatively underexplored with major emphasis geared towards manufacturing, where the focus was on product innovation. In addition, empirical studies were limited especially from a quantitative perspective. This study endeavored to load into that gap by focusing on the subject from a quantitative perspective as

well as constructing a conceptual framework which specifically fitted the banking sector. Additionally, there was a lot of disparity and vagueness which was observed in model frameworks regarding the dimensionality of service innovation. This study attempted to solve that by clarifying in explicit terms the unique dimensions of service innovation with special reference to the banking sector. Thus, service marketing innovation, service concept innovation, service process innovation, service channel innovation and organizational form innovation.

The study abysmally combed into the concept of service innovation and arrayed the underlying connection between service innovation and competitive advantage in the banking sector. Based on this in depth investigation, a number of research findings, conclusions and the recommendations on how to gain competitive advantage through service innovation in the banking sector in Kenya were made. They were envisioned to benefit the academicians, entrepreneurs, social scientists, educationists, insurance companies, corporate managers, bankers and policy makers in both the service and manufacturing sectors.

The study identified many gaps which could be filled by future researchers. Future researchers could benefit especially in areas such as finance, insurance, marketing, entrepreneurship, social sciences, IT and strategy.

### **1.7 Scope of this Study**

The scope of the study defines the terms of reference within which the problem statement would be analyzed and recommendations made. It also defines what, where and how the relevant data was collected and the variables to be studied and also the length of the study. This

study was carried out in Kenya and targeted all the registered banks operating under the Banking Act of Kenya. This means that those institutions offering non-bank services were excluded from this study. The period of study was 6 months starting January 2014 ending June 2014. Data was collected among all the target respondents, both primary and secondary data.

The Variables of study focused on the following main areas which were the bases of the study hypotheses: - service marketing innovations, service process innovation, service concept innovations, organizational form innovations, service channel innovations as the independent factors. These factors were assumed to influence competitive advantage (the dependent variable) dimensions of cost, time, quality and flexibility. The respondents in this study were the CEO's, directors and branch managers of all banks incorporated in Kenya.

### **1.8 Limitations of this study**

The researcher anticipated to encounter some hurdles some of which were addressed in the course of the study. The researcher envisaged response errors because different managers in the same bank would offer conflicting responses. In these situations, a validation was carried out through asking similar questions to a third higher level branch manager or CEO or director and views contradicting materially from the banks official position were excluded from the analysis.

The bank officers who were targeted in this study were expected to be relatively very busy therefore had very limited time to be free given the nature of their jobs. The researcher had to visit them in the offices and to develop a rapport which enhanced the response rate. In circumstances where it became too difficult to get them, the researcher left the questionnaires with their assistants, or office secretaries and made follow up through frequent phone calls.

The major limitation which was encountered in this study was that of suspicion. Matters regarding competitive advantage in the banking sector were very sensitive and information about banks is strongly guarded against leaking to competition and sometimes the government. Therefore, some respondents were unwilling to respond to the questionnaire items simply because; some banks had it as an obligation or rule that details about how they perform or go about their businesses be kept secret and confidential. In some banks, in order for an officer to fill a questionnaire required a researcher to seek permission from a higher rank office which complicated the matter. In order to elicit cooperation and willingness, the researcher created a rapport, presented to them the research request letter from the university, thoroughly explained the reasons for conducting the research and promised to give them a copy of the results once the research work was accomplished. In some banks, the researcher had to plead with them to accept to fill the questionnaires and at other times filled an affidavit regarding keeping information secretive. This caught attention and attracted willingness to fill the questionnaires. However, to some extent this limitation affected the response rate.

The study was limiting itself to only the banks operating under the Banking Act in Kenya. This meant that the non-banking service innovations were left out even though they impacted why and how banks innovated and competed.

This study applied a multivariate analysis of variables and hence would not purport that statistics derived measured the exact values but would offer insights into the statement of the problem. This therefore meant that conclusions and recommendations would be by inferences from the results of the study analysis.

Further limitation was related to the time of study. Being a one-time study, the study is not a longitudinal data analysis the researcher had a clue that it would not be able to analyze the impact of the innovation on a longitudinal basis. Therefore, this time-based analysis on the process of innovations and their gradual impact on a bank's competitiveness were not included in the analysis.

The competitive advantage is from the value of the firm which the buyers are willing to buy. This advantage may not be influenced by the only few factors under study. However, those other factors such as quality of management, brand names, logistical assets, locational advantages among other input factors were not part of this analysis.

## **CHAPTER TWO**

### **LITERATURE REVIEW**

#### **2.1 Introduction**

This chapter addressed the theoretical models and frameworks which contained the concepts being studied, demonstrating the understanding of the theories and concepts that are relevant to the research topic and which related to the broader areas of knowledge being studied. It also addressed the dimensions of service innovation and as well as those of competitive advantage; the conceptual framework, explanation of the hypothesized relationships among variables, operational framework, critique of existing literature relevant to the study, the research gap and summary.

#### **2.2 Theoretical Models and Frameworks**

Research with an assimilation perspective treats service activities as similar to manufacturing activities. That is, models and theories originally developed with manufacturing in mind appear applicable to a service context. Because it suppresses differences between services and manufacturing, the assimilation perspective undermines many unique characteristics of services. In contrast, research with a demarcation perspective emphasizes the unique characteristics of services and thus the need for specifically developed models and theories. Finally, research with a synthesis perspective emphasizes the need for an integrated innovation approach that considers both technological (i.e., product-oriented innovation) and non-technological (i.e., service-oriented innovation) perspectives. Synthesis-focused research thus aims to integrate insights from manufacturing-oriented innovation research with demarcation-oriented research to promote a unified framework (Gallouj & Savona, 2010; Gallouj & Windrum, 2009).

### **2.2.1 Service innovation Models and Frameworks**

OECD in the year 2005 developed a model ‘the OECD model’ to illustrate the dimensions of innovations. In this model, four levers can be applied to analyze innovation. These are product innovation, process innovation, marketing innovation and organizational form innovation. Product innovation is the introduction of a good or service that is new or significantly improved regarding its characteristics or intended use including significant improvements in technical specifications, components and incorporated software, user friendliness or other functional characteristics (OECD, 2005). Thus, product innovation can be based on new uses or combination of existing knowledge or technologies. According to OECD Oslo Manual (2005) *ibid* process innovation is the implementation of a new or significantly improved production and delivery method. This includes significant changes in technologies, equipment and /or software.

Process innovation can be intended to decrease unit cost of production or delivery, to increase quality, or to produce or deliver new significantly improved products. Tidd, Bessant and Pavitt(2001) differentiate process from product innovation whereby both are associated with manufacturing industries. However, product innovation involves changes in the things(products, goods) which an organization offers whereas process innovation involves changes in the ways in which they are created and delivered. Reichstein and Salter (2006) found that process innovation posed difficulties for managers to separate technology from organizational innovations and that process innovations often involve technological and organizational changes. Therefore, suggested for future research to focus on highlighting the differing and incomplete understanding of the concept in the literature on the sources of

innovation. Such a refinement of process innovation should account for the multi dimensional character of process innovation which often involves technological and organizational changes.

According to OECD Oslo Manual (2005) organizational innovation is the implementation of a new organizational method in the firm's business practices, workplace organization or external relations. It has a tendency to increase firm's performance by reducing administrative and transactional costs, improving workplace satisfaction, gaining access to non-tradable assets(such as non-codified external knowledge) or reducing cost of suppliers. Ramstad (2002) defines work organization innovation as renewals in the structures, processes, boundaries of work organization that achieves savings in the use of labour or capital resources, or on improved ability to respond to customer needs which include self managing teams, flatter hierarchies, outsourcing, diversified personnel skill, and management systems.

In a bid to illustrate the concept of service innovation, Hertog in the year 2000, developed 'the four dimensional model of service innovation'. In this model Hertog emphasized that companies can realize service innovation by applying four levers: new service concept, new client interface, and new service delivery system and technology options. The new service concept involves creating an entirely new service concept as a solution to a new client need. The new client interface involves changing the client's role in service production and effectively developing a new client interface by for instance automation. In the new service delivery system involves introducing a new service delivery system by changing processes on the service provider's side. It refers to internal organizational arrangements that have to be managed to allow service workers to perform their jobs properly and develop and offer

innovative services. In the technology option, technology is embraced as an enabling tool for service innovation.

Another model which focused on service innovation is 'the business model'. It represents an attempt to link service innovation and competitive advantage. The model was developed by Kowalkowski in the year 2012. He contends that a business model for competitive advantage should comprise of offerings, revenue model, customer relationships, value networks, service processes, resources and capabilities, structure and strategy. Additionally, Kindstrom, Kowalkowski and Sandberg (2012) for instance, sees service innovation as broad concept that encompasses a considerable number of distinct dimensions such as service development process, capability development, organization adaptation and culture.

The 'service innovation triangle' is still another model which attempts to put into array the dimensional elements which focus on service innovation. This model was developed by Furseth and Cuthberton in the year 2013. They viewed service innovation from the following dimensions: value, business model, customer experiences, service system, technology, key resources and strategic capacity. In their model value is created for everyone involved. However, customers seem to be the main focus. Customer experience represents all of the outcomes necessary for customers to feel the desired effects of innovation whereby in a mass market the total market is segmented into similar groups of customers and their relevant experiences. Service system refers to all the activities needed to deliver on innovation. Supported by technology and information systems alongside other key resources such as capital, people, land, buildings, transport and inventory.

A more comprehensive model is 'the six dimensional model' of service innovation by Hertog, Weietz and Jong. The model was developed in the year 2010. It tried to improve the four dimensional model of service innovation by adding two more dimensions to the existing four dimensions of service innovation. In addition, it tried to consolidate in a more simplified manner the dimensions of service innovation. In this model, service innovation is defined as a new service experience or service solution that consists of one or several of the following dimensions: innovation in service concept; new customer interaction and the role a customer plays in the co-creation of value; new value system or set of business partners; new revenue model; new delivery system(personnel, organization and culture) and new service delivery system(technological). Service concept in this model describes the value that is created by the service provider in collaboration with the customer, the innovation being a new idea of how to organize a solution to a problem or a need of a customer (Frei, 2008).

In their model Hertog *et al* (2010), service concept refers to service offering ( Frei, 2008) which depicts the value that is created between the service provider in collaboration with the customer. The innovation is often a new idea of how to organize a solution to a problem or a need of a customer. The second dimension is new customer interaction and the role a customer plays in co-creation of value. The interaction process between a client and provider is an important source of an innovation. The third dimension is the new value system or set of new business partners i.e. actors involved in jointly co-producing a service innovation.

The fourth dimension relates to new revenue models. The fifth dimension is the new delivery system which refers to (Heskett, 1986) to the organizational structure of the service company

itself. The sixth dimension being technological, whereby ICT has been assumed to enable numerous service innovations ranging from electronic government and e-health to advanced multichannel management, customization of services, introduction of new service concepts, virtual project teams and so on.

It can be concluded from existing model frameworks that there many dimensions which have been suggested to describe the concept of service innovation. These include: new and emerging business models, new customer interface, new service offerings, new processes and new channels to markets, contends that service innovation metrics be anchored on new service, new delivery method, new process, new marketing method and new business model. The existence of such a large array of dimensions shows that so far, there is no commonly agreed model which explains service innovation (Drejer, 2009). Sachdeva (2011) summarized these dimensions into five; new service offering, new delivery method, new process, new marketing method and new business model. Gunday *et al* (2009) studied on innovation and firm performance based on four dimensions: product innovation, process innovation, marketing innovation and organizational innovation. In this study, five service concept innovation dimensions were summarized from the models and mainly from the OECD and the six dimensional model and they were further modified to fit the banking sector. Thus, service marketing innovation, service concept innovation, service process innovation, service channel innovation and organizational form innovation.

### **2.2.2 Competitive Advantage Models and Frameworks**

A number of models have been identified in the literature to explain sources of competitive advantage to a firm. Some of these theories include: the generic strategy by Michael

Porter(1985), the Value chain theory by Porter (1985), the value disciplines by Treacy and Wiersema(1992),the resource base theory by Grant(1991), the core competence theory by Prahalad and Hamel (1990) among others.

The ‘generic strategy’ is a popular paradigm that a firm can apply in order to achieve competitive advantage. In this model, Porter (1985) views competitive advantage as arising from three generic approaches: low cost leadership, differentiation and focus. In low cost leadership, a firm strives for overall low cost leadership. By differentiation strategy, a firm strives to create and market unique products for varied customer group. In a focus strategy, the firm strives to create special appeal to one or more groups of consumer or industry buyers, focusing on their cost or differentiation. Pearce and Robinson (2009) suggest that a low cost leader is able to use its cost advantage to charge lower prices or to enjoy higher profits margins. By so doing, a firm is able to effectively defend itself in price wars, attack competitors on price to gain market share, or, if already dominant in the industry, simply benefit from exceptional returns. By product attributes, the firm attempts to build customer loyalty, which translates into a firm’s ability to charge a premium price for its product. A firm pursuing a focus strategy is willing to serve isolated geographical areas; to satisfy the needs of customers with special financing, inventory, or servicing problems; or tailor the products to the somewhat unique demands of the small to medium sized customer.

The ‘value chain model implies that competitive advantage resides in the value chain and strategy is manifested in choices about how activities in the value chain are configured and linked together. The Value chain was first suggested by Porter (1985) to depict how customer

value accumulate along a chain of activities that leads to the end product or service. Porter identified a set of interrelated activities generic to a wide range of firms. The resulting model is known as value chain. The goal of these activities is to create value that exceeds the cost of providing the product or service, thus generating a profit Margin (Mnjala, 2014). A value chain is a perspective in which a business is seen as a chain of activities that transforms inputs that customers value (Porter , 2012). Value chain analysis attempts to look at its costs across the series of activities the business performs to determine where low cost advantage or cost disadvantages exist. Thus, proponents of value chain theory have divided these activities of a firm into primary and support activities. Primary activities are those directly involved with the physical creation of a product, marketing and transfer to the buyer and after sale support. Support activities are assist the firm as a whole by providing infrastructure or inputs that allow the primary activities to take place on an ongoing basis. The value chain includes a profit margin because a mark-up is above the cost of providing a firm's value-adding activities is normally part of the price paid by buyers-creating value that exceeds cost so as to generate a return for the effort(Pearce *et al*, 2009).

The 'value discipline' model, nowadays, companies have taken their leadership positions in their industries in the last decade by narrowing on their focus to delivering superior customer value in one of the following value disciplines: Operational excellence, Customer intimacy or product leadership. Operational excellence involves providing customers with convenient and reliable products or services at competitive prices. Customer intimacy involves offering tailored to match the demands of identified niches. Product leadership implies offering

customers leading –edge products and services that make rival’s goods obsolete (Treacy & Wiersema, 1992).

Companies seeking to gain competitive advantage using operational excellence are identifiable in seeking ways to minimize operational costs, to eliminate intermediate production steps to reduce transaction and other frictional costs and to optimize business processes across functional and organizational boundaries. They concentrate on making their operations lean and efficient. Companies seeking competitive advantage using customer intimacy concentrate on segmenting and targeting markets precisely and then tailoring offerings to match exactly the demands of those niches. They combine detailed customer knowledge with operational flexibility so they can respond quickly to almost any need, from customizing a product to fulfilling special requests, leading to tremendous customer loyalty. Companies pursuing product leadership strive to produce a continuous state of the products and service. Reaching that goal requires them to challenge themselves in three ways. Firstly, they must be creative, which means recognizing and embracing ideas that usually originate outside the company. Second, such innovative companies must commercialize their ideas quickly. To do so, all their management must be engineered for speed. Third, product leaders must relentlessly pursue new solutions to the problems that their own latest product or service has just solved (Veiweire & Revolo , 2009).

The theory of ‘core competences’, competitive advantage emerges from the creation of superior competencies that are leveraged to create customer value and achieve cost and/or differentiation advantages, resulting in market share and profitability performance. A core

competence is a capability or skill that a firm emphasizes and excels in doing while in pursuit of its overall mission (Prahalad & Hamel, 1990). Core competencies that differ from those found in competing firms would be considered distinctive competencies; distinctive competencies that are nurtured throughout the firm, allowing it to execute effectively so as to provide products or services to customers that are superior to competitor's offering become the basis for a lasting competitive advantage (Barney, 1991).

The Resource Based theory (RVB) of the firm (Grant, 1991) argues that a firm's competitive advantage arises from a firm's ability to organize its bundle of resources. RVB is a method of analyzing and identifying a firm's strategic advantages based on examining its distinct combination of assets, skills, capabilities and intangibles as an organization. The RVB's underlying premise is that firms differ in fundamental ways because each firm possesses a unique bundle of resources- the tangible and intangible assets and organizational capabilities to make use of those assets.

### **2.3 Conceptual Framework**

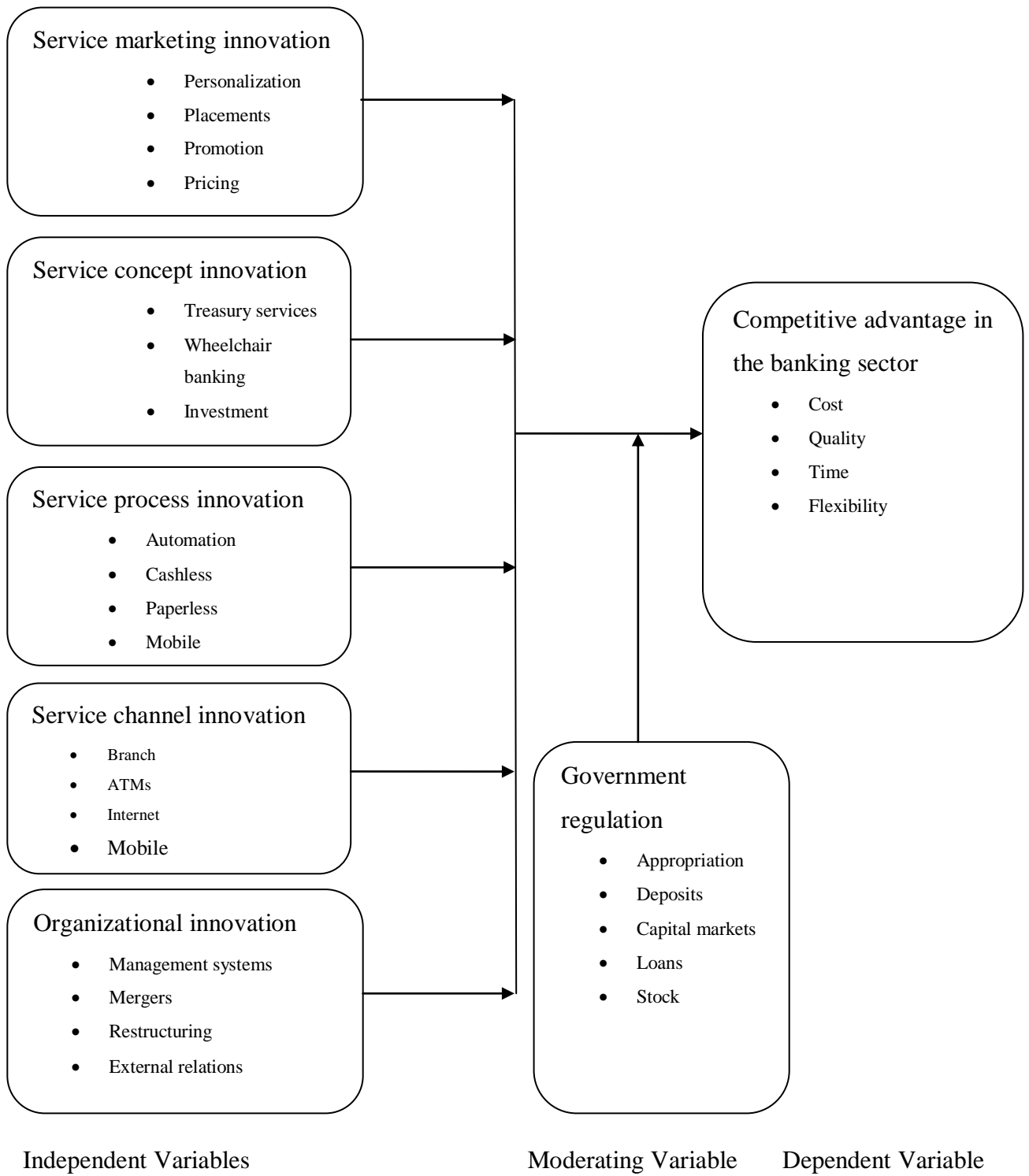
A conceptual definition is a definition outlining the basic principles underlying a term (Church, 2004). Conceptualization is a process of aiming to agreement about meaning of terms, the end result are concepts, constructs or variables. The process through which we specify what we mean when we use particular terms in research; describes indicators used to measure concepts and different aspects of the concept or dimensions; the process of refining research ideas into specific terms and beginning of your own interpretation and approach to study, indicates the concepts to be used or the conceptual basis for the study and represents a set of basic expectations about what you believe you will find. The end result is the development of a set of

indicators, a mental representation of a phenomenon with ways to compare that representation to reality (Martin, Cohen & Champion, 2013).

A conceptual framework is defined as a system of concepts, assumptions, expectations, beliefs and theories that support and inform your research. Miles and Hubman(1994) defined conceptual framework as a visual or written product, one that explains either graphically or in narrative form, the main things to be studied, the key factors, concepts or variables and the presumed relationships among them. It is a tentative theory of the phenomenon that you are investigating. The function of the theory is to inform the rest of your design, to help you assess and refine your goals, develop realistic and relevant research questions, select appropriate methods and identify potential validity threats to your conclusions. Jabareen(2009) defined it as a network, a 'plane' of interlinked concepts that together provide a comprehensive understanding of a phenomenon or phenomena. In this study, The research framework consisted of five independent variables i.e. service marketing innovation, service concept innovation, service process innovation, service channel innovation and organization form innovation, a moderation variable-the government regulation and the dependent variable-competitive advantage, and were being studied in the banking sector. These variables were discussed below and were presented in form of a conceptual framework as shown in Fig.2.1.

In addition, these variables were also operationalized. Operationalization is the development of measurable representations of the concepts and /or dimensions of concepts (i.e. variables). It is the development of specific research procedures, operations, measures that will result in empirical observations or data representing abstract concepts of interest in the study (Martin,

Cohen & Champion, 2012). The how you will define and measure a specific variable as it is used in your study (McLeod, 2008). The operations or procedures need to measure a concept. Measurement is the process by which numerals or some other labels are attached to levels or characteristics of the variables (Lewis-Beck, Bryman & Liao, 2004). It is recommended that simple variables use only a single indicator whereas complicated variables need multiple indicator-composite measures. Given the nature of the variables being studied in this study, composite indicators were applied in measuring each variable, on a scale of 1 to 4, with some guidelines drawn from the OECD Oslo manual (2005). In order to measure the service innovation constructs, the respondents were asked to explain if various metric of a service innovation construct had either: 1-not started, 2-started and in process, 3-completed and not imitated by competitors and 4-completed and imitated by competitors. A number of studies suggested measurement for competitive advantage, Thatte(2007), Azmi *et al*(2012) , and the contributions of Kavitha, Karthkeyan and Devi (2013). However, in order to measure competitive advantage in the banking sector, the respondents were asked to explain if the various metrics of competitive advantage constructs had increased or decreased on either side of the spectrum where, the decision legend was 1-decreased, 2- remained the same, 3-increased slightly, 4-increased significantly. Interpretations were made on a scale of 1-4. In order to measure government regulation, the respondents were asked to express the extent in which government regulation influence service innovations undertaken by their banks. The criterion was, where, 1-no effect, 2-lesser effect, 3-moderate effect, and 4-significant effects. Mean scores were computed in each case and conclusions were made.



**Fig.2. 1: Conceptual framework**

### **2.3.1 Service marketing innovation**

Service marketing innovation is defined as the implementation of a new marketing method involving significant changes in product design or packaging, product placement, product promotion or pricing (OECD Oslo Manual, 2005). Marketing innovations target at addressing customer needs better, opening up new markets, or newly positioning a firm's product on the market with the intention of increasing firm's sales. Lovelock, Vandermerwe, Lewis and Fernie (2011) claim that the concept of service marketing has increased in importance with advent of more companies offering intangible solution requiring expanded marketing mix consideration beyond conventional marketing mix---the four P's(Product, place, price and promotion) to consideration of three additional elements: the people, processes and physical evidence. This is because of service traits that make services peculiar from products. According to Kokemuller (2014) Product refers to what you're marketing. Place refers to the way you present and deliver products to consumers, including store locations and websites. Price is how much you expect the customer to pay. Promotion is use of marketing techniques to persuade customers to buy from you. The people component focuses on the fact that a service based business cannot be separate from its people, implying that when you market a service, you should try to emphasize the qualification and expertise of your providers. The process component is based on reality that service experiences typically happen over time whereas products are delivered at the time of purchase. The physical evidence refers to the importance of providing proof of quality in the lieu of intangible nature of services.

Marketing innovation entails product design, placement, pricing and promotion. Marketing innovation in product design refers to the changes in appearance and form of the product

without altering functional or user characteristics. Marketing innovation in pricing is use of new pricing strategies to market a firm's goods or services. Marketing in product promotion involve use of new concepts for promoting a firm's goods and services whereas innovation in product placement involve the introduction of new sales channels (Efi, 2009). Competitive advantage in this study is defined as the benefits of implementing some unique value creating strategy not simultaneously being implemented by any current or potential competitors (Barney, 1991). Customer -centrism proponents or user driven proponents such as Bisgaard and Hogenhoven (2010) agitate for value proposition to the market as arising from user interface, involvement and co-creation.

According to Sawhney *et al* (2006) a service solution is a customized, integrated combination of products, services, and information that solve a customer's problem. Innovation along this line the company can discover new customer segments or uncover unmet needs. Cognizant(2012) observes that use of mobile services is disruptive to traditional banking practices and creates cost efficiencies for banks while increasing customer convenience and enhancing productivity. Smartphones for example utilize specialized applications that allow customers to deposit checks by sending images rather than physical items. Also, prompted by loss of some critical components of traditional fee income as a result of new regulation, banks are scrambling to find new income sources and ways to reduce costs. For instance nearly all banks are revising the criteria for offering no fee services, such as checking accounts.

According to Burnett (2012) segmentation is a process of identifying and classifying people into heterogeneous groupings (segments) and determining which of these segments viable

target groups are. According to Thomas (2007) market segmentation refers to subdividing a market along some commonality, similarity or kinship with the aim of concentration of marketing energy and force on the subdivision to gain a competitive advantage within the segment. In marketing perspective, market segmentation can be based on geographical location, demographic characteristics, usage, psychological, distribution, media segmentation, price, time, psychographic or lifestyle (Burnett, 2012; Thomas, 2007). Maas, Graf and Bieck(2008) divide customers into five segments or types depending on their attitudes and value drivers: support-seeking individuals, product optimizers, uninterested minimalists, price sensitive analyzers or relationship oriented traditionalists. They argue that customer behavior orients towards information seeking, interaction, flexibility, transparency and innovation seeking and point that success in customer centric environment especially in insurance industry will derive from flexibility, personalization, experimentation and community social responsibility.

According to Voutsas and Heinrich (2012) present customer value proposition in the banking sector orients towards demand for simplicity, self control, mobility, personalized service and consistency for customer experience. Knorr and 'Zigova'(2004) found that with an innovative approach to pricing as one crucial element of a thoroughly thought through and consistently implemented marketing mix- proves that even on very competitive markets extraordinary, and lasting, profit opportunities exists and can be exploited if adequate pricing strategy is applied. Casadesus-Masanell and Zhu (2013) points to the possibility of competitive imitation and suggests that entrants need to strategically choose whether to reveal their ideas by competing

through the new business model or instead, to conceal them by adopting a traditional established logic of value creation and value capture.

Al-alack and Tarabieh (2011) studied on gaining competitive advantage and organizational performance through customer orientation, innovation differentiation and market differentiation found that innovation differentiation was more important in contributing competitive advantage in the banking industry. Giraldo (2010) studied on understanding the role of technology in service innovation and found that technology facilitates the interaction and transfer of knowledge from different sources, the interaction among different stakeholders of innovation process, both external and internal. It modifies service characteristics which lead to shorter lead cycles, impacting production and delivery of new services, while targeting clients more efficiently. It enhances service innovation creating possibilities to innovate. Davies (2000) ensured that marketing innovations increase sales by increasing product consumption and yield additional profit to firms. Moreover, Oke (2007) in a recent empirical Study on British firms showed that different types of innovations were found to be related to innovative performance.

Epetimehim(2011) found that marketing innovation plays a major role in achieving competitive advantage of a firm. Knorr and 'Zigova'(2004) found that with an innovative approach to pricing as one crucial element of a thoroughly thought through and consistently implemented marketing mix- proves that even on very competitive markets extraordinary, and lasting, profit opportunities exists and can be exploited if adequate pricing strategy is applied. Casadesus-Masanell and Zhu (2013) points to the possibility of competitive imitation and

suggest that entrants need to strategically choose whether to reveal their ideas by competing through the new business model or instead, to conceal them by adopting a traditional established logic of value creation and value capture.

### **2.3.2 Service concept innovation**

Service concept innovation encompasses service operation (the way in which service is delivered), service experience (the customer's direct experience of service), service outcome (benefits and results of service for the customers), and value of the service (the benefits the customers perceive as inherent in the service weighed against the cost of the service) (Johnston & Clark, 2001). Riddle (2008) adds that innovation in service offering involves changes to the service itself or what is being offered. Thus, claims that innovative services are the ones that did not exist before, or that have substantially been redesigned to meet customer's needs more efficiently. Service offering innovation refers to improved or new visible aspects of services aimed at enhancing customer's perception and experiences about the service offering (Fynes & Lally, 2008). Customers attach value on a product based on service benefits, people, physical, process, perception and experience (Fynes & Lally, 2008).

Bodie and Merton (2000) argued that although bank and financial organizations are service oriented, they still have products such as investment instruments including stocks, bonds, bank deposits, and lending instruments such as loan and credit cards. Louden (2004) posit that banks are under pressure to offer an expanding set of financial services to their customers while at the same time trying to focus on their core competencies. These services include insurance and investment products and services, credit and debit cards, bill-payments services and access to financial information from customers' personal investing software packages.

This trend towards unbundling the corporation and leveraging service providers for noncore functions drives banks to use internet for its ubiquitous connectivity and virtual private networking technology to safeguard communication with their integration partners.

Chebbi *et al* (2007) described the necessary conditions required for service concept and offer involving original ideas of new services, ideas aligned with its global strategy. These conditions includes: strong collaborations with customers and some systems of environmental scanning. The marketing staff plays an important role to identify the market segments and positioning. The management must think about direct and indirect characteristic use of the service. It involves managers studying tangible characteristics of technological goods, the quality of the firm's offer and number of supplementary services. For instance, in the banking sector, Tandulwadikar (2012) observed that many banks have focused on reengineering their user interfaces across delivery channels, in an attempt to provide customers with an integrated multi channel user experience. Also, banks are turning to mobile services and social media to create operational improvements as well as analytical-based (and thus more targeted and personalized) ways of engaging customers across all demographics. Cloud computing has emerged as a way to bring costs down to pay for the service delivery innovation.

According to Reiney(2005) the overarching objective of twenty first century new product development thinking is to maximize the value proposition, the critical perspective of product innovation. It is about creating products that solve customer problems and creates new products that are sustainable solutions for future. Verweire and Revollo(2009) claim that if companies want to develop and sustain competitive advantage they need to develop products

and /or services that keep attracting customers. Agarwal and Choudhary(2013) contend that since the ability to differentiate purely on basis of product, channel and price is limited, banks can still gain competitive advantage by creating an improved customer experience to attract and retain customers. Banks must strive to deliver right products at the right time through right channel. To succeed in this involves delivering personalized services to customers in exact manner that suit them, based on understanding of what exactly customers want.

Kotler and Amstrong (2001) point to the most important product attributes that are used to communicate product benefits: Quality, features, style and design and experience. According to Beacham(2006) the function(what it does) and form(how it is presented) are the key components of the design of a new product or service. In the banking sector, alternative channels such as ATMs, Mobile phones, Internet, and telephone have mainly provided customers with new experiences. Sullivan, Agarwal and Choudhary(2013) found that quality of services, trust and confidence that the customers have towards a particular bank were great sources of the customer experiences in the banking sector and that these experiences are anchored on products, channels and customer life cycle. Zaithaml *et al*(2000) demonstrates that service quality dimensions in banking sector which are associated with e-banking services includes: access, ease of navigation, efficiency, flexibility, reliability, personalization, security, responsiveness, trust, site aesthetics and price knowledge.

Customer experiences according to Furseth and Cuthbertson (2013) represent all of the outcomes necessary for customers to feel the desired effect of the innovation. Kaasinen, Ainasoja, Vulli, Paavola, Hautola, Lehtonen, & Raunanen, (2010) add another characteristic -

user experience, which emphasizes on product needs to support user's hedonic needs such as stimulation and self-experiences in addition to the pragmatic ones in using the product or service. In the banking sector, customer experience can be improved in the branch by self banking, ATMs, interactive screens, video conferences, expertise space, welcome desk, waiting space and R.F.I.D (Auther & Kreutzmann, 2011).

Fagerberg *et al.* (2004) stressed that while the introduction of new products is commonly assumed to have a clear, positive effect on the growth of income and employment, process innovation, due to its cost-cutting nature, can have a more hazy effect. Wolff and Pett (2004) and Walker (2004) conducted comparative research for the effects of product and process innovations on firm performance. They indicated that particular product improvements are positively associated with firm growth. Gopalakrishnan (2000) broadened the topic while emphasizing that innovation speed and innovation magnitude were also relevant innovativeness features both of which had a positive effect on firm performance.

### **2.3.3 Service Process Innovation**

Service process innovation is defined as the implementation of a new or significantly improved production or delivery method. This includes significant changes in techniques, equipment and/or software. Process innovations can be intended to decrease unit costs of production or delivery, to increase quality, or to produce or deliver new or significantly improved products (OECD Oslo Manual, 2005). Fagerberg *et al.* (2004) stressed that while the introduction of new products is commonly assumed to have a clear, positive effect on the growth of income and employment, process innovation, due to its cost-cutting nature, can have a more hazy effect.

Jeston and Nellies (2006) underpin the following types of process innovations which are applicable in an organization: These include: Redesign of industry value chain involves redesign of customer service such that customers have more control and provides more optimal process due to information access and data integrity. Secondly it involves customer to customer interactions which enhance exchange of ideas, information and opinions which encourage purchase of goods and services. The second type of process innovation is redesign of business involves processes developed around customer wishes, flexibility is the process rather than exception by pursuing that customer choice (flexibility) is embedded in the process. The third type of process innovation is redesign of processes by use of real time and geographical information such as using technology to track information, giving customers ability to track and trace their products real-time at the same time reducing workload for the call center. The fourth type of process innovation is the sub-process innovation involves adopting multi-process rather than using one standard process for a variety of situations such as use of automated services as well as use of mobile communications which allows employees and customers to access time based critical information such use of mobile devices in utility companies.

In the banking sector, Robinson, Sayer and Pallister(2007) observed that the most visible process innovations in recent years have been those exploiting internet technology to allow for rapid increase in online banking transactions. Also, other process innovations have been observed: the development of a new, automated, integrated back-office system has allowed banks to outsource and offshore routine administration and customer service functions. At the same time centralization of transactions processing and of such core operations as credit risks

assessment and sanctioning has reduced the role of local branch and led to a raft of branch closures. Payment methods have been migrated from checks to credit cards, debit cards, chip and pin and now contactless payment systems, how consumers transact business is now being revolutionized.

Pearson (2010) cited key areas where banks were pursuing process innovations. These areas include: The automation of credit processes, including the use of electronic signatures for online sales across a broader set of products. Where an end to end online application is not possible, some banks allow customers to start application online and then complete it in a branch. The second area includes the introduction of paperless branches and cashless branches, developments which have significant process implications for sales and service. The third area include the use of mobile phones to process applications for new accounts, supporting the greater use of mobile sale forces. TEB has developed an application for credit cards in Turkish market, and Equity bank in Kenya has also enabled account applications by mobile phone.

Reichstein and Salter (2006) found that process innovation posed difficulties for managers to separate technology from organizational innovations and that process innovations often involve technological and organizational changes. Therefore, suggested for future research to focus on highlighting the differing and incomplete understanding of the concept in the literature on the sources of innovation. Such a refinement of process innovation should account for the multi-dimensional character of process innovation which often involves technological and organizational changes. Gemes, Fletcher and Aggarawal(2009) regretted that the banking complexity has resulted in varying levels of customer service and inefficiency. End to end

simplification and a core focus on activities that add value can help banks cut costs, enhance customer service and improve customer retention; four areas of banking value chain form prime target for simplification: product management involving cutting out non-core business lines, rationalized and simplified product offering; migrating from low value transactions to direct channels and focus on scales; capitalizing on scale in case of operations and IT; and clarifying roles and responsibilities in case of banking organizational structure.

Heineke and Davis (2010) define delivery process as the end to end process that directly interacts with the customer. It consists of steps that a customer goes through in the co-creation of value. It begins where the customer first interacts with the service organization and ends when the delivery of the desired service is completed and the customer exits the process. Gemes, Fletcher and Aggarawal(2009) emphasized that shift in customer routine transactions to direct channels such as call centers and internet reduces employee's time spent on cashing checks because they can be done by customers themselves. For this to be achieved, banks should continue to improve self-service technology within branches and use employees to encourage customers to carry out simpler transactions themselves or through direct channels.

According to Riddle (2008) service delivery process innovation involves changes to the service delivery process or how the service is being provided with significant changes in the role of staff, strategic partners, and/ or customers, the most typical form of innovation including increased accessibility and changes in the degree of self service. Bernard, Lima and Souza(2007) found that automating back office processes such as account opening or closing, processing checks, mortgage and loan personal approvals, etc has helped banks reduce cycle

times, reduced high level staffing, improved visibility into the status of requests for front office and customers, standardization of processes and improved quality of services to customers.

Banerjee (2009) found that most recent innovations in the banking sector focused on delivery of products or services, management of customer interactions and administration of back office functions. Process innovations such as: internet related has improved online banking; Automated and integrated back office systems have enabled banks to outsource or offshore routine administration and customer service functions. Centralized transaction process in core operations such as credit risk assessment and loan approval has reduced the role of the local branch. Payment processes have been revolutionized by the introduction of chip-and-pin and contactless payment systems such as smart cards. KPMG (2012) suggest that process innovations have been very important in transforming back office functions, streamlining customer interactions and in facilitating outsourcing, off-shoring and similar cost management strategies.

Beside the speed and quality aspects, innovative performance is also related to the two other elements of production performance; namely, flexibility and cost efficiency. Success in the renewal efforts especially in administrative mechanisms, production processes, and new products can contribute extensively to the dissemination of knowledge and effectiveness of coordination within the organization, which are necessary for operational flexibility and decreased related costs (Koufteros & Marcoulides, 2006). Peters (2008) purports that not all the process innovations lead to cost savings, but some do and allow the organization to market products at competitive prices. Therefore, we can argue that the production performance,

which is the combination of the achievements in such performance indicators as speed, quality, flexibility, and cost efficiency, is positively affected by the innovative performance.

Process innovations are assumed to bring multiple benefits to an organization and help an organization achieve competitive advantage. However, a considerable number of businesses have adopted these practices without much success. For example, Staw and Epstein (2000) found no significant relation between companies being associated with quality, teams and empowerment and changes in economic performance. Letangule *et al* (2012) found that process innovation enables the running of the firm's operations thus increasing effectiveness and efficiency of the firm. Also, provides means for safeguarding and improving quality and saving costs while product innovation provided competitive advantage.

Peters (2008) purports that not all the process innovations lead to cost savings, but some do and allow the organization to market products at competitive prices. Therefore, it can be argued that the production performance, which is the combination of the achievements in such performance indicators as speed, quality, flexibility, and cost efficiency, is positively affected by the innovative performance. Baer and Frese (2003) in their study of 47 mid-sized German companies examine the relation between process innovations, climates for initiative and psychological safety and firm performance. The results showed that climates for initiatives and psychological safety were positively related to two measures of firm performance.-longitudinal change in return on assets and firm goal achievement-and moderated the relation between process innovations and firm performance.

#### **2.3.4 Service Channel innovation**

According to Peppard (2000) a service channel or a distribution channel can be described as any delivery method through which a bank can provide services to customers. Each individual bank typically operates an array of distribution channels, collectively termed the bank's multi-channel mix. Across the multi-channel mix, those channels that do not involve physical face-to-face contact with bank staff members have been called 'direct channels.' Examples of the most commonly employed direct channels include: call centres, web banking, direct mail, and automated teller machines. Historically, banks have actively sought to migrate simple transactions, products and services away from tellers towards direct channels. This global trend has been driven by a combination of three underlying forces.

Firstly, migration towards direct channels represents a cost saving opportunity for banks, particularly migration towards web banking (Farquhar & Panther, 2007). Secondly, the migration of simple, low-value activities away from in-branch tellers, allows staff to focus instead on the sale of high-value products and services (BearingPoint, 2006). Thirdly, direct channels have the potential to offer customers enhanced levels of service and convenience (Peppard, 2000). Banks that will successfully create an integrated multichannel strategy with a customer-focused approach are expected to turn their channel management efforts into a key differentiator in the market (Kanchan, 2012).

Louden (2004) observed that forty years of banking changes have given customers more flexibility and better service, while leaving most banks with an evolved- rather than crafted-set of delivery channels and supporting organizations. With new distribution channels, banks have

enhanced the ability to deliver customer service. With the right connectivity behind these channels, their value-both to the bank and to its customers-has been amplified. Hence, as bank customers choose to interact with their banks over a variety of channels, however, it becomes increasingly necessary for banks to provide a consistent customer experience across all channels.

Voutsas *et al* (2011) contend that innovation in the banking channels is a strong value proposition for all generations. They observed six emerging trends in customer needs, behavior and preferences that impact on innovation. These are: Banking customers becoming more experienced and savvy using technology-based banking services; two thirds of the customers demand a consistent service offering through multiple banking channels; customers will conduct 40% of their banking activities in the branch and 50% through direct channels in 2013; customers use internet banking up to 50% as the main channel for interaction with their preferred bank. Lastly, every third customer is willing to change to a bank that offers better technology-based services. Philpott and Dooley (2009) identified examples of channels applicable in banking industry as including the branch, web banking, and call center, external ATMs, direct mail, Web agent, social media banking, mobile banking, field agents and partnering with another firm. Louden (2004) stress that innovation in service channels like branches, ATMs, internet banking and mobile banking has helped banks reduce costs.

Pearson (2010) cited more recent innovations which apply in specific channels to include for instance: in branches, more use of technology such as RFID for recognizing customers and printing of debit/credit cards in branch. Banks also focus on creating advisory tools which to be shared by customers and relationship managers as well as branches creating specialist branches

for affluent and SME segments. In self-service innovations banks concentrated mainly in terms of new functionality of ATMs and Kiosks. The examples include the use of biometric ATMs, radical ATM designs, among others. In mobile channels include richer application for smartphones, use of electronic signature system for use with mobile banking, augmented reality services for smartphones, remote deposit capture to enable deposit of cheques by taking a photo on mobile phone. In online channels- banks concentrating in web 3.0 technologies and personal financial management tools.

Valluri (2010) claims that banks today are drifting away from branch channel towards alternative channels like online/internet (E) banking, ATM, call centers and mobile banking. Also, recent studies show that eighty percent of customers are not interested in purchasing investment products over electronic channels or phone, they would rather meet a financial expert or analyst in person before coming to a decision. It is also true that even now, sales are high from branch banking in wealth management, but alternative channels provide convenience for the regular transactions and provides banks with higher profits with lower operational expenses and transactional costs. A study conducted by Mallat, Dahlberg, Saarinen and Tuunainen (2001) showed how customers consumption pattern in financial services is changing with respect to channel application. Thus, ATM recorded highest in accessing account information at 53% and 91% in cash withdrawal services. Internet led at 41.6% in bill payments followed by branches at 18% .Branches dominated in submitting loan applications while service counters recorded highest in investment services, alternative channels recording low.

Pavier and O'keeffe (2012) demonstrated that technological innovation in retail banking industry produced new distribution channels which give more ways for consumers to access their accounts, also provides many alternatives to a bank. According to Kanchan (2012) banking service channel improvements are being characterized by banks transforming in areas such as layout and design, sales and services as well as staff and people. Also, banks focusing sales through online channels due to steady growth in customer using online banking; the growth of smart-phones, advancement in technology and advanced security levels have helped increase adoption of mobile devices leading to reduced operational costs and improved efficiency. ATMs are evolving with increased automation, integration with direct channels such as mobile and online banking, and delivering value-added services to customers.

Banks are now looking at ways to create revenue streams out of self-service channels as opposed to seeing them as channel extensions of branch banking. Increasingly, self-service channels are becoming critical for the mobile and social customers. Gemes, Konik and Moss (2007) stress that branch/teller, online, call center, ATM and mobile banking services are very critical. However, they found that customers still tended to prefer to do most of their banking in branches because of its suitability for all products especially current and saving accounts and mortgages. Voutsas and Heinrich (2012) branch, internet and mobile banking channels are critical in all banks but integration of a multichannel strategy would be an important ingredient supporting customer value proposition in the banking sector. Pearson (2010) also claims that although there many specific channel innovations being experienced in the banking sector, the main challenge facing the sector are how to achieve effective multichannel integration.

The use of electronic service channels has been associated with performance dimensions of firms. E-banking for instance has enhanced revenue generation, improvement in productivity and efficiency in service delivery, increase in market share, market access and cost savings (Asemanyiwaa, 2012). The integration of internet, branch network and mobile banking channels helps banks attract and retain customers (Voutsas *et al*, 2012) as well as enhance customer satisfaction (Chavan, 2013). Kathuni and Mugenda (2012) demonstrated that direct sales strategy employed in Commercial banks in Kenya enabled competitive advantage in the sector.

### **2.3.5 Organizational Form Innovation**

An organizational innovation is here defined as the implementation of a new organizational method in the firm's business practices, workplace organization or external relations. Organizational innovations have a tendency to increase firm performance by reducing administrative and transaction costs, improving workplace satisfaction (and thus labor productivity), gaining access to non-tradable assets (such as non-codified external knowledge) or reducing costs of supplies (OECD Oslo Manual, 2005). Although there are quite numerous conceptual studies, analytical and empirical studies are limited both in terms of numbers and the extent and depth of the analysis. Only a few studies have intimately examined the relationship between innovation types and firm performance. Gunday *et al* (2009) found that organizational innovation was a very important ingredient in influencing firm performance. In service industries, it is greatly emphasized and acknowledged with great focus on changes in organizational structure (Hertog *et al*, 2012) and management (Riddle, 2008).

Both Lynch(2007) and Mothe(2012) acknowledged that organizational innovation should incorporate new business practices for organizing work or procedures(i.e. supply chain management, business re-engineering, lean production, quality management, education or training systems); new knowledge management systems designed to improve information use or exchange, knowledge and skills within the enterprise or to collect and interpret information from outside the enterprise; new methods of workplace organization for distributing responsibilities and decision-making(i.e. teamwork, decentralization, integration or de-integration of departments) and new methods of organizing external relations with other firms or public institutions(i.e. first use of alliances, partnerships, outsourcing or subcontracting).

Ramstad (2009) viewed organizational innovation as renewals in the structures, processes or boundaries of a work organization that achieve savings in the use of labor or capital resources or an improved ability to respond to customer needs. Such organizational innovation includes; management teams, flatter hierarchies, outsourcing, diversified personnel skill and management systems. Cox, Richard and Tamkin (2012) underpin that organizational innovation involves business practices including knowledge sharing and staff development, work place organization including devolution of decision making to employees, external relations between employees in one part of an organization and those of other departments or externally and other innovations including those of variable pay as a change to reward systems or atypical employment contracts.

Organizational innovation has been widely defined as the creation of new idea and new behavior to the organization. The dimensions of organizational innovation are extremely

complex and multiple; it can be reviewed from two aspects: (1) breadth of innovation, which includes policies, system, administrative, processes, products, services, and others; (2) depth of innovation, which includes the importance, the degree of influence, effect on long term profitability, and others (Chuang, 2005). Fundamentally, there are two distinctive types of organizational innovation have been classified in most literature, namely technological innovation, and administrative innovation (i.e. Chuang, 2005; Tan & Nasurdin, 2010). Chuang (2005) has further categorized technological innovation into secondary dimensions: product innovation and process innovation; while administrative innovation remains distinct from the other two.

Under Mavondo, Chimhanzi and Stewart's (2003) study, organizational innovation was distinctively classified into three dimensions, namely: product innovation, process innovation and administrative innovation. However, Product innovation, process innovation and administrative innovation are the important predecessors for manufacturing firms and have the equal capability to improve performance or effectiveness, solve problems, add value, and create competitive advantage (Cooper, 1998; Damanpour, 1996). Given the importance of product innovation, process innovation and administrative innovation in enhancing manufacturing firm performance, therefore, the organizational innovation is operationalized to be multidimensional comprising of these three types of organizational innovation. Prahalad and Ramaswamy (2005) contend that teams in services organization must be able to tap into the collective intelligence of the organization and of the marketplace to continually replenish the supply of new and innovative ideas. The team composition should be a careful mixture of adaptive and innovative skills depending on the nature of the engagement, with an ability to

dynamically form and disperse a team based on needs. Traditional metrics for execution will no longer be valid and new measurements will have to be created for services business.

Organizational innovations have a tendency to increase firm performance by reducing administrative and transaction costs, improving workplace satisfaction (and thus labor productivity), gaining access to non-tradable assets (such as non-codified external knowledge) or reducing costs of supplies (OECD Oslo Manual, 2005). Examples would be the introduction of practices for codifying knowledge by establishing databases of best practices, lessons learnt and other knowledge, so that they are more easily accessible to others; the introduction of training programs for employee development and improved Employee retention; or the initiation of a supplier development program. Thus, organizational innovations are strongly related with all the administrative efforts of renewing the organizational routines, procedures, mechanisms, systems etc. to promote teamwork, information sharing, coordination, collaboration, learning, and innovativeness.

Corporate and retail banks are facing competition from new entrants and innovative business models, in addition to shrinking margins and tighter regulatory requirements are adding to the pressure (Bernerjee, 2009). Innovation can be an effective and a proper instrument for government to guide the innovation process. This is because a well-designed regulation that sets rules changes the institutional framework of the market. According to Ashford(2011) regulation can induce dramatic innovations not only by spurring the development of new products or services by incumbent producers, but also by creating conditions in which new

products can enter the field. Regulation can do this when firms have, or are induced to have the willingness, opportunity and capacity to innovate.

### **2.3.6 Government regulation**

There are various banking laws in Kenya that govern and regulate the way banks are formed, operate and are managed in the country. Some of these include but not limited to the appropriation act, banking act, bankruptcy act, Barclays of Kenya limited act, capital markets, central bank of Kenya act, central depositories act, cheques act, general loans and stocks act among others. According to Stewart (2010) government regulation may influence innovation in two ways: Regulation places a compliance burden on firms which can cause them to divert time and money from innovative activities to compliance efforts. The second is through compliance or circumventive innovation. Circumventive innovation occurs when the scope of the regulation is narrow and the resulting innovation allows firms to escape the regulatory constraints. Compliance innovation occurs when the scope of the regulation is broad and resulting products or process innovations remain within the scope of the regulation.

Naceur and Kandil(2002) found that banks become more competitive after introduction of innovation. One of the purposes of bank regulation is to create a regulatory framework that encourages efficiency and competition. Competition is a driving force in keeping banks innovative in their operations and designing new services to customers. Sund(2008) demonstrated that government regulations can enhance innovation as well as inhibit innovation of a sector.

### **2.3.7 Competitive Advantage**

Cole (2008) defined competitive advantage as an advantage gained over the competitors by offering customers greater value, either through lower prices or by providing additional benefits and service that justify similar or possibly higher prices. Papulova and Papulova (2006) real competitive advantage implies companies are able to satisfy customer needs more efficiently than their competitors. It is achieved if and when real value is added for customers.

Customer -centrism proponents or user driven proponents such as Bisgaard and Hogenhoven (2010) agitate for value proposition to the market as arising from user interface, involvement and co-creation, an aspect of services. Empirical findings have shown that differences between organizations may account for more variance in firm performance than differences between industries (Rumelt, 1991). Although important industry effects may be present (e.g., see McGahan & Porter, 1997), organizational-level differences are now acknowledged as a critical source of variation in firm performance over and above industry differences. Gemes, Fletecher and Aggarwal (2009) claim that banks can achieve competitive advantage by focusing on simplifying four areas of value chain: product management, distribution, operations and IT, and organizational structure.

A number of empirical studies and reviews have somewhat summarized the dimensions that firms can pursue while seeking competitive advantages. Competitive advantage suggests that each organization have one or more of the following capabilities when compared to its competitors such as lower prices, higher quality, higher dependability and shorter delivery time. These capabilities enhance the organization's overall performance (Mentzer *et al*, 2000). The fact that service is are less visible and more labour-dependent makes them a strategic

opportunity and source of sustained competitive advantage (Gebauer, Gustafsson and Witell, 2011). Services leads to co-creation of value based on the competencies of the company and the customer which leads to resources that are hard to imitate (Vargo & Lusch, 2008).

Cole (2008) contends that quality is an underlying factor in competitive advantage and arises from a product offered being perceived as of higher physical quality than the competitor's product or from providing excellent customer service. Day and Wensley (1988) asserts that sustaining competitive advantage requires that firms set up barriers that make imitation difficult through continual investment to improve the advantage, making this a long-run cyclical process). Competitiveness appears as the penultimate link in the learning chain. Its meaning differs for profit-making market organisations and non-profit ones. In both cases, however, regardless of their nature, they have elements in common that refer to client satisfaction: opportunity price; quality of products and processes; design and timeliness (flexibility, response capacity) of the goods or services offered. "Competitiveness is the ability always to secure the most advantageous position or niche in rapidly changing markets. The main determinant of this capacity to sell goods and services in the international market is no longer just the edge of relative costs. Competitiveness is increasingly based on quality, speed of response, technological superiority, product or service differentiation (Tolentino, 2000).

Diab (2013) focused on cost, flexibility, delivery as well as quality dimension to measure competitive advantage in Jordan private hospitals. The four dimensions of competitive capability used were operationalized as follows: Cost: the focus being cost reduction especially to customers who are price sensitive. Flexibility: the organization's ability to provide a variety

of and different levels in the target market through its ability to keep pace with development in technology, and design products and services according to customer expectations. Quality: the ability of a product or service to meet customer needs and expectations. Most managers agree that cost and quality will continue to remain the competitive advantage dimensions of a firm (D' Souza & Williams, 2000). In a research framework, Koufteros *et al* (1997) describe the following five dimensions of competitive capabilities: competitive pricing, premium pricing, value-to-customer quality, dependable delivery, and product innovation.

Hong, Callaway and Kunnathur(2010) point to important features of delivery performance improvements as related to delivery speed and reliability, reduced cost and quality. Delivery speed is the ability to reduce time between order taking and customer delivery to as close to zero as possible. Reliability is the ability for firms to meet quoted or anticipated delivery dates and quantities. Flexibility can be focused to achieve a variety of operating attributes such as ability to respond to special service requests. Quality indicates effectiveness of firms to retain customers and focuses on delivery dependability, responsiveness, order flexibility, and delivery flexibility. Time based competition is the ability to reduce lead times and cycle times which assumes close collaboration with suppliers.

Whereas cost, quality, dependability and speed of delivery as some of the critical competitive priorities for manufacturing. There is widespread acceptance of time to market as a source of competitive advantage (Holweg, 2005). Competitive advantage is the extent to which an organization is able to create a defensible position over its competitors (Porter, 1985 and Li *et al*, 2006). Price/cost, quality, delivery and flexibility has been identified as important

competitive capabilities (Treacy *et al*, 1999). Based on studies which were done by Thatte (2007) and Azmi *et al* (2012) respectively, and the contributions of Kavitha, Karthkeyan and Devi (2013), Li *et al* (1997) have demonstrated four dimensions of competitive advantage: Cost, quality, time and flexibility have been utilized. Therefore, there are four dimensions of competitive advantage which can be drawn from the models of competitive advantage which include: cost, time, flexibility and quality which are discussed below.

Ability to cut cost is a critical aspect for a firm's source of competitive advantage. Costs can be direct or indirect, fixed or variable and short or long-term. Additionally cost can also be expressed according to its intention. Further cost of quality can be subdivided into failure, appraisal, and prevention costs (Juran, 2004). Firms must make some kind of compromise between the cost and the characteristics of their products and services. In general, most organizations choose to cut total cost by stripping fixed costs and applying continuous control on raw materials, reducing employee compensation rates and by achieving higher levels of productivity (Dilworth, 1992).

The other measure of competitive advantage is quality. Juran (2004) described quality as "fitness for use", where fitness is defined by the customer. Weinberg (1993) defines fitness more holistically as "value to some person". Quality can be achieved by adding unique attributes to products to enhance their competitive attractiveness so as to benefit customers in the final stages (Best, 1997; cited by Al-Rousan & Qawasmeh, 2009). Also quality can be achieved through a couple of dimensions such as the quality of design which means to adapt product design to its function (Adam & Elbert, 1996) and the quality of conformity which

stands for the organizational capability to transform inputs to comfortable outputs (Hill, 1993) or outputs in accordance to the specific design characteristics and the focus on quality will be reflected in competitive advantage and profitability of the organization.

Johnstone (1995) found 18 attributes of service quality in banking sector: access, aesthetics, attentiveness, availability, care, tidiness, comfort, commitment, communication, competence, courtesy, flexibility, friendliness, functionality, integrity, reliability, responsiveness and security. Joseph *et al* (1999) observed convenience, feedback and complaint management, efficiency, queue management, accessibility and customization as elements of service quality in banking. Jun and Chai(2001) emphasis on reliability, responsiveness, competence, courtesy, credibility, access, communication, understanding the customer, collaboration and continuous improvement, content, accuracy, ease of use, timeliness, aesthetics, security, aesthetics, security and diverse features. Chun and Zeng (2006) found that reliability, responsiveness, security, communication and access as important levers of quality in internet banking.

Also, time can represent competitive advantage competitive advantage in a firm. The original term lead-time used by Hayes and Wheelright (1984) is rephrased as time in this study. It is seen as the total time an activity requires to be executed, from the very beginning to the very end. Firms can consider the time factor to compete among each other .Delivery time can be a source of competitive advantage when firms try to reduce the period of time between receiving and accepting customer orders and provisions of products or services to customers (Stonebrake & Leong,1994). It's is also a measure of the firm's adherence to delivery schedules agreed upon with customers .The speed of product development also refers to the

time factor ; that is the time period between product idea generation till achieving the final design or production (Evans,1993). Parasuraman *et al* (1985) define responsiveness as speed and timeliness of service delivery, it includes all willingness and readiness of employees to provide for services, prompt response to customer needs, implying quick problem solving, prompt service and convenience in the banking industry.

Another measure of competitive advantage of a firm is flexibility. Knoll and Jarvenpaa (1994), described flexibility as an essential property for maintenance of fit between Business Processes and their supporting systems in changing environments. Forster defined flexibility as the ability to react to changes (Forster, 2006). Flexibility can be viewed as the ability of the processes to switch from one product to another or from one customer to another at the least cost or impact. Flexibility also can be defined as the ability to adapt the production capacity to changes in the environment or market demands (Evans, 1993). Flexibility also encompasses product flexibility in the first place which is defined as the ability of the organization to trace changes in consumers' needs, tastes and expectations so as to carry out changes in the product designs. The second flexibility has to do with volume which stands for the organization capability to respond to changes in consumer demand. It is believed that such flexibility can yield benefits such as introducing new products variety and controlling volume and delivery time (Stakes *et al*, 1998).

## **2.4 Critique of the existing literature relevant to the study**

A number of theoretical models of service innovation have been identified in the existing literature. These include: The four dimensional model of service innovation, the service innovation triangle, the business model of service innovation, the six dimension model of service innovation, among others have been very crucial in laying the conceptual foundation for the current study. However, these models have criticized. Drejer (2009) claims that the theoretical frameworks which focus on service innovation are vague and underdeveloped. Additionally, Cubertson (2013) argued that the model frameworks which are provided in service innovation literature are incomplete. The OECD Oslo manual (2005) provides a feasible framework for this study because it presents the four dimensions of innovation: product, process, organizational and marketing innovations. Notwithstanding, this framework overlooked service innovation as a distinct type of innovation, even though available literature reveals that it need to be differentiated (Tether, 2012).

Internationally, Al-alack and Tarabieh (2011) studied on gaining competitive advantage in the banking sector through customer orientation, innovation differentiation, and market differentiation in Jordan banking sector. This study revealed how banks can win competitive advantage through innovation. However, it differed from the current study both in focus and scope. Gunday *et al* (2009) and Hassan *et al* (2013) who studied on the effects of innovation types and firm performance, provided a defensible position for innovation analysis and investigation by focusing on four types of innovation: organizational, process, product and marketing innovations. Nonetheless, they left out service innovation. Mansharamani( 2005) tried to develop a model of service innovation(supply and demand side theory of service

innovation) , even so, his work was anchored on qualitative approaches, wherefore lacking a quantitative perspective.

Locally, many studies have been conducted on innovations and competitive advantage. Nevertheless, none of them focused on the role of service innovation on competitive advantage in the banking sector. A study by Ngugi *et al* (2013) concentrated on how innovation strategy affected performance of banks in Kenya. He did not focus on investigating the role of service innovation on competitive advantage in the banking sector as is the case in the current study. Bwaley(2011) focused on innovation strategies and competitive advantage in the banking sector in Kenya based on banks enlisted in NSE. His study did not include all banks in Kenya, neither did it apply a random sampling technique nor narrowed its study focus to the subject of service innovation as is the case in this study.

Munjuri(2011), Kathuni and Mugenda(2010), Achieng(2011), Ongore(2013) conducted studies on strategies applied by commercial banks in Kenya. Letangule *et al* (2011), studied on effects of innovation strategies on performance of firms in the Telecommunication sector in Kenya by focusing on four types of innovation: product, process, marketing and technological innovations. The current study differs from these studies in scope, methodology and focus. None of these studies focused on the subject of service innovation.

## **2.5 Research Gaps**

According to Drejer (2009), limited attention and focus has been given to service innovation both by researchers and service companies and model frameworks have been termed underdeveloped. In addition, Myles (2008) emphasized that the effect of service innovation is

attracting a lot of debates. Specifically, Komaladewi *et al*, (2012) acknowledged that service innovation supported competitive advantage in companies. However, they underscored that the effect of service innovation is not well known especially in the banking sector, and suggested for future research to investigate on this matter. Additionally, Sachdeva (2011) argued that existing metrics so far, have not fully captured service innovation especially at firm level and suggested for future research to focus service innovation at a firm level. Moreover, Mansharamani (2005) who focused on ‘towards a theory of service innovation’, by evaluating on the uniqueness of services suggested that future research on services would be beneficial if they focused on service innovation from both qualitative and quantitative perspectives so as to measure service innovation strategies and their impacts. Furthermore, Giraldo(2010) studied on the role of technology in service innovation and suggested future research to focus on methodology required to measure service innovation based on technology. The current study sought to fill these gaps by investigating on the role of service innovation on competitive advantage in the banking sector using both qualitative and quantitative approaches.

## **2.6 Summary**

To sum up, this chapter addressed theoretical models and frameworks which highlighted on service innovation as well as those which beacons on competitive advantage. Specifically, the chapter analyzed the service innovation models which included: the OECD model, the four dimensional model; the service innovation triangle; the business model and the six dimensional model of service innovation. Competitive advantage models were also anatomized. These models included: the generic strategies model, The Value chain model, the core competence model, and the resource based theory. Based on emerging dimensions of service innovation and competitive advantage as presented in these empirical models and theoretical frame

works, a conceptual frame work was constructed, mapping together an array of the variables of interest in the focus of this study.

In addition, the premised dimensions of service innovation and competitive advantage were thoroughly defined whereby important indicators for each of them were extracted. In the field of service innovation, the hypothesized dimensions were summarized as follows: service marketing innovation, service concept innovation, service process innovation, service channel innovation and organizational form innovation, which formed the independent variables. On the other hand, competitive advantage dimensions were summarized as: cost, quality, time, and flexibility. The study involved a moderating variable, the 'government regulation'. They were all linked together to form the conceptual frame work which guided the current study. These relationships as presented in the conceptual framework were followed by empirical review of literature which supported them. In order to precisely define each variable and make it amenable to empirical measurement, operationalization for each was done utilizing a composite measure. Finally, by performing an extensive review of both existing literature and previous studies, the research gap for this study was scrupulously scrutinized and identified.

## **CHAPTER THREE**

### **RESEARCH METHODOLOGY**

#### **3.1 Introduction**

This chapter narrowed on presenting the research methodologies which were applied in this study in a bid to achieve the stated objective. They were meticulously selected guided by the study objective and were accepted based on contributions of archetypical authors and empirical works which were done by previous researchers specifically the research studies which had related focus. Specifically the study in this chapter illuminated on the research designs, scope, target, sampling frame, sampling techniques and sample selection, research instruments, pilot study procedures, data collection techniques and data analysis and presentation techniques.

#### **3.2 Research Design**

The study used a descriptive cross-sectional survey research design. Kungu, Desta and Ngui (2014) applied a descriptive research design to assess the effectiveness of competitive strategies applied by commercial banks in Kenya. Descriptive cross-sectional approaches as applied in this study aimed at making predictions regarding the occurrence of phenomenon under study and by taking a sample of a large population at one point in time (Elahi & Dehdashti, 2011).

#### **3.3 The Target Population**

The study targeted on all the forty four banks in Kenya with special reference to Nairobi County where majority of them are located and centered. The study targeted banking sector where majority of innovations are taking place so as to enhance banks to survive and gain competitive advantage. Additionally, the study targeted the banking sector because it is where competition is highly anchored on services and imitation is very high. The respondents in this

study were the bank Chief Executive Officer(CEOs), directors of three departments which are responsible for innovations in the banking sector i.e. R&D department, operations department and marketing department (Frei, *et al*, 1998) and branch managers of all the banks in Nairobi. The respondents who were targeted in this study comprised of 584 members. They were believed to be endowed with knowledge and information regarding innovations which take place in the banking sector. In order to further enrich the study and fortify results of inferential analysis, the views of some of the customers were included whereby; the study interviewed a few selected customers drawn from some banks in Nairobi County.

### **3.4 The Sampling Frame**

According to Turner (2003) a sampling frame is the set of source materials from which sample is selected. In this study, the sampling frame consisted of the head offices and the branches of the 44 banks in Kenya located in Nairobi County. The list was drawn from Kenya business directory, internet blogs such as softkenya.com, Kenya-Jambo.com among others. At the head office of a bank, the study targeted a bank CEO and a director in each of the three departments (i.e. R&D, Operations and Marketing department) where a total of a total of 172 members were drawn. At branch level of a bank, the study targeted the branch manager where a total of 408 members were drawn as summarized in Table3.1.

### **3.5 Sample and Sampling Techniques**

The study embraced a mixed method approach to sampling techniques involving a multi stage sampling scheme and a purposive sampling scheme. Multistage sampling scheme was applied in selecting the respondents who were administered with questionnaires i.e. the CEOs, the directors and the branch managers. Purposive sampling was applied to select a few bank customers who were considered for interview guide. A multi stage sampling scheme

represents a more complicated form of cluster sampling in which larger clusters are further subdivided into smaller, more targeted groupings for the purposes of surveying (Agresti & Finlay, 2008).

In order to arrive at a representative sample of the target population, three stages were involved in this study. Stage one involved clustering together the 44 banks in Kenya and stratified them into two main cluster categories, i.e. Large and small banks. This clustering was guided by information derived from the Kenya business directory and softkenya.com, where banks are listed according to those two main categories. Stage two involved arriving at smaller but more grouping (i.e. clusters) in each of the two emergent clusters based on the target respondent source in each of them i.e. the head offices and the branches. Stage three involved selecting the target respondent from each of these two sub clusters in each bank category. Given that the targeted respondents in each of these latter clusters were in different categories, stratified simple random sampling technique was applied to select individuals who were included in the sample. Thus, the CEOs, directors R&D, directors operations, directors marketing and branch managers were targeted in each bank category. In the large banks, the respondents who were targeted to be drawn from the heads offices comprised of 10 CEOs, 30 directors and 213 branch managers whereas, from small banks category, the target respondents consisted of 34 CEOs, 12 directors and 195 branch managers. This generated a total population of 584 members in the study. The sampling scheme utilized a random sample size of 30% in each target respondent category, generating a sample population of 175 members as illustrated in table 3.1. Azmi *et al* (2012) used a random sample size of 21% to study on impact of innovations in realizing competitive advantage in Jordan banking sector. The sample which

was adopted in this study is justified given that it investigated above 30 observations. According to Mason *et al* (1996 pp.400) a sample is regarded small if it investigates less than 30 observations.

Some banks' customers were also targeted to be included in the study utilizing an interview schedule. The information which was solicited from these customers was expected to enrich the study as well as fortify the findings of inferential analysis. In order to select these customers, the study applied purposive sampling approaches. In purposive sampling scheme, the researcher utilized sampling technique that yielded information rich cases where, customers were selected from banks in Nairobi, and in such a way as to represent different customer segment groups: Retail banking segment, business banking segment, corporate banking segment and treasury banking segment which mainly apply in banking sector in Kenya. In order to achieve this, heterogeneous purposive sampling technique which aimed to achieve a heterogeneous sample, i.e. a sample whose units share the different characteristics or traits was applied (Teddie, 2009). In order to get these respondents for the interview, the researcher requested the branch manager of the respective bank to provide names and telephone numbers of the information rich customers. The researcher called them, developed a rapport with the customer and arranged where to meet and be administered with a structured interview. In cases where the customer chose to volunteer information away from the researcher, telephone method was applied.

**Table 3.1: Sampling frame, Target population and sample**

<b>Sampling frame</b>	<b>Unit of selection</b>	<b>Population</b>	<b>Sample (30%)</b>
	<i>Large bank</i>		
Head office	CEO	10	3
	Director R&D	10	3
	Director Operations	10	3
	Director Marketing	10	3
Branches	Branch manager	213	63.9
	<i>Small bank</i>		
Head office	CEO	34	10.2
	Director R&D	34	10.2
	Director Operations	34	10.2
	Director Marketing	34	10.2
Branches	Branch manager	195	58.5
<b>Total</b>		<b>584</b>	<b>175</b>

### **3.6 Research Instruments**

In this study a questionnaire and an interview guide were used to solicit the information from the respondents. The questionnaire in this study comprised of closed and open ended questionnaire items in the same questionnaire paper carefully worded to capture and solicit the intended information. In a mixed method i.e. triangulation as applied in this study, questions are questions that embed both a quantitative and qualitative research within the same question whereby, quantitative research questions tend to be specific in nature; they may either be descriptive, comparative or relationship questions. Conversely, qualitative research questions are open ended, evolving and non-directional and seek to discover, explore a process or describe experiences. They attempt to describe rather than relate variables or compare groups

avoiding use of words such as affects, influence, compare and relate (Onwuegbuzie & Leed, 2006). Qualitative data in this study targeted to obtain different but complementary data on the same topic to best understand the research problem in this case the role of service innovation on competitive advantage in the banking sector (Cresswell, 2006). Moreover, literature was furthered by way of qualitative data which was extracted from open ended questionnaire items.

Dichotomous and ordinal scales were applied and were useful in generating descriptive statistics. Likert scale data was constructed and was analyzed at interval measurement scale whereby scale items were created by calculating a composite score from a five type likert – type items (Boone & Boone, 2012). ). This study mainly utilized likert five point scales as it is one of the best and most frequently used scales to measure opinions due to its ease and balance (Zikmund, 2000). In order to measure service innovation, five sub-constructs were used; service marketing innovation, service concept innovation, service process innovation, organizational form innovation and service channel innovation whereas in order to measure competitive advantage, four sub-constructs were applied; cost, quality, flexibility and time. An interview guide was applied to gather views from the customers regarding competitive advantage in the banking sector in Kenya. This information was useful in validating or negating the results of inferential analysis.

### **3.7 Data Collection Procedures**

Data collection exercised was programmed to take place in the month January 2013. However, due to unexpected circumstances, the exercise started in the month of February, 2014. It was envisaged to last for a maximum of three weeks. Before actual collection of data began, the researcher sought a research permit from the Entrepreneurship and Procurement Department

(EPD) of the Jomo Kenyatta University of Agriculture and Technology. Preliminary visits were made to some of the banks head offices so as to enable the researcher familiarize with the bank offices locations and to collect preliminary information which included: the types of innovations applicable to particular banks, departments applicable in banking industry, reports, websites and journals. The researcher delivered the questionnaires face to face to the respondents by visiting them in the banks (in case of branch managers) and in the head offices to CEOs and directors. The researcher noted down telephone numbers of the respondents which enabled him make follow-up using telephone calls. The researcher requested the respondents to fill the questionnaires in three weeks' time so as to give them ample time to respond to the questionnaire items. The questionnaires were collected by the researcher after three weeks and preparations for data analysis and presentation ensued.

Both primary and secondary data was targeted in this study. Secondary data was collected from the banks' websites, internets, journals, reports from Central Bank of Kenya, banking portals, business directories as well as R&D divisions in the banking sector. Secondary data was used to refine the problem as well as clarify important issues in the research findings. The primary data was collected from the respondents using a carefully designed questionnaire and an interview schedule. The questionnaires were administered to bank branch managers, CEOs and directors of three departments at the head offices. In order to validate the results of the finding from quantitative survey, an interview guide was administered to bank's customers who were approached by requesting the managers of respective banks to guide the researcher in selecting them using banking membership registry. The researcher made calls and organized how to meet and interview them.

### **3.8 Pilot test**

In order for the instruments to be valid and reliable, the items in the questionnaires were carefully designed and the supervisors scrutinized them before a pilot study was carried out. A pilot study was important because it enabled the researcher to test the validity and reliability of the research instruments. The pilot was done on five respondents away from target scope to avoid a repeat bias on the side of the targeted respondents in the target scope. Since the test was for pretesting purposes, targeting five managers was assumed to provide sufficient information.

Before analysis of the reliability and validity of constructs presented, factor analytic methods were employed. The purposes of factor analysis in this study was to explore how various items within each of the constructs (service innovations and competitive advantage) interact with one another; and to develop scales (by combining several closely correlated items) to be used in the following analysis on linkage (Kim & Arnold, 1996). Factor analytic methods were useful to observe the underlying patterns or relationships for a large number of variables and they determined whether the information could be condensed or summarized in a smaller set of factors or components (Kim & Mueller, 1978). In this study, with the help of SPSSv.18, factor loadings on each individual item of service innovation constructs were extracted and presented, while those of competitive advantage were grouped as one and analyzed individually.

The second stage involved analysis of reliability and validity of the constructs involved in this study. According to Drost(2011) reliability is the extent to which measurements are repeatable when different persons perform the measurement on different occasions, under different

conditions, with supposedly alternative instruments which measure same thing and validity as concerned with meaningfulness of research components. Internal consistency and reliability among the items of each construct was explored via Cronbach alpha  $\alpha$  (Carmines & Zeller, 1979). An instrument has high validity if the correlation value of each indicator to total correlation is more than 0.30 or r-value is greater than 0.30 (Cooper & Emory, 2002, in Munizu, 2013). Also, according to Thenasegaran(2009) the most common method of assessing internal consistency reliability is through the use of coefficient alpha which is an average of all the possible split-half reliability estimates and varies from 0 to 1 and a value of 0.6 or less signals unsatisfactory internal consistency. According to Nunnally and Bernestein(1994) the acceptable reliability estimates range from 0.7 to 0.8. In this study, a Cronbach alpha of .06 and above was deemed acceptable.

### **3.9 Data analysis and presentation**

In this study, both descriptive and inferential data analysis techniques were used. According to Mugenda and Mugenda(1999), the first step in data analysis is to describe or summarize the data using descriptive statistics. Data was edited, coded, classified and summarized into categories. In order to make the data collected amenable to statistical analysis using the Statistical Package for Social Sciences (SPSS) version 18, the data was coded as follows: For nominal data for example, representing demographics of the respondents and other characteristics of the bank studied such as , male = 0 and female = 1. In categorical data where likert scale was used representing, 1- 5 where, 1 imply least, 5- imply most was used. Descriptive data analysis started during data collection. Descriptive data was analyzed by use of frequencies and central tendencies and was presented in form of tables, pie charts, and bar graphs.

For inferential purposes, a number of steps and/or analysis were necessary so as to achieve the goal which was envisaged in this study. In this study, inferential analysis started with analysis of the moderation effects of ‘government regulation’ on the role of service innovation on competitive advantage in the banking sector. According to Aiken & West (1991) a moderator is a variable that specifies conditions under which a given predictor is related to an outcome. The moderator explains ‘**when**’ a Dependent Variable and Independent Variable are related. Moderation implied an interaction effect, where introducing a moderating variable changes the direction or magnitude of the relationship between two variables. A moderation effect could be (a) Enhancing, where increasing the moderator would increase the effect of the predictor (the four variables) on the outcome (competitive advantage); (b) Buffering, where increasing the moderator would decrease the effect of the predictor on the outcome; or (c) Antagonistic, where increasing the moderator would reverse the effect of the predictor on the outcome.

According to Drapper and Smith(1981), in order to confirm a third variable making a moderation effect on the relationship between the two variables X and Y, the study had to show that the nature of this relationship changes as the values of the moderating variable Z change. This was achieved by including an interaction effect in the model and checked if the interaction was significant and helped to explain the variation in the response variable better than before. In this study linear regression menu on SPSS v18 was used to assess the effects of a moderating variable (government regulation). To test moderation the researcher looked at the interaction effect between X’s and Moderator variable, **Z** and whether or not such an effect is significant in predicting Y(competitive advantage ).

In more explicit terms the following steps were followed following Aiken and West(1991):

- 1.The researcher standardized all variables to make interpretations easier afterwards and to avoid multicollinearity
2. Fitted a regression model (model 1), predicting the outcome variable Y from both the predictor variable X's and the moderator variable Z. Both effects as well as the model in general (R<sup>2</sup>) should be significant.
3. Added the interaction effect to the previous model (1) and checked for a significant R<sup>2</sup> change as well as a significant effect by the new interaction term. If both are significant, then moderation is occurring. If the predictor and moderator are not significant with the interaction term added, then complete moderation has not occurred. If the predictor and moderator are significant with the interaction term added, then moderation has occurred, however the main effects are also significant.

The next analysis involved the analysis of the relationships between the independent variables in the study. In order to achieve this, Pearson correlations coefficients were computed, with the relationships controlled by government regulation, which was deemed to be a moderating variable. Pearson Correlation coefficient was used to measure the degree of the relationship between linear related variables. In this study, the correlation between service innovations constructs (service concept, service marketing, service process, service channel and organizational forms were computed. Analysis of correlations between independent variables helps detect and control multicollinearity among variables.

The next stage involved multiple regression analysis. In order to explain the effects of the five dimensions of service innovation on competitive advantage, multiple regression techniques were applied where, Beta coefficients and t-values were computed at 5% level of significance. The beta coefficient in the regression analysis indicated how effectively, the predictor variable influences the criterion variable. In order for the influence of each independent variable to be true estimation in the model in this analysis, the moderating variable was controlled. By using ANOVA, the significance of the regression model was tested through the Wilks' Labda .When the overall model is significant, then the study can predict the individual significance of each variable. In addition, Levene's tests were also used to test whether or not the variance between the groups in the independent constructs is equal. Insignificant value of Levene;s test shows equal variance between groups. These data analysis techniques were applied by Gunday *et al* (2009) and Hassan, *et al* (2013) to measure effects of innovations on firm performance. The following regression model was adopted:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \beta_1 X_1 Z + \beta_2 X_2 Z + \beta_3 X_3 Z + \beta_4 X_4 Z + \beta_5 X_5 Z + e$$

Where, Y is the dependent variable (Competitive advantage in banking industry).

$\beta_0$  was the regression coefficient(Intercept),  $\beta_1$ ,  $\beta_2$ ,  $\beta_3$ ,  $\beta_4$ , and  $\beta_5$  were the slopes of the regression equation.

X denoted an independent variable.

Where,  $X_1$  was service marketing innovation,  $X_2$  was service concept innovation,  $X_3$  was Service process innovation,  $X_4$  was the service channel innovation ,  $X_5$  was organizational

form innovation,  $Z$  was Government regulation (the moderating variable) and  $e$  the error term.

## **CHAPTER FOUR**

### **RESEARCH FINDINGS AND DISCUSSION**

#### **4.1 Introduction**

This chapter presented the research findings and the discussion based on those findings in the study. Based on the research methodology which was applied, the results of the findings from each research item were presented in raw form and the discussion of each was done. The data was organized around the study variables and findings discussed based on the data analyzed. Empirical studies were reviewed to either support or negate the current study findings. Additionally, hypothesis testing was done based on the regression results and statistics tested based on 95% confidence level.

#### **4.2 Response rate**

The sample for the study consisted of 175 respondents drawn from CEOs, directors of R&D department, directors of Operation department and directors of the Marketing department at the head offices as well as the branch managers of all bank branches in Nairobi. The sampling frame was obtained from the Kenya Business Directory. A total of 44 banking organizations were surveyed and responded as shown below. This resulted into 54% responses rate which was considered satisfactory for the study.



**Fig 4.1 Response rate**

### **4.3 Factor analysis and test of reliability**

In this study, with the help of SPSS version 18(factor and reliability analysis) , factor loadings and cronbach's alpha scores of service innovation constructs, moderating variable, and competitive advantage were produced . Gunday et al(2011) used same factor analytic methods on study of innovation types and firm performance. Hassan, Shaukat, Nawaz and Naz(2013) studied effects of innovation type on firm performance using similar factor analytic method where each item was analyzed individually as is the case in this study.

Internal consistency reliability was examined in the way of Cronbach's alpha (Nunnally, 1978). Generally, 0.70 or higher is considered to be agreed value for Cronbach's alpha reliability (Nunally, 1978; Cronbach, 1951). The Alpha results in table 4.1 indicates that,

service concept innovation had 23 items whose alpha score was 0.664, service process innovation had 22 items whose alpha score was 0.868, service marketing innovation had 14 items whose alpha score was 0.585, service channel innovation had 24 items whose alpha score was 0.808, organization form innovation had 13 items whose alpha score was .631 and government regulation had 10 items whose alpha score was .629. The analysis presented in Table 4.1 indicates that Cronbach's alpha values were well above 0.60 the acceptable minimum (Thenasegaran, 2009), so the results were acceptable.

**Table 4.1: Reliability statistics results**

<b>Construct</b>	<b>N=Number of sub constructs</b>	<b>Cronbanch Alpha</b>
Service concept innovation	23	0.664
Service process innovation	22	0.868
Service marketing innovation	14	0.585
Service channel innovation	24	0.808
Organizational form innovation	13	0.631
Government regulation	10	0.629
Competitive advantage	39	0.668

#### **4.5 Test of validity**

##### **4.5.1 Convergent validity**

In this study, convergent validity was also assessed. Convergent validity exists if a group of indicators measure one common factor. According to Fornell and Larcker(1981) convergent validity can be assessed at an individual and construct level by examining individual item

loadings(squared multiple correlations). Individual item loadings which represent squared multiple correlations of 0.70 or greater imply that the indicator shares more variance with its construct than error variance. In addition, a loading of 0.70 indicates that about one half of the items variance (the squared loadings) can be attributed to the construct (Gefen, Straub & Bondreau, 2000). However, later Ford, McCallum and Tait(1986) believe that the 0.70 level is too high, and they suggest that the 0.4 will be the least level. Hence, according to Fornell and Larcker(1981), 0.4 is adopted as the minimum level for item loading on established scales. *Appendix IV*, of the items in the various scales, all had 0.5 and higher. Squared multiple correlations of 0.5 or greater (Fornell & Larcker, 1981) demonstrates the construct as a whole shares more variance with its indicators compared to error variance. The calculations emerging from item loadings analysis (*Appendix IV*) surpassed the recommended threshold for each construct.

#### **4.5.2 Content Validity**

This can be examined at the level of the entire instrument and that of individual items (Hyrkas *et al* 2003). Content validity at the instrument level expresses how the instrument's sub-scale represents the target or content domain being measured. Content validity at the item level measures the target or content domain, which it is supposed to measure. This present instrument was pretested and piloted to ensure validity.

#### **4.6 Test of Sampling Adequacy**

In order to test the sampling adequacy in this study, Kaiser-Meyer-Olkin (KMO) test was done as recommended by Nunnally (1988) because of the sample size. Hence, because of 175 respondents of the target banks implementing service innovation, a measure of the sampling adequacy, the Kaiser-Meyer-Olkin (KMO) was carried out and generated an index of 0.530 as

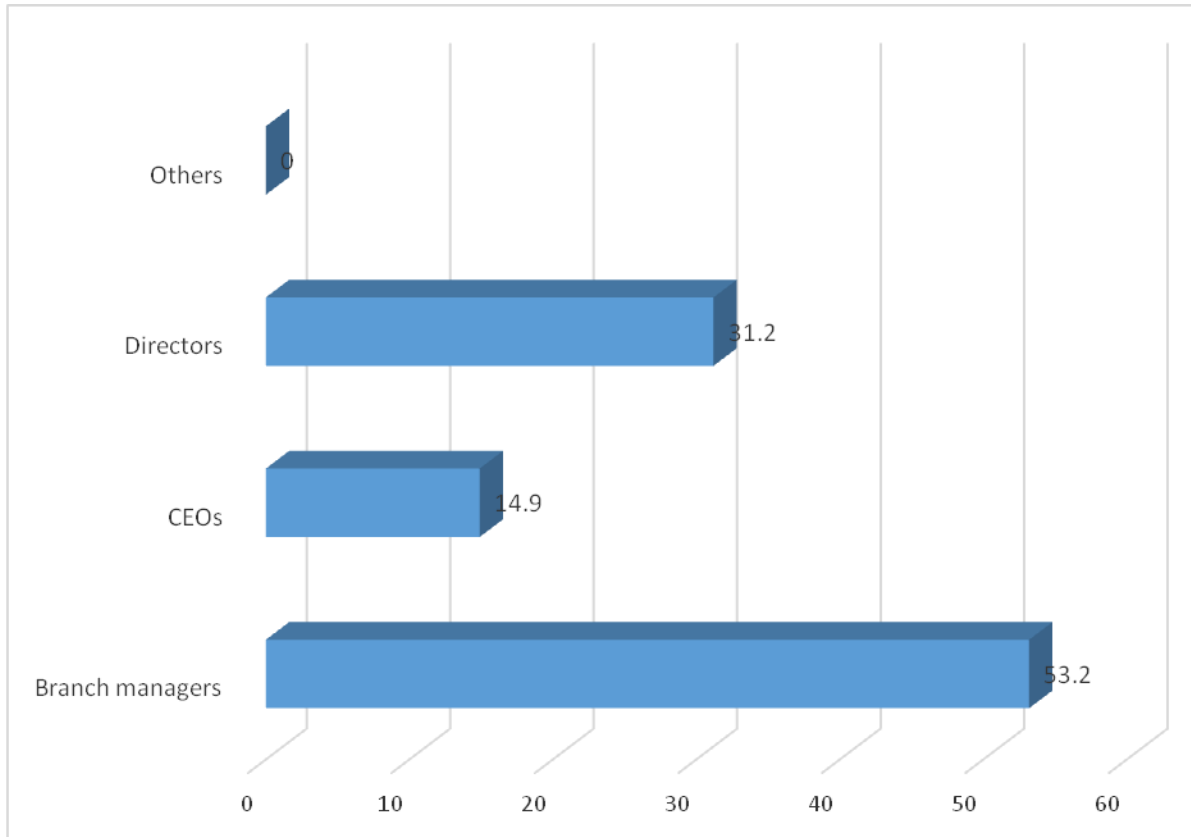
indicated in Table 4.2. It is recommended that the value of KMO should be greater than 0.5 if the sample is to be adequate (Field, 2000). The above result 0.530 indicates that the sample was adequate for each un-factorial determination considered respondents bank. According to Field (2002), a critical aspect fundamental theory in any management concept is the development of good measures to obtain valid and reliable estimates of the construct of interest. The measurement instrument had to satisfy the requirements of reliability, validity and un-dimensionality.

<b>Table 4.2: KMO test</b>	
<b>Kaiser-Meyer-Olkin Measure of Sampling Adequacy.</b>	<b>.530</b>
<b>df</b>	<b>528</b>
<b>Sig.</b>	<b>.000</b>

## **4.7 Respondents Profile**

### **4.7.1 Respondents Office capacity**

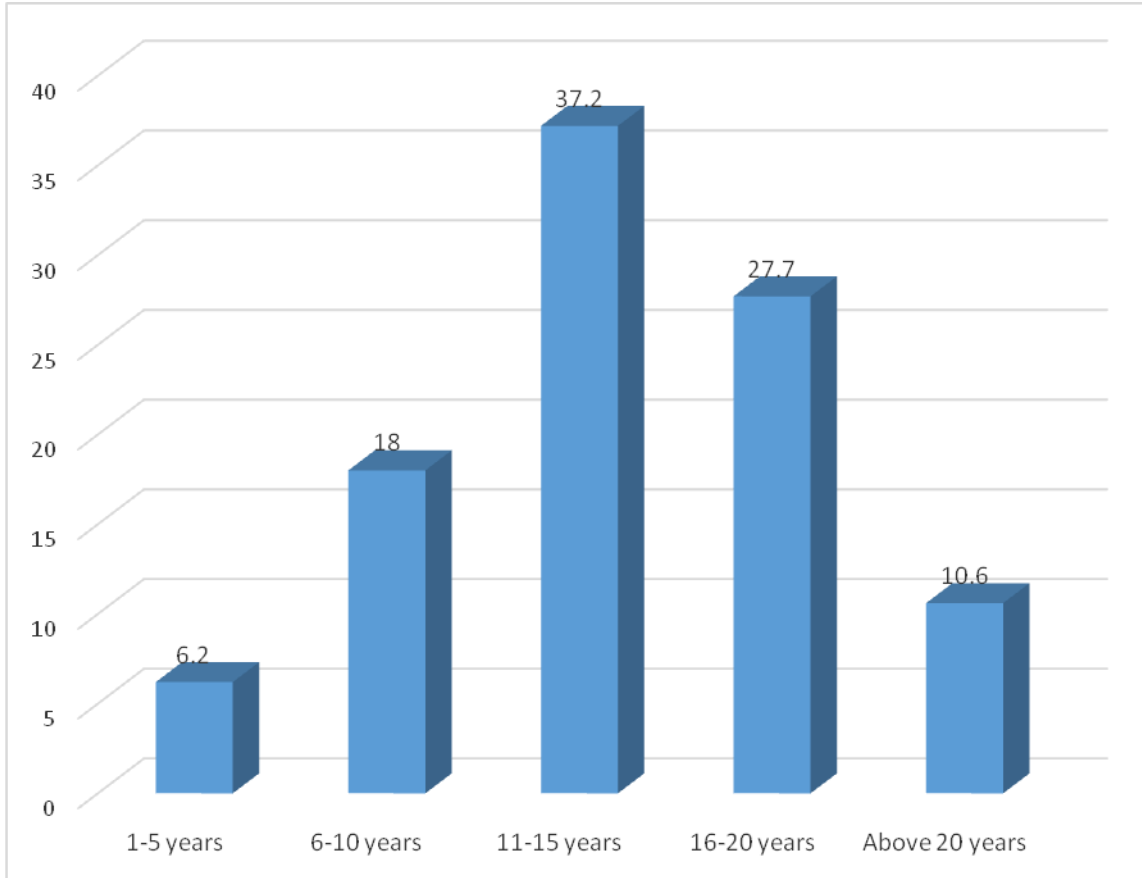
The caliber of the officers was critical for the data validity. That is why the study targeted the CEOs, directors and branch managers. Majority of the respondents in the cadre of respondents were branch managers at 53.2 % followed by directors and CEOs respectively as shown in fig.4.2 below. This is attributed to the office responsibility that each cadre carries. Hence branch managers were more readily available to fill the questionnaires. The top echelon of management which made up the majority of the respondents were assumed to have better knowledge about the subject matter .Hence, offered the most relevant and valid information.



**Fig 4.2: Respondents office capacity**

#### **4.7.2 Respondents years of experience**

The respondent's years of experience in the banking sector were also critical for the data validity. From fig. 4.3 below, respondents were well experienced and in a better position to offer relevant information for this study. Of those participants, majority (37.2%) ranged between 11-15 years in the banking industry. This experience is assumed to have endowed them with better knowledge about the subject matter and therefore offered the most relevant and valid information

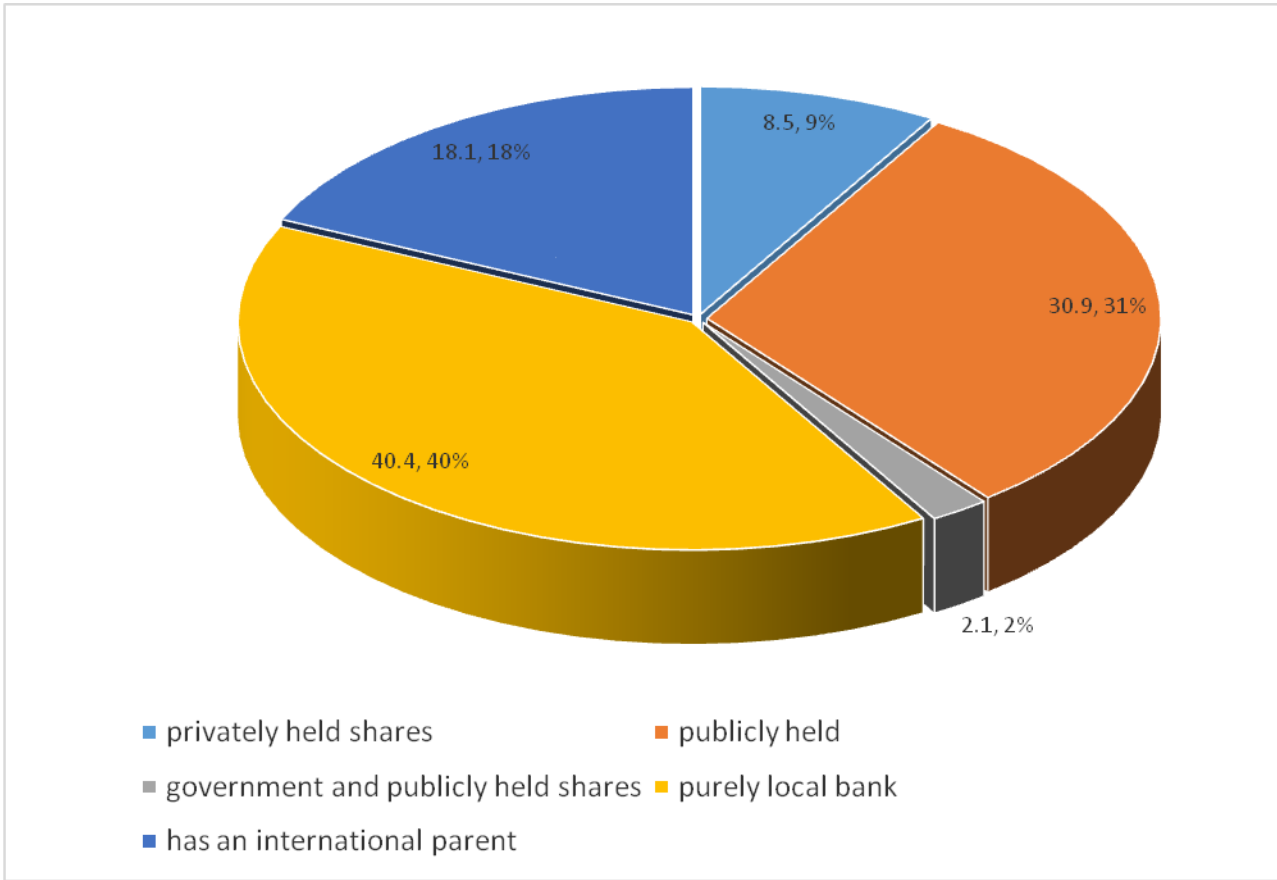


**Fig 4.3: Respondents years of experience in the banking sector**

## **4.8 General Information related to the study**

### **4.8.1 Bank ownership**

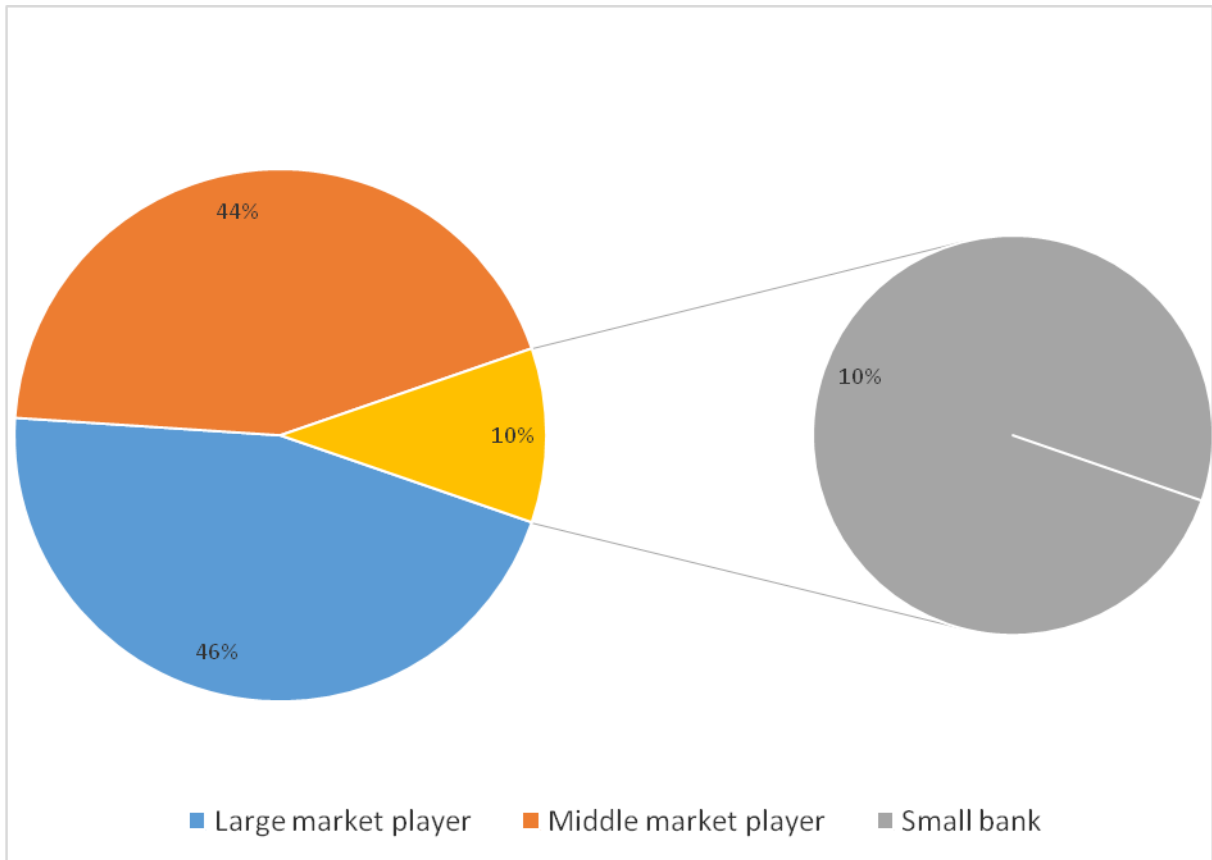
Banks surveyed showed that majority (40.4%) of banks were purely local banks. 30% of banks surveyed were publicly held, 18.1% have international parent, 8.5% are privately held shares whereas 2.1% are government and publicly held shares as shown in fig. 4.4 below.



**Fig 4.4: Bank ownership by capital**

**4.8.2 Size of the bank**

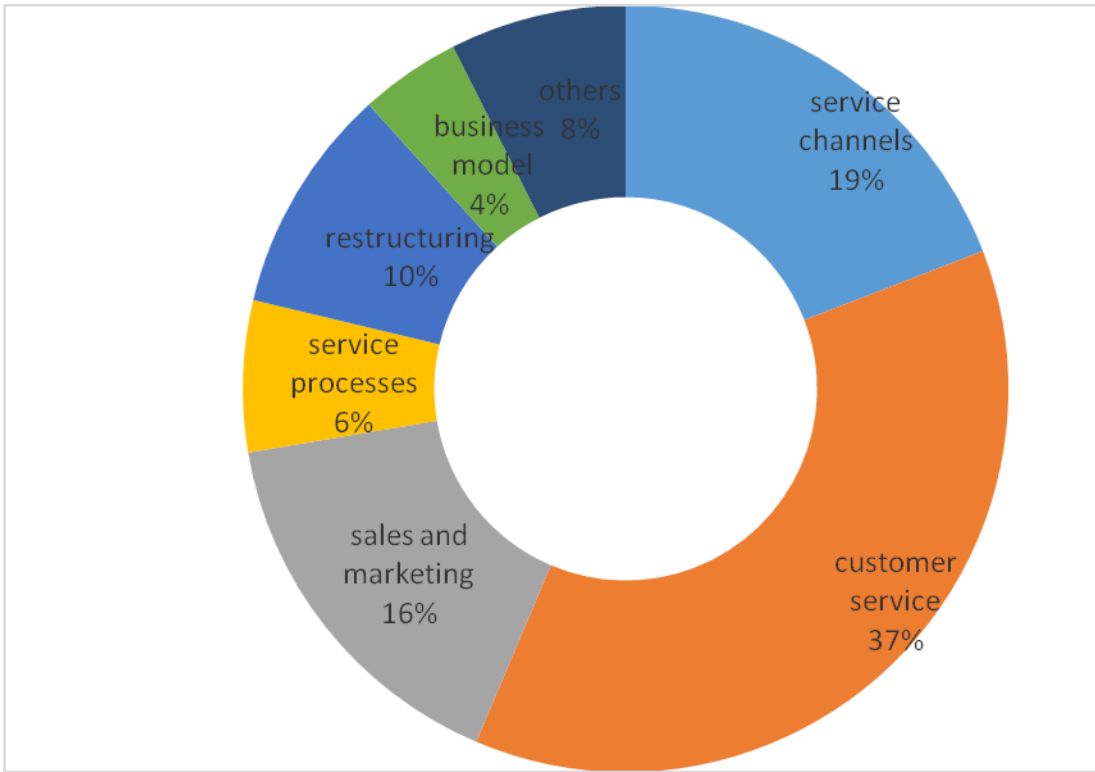
The survey showed that majority (45.7%) of banks was perceived to be large market players. The rest were middle market players (43.6%) and small market players (10.6 %) respectively as shown in fig. 4.5. Large market players were also found to be listed in the NSE.



**Fig 4.5: Size of bank**

#### **4.8.3 Prioritizing innovation through investment areas in the banking industry**

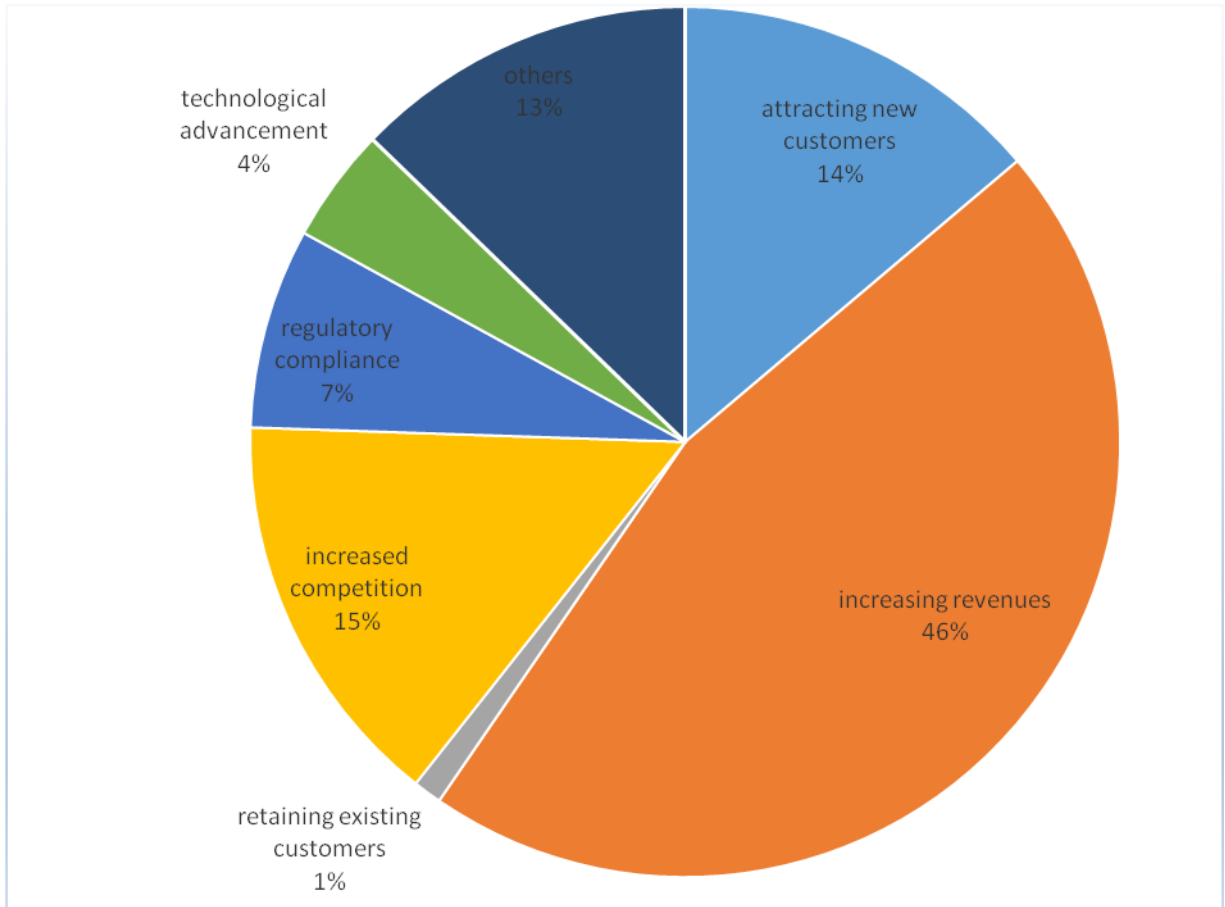
Banks in Kenya has of late been focusing on innovation areas. Fig 4.6 indicates that majority of the respondents felt those banks with committee for prioritizing investments focused all their investment on customer service (37.2%), and service channel (19.1%) and least on business model (4.3%).



**Fig 4.6: Innovation priorities within banks**

**4.8.3 Why banks are innovating their services**

Respondents indicated that banks are innovating services mainly due to increased revenues and due to increased competition. Due to the shrinking market base and increased market players banks are devising ways to grow their revenues and fend off competition especially from non-bank financial products and players. Majority (45.7%) cited increased revenues and 14.9 % cited increased competition and attracting new customers (13.8%) as the main reasons behind service innovation as tabulated in Fig 4.7.



**Fig 4.7: Reasons for service innovation in banks**

#### **4.8.4 Drivers towards service innovation by bank size**

Table 4.3 shows that majority (45.74%) of the respondents felt that the drivers towards the service innovation by banks is mainly motivated by increased revenues and this is mainly among the middle level (23.4%) and large player banks (22.3%) while small banks are largely tied to compliance with regulation such as meeting the reserve requirements, the reserve rations and capital requirements. Large banks seem also to be engaged with attracting new customers while middle level banks are craving to innovate due to increased competition. Interestingly, the small banks are not keen on technology but this contrasts what the large player banks are doing, trying to leverage technological developments in order to attract new customers and increase revenues. Unfortunately, the innovation by banks does not seem to

focus on retaining the existing customers. Small banks seem to focus on less of technological development and a little more of increased competition especially from non-bank financial institutions and products.

**Table 4.3 Drivers towards service innovation by bank size**

	Attracting new customers	Increasing revenues	Retaining existing customers	Increased competition	Regulatory compliance	Technological advancement	Others	Total (%)
Large player	12.7	22.3	0	1.06	0	3.19	5.35	45.7
Middle	1.06	23.4	1.06	11.7	0	0	6	43.6
Small	0	0	0	2.15	7.45	1.06	1.4	10.6
Total (%)	13.8	45.7	1.06	14.89	7.445	4.3	12.7	100

#### **4.8.5 Banks performance rating based on innovations started in last three years**

Innovation is meant to enhance profitability and growth and banks have devised different methods as metrics to assess the benefits associated with service innovation in the banks in Kenya. The respondents were asked if they felt that the various metrics have increased or decreased on each side of the spectrum. The decision legend was where 1-decreased, 2-remained the same, 3- increased slightly 4- increased significantly. This was interpreted as follows, mean 0-1.99, decreased, 2.00 – 2.99, remained the same, and 3.00 to 4.0 means increased.

The arithmetic mean was interpreted to represent the average effects. The following decreased on average, time to market new products and services (mean = 1.81, this decrease is an

improvement), market share has decreased and the non-performing loans has decreased (improved). It's clear from the conclusions that only 3/12 (25%) of the banks metrics had improved in the last three years as shown in table 4.4 These increases were registered in productivity, customer deposits, and non-financial products. In addition, 50% (6/12) of the banking surveyed metrics remained the same while the rest of the metrics declined (time to market for new products and services and non-performing loans).Ironically the decline in these metrics is a positive impact on the banks.

**Table 4.4: Banks performance rating based on innovations started last three years**

<b>Performance metrics</b>	<b>Mean</b>	<b>Interpretations of mean score</b>
<i>Statistics</i>		
Revenue growth from new products and services	2.50	Remained the same
Customer satisfaction	2.78	Remained the same
Profitability	2.73	Remained the same
Productivity	3.35	increased
Better risk and compliance capabilities	3.26	increased
Time to market for new products and services	1.81	Decreased
Customer deposits	3.23	increased
Customer accounts	2.63	Remained the same
Branch expansion	2.76	Remained the same
Market share	2.03	Remained the same
Non-performing loans	1.79	Decreased
Non financial products	3.20	Increased

**N=94;SCALE,1-4**

Key; Mean statistics, where, 0-1.99 decreased,2.00-2.99 remained the same, and 3.00-4.00 increased

## **4.9 Descriptive analysis of study objectives**

### **4.9.1 Service Concept Innovation**

The respondents were asked if the various service innovations has either 1-not started, 2-started and in process, 3- complete and not imitated by competitor, 4- completed and imitated by competitors. Table 4.5, tabulates the average responses attributed to each service innovation.

The responses were interpreted based on the following decision criteria ,where mean between 1-2 , implied not started , 2.1-3.00, started and in process 3- 3.5 completed and not imitated and 3.6 – 4.00 completed and imitated by competitors. It's clear that out of 23 service concept innovation areas surveyed, the banks had not started on 39% (9/23) of them and for those already completed areas of service concept innovation, only 17.3% (4/9) were not imitated by competitors. These include: custodial services pay slip loans, third part ATM partnerships and collateral loans. The study can conclude that, banks surveyed were offering more of less differentiated products and service and the market was highly competitive.

**Table 4.5: Service concept innovation**

<b>Service concept innovation metrics</b>	<b>Mean</b>	<b>Interpretation of mean score</b>
	Statistics	
Non financial products	3.20	Started and in the process
Zero charges for opening bank accounts	3.46	Started and in the process
Treasury and foreign exchanges	2.73	Not started
Trade finance and bank guarantees	2.44	Not started
Self services	2.78	Not started
Mobile payment/withdrawal services	2.65	Not started
Agency banking services	2.56	Not started
Direct mobile deposits	2.91	Not started
Direct check deposits at ATMs	3.12	Started and in process
Sitting space for customers waiting for services	2.222	Not started
Wheel chair banking	1.78	Not started
Financial advice services	2.97	Started and in process
Insurance services	1.91	Not started
Investment services	2.43	Started and in process
International/diaspora account	2.78	Started and in process
Advance/credit service	2.43	Started and in process
24 hour banking	2.07	Started and in process
Custodial services	3.10	Not imitated by competitors
Pay slip loans	3.14	Not imitated by competitors
Working capital management services	2.10	Started and in process
Credit monitoring services	2.27	Started and in process
Third party ATM partnership	3.20	Not imitated by competitors
Collateral free loans	3.20	Not imitated by competitors

**N=94, SCALE,1- 4**

Key: mean statistic, where 1-2 not started, 2.1 -3.0 stated and in process, 3.1 -3.5 completed and not imitated and 3.6 -4.0 implied that the innovation is already imitated by competitors.

#### **4.9.2 Service Process Innovation**

The respondents were asked if they felt that the various service process innovations have either 1- not started, 2- started and in process, 3- completed and not imitated by competitors, and 4- completed and imitated by competitors. The responses were analyzed based on the mean statistic, where 1-2 not started, 2.1 - 3.0 stated and in process, 3.1 -3.5 completed and not imitated and 3.6 -4.0 implied that the innovation is already imitated by competitors. Table 4.6, enumerates the conclusions and findings on this aspect of innovation in form of arithmetic averages and indicates that 70%(14/20) of service process innovations surveyed were not imitated by competitors, implying that competitive advantage in the banking sector were mainly anchored on service process innovations. It can be concluded that majority of service process innovations being implemented in the banking sector in Kenya are not easily eroded by competition.

**Table 4.16: Service process innovations**

<b>Service process innovation metrics</b>	<b>Mean</b>	<b>Interpretation of mean score</b>
	Statistics	
Touchscreen for use by advisors and customers	3.06	Completed and imitated
Automatic identification and 360 degree view	1.94	Not started
Credit score rating for clients	2.17	Completed and not imitated
Extending opening hours and weekends	2.55	Completed and not imitated
Islamic banking concept	3.05	Completed and imitated
Web banking	2.41	Completed and not imitated
Twenty four hour credit approval	1.50	Not started
Debit card purchase at retail store, point of sale	2.10	Completed and not imitated
Mobile communication with customers	3.16	imitated
Mobile utility bill payment services	2.54	Not imitated
Third party guarantee for loans	3.44	imitated
Automatic birthday/valentine/anniversary card wishes	2.32	Not imitated
SMS security bank alerts incase of irregular bank activity	2.53	Not imitated
Background check on all customers opening bank account	2.27	Not imitated
Online chat services	2.31	Not imitated
Automatic customer answering machine and directing calls	1.32	Not started
Email alerts to customers	2.85	Not imitated
SMS alerts to customers	3.82	Not imitated by competitors
Debi purchase at gas/petro stations	3.14	Not imitated by competitors

**N=94,SCALE, 1- 4**

Key: mean statistic, where 1-2 not started, 2.1 - 3.0 stated and in process, 3.1 -3.5 completed and not imitated and 3.6 -4.0 implied that the innovation is already imitated by competitors.

### **4.9.3 Service Marketing Innovation**

The respondents were asked if they felt that the various service marketing innovations have either 1- not started, 2- started and in process, 3- completed and not imitated by competitors, and 4- completed and imitated by competitors. The responses were analyzed based on the mean statistic, where 1-2 not started; 2.1 - 3.0 stated and in process, 3.1 -3.5 completed and not imitated and 3.6 -4.0 implied that the innovation is already imitated by competitors. Table 4.7, elucidates the average response on each particular area of service market innovation and conclusions based on the decision criteria. The results in Table 4.7 shows that out of the service marketing innovations surveyed, 57.14% of service marketing innovations have been started and are in the process of being implemented and those service marketing innovations supporting competitive advantage represent 30.8% of all service marketing innovations and include: personalized marketing, direct marketing to customers, business banking and corporate banking. It can therefore be concluded that service marketing innovations are currently not mainly supporting competitive advantage since majority of banks are in the process of implementing them. None the less, banks can focus on those innovations which are supporting competitive advantage.

**Table 4.7: service marketing innovations**

<b>Service marketing innovation metrics</b>	<b>Mean</b>	<b>Interpretation of mean score</b>
	Statistics	
Personalized marketing offers	3.24	Not imitated
Direct marketing to customers	3.13	Not imitated
Retail banking	2.99	Started and in process
Business banking	3.14	Not imitated
Corporate banking	3.07	Not imitated
Premium banking	2.32	Started and in process
Web service offers/promotions	2.93	Started and in process
Email alerts on new products/offer promotions	2.55	Started and in process
Market segmentation based on price	2.77	Started and in process
Market segmentation by geographical location	2.95	Started and in process
Market segmentation based on demographics	2.52	Started and in process
Market segmentation based on lifestyle	2.15	Started and in process
Monitoring customer usage, distribution and media	2.26	Started and in process

**N=94, Scale 1-4**

Key: mean statistic, where 1-2 not started, 2.1 - 3.0 stated and in process, 3.1 -3.5 completed and not imitated and 3.6 -4.0 implied that the innovation is already imitated by competitors.

#### **4.9.4 Service Channel Innovation**

The respondents were asked if they felt that the various service channel innovations have either 1- not started, 2- started and in process, 3- completed and not imitated by competitors, and 4- completed and imitated by competitors. The responses were analyzed based on the mean statistic, where 1-2 not started, 2.1 - 3.0 stated and in process, 3.1 -3.5 completed and not imitated and 3.6 -4.0 implied that the innovation is already imitated by competitors. Table 4.8,

elucidates the average response on each particular area of service channel innovation and conclusions based on the decision criteria.

From Table 4.8 majority of the banks have started service channel innovations in different areas, whereby 39.1%(9/23) of these innovations are not imitated by competitors implying a mild source of bank's competitive advantage and includes: use of branch for events and community services, mobile banking video surveillance at ATMs, branchless banking, bespoke tablet application for banking, cashless banking, dedicated branches and integration with social media. It also true, that bank has not started web chat, click to call, remote video conferencing with customers at branch level with the headquarters. These are innovation areas the bank can explore to recruit more customers without opening bank branches and ensure one on one communication with bank staff.

**Table 4.8: Service channel innovation**

<b>Service channel innovation metrics</b>	<b>Mean</b>	<b>Interpretation of mean score</b>
	Statistics	
Mobile banking	2.70	Started and in process
Internet banking	2.62	Started and in process
Self service	2.43	Started and in process
Branchless banking	3.21	Not imitated
Contact centers	2.99	Started and in process
Credit card offers	2.89	Started and in process
Agency banking	3.62	Imitated
Remote deposit check capture	2.94	Started and in process
Mobile based wealth management and advisory	2.51	Started and in process
Web chat or click to call	1.91	Not started
Integration with social media like facebook	3.16	Not imitated
Fully automated origination for complex products	2.29	Started and in process
Offers of payments and loan option at retail checkout	2.63	Started and in process
Bespoke tablet applications for banking	3.23	Not imitated
Video conferencing for advisory services	2.62	Started and in progress
Cashless banking	3.07	Not imitated
Different bank sizes or dedicated branches	3.11	Not imitated
Use of branches for events and community services	3.30	Not imitated
Remote video conferencing booth with customers in diff. banks	1.23	Not started
Paperless banking	2.52	Started and in process
Card banking	2.80	Started and in process
Mobile banking	3.12	Not imitated
Video surveillance at ATMs	3.39	Not imitated

**N=94, Scale 1-4**

Key: mean statistic, where 1-2 not started, 2.1 - 3.0 stated and in process, 3.1 -3.5 completed and not imitated and 3.6 -4.0 implied that the innovation is already imitated by competitors.

#### **4.9.5 Organization Form Innovation**

The respondents were asked if they felt that the various organization form innovations have either 1- not started, 2- started and in process, 3- completed and not imitated by competitors, and 4- completed and imitated by competitors. The responses were analyzed based on the mean statistic, where 1-2 not started; 2.1 - 3.0 stated and in process, 3.1 -3.5 completed and not imitated and 3.6 -4.0 implied that the innovation is already imitated by competitors.

Table 4.9, elucidates the average response on each particular area of organizational form innovation and conclusions based on the decision criteria. Table 4.9 shows that most banks have adopted different forms of organizational innovations whereby 50% (6/12) have not been imitated by competitors. Hence, it can be concluded that banks which have implemented organizational forms such as customer centric training, mergers dress codes, open door policy, personalized banking are unique and not easily imitated by other banks and should form focal point for banks seeking competitive advantage through organizational innovations.

**Table 4.9: Organizational form innovation**

<b>Organizational form innovation metrics</b>	<b>Mean</b>	<b>Interpretation of mean score</b>
	Statistics	
Team leader concept	2.19	Started and in process
Decentralized service centers	2.40	Started and in process
Matrix/flat organizational structures	2.86	Started and in process
Acquisition of other banks subsidiary	2.72	Started and in process
Merger with other banks	3.30	Not imitated
Open door policy	3.40	Not imitated
Dress down code/casual	3.10	Not imitated
Personalized banking	3.15	Not imitated
Employee participation in decision making	3.31	Not imitated
Bottom up approach to strategy	2.94	Started and in process
Customer centric training	3.28	Not imitated
Dedicated customer care desk	2.77	Started and in process

**N=94, Scale1-4**

Key: mean statistic, where 1-2 not started, 2.1 -3.0 stated and in process, 3.1 -3.5 completed and not imitated and 3.6 -4.0 implied that the innovation is already imitated by competitors.

#### **4.9.6. Government Regulation**

The respondents were asked to express the extent to which government influences the innovations undertaken by their banks. Table 4.10 presents effects of government regulation on innovations in the banking sector. The criteria were, where 1- no effect, 2- lesser effect, 3- moderate effect, and 4- significant effect. The government significantly influences the service market innovation (mode =4.00), service process innovation (mode =4.00). However, half or 50% of the respondents indicated that the government significantly influences the service innovation among the banks (median = 4.00).

**Table 4.10 Government effects on bank service innovations**

Variable	Statistics			
	mean	Median	Mode	Std. Deviation
Service concept	3.21	3.00	3	.949
Service process	3.64	4.00	4	.937
Service marketing	4.03	4.00	4	.822
Organizational form	3.16	3.00	3	.661
Service channel	3.68	4.00	3	1.099

**N=94, SCALE, 1-4**

#### **4.9.7 Competitive Advantage**

The researcher was also interested in knowing whether banks were experiencing competitive advantage and whether these advantages were related with service innovation. The respondents were asked if they felt that the various metrics have increased or decreased on each side of the spectrum. The decision legend was where 1-decreased, 2-remained the same, 3- increased slightly 4- increased significantly. This was interpreted as follows, mean 0-1.99, decreased, 2.00 – 2.5, remained the same, and 2.5 – 3.5 increased slightly 3.6 to 4.0 means increased significantly. From Table 4.11, it's clear that ATM withdrawal charges has remained the same across banks, banking staff courtesy has also remained the same, so are the banking hall appearance in most of the banks surveyed, the loan origination fees remained the same.

However, over the period of last 3 years, the respondents said that the customer care has increased significantly while the rest of the competitive advantage metrics have slightly increased. The increase in the cost of service, interest rates, over the counter withdrawals bank statement charges have increased slightly as banks try to cover the increased costs of doing

business in Kenya due to increased inflation and other government regulations . The banks have also been known to report billions of profits in the last three years as a result of non - traditional charges that have managed to be concealed from the regulators and enhanced the bank's profitability over the years. The major banks that have reported over 1 billion operating profits in the last three years include KCB, Cooperative bank, Equity Bank, Barclays bank, Stanchart and Citibank. These and other banks have resorted to non- traditional charges such as over the counter charges being too high.

**Table 4.11: Competitive advantage metrics**

<b>Competitive advantage metrics</b>	<b>Mean</b>	<b>Interpretation of mean score</b>
	Statistics	
Cost of service	2.66	Increased slightly
Open bank account charges	2.69	Increased slightly
Interest rates	2.67	Increased slightly
ATM withdrawal charges	2.54	Remained the same
Agent banking charges	2.63	Increased slightly
Ne/replacement ATM cards costs	2.91	Increased slightly
Bank statement charges	2.96	Increased slightly
Over the counter withdrawal charges	2.94	Increased slightly
Exchange rates charges	2.99	Increased slightly
Base interest rates	2.81	Increased slightly
Loan origination fees	2.32	Remained the same
Point of sale charges	2.53	Increased slightly
Money order and bank draft charges	2.68	Increased slightly
Compensating balance	2.44	Remained the same
Cashing check charges	2.52	Increased slightly
Money transfer charges	3.11	Increased slightly
Banking hall appearance	2.36	Remained the same
Banking staff courtesy	2.19	Remained the same
Customer care	4.00	Increased significantly
Privacy of customer information	3.44	Increased slightly

N=94, Scale 1-4

Key: Mean 0-1.99, decreased, 2.00 – 2.5, remained the same, and 2.5 – 3.5 increased slightly  
3.6 to 4.0 means increased significantly

## **4.10: Moderation, correlation and regression analysis of variables**

### **4.10.1: Testing and controlling for effects of government regulation-the moderating variable**

In this study linear regression menu on SPSS was used to assess the effects of a moderating variable (government intervention). To test moderation the researcher looked at the interaction effect between X's and Moderator variable and whether or not such an effect is significant in predicting Y (competitive advantage).

#### **Steps in Testing Moderation**

In order to confirm a third variable making a moderation effect on the relationship between the two variables X and Y, the study had to show that the nature of this relationship changes as the values of the moderating variable Z change. This was done by including an interaction effect in the model and checked if the interaction was significant and helped to explain the variation in the response variable better than before. In more explicit terms the following steps were followed:

#### **Step 1 Interaction effects of Moderating Variable**

- a. The researcher standardized all variables to make interpretations easier afterwards and to avoid multicollinearity
- b. Fitted a regression model (model 1) as show in Table 4.2, predicting the outcome variable Y from both the predictor variable X's and the moderator variable Z. Both effects as well as the model in general (R<sup>2</sup>) should be significant.
- c. Added the interaction effect to the previous model (1 ) and checked for a significant R<sup>2</sup> change as well as a significant effect by the new interaction term. If both are significant, then

moderation is occurring. If the predictor and moderator are not significant with the interaction term added, then complete moderation has occurred. If the predictor and moderator are significant with the interaction term added, then moderation has occurred, however the main effects are also significant. a) From Table 4.12, is model 1 (without the interaction term) significant? Yes,  $F(5, 87) = 9.125, p < .001$ . b) From Table 4.12, is model 2 (with the interaction term) significant? Yes,  $F(6, 86) = 10.093, p < .001$

**Table 4.12 :ANOVA<sup>a</sup>** Predictor Variable on Y Variable (Variance Explained)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	31.079	5	6.216	9.125	.000 <sup>b</sup>
	Residual	59.260	87	.681		
	Total	90.339	92			
2	Regression	37.328	6	6.221	10.093	.000 <sup>c</sup>
	Residual	53.011	86	.616		
	Total	90.339	92			

a. Dependent Variable: competitive advantage

b. Predictors: (Constant), organizational form innovation, service process innovation, service concept innovation, service marketing innovation, service channel innovation

c. Predictors: (Constant), organizational form innovation, service process innovation, service concept innovation, service marketing innovation, service channel innovation, government regulation

**Step 2: Checking whether model 2 accounted for more variance than model 1**

The researcher had to test whether model 2 accounted for more variance than model 1. In this study model 2 Table 4.13, with the interaction between the five variables and the dependent variable accounted for significantly more variance than just the five predictor variables (service concept innovation, service marketing innovation, service process innovation, service channel innovation and organizational form innovations) level by themselves,  $R^2$  change = .069,  $p = .002$ , indicating that there is potentially significant moderation between service innovations and competitive advantages in commercial banks.

**Table 4.13 Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.587 <sup>a</sup>	.344	.306	.82531827	.344	9.125	5	87	.000
2	.643 <sup>b</sup>	.413	.372	.78511801	.069	10.137	1	86	.002

a. Predictors: (Constant), organizational form innovation, service process innovation, service concept innovation, service marketing innovation, service channel innovation

b. Predictors: (Constant), organizational form innovation, service process innovation, service concept innovation, service marketing innovation, service channel innovation, government regulation

c. Dependent Variable: competitive advantage

### **Step 3: Assessing how government regulation moderated service innovation competitive advantage**

In order to assess the influence of government regulation, partial regression was done us SPSS where in the first analysis , interaction effects of the moderating variable (Government regulation) was included, but was excluded in the second regression analysis as presented in model1 and model 2, in table 4.14. The government influence on service innovation in the banking sector was found to be significant and negative. It reduced the beta coefficient of Service Channel innovation as shown in Model 1 of Table 4.14. However, the government effect has had an incremental effect on all other variables based on the Beta coefficients as indicate in Model 1 and Model 2. The government influence on the predictor variables against the dependent variable is 6.9% as indicated by  $R^2$  change in Model 2 .This influence is significant and negative overall but positive on some individual predictor variables.

<b>Table 4.14 :Coefficients</b>						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-.002	.086		-.025	.980
	Service concept innovation	.413	.100	.405	4.125	.000
	Service process innovation	.185	.101	-.186	-1.833	.070
	Service marketing innovation	.155	.105	-.157	-1.469	.145
	Service channel innovation	.859	.218	-.867	-3.937	.000
	Organizational form innovation	.353	.218	.351	1.617	.109
2	(Constant)	.004	.082		.051	.959
	Service concept innovation	.454	.096	.446	4.727	.000
	Service process innovation	.219	.097	.219	2.264	.003
	Service marketing innovation	.302	.110	.306	2.735	.001
	Service channel innovation	.225	.214	1.034	4.788	.000
	Organizational form innovation	.686	.233	.682	2.951	.004
	Government regulation	-.355	.111	-.360	-3.184	.002
a. Dependent Variable: competitive advantage						

#### **4.10.2 Correlations between Independent variables controlled by a moderating variable**

The researcher had to assess how independent variables correlated with each other so as to avoid multicollinearity. In order to explain the correlations between independent variables, non-parametric correlations in form of Pearson correlation coefficient and their significant values were computed and presented as shown in Table 4.15. The results in Table 4.15 shows that, model 1, service concept is negatively correlated service process ( $r = -.002$ ,  $sig. = .983$ ) and also negatively correlated to government influence ( $r = -.003$ ,  $sig = .979$ ), but these correlations are very weak and statistically insignificant. In addition, service process innovation is also moderately negatively correlated ( $r = .453$ ,  $sig = .000$ ) and the correlation is statistically significant at 5% level. However, government intervention had a negative correlation to the following variable, service concept ( $r = .003$ ,  $sig = .979$ ), service market innovation ( $r = -.405$ ,  $sig = .000$ ), but positively correlated to service channel ( $r = .417$ ,  $sig = .000$ ), and to organizational form innovation ( $r = .549$ ,  $sig = .000$ ).

**Table 4.15: Non parametric partial correlations between independent variables controlled by government regulation**

Variable		Service concept	Service process	Service marketing	Service channel	Organizational innovation	Government regulation
Service concept	Correlation	1.000	-.002	.343	.214	.137	-.003
	Significance(2-tailed)	.	.983	.001	.040	.191	.979
	df	0	91	91	91	91	91
Service process	Correlation	-.002	1.000	-.453	-.046	.039	.151
	Significance(2-tailed)	.983	.	.000	.658	.713	.148
	df	91	0	91	91	91	91
Service marketing	Correlation	.343	-.453	1.000	-.036	-.095	-.0405
	Significance (2-tailed)	.001	.000	.	.734	.363	.000
	df	91	91	0	91	91	91
Service channel	Correlation	.214	-.046	-.036	1.000	.911	.417
	Significance(2-tailed)	.40	.658	.734	.	.000	.000
	df	91	91	91	0	91	91
Organizational innovation	Correlation	.137	.039	-.095	.911	1.000	.549
	Significance(2-tailed)	.191	.713	.363	.000	.	.000
	df	91	91	91	91	0	91
Government regulation	Correlation	-.003	.151	-.405	.417	.549	1.000
	Significance(2-tailed)	-.979	.148	.000	.000	.000	.
	df	91	91	91	91	91	0

a. Cells contain Zero order (Pearson) correlations

### 4.10.3 Hypothesis testing

In this study, the hypotheses were tested based on regression beta coefficients and t-values at a significance level of 5%. The results are shown in table 4.16 and the conclusions were summarized as follows:

#### ***Hypothesis 1:***

***Ho: There is no positive relationship between service concept innovation and competitive advantage.***

The results presented in table 4.16 shows that beta coefficient of service concept innovation was positive (Beta=+ .454) implying that the relationship was positive and the results of t-values were significant at 5% significance level (P=.000). It was concluded that there is a positive relationship between service concept innovation and competitive advantage in the banking sector. Ho was rejected and alternative hypothesis was accepted. Hence, Ha: There is a positive relationship between service concept innovation and competitive advantage in the banking sector.

***Hypothesis 2: There is no positive relationship between service process innovation and competitive advantage.***

The results presented in table 4.16 shows that the beta coefficient of service process innovation was positive (Beta=+ .219) implying that the relationship was positive and the results of t-values were significant at 5% significance level (p=.003). It was concluded that there is a positive relationship between service process innovation and competitive advantage in the banking sector. Ho was rejected and alternative hypothesis was accepted. Hence, Ha: There is a positive relationship between service process innovation and competitive advantage in the banking sector.

***Hypothesis 3: There is no positive relationship between service marketing innovation and competitive advantage.***

The result presented in table 4.16 shows that the beta coefficient of service marketing innovation was positive (Beta= .302) implying that the relationship was positive and the results of t-values were significant at 5% significance level (p=.001). It was concluded that there is a positive relationship between service marketing innovation and competitive advantage in the banking sector. Ho was rejected and alternative hypothesis was accepted. Hence, Ha: There is a positive relationship between service marketing innovation and competitive advantage in the banking sector.

***Hypothesis 4: There is no positive relationship between service channel innovation and competitive advantage.***

The result presented in table 4.16 shows that the beta coefficient of service channel innovation was positive (Beta= .225) implying that the relationship was positive and the results of t-values were significant at 5% significance level (p=.000). It was concluded that there is a positive relationship between service concept innovation and competitive advantage in the banking sector. Ho was rejected and alternative hypothesis was accepted. Hence, Ha: There is a positive relationship between service channel innovation and competitive advantage in the banking sector.

***Hypothesis 5: There is no positive relationship between organizational form innovation and competitive advantage.***

The result presented in table 4.16 shows that the beta coefficient of organizational form innovation was positive (Beta= .686) implying that the relationship was positive and the results of t-values were significant at 5% significance level (p=.004). It was concluded that there is a

positive relationship between organizational form innovation and competitive advantage in the banking sector.  $H_0$  was rejected and alternative hypothesis was accepted. Hence,  $H_a$ : There is a positive relationship between organizational form innovation and competitive advantage in the banking sector.

***Hypothesis 6: There is a positive influence on service innovation by government regulation in the banking sector in Kenya***

The result presented in table 4.16 shows that the beta coefficient of government regulation was (Beta= -.355) implying that the relationship was negative and the results of t-values were significant at 5% significance level ( $p=.002$ ). It was concluded that there is a negative relationship between government regulation and competitive advantage in the banking sector.  $H_0$  was rejected and alternative hypothesis was accepted. Hence,  $H_a$ : There is a negative relationship between government regulation and competitive advantage in the banking sector.

#### **4.10.4 The influence of independent on dependent variables**

In order to explain the influence of independent variable on the dependent variable, beta coefficients were computed at 5% significance level. The un standardized beta coefficients as indicated in Table 4.16 with moderation of the government intervention are that Service Concept Innovation (B= .454,  $t = 4.727$ ,  $p = .000$ ) statistically significant at 5% level), Service process innovation (B= .219,  $t = 2.264$ ,  $p = .003$ ), Service Market Innovation (B =.302,  $t = 2.735$ ,  $p = .001$ ), Service Channel Innovation (B= .225,  $t = 4.788$ ,  $p = 0.000$ ), Organizational form innovation (B= .686,  $t = 2.951$ ,  $p = .004$ ). The government moderating variable have a negative Beta coefficient (B= -.355,  $t = -3.184$ ,  $p = .002$ ) and a Constant of B= .004).

From the regression model below, it is clear that organizational form innovation factor had the highest beta coefficient (B=.686) indicating that a bank concentrating on organizational form

innovation gained more competitive advantage as compared with banks concentrating on other types of service innovation. It is followed by service concept innovation (B=.454), service marketing innovation (.302), service channel (.225) and service process (.219) in that order. A regression model was fitted as follows:

$$Y = .004 + .454X_1 + .219X_2 + .302X_3 + .225X_4 + .686X_5 - .355Z$$

*Where Y= Competitive Advantage*

*X<sub>1</sub> = Service Concept Innovation*

*X<sub>2</sub> = Service Process Innovation*

*X<sub>3</sub>: Service Market Innovation*

*X<sub>4</sub>: Service Channel Innovation*

*X<sub>5</sub>: Organizational Form Innovation*

*Z: Government Regulation*

**Table 4. 16: Beta Coefficients**

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
	(Constant)	.004	.082		.051	.959
	Service concept	.454	.096	.446	4.727	.000
	Service process	.219	.097	.219	2.264	.003
	Service market	.302	.110	.306	2.735	.001
	Service channel	.225	.214	1.034	4.788	.000
	Organizational form	.686	.233	.682	2.951	.004
	Government regulation	-.355	.111	-.360	-3.184	.002

a. Dependent Variable: competitive advantage

#### 4.10.5 Explained variation

In order to assess whether the regression model was accurate, relationship(R) between independent variables and the dependent variable were computed via SPSS. Table 4.17, the model's ability to explain competitive advantage indicates that there is a strong positive correlation (Adj R =.661). The influence of the independent variables accounts for 43.6% (R – Squared = .436) of the changes in competitive advantage in the banking sector. Looking at the model the adjusted R-square statistics are nearly identical. A model with extra predictors will always have at least as large an R-square value, but the adjusted R-square compensates for model complexity to provide a more fair comparison of model performance. The relationship between the independent variables and the independent variable was very strong(R=.661). It also true that while controlling for government moderation, the five independent variables accounted for 43.6% of variations on competitive advantage in the banking sector while 56.3% is explained by other factors outside the model.

**Table 4.17 Model summary**

Model summary <sup>b</sup>					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.661 <sup>a</sup>	.436	.415	.78313992	.272

a. Predictors: (Constant), government influence; service concept; service process; service channel; service marketing;;organizational form

b. Dependent variable: Competitive advantage

**4.10.6: Model fit**

Testing the significance of the R, indicates that it has an F- value of 20.78, 6 df and a p = .000, as shown in Table 4.18. The model is therefore a good fit because the F- tests shows that there are no significant differences in the means from the model.

**Table 4.18: Anova Table**

ANOVA <sup>a</sup>						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	76.467	6	12.744	20.780	.000 <sup>b</sup>
	Residual	98.743	161	.613		
	Total	175.210	167			

a. Dependent Variable: Competitive advantage

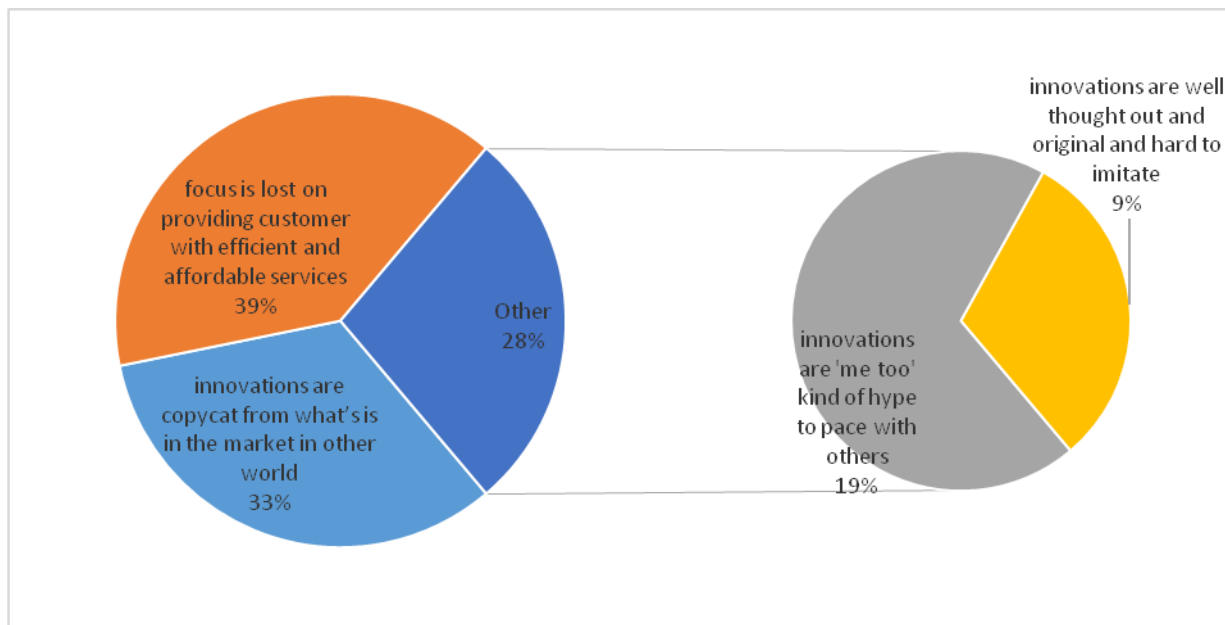
b. Predictors: (Constant), government regulation; service concept; service process; service channel; service marketing; organizational form

**4.11 : General Questions Interview Results**

**4.11.1 Opinion of respondent on their banks innovations**

Respondents were asked what they thought about why their respective banks were innovating. Fig 4.8 shows that 33% felt that the banks were simply copy cats copying what is happening in order to belong , and another 19.1% indicated that ,innovations on the banks are ‘me too’ kind of hype in order to look like the banks are doing something new and not left behind in the industry . Additionally, less than 10% have the innovations being well thought out and original and hard to imitate. This implies that most of the innovations done in the banks are just copied

from others and may be reactionary to the changes in the market like ‘me too. As a result, these innovations end up being easily imitated by competitors and thus lose the ability to enhance competitive advantage. The most sought after type of innovation is that which focus on providing customer with efficient and affordable services as indicated by 39.4% of the respondents.

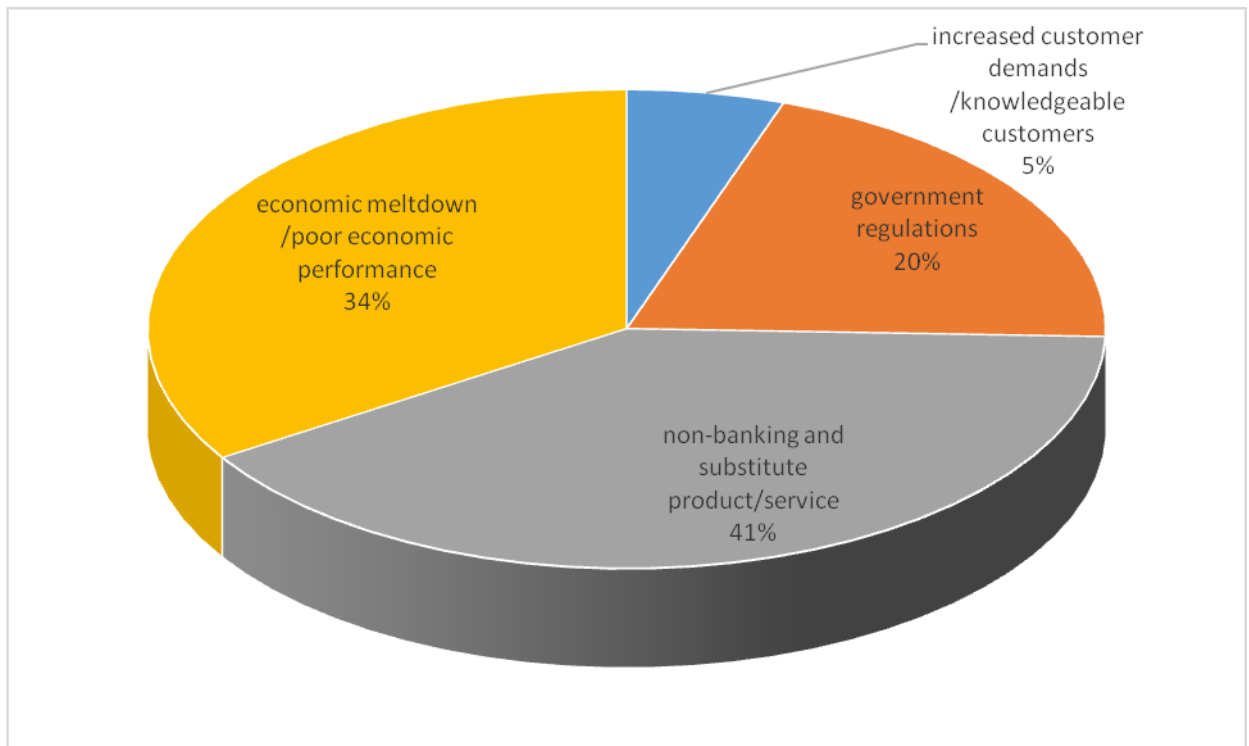


**Fig 4.8 Respondent’s opinion on the banks innovations**

#### 4.11.2 Motivations behind innovations in the banking sector

The researcher was interested in knowing why banks were innovating. Fig. 4.9 shows that majority of the respondents (38%) are innovating on non-banking and substitute product and service, basically non-traditional products and services. Another 32 %, are innovating due to economic meltdown or poor economic performance in the last three years and this is meant to turn round their businesses and face competition. The government is also pushing the innovations in the banking sector as 19% of the respondents felt that the government changes in the banking regulations, and banking policies and fiscal policies, are pushing the banks to innovate. However, very little of the baking innovations are as a result of increased customer

demands or due the knowledge of customers accounting for only 5% of the respondents supporting this argument.

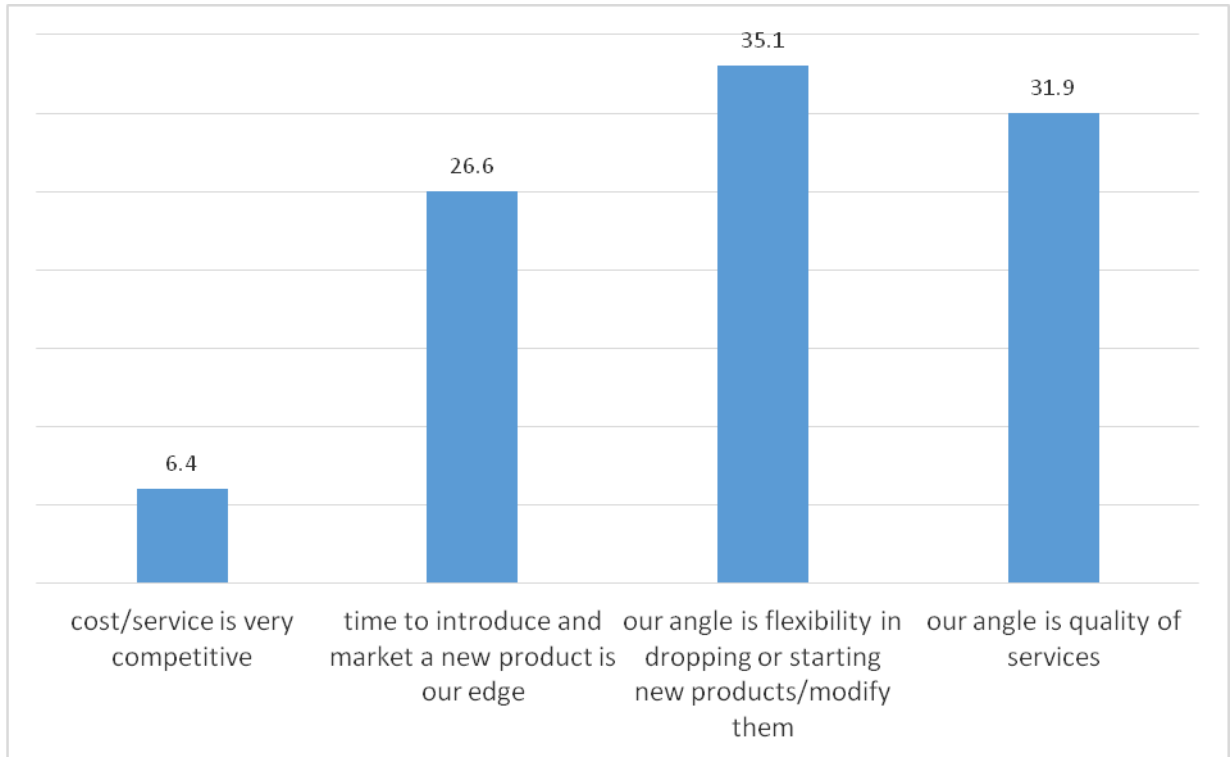


**Fig 4.9: why banks are innovating**

#### **4.11.3 Winning formula for the banking industry**

The researcher was interested in knowing the winning formula for banks innovation. Fig. 10, shows that bank mainly derive competitive advantage anchored on flexibility (35.1%) followed by delivery of quality services (31.9%), while timely (26.6%) and cost of service (6.4%) were third and fourth respectively. It is clear that innovation has positive impact on quality, adopting innovation lead to new products and services and new ideas as well. Improving the quality in general allows banks to compete in the markets based on the characteristics and the specifications of its products and services; also innovation provides better quality and utilizes production methods efficiently.

Innovation is as well has positive impact on cost, innovation reduces cost of both products and process, allowing banks to offer quality products and services with lower cost, and reduce the overall cost of operation. Which in turn allow offer products and services at better prices. However, the results confirms that cost was the least important dimension of realizing competitive advantage, which indicates that banks in Kenya are not fully adopting innovation as a management concept. Lastly, innovation has positive impact on flexibility, adopting innovative methods in products and process allow banks to customize products and services based on customer requirements, it also allow banks to offer product and service in response to competition, flexibility has a better rank compared to cost but it is still less than time and quality. To conclude innovation has a positive impact on competitive advantage; the four dimensions of competitive advantage combined together show better result under the impact of innovation, indicating that the use of innovation in all competitive advantage dimensions will create eventually much better performance for the banks. These findings were supported by Azmi *et al* (2012).



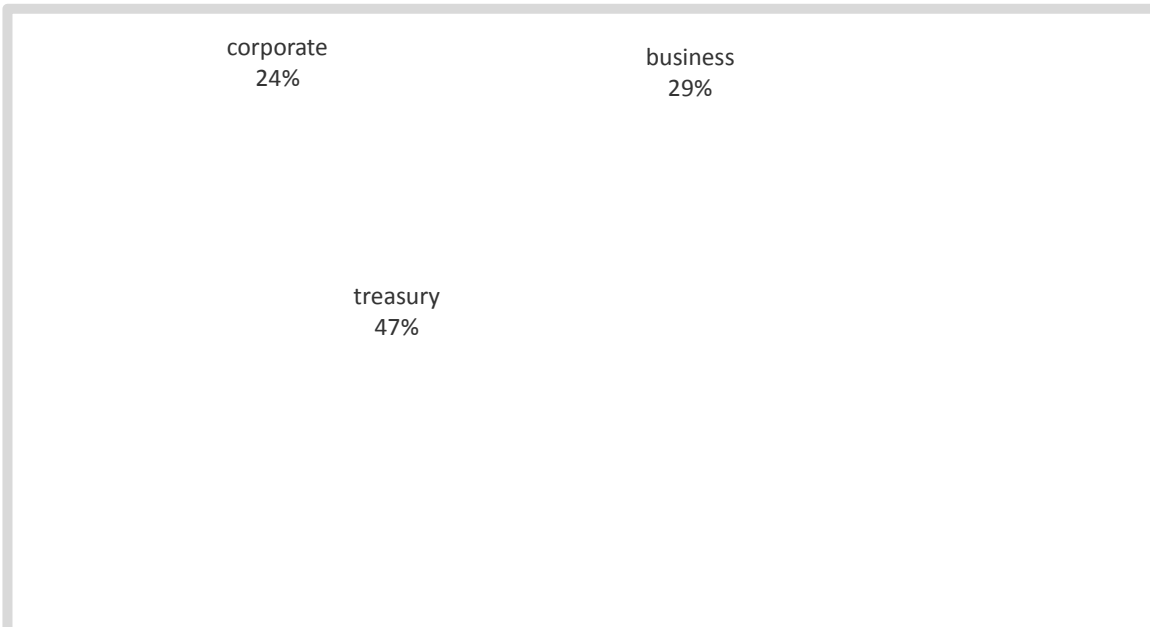
**Fig 10: winning formula for banks innovations**

## **4.12 Customer survey results**

In order to compare and validate the results of this study, information from a few select banks customers was collected through a structured interview. The survey also included questions posed to customers at random found in the banking hall of different banks surveyed. The results of the survey through interviews are enumerated in fig. 4.11 to 4.13 below.

### **4.12.1 Type of customer interviewed**

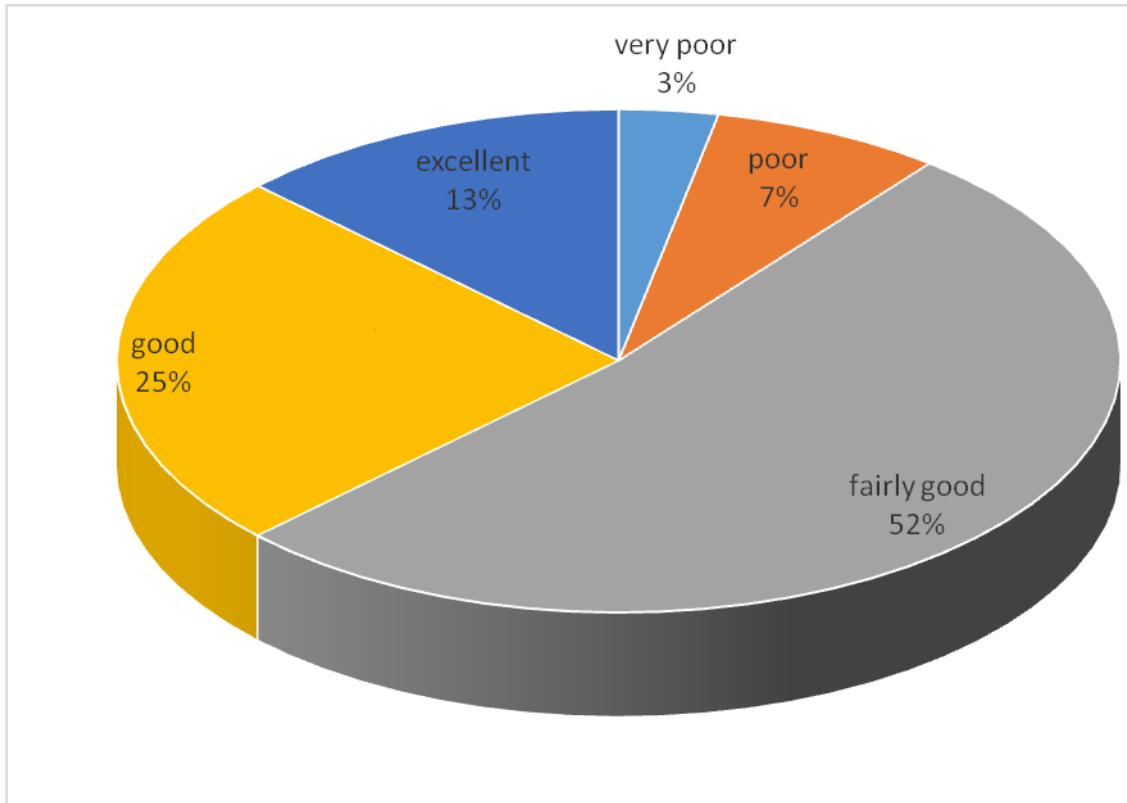
Based on results presented in fig. 4.11, of the customer interviewed 44% were treasury customers, 27% were business /retails customers and 23 %were corporate customers. The interviews were done at random through use of purposive sampling. It shows that customers from treasury were more available and willing to respond due to understanding of banking sector.



**Fig 4.11: Type of customer interviewed**

#### **4.12.2 Customer’s evaluation of the banks surveyed**

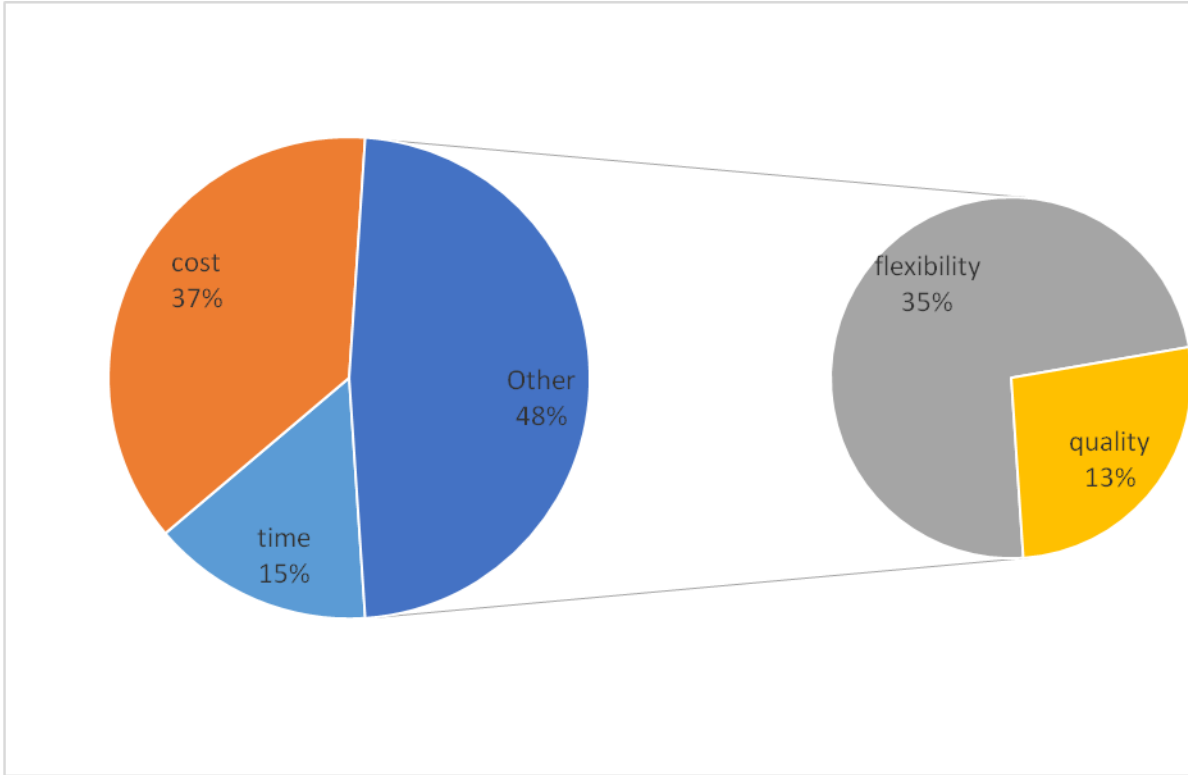
The study assessed how customers rated their banks services. Of the customers surveyed, majority (52.1%), felt that the banks services were fairly good and another combined 37.3% rated the banks services as either good and or excellent as shown in fig.4.12. This means that of the banks surveyed, their customers rated 18.6 % as poor or very poor. The study concludes that due to the various banking innovations in the last three years, majority of the customers (90%) are satisfied with the banking services in Kenya. While majority of the costs aspects of the banking services have slightly increased over the years and the banks have introduced nontraditional services, the customers seem to appreciate the new innovative products and services.



**Fig 4.12: customer evaluation of the banks services**

#### **4.12.3 Reasons for rating the banks by customers**

The study evaluated the rationale behind why customers rated banks the way they did it. Based on results presented in fig 4.13, customers surveyed gave several reasons why they rated the banks the way they did. Of the customers interviewed, 35.1 % said flexibility is very important to them, while 37.2% cited cost of the service as the most important aspect. Of lesser importance was time and quality of services. Perhaps the banks should listen to the customers and focus on what matters to them a lot (cost and flexibility) which customers can easily identify with. The word quality may be too broad and less meaningful to an ordinary customer.



**Fig 4.13: why customer rated the banks the way they did**

## CHAPTER FIVE

### SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

#### 5.1 Introduction

This chapter focused on the summary, conclusions, recommendations and the areas for future research. The findings were based on study objectives whereas the conclusions and the recommendations were based on each of the findings. The study sought to investigate on the role of service innovation on competitive advantage in the banking sector in Kenya. Specifically, the study sought to establish the level of service concept innovation on competitive advantage in the banking sector in Kenya, the extent of service process innovation on competitive advantage in the banking sector in Kenya, the level of service channel innovation on competitive advantage in the banking sector in Kenya, the extent of service marketing innovation on competitive advantage in the banking sector in Kenya, the level of organizational innovation on competitive advantage in the banking sector in Kenya and the extent of government regulation on competitive advantage of service innovation in the banking sector.

#### 5.2 Summary of the findings

##### **5.2.1 Objective 1: The level of service marketing innovation on competitive advantage in the banking sector in Kenya**

The first objective sought to establish the level of service marketing innovation on competitive advantage in the banking sector. Based on the results of descriptive analysis, the study found that very few of the service marketing innovations taking place in the banking sector were not being imitated and included personalized marketing offers, direct marketing to customers, business banking and corporate banking. Based on the beta coefficient computed, the study

established that there was a moderately weak but positive relationship between service marketing innovation and competitive advantage in the banking sector and the relationship was statistically significant at 5% level. In addition, the study established that while holding other factors constant, a unit increase in service marketing innovation improved competitive advantage in the banking sector in Kenya by .302 i.e. 30.2%.

### **5.2.2 Objective 2: The extent of service concept innovation on competitive advantage in the banking sector in Kenya**

The second objective sought to estimate the extent of service concept innovation on competitive advantage in the banking sector. Based on the results of descriptive analysis, the study found that of all service concept innovations being implemented, few were not being imitated by competitors. However, banks had not started many and include: treasury and foreign exchange services, trade finance and bank guarantees, self services, mobile payment withdrawal services, agency banking services, direct mobile deposits, sitting space for customers waiting for services, wheel chair banking and insurance services. Based on the beta coefficients computed, the study established that there was a moderate positive relationship between service concept innovation and competitive advantage in the banking sector and the relationship was statistically significant at 5% level. Additionally, while holding other factors constant, the study established that a unit increase in service concept innovation enhanced competitive advantage in the banking sector in Kenya by 0.454 i.e. 45.4%.

### **5.2.3 Objective3: The level of service process innovation on competitive advantage in the banking sector in Kenya**

The third objective sought to evaluate the level of service process innovation on competitive advantage in the banking sector in Kenya. Based on results of the descriptive analysis, the

study established that majority of the banks surveyed had adopted service process innovations with varying degrees of success, majority of them being not being imitated by competitors and include touch screens for use by advisors and customers, credit score rating for clients, extending opening hours and weekends, web banking, wire transfer directly from a customer account, mobile utility bill payments, debit card and purchase at retail store point of sale. Based on beta coefficients computed, the study found that there was a very weak but positive between service process innovation and competitive advantage in the banking sector and the relationship was statistically significant at 5% level. In addition, the study found that , while holding other factors constant, a unit increase in service process innovation escalated competitive advantage in the banking sector by 0.219 i.e. 21.9%.

#### **5.2.4 Objective 4: The Extent of service channel innovation on competitive advantage in the banking sector in Kenya**

The fourth objective sought to determine the extent of service channel innovation on competitive advantage in the banking sector in Kenya. Based on the results of descriptive analysis, the study established that out of the service channel innovations being implemented, small percentage was not being imitated by competition and included: branchless banking, integration with social media like Facebook, bespoke tablet applications for banking, cashless banking, different branch sizes or dedicated branches, use of branches for events and community services, mobile banking and video surveillance at ATMs. In addition, the study found that majority of the banks have started service channel innovation in different area but they have not started web chat, click to call, remote video conferencing with customers at branch level with the headquarters. Based on the beta coefficients computed, the study established that service channel innovation had a very weak positive relationship with

competitive advantage in the banking sector and the relationship was statistically significant at 5% level. In addition, the study found that while holding other factors constant, a unit increase in service channel innovation accelerated competitive advantage in the banking sector in Kenya by 0.225 i.e. 22.5%.

#### **5.2.5 Objective 5: The Level of organizational form innovation on competitive advantage in the banking sector in Kenya**

The fifth objective sought to analyze the level of organizational form innovation on competitive advantage in the banking sector in Kenya. Based on the results of descriptive analysis, the study established that majority of banks surveyed have adopted different organizational form innovations and out of the organizational form innovations adopted, majority were not imitated and included mergers with other banks, open door policy, dressing down codes, personalized banking, employee participation in decision making and customer centric training. Based on the beta coefficients computed, the study established that there is a strong and positive relationship between organizational form innovation and competitive advantage in the banking sector and relationship was statistically significant at 5% level. Furthermore, the study found that while holding other factors constant, a unit increase in organizational form innovation accumulated competitive advantage in the banking sector by .686 i.e. 68.6%.

#### **5.2.6 Objective 6: The extent of Government Regulation on competitive advantage of service innovation in the banking sector in Kenya**

The sixth objective sought to assess the extent of government regulation on the competitive advantage of service innovation in the banking sector in Kenya. The study established that the government influence on service innovation in the banking sector was found to be negative and

significant. However, the government regulation had an incremental effect on all other variables based on the Beta coefficients. The government influence on the predictor variables against the dependent variable was 6.9% as indicated by  $R^2$  change. This influence is significant and negative overall but positive on some individual predictor variables. Thus, while holding other factors constant, a unit increase in government regulation dwindled competitive advantage of service innovation by .355 i.e. 35.5% in the banking sector in Kenya.

### **5.2.7 Competitive advantage**

The study found that ATM withdrawal charges had remained the same across banks, banking staff courtesy has also remained the same, so are the banking hall appearance in most of the banks surveyed, the loan origination fees remained the same, compensating balance remained the same, banking hall appearances/space remained the same, banking staff courtesy remained the same. Besides, the study established that over the period of last 3 years, the customer care has increased significantly while the rest of the competitive advantage metrics have slightly increased. In addition, the study established that there is increase in the cost of service, interest rates, over the counter withdrawals and bank statement charges have increased slightly as banks try to cover the increased costs of doing business in Kenya due to increased inflation and other government regulations.

### **5.3 Conclusions**

Generally, the study concludes that service innovation is positively and strongly correlated with competitive advantage in the banking sector in Kenya and the relationship is statistically significant. Of the dimensions of service innovation being investigated in this study, Organizational form innovation exerted greater variation on competitive advantage in the banking sector, followed by the service concept innovation, service marketing innovation,

service channel innovation and service process innovation. The study concludes that organizational form innovation is relatively very important in influencing competitive advantage as compared to other types of service innovations which take place in the banking sector in Kenya.

Specifically, the study concludes that there is positive relationship between service marketing innovation and competitive advantage in the banking sector and the relationship is statistically significant. The relationship is relatively weak implying that service marketing innovation has a low relative importance in influencing competitive advantage in the banking sector. Additionally, the study concludes majority of banks are in the process of implementing service marketing innovations and out of those already implemented, imitation is very high and only a small percentage are not being imitated.

On service concept innovation, the study concludes that there is a positive relationship between service concept innovation and competitive advantage in the banking sector and the relationship is statistically significant. The relationship is relatively moderate implying that service concept innovation has a moderate relative importance in influencing competitive advantage in the banking sector. In addition, the study concludes that banks are offering more of less differentiated products and services and the market was highly competitive, hence, majority of service concept innovations completed were easily being imitated by competition, therefore concludes that service concept innovations implemented in the commercial banks are offering temporary competitive advantages due to erosion by imitation.

On service process innovation, the study concludes that there is a positive relationship between service process innovation and competitive advantage in the banking sector and the relationship is statistically significant. The relationship is relatively weak implying that service process innovation has a low relative importance in influencing competitive advantage in the banking sector in Kenya. The study also concludes that majority of the banks surveyed had adopted service process innovations with varying degrees of success, where majority of them were not being imitated by competitors and include touch screens for use by advisors and customers, credit score rating for clients, extending opening hours and weekends, web banking, wire transfer directly from a customer account, mobile utility bill payments, debit card and purchase at retail store point of sale.

On service channel innovation, the study concludes that there is a positive relationship between service channel innovation and competitive advantage in the banking sector and the relationship is statistically significant. The relationship is relatively weak, implying that service channel innovation has a low relative importance in influencing competitive advantage in the banking sector. Additionally, the study concludes that majority of service channel innovation are in the process of being implemented in the banking sector in Kenya whereas, of those already implemented, only a small percentage are not imitated and included branchless banking, integration with social media like Facebook, bespoke tablet applications for banking, cashless banking, different branch sizes or dedicated branches, use of branches for events and community services, mobile banking and video surveillance at ATMs.

On organization form innovation, the study concludes that there is a positive relationship between organization innovation and competitive advantage in the banking sector and the relationship is statistically significant. The relationship is relatively strong implying that organizational form innovation has a high relative importance in influencing competitive advantage in the banking sector.

On Government regulation, the study concludes that the government regulation on competitive advantage of service innovation in the banking sector is negative and significant and that government regulation has an incremental effect on all other variables based on the Beta coefficients. Additionally, the study concludes that government regulation enhances organizational form innovation and service channel innovation but deters service marketing innovation in the banking sector. This influence is significant and negative overall but positive on some individual predictor variables.

#### **5.4 Recommendations**

The study established that service innovation accounted for great variation in competitive advantage in the banking sector. The study recommends banks in Kenya to invest in service innovation in a bid to achieve competitive advantage. Specifically, these banks can invest in service marketing innovation, service concept innovation, service process innovation, service channel innovation and organizational form innovations.

The study established that service marketing innovation spawned a relatively moderate influence on competitive advantage in the banking sector. The study recommends banks seeking to improve competitive advantage through service marketing innovation, to broaden their service marketing base by focusing on non-core businesses such as insurance, and investment products and services, bill payment services and access to financial information from customer's personal software packages, while at the same time focusing on core functions. More emphasis can be geared towards innovations like: personalized marketing offers, direct marketing to customers, business banking, corporate banking and corporate banking since they are not easily imitated.

The study found that service concept innovation provided a relatively moderate influence on competitive advantage in the banking sector. Banks seeking to improve competitive advantage using service concept innovation, to invest more in innovation leadership in value based service concepts which offer different and unique experiences relative to competition, innovative services that did not exist before, or that have substantially been redesigned to meet customer's needs more efficiently. These innovations may include wheel chair banking, agency banking, direct mobile deposits, treasury and foreign exchange services, trade finance and bank guarantees among others. Banks can broaden their service concept innovation by investing in service concept innovations such as treasury and foreign exchange services, trade finance and bank guarantees, self services, mobile payment services, agency banking services, direct deposits, sitting space for customers waiting for services and wheel chair banking, insurance services.

The study established that service process innovation delivered a relatively little influence on competitive advantage in the banking sector. The study recommends banks in Kenya seeking to improve competitive advantage through service process innovation, to invest more on service process innovations which are not easily imitated by competitors. These innovations include: touch screens for use by advisors and customers, credit score rating for clients, extending opening hours and weekends, web banking, wire transfer directly from a customer account, mobile utility bill payments, debit card and purchase at retail store point of sale, etc which are not being easily imitated by competitors.

The study found that service channel innovation generated a relatively little influence on competitive advantage in the banking sector. The study recommends banks in Kenya seeking to improve competitive advantage through service channel innovation, to invest more in service channels which are not easily imitated. These innovations include: branchless banking, integration with social media like facebook, bespoke tablet applications for banking, cashless banking, different branch sizes or dedicated branches, use of branches for events and community services, mobile banking and video surveillance at ATMs.

The study established that organizational form innovation supplied a relatively strong influence on competitive advantage in the banking sector. The study recommends banks in Kenya to heavily invest on organizational form innovation in a bid to achieve competitive advantage. Specifically, they should put major focus on restructuring activities and organizational processes such as mergers with other banks, open door policy, dressing down codes,

personalized banking, employee participation in decision making and customer centric training because these innovations are not easily being imitated by competitors.

On banking regulations, the study established that the banking sector in Kenya was laden with a huge number of banking regulations whose overall impact was relatively weak and negative on competitive advantage of the services innovated in a bank. Given that these regulations somehow sought to discourage service innovation in the banking sector in Kenya, the study recommends that the Kenyan bank's managers should focus their energy on compliance innovation.

### **5.5 Areas for further research**

The study focused on service innovations in the banking sector and constrained itself to the banking industry. Further study can be done to expand the scope by including other service sectors like the insurance sector, hospitality industry, health sector and the financial companies and other service institutions. Such study would serve to incorporate an industry level understanding of how innovations in the service really affect competitive advantage without having to look at the specific regulations that govern each type of firms in the industry.

Banks regulations and those for an insurance company or a financial institution are more likely to be different. Further study can be done on the whole industry so as to preempt the regulation as a variable in any study in order to establish a common standing on the influencers that affect the industry as a whole.

Due to time factor limitation, time-based analysis on the process of innovations and their gradual impact on a bank's competitiveness were not included in the analysis. This study suggest for future research to apply a longitudinal approaches.

Banking innovations are not limited to services only. This study mainly restricted on service innovation, future studies can eye on other types of innovations which are taking place in the banking sector in Kenya and how these innovations affects the competitive advantage in the sector.

The competitive advantage is from the value of the firm which the buyers are willing to buy. This advantage may not be influenced by the only few factors under study. The factors under this study account for only 43.6% of competitive advantage in the banking sector. Future studies can investigate on other factors influencing competitive advantage in the sector.

Most of the service innovations which are being applied in the banking sector are providing transient advantages due to imitation. Future research can focus on how banks in Kenya can exploit service innovation so as to provide sustained competitive advantages.

While some banks have taken leadership in innovation, others are sluggish and lagging behind. Future research may investigate on factors influencing service innovation leadership in the banking sector in Kenya.

## REFERENCES

- Abernathy, w. J. and Utterback, J. M.(1975) A dynamic model of process and product innovation. *OMEGA, The international Journal of management science*. (6) 639—656.
- Abernathy, W.,J.(1978) *The productivity dilemma:roadblock to innovation in the automobile Industry*. Bathmore: Johns Hopkins University Press.
- Abernathy, w. J. and Utterback , J. M.(1978) Patterns of Innovation in Technology. *Technology Review*, 40-47.
- Abishua,D.A.(2010) *Strategic responses used by Equity bank to compete in the Kenyan banking industry*. A management Research Project, Nairobi: University of Nairobi. Retrieved from <http://ssrn.com/abstract=1815341>
- Acelandu, M.I.and Serban, A. (2009) The relation between sustainable innovation and competitive advantage: Romanian perspective. *Communications of the IBIMA*. Retrieved from <http://www.Ibimapublishing.com/journals/CIBIMA>
- Achieng, O,D.(2011) *Competitive strategies applied by bank's agents to sustain their market share(A case of commercial banks in Migori county)*. Retrieved from <http://ir-library.ku.ac.ke/bitstream/handle/123053789/7606/Omollo%20Dorothy%20Achieng.pdf>
- Adam,E. and Albert, R.(1996) *Production and operations management: concept models, and behaviors* (5<sup>th</sup> edition),Eaglewood cliffs NJ: Prentice Hall.
- Agresti ,A. and Finlay, B,(2008) *Statistical operations for social sciences, 4<sup>th</sup> Edition*. Upper Saddle River, NJ: Prentice Hall
- Aiken, L. S., and West, S. G. (1991). *Multiple regression: Testing and interpreting interactions*. Thousand Oaks, CA:Sage

- Al-alak B. and Tarabieh S. A. (2011) Gaining competitive advantage and organizational performance through customer orientation, innovation differentiation and market differentiation. *International Journal of Economics and Managerial Sciences*.. 80-91. Retrieved from <http://www.manageemntjournals.org/ijems/5/IJEMS-11-1508D.pdf>(Accessed 25/3/2013)
- American Heritage Dictionary (2013) *Bank*. <http://www.answers.com/topic/bank>
- Amit, R. and Zott, C. (2012) Creating value through business model innovation. *MITSloan Management Review* . Retrieved from <http://www.management.wharton.unplan.edu/amitresearch/docs/2012/Amit-creating-value-Business-model-innovation>.
- Ankli, R. E.(1992) Michael Porter's competitive advantage and business history. *Business and Economic History, Second Series*. Business History Conference.
- Arboleda, C.R. (2003) *Writing a thesis proposal* 1<sup>st</sup> edition1998. Philippine: Philippine Educational Publishers
- Arttachariya, P.(2005) *A handbook on thesis writing MBA program*. Graduate School of Business Assumption University. Bangkok, Thailand, 2005. Retrieved from [http://www.graduate.au.edu/download/content/file/school%20business/MBA/Thesis/handbook/A %20 Handkook%20MBA%20Thesis.pdf](http://www.graduate.au.edu/download/content/file/school%20business/MBA/Thesis/handbook/A%20Handkook%20MBA%20Thesis.pdf)
- Asemanyiwaa, M.,C.,A.(2012) *Electronic banking adoption in Ghana. A case of Guaranty TrustBank(India)Limited*. Retrieved from <http://dspace.knut.edu.gh/jspui/bitstream/123456789/4948/1/MENSAH%20CHERYL%20ADWOA%20ASEMANYIWAA.pdf>
- Ashford, N. A. and Hall, R. P. (2011) The importance of regulation-induced innovation for sustainable development. *Sustainability* 2071-1050. Article. Retrieved from <http://www.mdpi.com/2071-1050/3/1/270/pdf>

- Athmor, N.(2013) Innovations in the banking Industry in the rest of the world. *American Academic and Schorklarly Research Journal*, (5), 15-34 Retrieved from [www.aarsc.org/aasrj](http://www.aarsc.org/aasrj) on 23/03.
- Awuah, L.(2011) *An evaluation of strategies for achieving competitive advantage in the banking industry: The case of Ghana commercial bank Ltd.* Retrieved from <http://ir.knust.edu.gh/bitstream/123456789/4352/lawrence%20Isaac.pdf>
- Awuondo, I. (2007) *e-Banking in Kenya: Practical lessons to be drawn from Commercial bank of Africa.* Retrieved from <http://www.digital.library.strathmore.edu/xmlui/bitstream/handle/123456789/1129/Awuondo%20Isaac.pdf>
- Azmi ,A.A.,Gaith, M. and Ayed, M.(2012) Impact of innovation on realizing competitive advantage in banking sector in Jordan. *American Academic& Schorklarly Research Journal*. (5) . Retrieved from <http://naturalspublishing.com/files/published/up889+83c79jg4.pdf>
- Baer, M. and Frese, M.(2003) Innovation is not enough: climates for initiative and psychological safety, process innovations, and firm performance. *Journal of organization behavior. J. Organiz. Behavior.* 45-68) Retrieved from <http://bschool.nus.edu/departments/management+organization/publication/michaelfresejournal/baer%20Frese.pdf>
- Baker, K.A.(2002) *Innovation.* Retrieved from <http://www.au.af.mil/au/awc/awcgate/doe/benchmark/ch14.pdf>
- Baldwin, J.R. and Johnson, J.(1995) Human capital and innovation: The case of training in small and medium-sized firms. *No 74.* Retrieved from <http://citesteerx.ist.psu.edu>
- Barclay bank (2013) Retrieved from <http://standardmedia.co.ke/business/article/2000093382/>
- Barclay, M., Higgins,K. and Thompson, A.S.(1995) *Towards a general theory of action.* New York: Harper and Row.

- Barney, J.B.(1986) Strategic factor markets: Expectations. Luck and business strategy. *Management science* 32, 1231-1241
- Barney, J. B.(1991) Firm resources and sustainable competitive advantage. *Journal of management*,17,19-120. Retrieved from <http://www3.uma.pt/filipejmsousa/ge/Barney,%201991.pdf>
- Bates, K. A. (1995) *Innovation history and competitive advantage: A resource-based view analysis of manufacturing technology innovations*. Retrieved from <http://www.proceeding.aom.org/content/1995/1/235.full.pdf>
- Beacham, J. (2006) *Innovation is possible for every company*. dti. <http://webarchive.nationalarchives.gov.uk/+/>Retrieved from <http://www.dti.gov.uk/files/file29058.pdf>
- Bearing Point(2006) *Banking channel optimization: Rationalizing the customer experience*. Retrieved from <http://www.bearingpoint.nl/media/supply-chain-management/bankchannelOpt-whitepaper.pdf>
- Benson, P.G., Saraph, J.V. and Schroeder, R.G.(1991) The effects of organization context on quality management :An empirical investigation. 37(9) , 1107-1124
- Bernard, I., Lima, G. and Souza, J.F.( 2007)Improving operations and IT in Latin America's banks. *The Micknisey Quarterly*.
- Bernerjee, B.(2009) *How successful banks build their innovation strategy*. Infosys Technology limited, India. Retrieved from <http://www.infosys.com/finacle/solutions/thought-papers/Documents/how-successful-banks.pdf>
- Bharadwaj, S.G.,Varadajan, P.R. and Fay, J. (1993) Sustainable competitive advantage in service industries: A conceptual model and research propositions. *Journal of Marketing* 57, 83-89.Retrieved from <http://allenjcochran.com/wp-content/uploads/2012/01/sustainable-competitve-advantage-in-service-industries.pdf>
- Bhatti, W.A., Khan M.,N., Ahmed, A., Hussain, N., and Rehman , K.(2010) Sustaining competitive advantage through effective knowledge management. *Afri J Bus*

- Management*. Retrieved from  
<http://www.academicjournals.org/ajbm/pdf/pdf2011/18Apri/Bhatti%20et%20al.pdf>
- Bikker, J. A. and Bos, W.B.J.(2006) Trends in competition and profitability in the banking industry: A basic framework. *SUERF, Vienna*. Retrieved from  
<http://www.suerf.org/download/sbiz>
- Bisgaard, T. and Hogenhoven, C.(2010) *Creating new concepts, products and services with user driven innovation*. Nordiac Innovation Centre, Norway. Retrieved from  
<http://erhvervsstyrelsen.dk/file/76299/udi.pdf>
- Bitran, G. R. and Logo, M. (1993) A framework for analyzing service operations. *European management Journal* 1(3), 271-282
- Boone, H.N. and Boone,D.A(2012)Analyzing Likert data .West Virginia. *Journal of Extension* 50 (2). Article Number 2TOT2. Retrieved from  
<http://www.joe.org/joe/2012April/tt2p.shtm>
- Bollad,D.(2013) Case studies of financial innovations in Africa. Convening space, IDS. Retrieved on 25/1/2014 from [www.ipsos-mori.com](http://www.ipsos-mori.com)
- Boston Consulting Group. *Innovation( 2005) Senior Management Survey*.
- Bruce,l., Bondy, K., Street, R. and Wilson, H.(2009) Channel evolution: How new multichannel thinking can deliver competitive advantage. *Journal of direct, data and digital marketing practice* 10(4), 329-335
- Burnett, J. (2012) *The segmented market*. Retrieved from [http://www.soylor.org/site/wp-content/uploads/2012/12/BUS\\_203-2.1.1\\_The\\_segmented-market.pdf](http://www.soylor.org/site/wp-content/uploads/2012/12/BUS_203-2.1.1_The_segmented-market.pdf)
- Bwaley, K. K. (2011) *The relationship between innovation strategies and competitive advantage among banks listed in NSE*. University of Nairobi Digital Repository. Retrieved from <http://erepository.unobi.ac.ke/handle/123456789/13320>

- Capgemini, EFMA and ING (2008) *World banking retail report*. Retrieved from <http://www.at.capgemini.com/u/at/tl/world-retail-banking-report-2008.pdf>
- Carmines, E.G and Zeller R.A.(1979) *Reliability and validity assessment*. Sage, Newbury Park,CA.
- Casadesus-Masanell, R. and Zhu, F.(2013) Business model innovation and competitive imitation: The case of sponsored based business models. *Strategic management Journal* 34, 464-482 USA: John Wiley & Sons Ltd. Retrieved from <http://www.bcf.usc.edu/~fzhu/bmi.pdf>
- Chandan, H.,R. and Urhuogo, I.(2013) Organizational challenges for innovation in information systems. *Proceedings of Southern Association for Information Systems conference, Atlanta, G.A, USA*. Retrieved from <http://sais.aisnet.org/2012/chandanurhuogo.pdf>
- Chavan, J.(2013) Internet banking –benefits and challenges in an emerging economy. *International Journal of Research in Business Mangement(IJRM)*. 1( 1), 19-26 Retrieved from [www.impactjournals.us/download.php?](http://www.impactjournals.us/download.php?)
- Chebbi, H., Brian-Cruz, L.B. and Zawislak, P.A.(2007) The association of technical and service aspects in a service innovation strategy: proposal of a theoretical framework. *16<sup>th</sup> International conference on management of technology, IAMOT* Retrieved from <http://centremagellan.uni-lyon3.fr/articles/29-190-191-220.pdf>
- Chege, E.S.(2013) *Corporate Social Responsibility and Competitive Advantage of commercial banks in Kenya*. UON. <http://erpository.uonbi.ac.ke:8080>
- Christensen, C., M. and Bower J.L(1996) Customer power, strategic investment and the failure of the leading firms. *Strategic management Journal*, 17(3), 197-218
- Chuang, L-M.(2005) An empirical study of the construction of measuring model for organizational innovation in Taiwanese high-tech enterprises. *The journal of American Academy of Business* 9 (2), 299-304

- Chun, W. and Zeng, W. (2006) *The impact of internet on service quality in the banking sector*. Master thesis. Lelea: Lelea University of Tecnology
- Church, C.M.(2004) *The conceptual and operational definitions of quality of life: A systematic review of the literature*. Texas A and M University. Retrieved from <http://oaktrust.library.tamu.edu/bitstream/handle1969.1/2771/etd-tamu-200B-HEED-church.pdf>?
- Clark, K.B., Hayes, R.T and Wheelwright,S.C.(1998) *Dynamic manufacturing*. New York,NY.The freee press
- Clatworthy, S. (2010) *Service innovations through touch points: the AT-ONE touch-point cards. Second Nordic conference on service design and service innovation*.Retrieved from <http://www.sewdes.org/pdf/clatworthy.pdf>
- Cole, E. M.S (2008) *Strategies for competitive advantage*. Wyoming: University of Wyoming. Retrieved from <http://ag.arizona.edu/arec/wmec/nichemarkets/05competitive advantage.pdf>
- Cook,D.P., Goh, C.H and Chung, C.H.(1999) Service typologies, a state of the art survey. *Production and operations management* 8(3), 318-338
- Cooper, J.R1988) A multidimensional approach to the adoption of innovation. *Management Decision*, 36(8), 493-502
- Cosby, P.B.(1995) *Philip Cosby's reflections on quality:295 inspirations from the world's foremost quality guru*. New York: Mac Graw Hill
- Cox,A., Richard C.and Tamkin, P. (2012)*working organization and innovation. European foundation for improvement of working conditions*.Retrieved from [www.eurofound.uropa.eu/pubdocs/2012/72/en/1/Ef1272EN.pdf](http://www.eurofound.uropa.eu/pubdocs/2012/72/en/1/Ef1272EN.pdf)
- Crawford, F. and Mathews, R.(2001) *The myth of excellence: Why great companies never try to be the best at everything*. New York :Crown Business.

- Cresswell, J.W. (2006) *Choosing a mixed method design*.04-cresswell(Designing) 45025.qxd  
5/6/2006 8.35pm pp62.Retrieved from <http://rds.epi-ucsf.org>
- Cronbach, L.J.(1951) Coefficient alpha and the internal structure of testes, *psychometrika* 16,  
297-334
- Damanpour, F.(1996) Organizational complexity and innovation: Developing and testing  
multiple contingency models. *Management science* 42(5), 693-710
- Damanpour, F. and Evan, W.M. (1984) Organizational innovation and performance. The  
problem of organizational lag. *Administrative Science Quarterly* 29(3), 329-409
- Damanpour, F. and Gopalakrishnan, S.(2001) The dynamics of product and process  
innovations in organizations. *Journal of Management studies*, 38(1), 45-65
- Davenport, T.(2005) The Coming Commoditization of Processes. *HBR. June, 2005 Trend  
Letter* 24( 11).
- Dawson, R. and Horenkamp M.(2007) *Service delivery innovation: creating client value and  
enhanced profitability*. Retrieved from <http://www.rossdawsonbog.com>
- Day, G.S. and Wensley, R.(1988) Assessing advantage: A framework for diagnosing  
competitive superiority. *Journal of Marketing* 52(2) , 1-20
- Dey, I.(1993)*Qualitative data nalysis. User friendly guide for social sciences*. London and  
New York :Taylor &Francis group. Retrieved from <http://www.drapuig.info>
- Diab, S.M.(2013) *Using competitive dimensions to achieve competitive advantage( A study on  
Jordan private hospitals)*. Retrieved from <http://hrmars.com/hrmars-papers/Using-the-competitive-dimensions-to-achieve-competitive-advantage.pdf>
- Dilworth, J.B.(1995) *Operations management: Design, planning and control for  
manufacturing and services*. New York: The free press
- Drapper, N.,R. and Smith, H.(1981) *Applied regression analysis*, 2<sup>nd</sup> ed. New York: John  
Wiley

- Drost, E. A. (2011) Validity and Reliability in social science research. *Education research and perspectives* 38 ( 1). Los Angeles: California State University. Retrieved from <http://erpjournal.net/wp-content/uploads/2012/07/ERPv38-1>
- Dreger, I.(2009) *A Schumpeterian perspective on service innovation. Danish Research Unit for Industrial Dynamic .Druid working paper 02-09.*Retrieved from <http://www3.druid.dk/wp/20020009.pdf>
- D'Souza,D.E and Williams,F.P. (2000) Towards a taxonomy of manufacturing flexibility dimensions. *Journal of Operations Management.* 18(5), 577-593
- Efi, V. (2009) *Marketing Innovation Measurement.* MBIT, 2009-10. Retrieved from <http://www.aitdSPACE.gr/xmlui/bitstream/handle/123456789/279/vlachaki-thesis.pdf>
- Elahi , M. and Dehdashti, M. (2011) Classification of researchers and evaluating a consolidating typology of management studies. *Annual conference on innovation in business and management.* Uk:London..Retrieved from <http://www.cibmp.org/papers/papers622.pdf>
- Epetimehi, F., M.(2011) *Achieving competitive advantage in Insurance Industry. The impact of marketing innovation and creativity.* Retrieved from <http://jetems.scholarlinksresearch.org/articles/Achieving%20competitive%20Advantage%20in%20insurance%20Industry.pdf>
- Equity bank (2013) *Self service.* Retrieved from <http://www.ke.equitybankgroup.com/index.php/self-service>
- Evans, J.R. (1993) *Applied production and operations management.* USA : West Publishing company
- Eysenck, W.M.(2004) *Research methods: Data analysis.* Psychology Press Ltd
- Farquhar, J. and Panther, T.(2007) The more the merrier? An exploratory study into managing channels in UK financial services. *International Review of Retail, Distribution and Consumer Research* 17(1), 43-62

- Ferrel, M. and Lacker, G.(1981) *Business Ethics: Ethical decision making and cases*(4<sup>th</sup> Ed.),Boston: Boston Houghton Mifflin Company
- Field, K.(2002) *Management research*, 2<sup>nd</sup> Ed. London: Sage
- Filistrucchi, L., Boone, J., Brouwer, E. and Wiel(2011) *Relaxing competition through product innovation*. Retrieved from <http://ftp.zew.de/pub/zew/docs/veranstaltungen/innovationpatenting2011/ppapers/filistrucchi.pdf>
- Fornell, G. and Lacker, R.N(1981) *Introduction to linear regression analysis*(3<sup>rd</sup> Ed.). New York: John Wiley and sons
- Forster,F.(2006) *The idea behind business process improvement pattern framework*. *BP Trends*. Retrieved from <http://www.bptrends.com>
- Fowler, S.W, King, A.W., Marsh S.J and Victor, B.(2000) Beyond products: new strategies imperatives for developing competencies in dynamic environments. *Journal of Engineering and Technology Management*, 17, 357-377
- Flynn, B.B., Sakakibara, S., Schroeder, R.G, Bates, K.A and Flyinn E.J(1990) Empirical research methods in operations management.*Journal of operations management*, 9(2), 250-284
- Frame, W.S and White, L.J. (2004) “Empirical studies of Financial Innovations: Lots of talk. Little action? “ *Journal of Economic Literature* 42(1), 116-144.Accessed on 25/1/2014 from [www.ipsos-mori.com](http://www.ipsos-mori.com) framework.
- Frei, F.X., Harcker, P.T. and Hunter ,L.W.(1998) *Innovation in retail banking Wharton financial institution center*. Retrieved from <http://fic.wharton.upenn.edu/fic/papers/97/9748.pdf>
- Frei, F.X., Harcker, P.T and Hunter, L.W(2013) Financial Institutions center. *Journal of Economic Literature*, 97, 48-B

- Furseth, P.I and Cuthbertson, R.(2013) The service innovation triangle: A tool for exploring value creation through service innovations, *Int, J. Technology marketing*.8( 2), 159-176.<http://www.bi.edu/pagefiles/214077>
- Fynes, B. and Lally, M.A. (2008) *Innovations in services: From service concept to service experience*. University College Dublin, Ireland.<http://faculty.babson.edu/jayrao/published-articles/service-concept.JOMA-articles.pdf>
- Gadrey, J., Gallouj F. and Weinstein, O.(1995) New models of innovation: How services benefit industry. *International Journal of Service Industry Management*.6 (.3), 4-16
- Gall, D.M., Borg, R. W. and Gall, P.J.(1996) *Educational Research*(6<sup>th</sup> ed). New York: Longman
- Gandotra, N.K.( 2010) Innovation culture for sustainable competitive advantage. *APJRB* volume 1, (2).Retrieved from <http://www.skirec.com/images/download/apjrbm/2.3%20Innovation%20culture%20competitive%20advantage.pdf>
- Gemes, a., Fletcher, C. and Aggarwal, R.(2009) *Keep it simple. How banks can do less and deliver more.* , USA: booz and Co
- Gemes, A., Konik, F. and Moss, C.(2007) *Striving for growth: Best practices in retail banking sales and service channels*. London.:Booz/Allen/Hamilton, Retrieved from <http://www.boozallen.com/media/file/striving-for-growth.pdf>
- Gershon H. J. (2003) Strategic positioning: Where does your organization stand?' *Journal of Healthcare Management*,48(1), 12-14 Retrieved from <http://reach-newheight.com/wp-content/uploads/2012/01/jhm48-1stm.pdf>
- Giraldo, R.(2010) *Understanding the role of technology in service innovation: A theoretical overview*. Sweden : Stockholm. Retrieved from <http://www.diva-portal.org/smash/get/divas2>

- Goh, S,LA.(2002) Towards innovation driven economy through industrial policy-making: An evolutionary analysis of Singapore. *The innovation Journal: The public sector innovation* 10(3), article34.Retrieved from <http://www.innovation.cc/volume-issues/goh-innov-driven-econo2a.pdf>
- Grant, R. M.(2001) The resource based theory of competitive advantage. *California Management Review Spring 1991*. Netherlands: Zoetermer Retrieved from <http://www.skynet.ie/~Karen/articles.pdf>. Research.
- Glefen, Traub and Bondrean(2000) Empirical research methods in operations management .*Journal of operations management* 9(2), 250-84
- Gustafsson, A. and Johnson, M.D.(2003) *Competing in a service economy: How to create a competitive advantage through service development and innovation*. San Francisco: Jossey-Bass.
- Gunday , G., Ulusy, G., Kilic, K. and Alpkın, L.(2009) *Effects of innovation types on firm performance* .Retrieved from <http://www.research.sabanciunio.edu/13660/1/Gunday-et-at-effects-of-innovation-on-firm-performance.pdf>
- Hana, U. (2013) Competitive advantage through innovation and knowledge. *Journal of competitiveness*. 5 ( 1), 82-96. Retrieved from <http://www.ejournals.cz/files/127.pdf>
- Harris Interactive Inc (2006) *Research uncovers different views on innovation*. Dowcorningcorporation Retrieved from <http://www.dowcorning.com/content/about/aboutmedia/research-Newsletter.pdf>
- Hassan, M.U.I, Shaukat, s., Nawaz, M.S. and Naz S.(2013) Effects of innovation types on firm performance:an empirical study on Pakistan’s manufacturing sector.*Pak J Commer Sci*.vol,7(2), 243-262
- Hayes, R.H. and Wheelright, S.C (1984) *Restoring our competitive edge: Competing through manufacturing*. New York, NY: John Wiley sons.

- Heiko, G., Anders, G. and Lars, G.(2011) Competitive advantage through service differentiation by manufacturing companies. *Journal of business research* 12 (64) 1270-1280.Retreved from <http://dx.doi.org/10.1016/j.jbusres.2011.01.015>
- Hill,T.(1993) *The essence of operations management*. Prentice Hall, UK.
- Hykras, S.L.(2003) *SPSS for Psychologists*. London: McMillan Press Ltd,
- Kernderson, R., M. and Clark, K.B(1990) Architectural Innovation: The reconfiguration of existing product technologies and the failure established firms. *Administrative Science Quarterly* 35, 109-30
- Hertog , P.D.(2000) Knowledge intensive business services as co-producers of innovation.. *International Journal of innovation management*. 4(4 ), 491-528. Imperial college press. Retrieved from <http://www.sce.carleton.ca>
- Hoffman, K.D. and Bateson, J.E(2002) *Essentials of service marketing: concepts, strategies and cases*.2<sup>nd</sup> Edition, Harcourt: Harcourt College Publishers
- Hoffman, P. (2000) An examination of the sustainable competitive advantage concept: Past, present and future. *Academy of Marketing Science Review* 2000 ( 4). Retrieved from [http://www.armsreview.org/articles/hoffman\\_04-2000.pdf](http://www.armsreview.org/articles/hoffman_04-2000.pdf)
- Hong, P.C., Callaway, S.K .and Kunnathur, A..(2011) Innovation and competitive advantage: Model and Implementation for Global Logistics. *International Business Research* 4(3) Retrieved from <http://www.ccsenet.org/ibr>
- Holweg, M.(2005) An investigation into supplier responsiveness. *International Journal of Logistics Management* 16(1) , 96-119
- Hum, S. and Sim, H.(1994) Time based competition: *Literature review and implications for modeling*.( IJOPM ), 16,1
- Hyndman, R. J. (2008) *Business Research Methods*. Monarch University (Clayton Campus).VIC 3800.Retrieved from [www.robhyndman.info](http://www.robhyndman.info)
- Ivankova, N.V.(2002) A sample mixed method dissertation proposal. <http://www.sagepub.com>
- Investorwords.com (2013) *Commercial Bank*. Retrieved from <http://www.investorwords.com/955/commercialbank>. Html

- Jabareen, Y.(2009) Building a conceptual framework: Philosophy, definitions and procedure. article. *International Journal of qualitative methods*,8(4). Retrieved from <http://ejournals.library.ualberta.ca/index.php/IJQM/article/viewfile/6118/5892>
- Jaflah, H.A (2008) *Knowledge management strategic alignment in banking sector at the Gulf Cooperation Council(GCC) countries on organization performance*. Murdoch University
- Jefre (2011) *Strategic Management: The theory and practice of strategy in(Business) organizations*.DTU management Engineering. Denmark: Technical University
- Jeston, J. and Neilis, J. (2006) Process Innovation. *BPT Trends*. Retrieved from <http://www.bptrends.com/publicationsfiles/07-06-col-Innovatio-jeston-nellis.pdf>
- Johnson, G. (1992) Managing strategic change-strategy, culture and action. *Long range planning.* ' 25(1), 28-36
- Johnstone, R.(1995) Determinants of service quality: Satisfiers and dissatisfies. *International Journal of service industry management.* 6 (5), 53-71
- Joseph, M., McClure, C. and Joseph, B.(1999) Service quality in banking sector: The impact of technology on service delivery. *International Journal of Bank Marketing* 17(4), 182-1991
- Jun, M. and Chai, S.(2001) The key determinants of internet banking service quality : a content analysis. *International Journal of marketing* 19(7), 276-291
- Juran, J.M(2004) *Architect of quality*.New York: Mc Graw Hill
- Kaasinen E., Ainasoja M., Vulli E., Paavola H., Hautala R., Lahtonen P. and Raunanen E.(2010) User involvements in service innovation.*VTT RESEARCH NOTES* 2552. Julkaisija-Ultigivare.Finland. Retrieved from <http://www.vtt.fi/inf/pdf/tiedotteet/2010/T2552.pdf>

- Kandampully, J. and Duddy, R. (1999) Competitive advantage through anticipation, innovation and relationships. *Management Decision* 37(1), 51-56. Retrieved from <http://ecsocman.hse.ru/data/477/774/1219/competitiveadv.pdf>.(accessed 1/4/2013)
- Kandampully, J (2002) Innovation as a core competence of an organization: the role of technology, knowledge and networks. *Journal of innovation management* 15(1), 18-26  
Retrieved from <http://www.ausicom.com/fileslibPDF/Researchlibrary/service%20Innovation.pdf>
- Kanchan, A. (2012) *Trends in retail banking channels: Improving client service and operational costs*.Capgemini. Retrieved from <http://www.thefinanser.co.uk/files/trends-in-retail-banking-channels-immproving-client-service-and-operating-costs.pdf>
- Kao, J.(2001) *Management Innovation*. USA: Harvard University
- Kathuni, L.K and Mugenda W. Galo(2012) Direct sales strategy applied by commercial banks in Kenya.kenya. Retrieved from <http://www.ijbhtnet.com/journals/vol-2-No-7-December 2012/16.pdf>
- Kavitha, P., Karthkeyan, P. and Devi, N.(2013) An investigation of competitive priorities and competitive advantages among small scale industries with reference to Coimbatore city.*IOSR Journal of Business and management(IOSR-JBM)* 7( 3), 39-44.Retrieved from [www.iosrjournals.org](http://www.iosrjournals.org)
- Kemp, R.G.M., Falkeria, M. de Jong, J. P. T. and Wubben E, F,M(2003) *Innovation and firm performance*. Research Report. H200207.<http://www.ondernernemerschap.nl/pdf-ez/H200207>
- Kim, J.O. and Muller,C.W(1978) *Introduction to factor analysis*. Sage, Newbury Park, CA.
- Kim,J.S. and Annold, P.(1996) Operationalizing manufacturing strategy. *International Journal of operations and production management*, 16(12), 45-73
- Kindstrom, D., Kowalkowski, C. and Sandberg, E. (2012/2013) Enabling service innovation- A dynamic capability approach. *Journal of business research*. 66(8), 1063-1073

Retrieved from <http://hanken.halvi.helsinki.fi/portal/files/1559894/JBR-kindstrom-kowalkowski>

Kiran, K.S.R.(2009) *Evolution of mobile banking*. Infosys technologies Ltd

Knoll,K. and Jarvenpaa, S.L.(1994) *Information technology alignment or 'Fit' in highly turbulent environments:the concept of flexibility*. Paper presented at the computer personnel research conferencxe on re-inventing. USA: Alexandria, Virginia

Knorr, A. and 'Zigova, S.(2004) Competitive advantage through innovative pricing strategies. The Case of Airline Industry. *Institute for World Economics and International Management*.Retrieved from <http://www.iwim.unibemen.de/publikationen/pdfb039.pdf>

Komaladewi, R.,Nanere, M., Suryan, Y. and Rufaidah, P.(2012) Service innovation in banking industry: A literature survey. *World Journal of social sciences* 2(7), 1-8

Kokemuller, N.(2014) *Differences between marketing a product and a service*. eHow.1999-2014 Demand media.Inc. Retrieved from <http://www.ehow.com/info-7735977-differences-between-marketing-product-service.html>

Kotler, P.(2000) *Marketing management*(10<sup>th</sup> edition), New York: Prentice Hall

Kotler, P. and Amstrong, G. (2001) *Principles of Marketing* (9<sup>th</sup> ed.) Upper Saddle River :Prentice Hall International Inc

Koufteros, X.A. (1995) *Time based manufacturing: Developing a nomological network of constructs and instrument development* , Doctoral Dissertation, OH:University of Toledo

Kowalkowaski, C. (2012) *Service innovation and service infusion: A business model approach*.<http://productledardagen.se/wp/content/uploads/2012/203/PLD-2012>

Kungu, G., Desta,I. and Ngui, T.(2014) An assessment of the effectiveness of competitive strategies by commercial banks: A case of Equity bank. *International Journal of Education and Research* 2(12 )

- Laukkannen, T., Sinkkonen, S., Kivijarvi, M. and Laukkannen, R.(2007) Innovation resistance among mature consumers. *Journal of consumer marketing*, 24(7), 419-427. Emerald Group Publishing Limited
- Lees, G. (2008) *Strategic Position*. United Kingdom: Chartered Institute of Management Accountants(CIMA)
- <http://www.cimaglobal.com/Documents/Imported/Documents/cid-tg-strategic-position-marro.pdf>
- Lei, P. and Wu, Q. (2002) *Introduction to structural equation modeling: Issues and practical considerations*. *Education measurements issues and practice*. USA: Pennsylvania State University
- Letangule, S.L. and Letting, N.K. (2012) Effects of innovation strategies on performance of firms in the Telecommunication sector in Kenya. *International Journal of management & business studies* 2( 3). Retrieved from <http://www.ijmbs.com/23/solomon2.pdf>
- Lewis-Beck, M.S. Bryman, A. and Liao, T.C(2004) Conceptualization, operationalization and measurement. *Retrived from :http://dx.doi.org/10.4135/9781412950589*. *The Sage encyclopedia of social science research methods*.
- Li, S.,Ragu-Nathan,T.S and Kao, S.(2006) The impact of supply chain management practices on competitive advantage and organizational performance .*Omega*, 34(2), 107-124.
- Lindgardt Z., Reeves, M., Stalk, G. and Deimler, M.S. (2009) *Business model innovation. When the game get tough, change the game*. Boston Consulting Group. Retrieved from <http://www.dti.gov.uk/files/file39965.pdf>
- Lovelock, C., H., Vandermerwe, S., Lewis, B. and Fernie, S.(2011) *Service marketing*. United Kingdom :Edinburg Business School, Heriot Watt University Retrieved from <http://www.Ebsghobal.net/documents/course-tasters/English/pdf/h17se-bk-taster.pdf>
- Louden,B.(2004) *Optimizing retail banking channels: building business on solid foundation*. USA :IBM Services, Somers. Retrieved from <http://www.935.ibm.com/services/us/ima/pdf/ge510-625-banking-2015.pdf>
- Lynch, L.M.(2007) *The adoption and diffusion of organizational innovation: Evidence for the U.S Economy*. IZA DP250.2819 Discussion Paper No2819 Retrieved from [http://ftp.zew.de/pub/zew-docs/dp/dp\\_07052.pdf](http://ftp.zew.de/pub/zew-docs/dp/dp_07052.pdf)

- Maas P., Graf A. and Bieck C. (2008) *Trust, Transparency and Technology: Customers' perspectives of Insurance and Innovation*. USA. :IBM Corporation. Retrieved from <http://www-935.Ibm.com/services/usgbs/bus/pdf/gbe03008-usen-02-Insurance3.pdf>
- Macaulay, L., Miles, I., Wilby, J., Tan, Y.L., Theodoulidis, B. and Zhao, L.(2010) *Case studies in service innovation*. Centre for service research.USA:Manchester business school. Retrieved from [http://www.ssmenetuk.org/dod service innovation-casebook-pre. Conference.pdf](http://www.ssmenetuk.org/dod%20service%20innovation-casebook-pre.%20Conference.pdf)
- Mallat, N., Dahlberg, T., Saarinen, T. and Tuunainen, V.K.(2001) *Efficient service production and consumer choice of delivery channels*. 14<sup>th</sup> Bled Electronic Commerce Conference. Bled, Slovenia
- Mansharamani, V. (2005) *Towards a theory of service innovation: An inclusive case study approach to evaluating the uniqueness of services*. Vikram Mansharamani. Massachusetts Institute of Technology. Retrived from [http://dspace.mit.edu/bitsteam/handle/1721.1/28828/60351922.pdf](http://dspace.mit.edu/bitstream/handle/1721.1/28828/60351922.pdf)
- Mantymaa, J.(2003) *Gaining competitive advantage through quality of services in financial industry*.Oulu: University of Oulu. Retrieved from <http://herkules oulu.fi/thesis/nbnfioulu-20130606522.pdf>
- Martin, R. Cohen, J.W. and Champion, D.L.(2013) Conceptualization, Operationalization, Construct validity and truth in advertising in Criminology research. *Journal of Theoretical and philosophical criminology*. January 5(1), 1-38
- Mason, D. R. and Lind. D. A. (1996) *Statistical techniques in business and economics*(9<sup>th</sup> ed) Richard D. USA :Irwin.
- Mavondo, F.T.; Chimhanzi, J. and Stewarts, J.(2003) Learning orientation and market orientation: Relationships with innovation, human resource practices and performance. *European Journal of Marketing*. 39(1), 1235-1263
- McGahan, A.A and Porter, M.E(1997) How much does industry matter, really? *Strategic management Journal* (18), 15-30
- McLeod, S.A.(2008) *Independent, Dependent and extraneous variables*. [www. Simplypsychology.org/variables.html](http://www.Simplypsychology.org/variables.html)
- Mentzer, J.T. and Zacharia, Z.G.(2000) The nature of inter-firm partnering in supply chain management.*Journal of Retail* (76), 549-568

- Miles, I. (1993) Services in the new industrial economy. *Future* 653-672.
- Miles, I.(2008) The Patterns of Innovation in service industries. *IBM System Journal* 47(11), 55-128
- Mile, M.B. and Hubman, A.M. (1994) *Qualitative data analysis: An expanded source book* (2<sup>nd</sup> ed. Newbury Park: CA, sage
- Mothe, C. (2012) *The impact of non-technological innovation on technological innovation*. JEL classification: L25, I80, O30,O31,O32.Retrieved from <http://caroline-mothe.org/site%20web%20de>
- Muiruri, J.K. and Ngari, J.M. (2014) Effects of financial innovations on the performance of commercial banks in Kenya. *International Journal of Humanities and Social Science*. 4 (7) Retrieved from <http://www.ijhssnet.com/journals/vol-4-NO-7-may2014/7.pdf>
- Munizu, M.(2013) The impact of total quality management practices towards competitive advantage and organization performance. A case of fishery industry in South Sulawesi Province of Indonesia. *Pak J. Commer Soc Sci. Pakistan Journal of commerce and social sciences*7(1), 184-197
- Munjuri, M., G.(2010) A survey of the criteria used by commercial banks in Kenya to determine employees to retrench. Kenya. Retrieved from <http://uonbi.ac.ke/mercy-Gacheri/files/vol-2-no-2.pdf>.
- Mutai, K. B.(2000) *How to write quality research proposal*. New York :Thelley publication
- Onwuegbuzie, A.J and Leed, N.A.(2006)Linking research questions to mixed method data analysis procedures. *The qualitative report* v2 (3)3 474-498.Retrieved from <http://www.nova.edu/ssss/QRPR11-3/Onwuegbuzie>
- Naceur,S.B. and Kandil, M.(2002) *The impact of capital requirement on bank's cost of intermediation and performance*. A case of Egypt. Retrieved from <http://www.lefa-inec.com/so13/papers.cmf?abstract-id=904950>
- National Research Council(1994) *Information technology in the service society*. Washington DC: National Academy Press
- National Research Council(1994) IT problem in the banking industry. *Journal of Economic Literature* (1), 81

- Nauman, E. (2007) '*Creating customer value: The linkage between customer value, customer satisfaction, customer loyalty and profitability.*' A White paper. Retrieved from <http://www.endoc.net/pdf.pdf>
- Netemeyer, Bearden and Sharma(2003) Cautionary note on reporting eta-squared values from multifactor anova designs. *Educational and psychological measurement*, 64(6), 916-924
- Ngugi, K. and Karina, B. (2013) *Effect of innovation strategy on performance of commercial banks in Kenya*, *International Journal of Social science and Entrepreneurship* 1 ( 3), 158-170. Retrieved from [http://www.ijssse.org/articles/ijsssev\\_1-i3\\_158\\_170.pdf](http://www.ijssse.org/articles/ijsssev_1-i3_158_170.pdf)
- Nunnally, J. (1978). *Psychometric Theory*. New York: McGraw- Hill.
- Nunnally, J.C. and Berneisten I, H.(1994) *Psychometric Theory* (3<sup>rd</sup> Ed). New York : McGraw-Hill,
- OECD (1998) *Human capital development: An international comparison-OECD-organization for Economic Co-operation and Development*. A centre for Educational Research and Innovation. Paris France: OECD
- OECD, Oslo Manual (2005) *Proposed guidelines for collecting and interpreting technological innovation data*. Paris: OECD Publishing,
- Okey, A.(2007) Innovation types and innovation management practices in service companies. *International Journal of Operations and Productions management* 27 (6)
- Olsen, W.(2004) *Triangulation in social research: Qualitative and quantitative methods can really be mixed.* ed. M. Holborn, Ormskirk: Causeway Press. Retrieved from <http://www.ccsr.ac.uk>
- Ongore, V., C. and Kusa G.B(2013) Determinants of financial performance of commercial banks in Kenya. *International Journal of Economics and financial issues* 3, ( 1), 237-252. Retrieved from [www.ejournals.com](http://www.ejournals.com)

- Orodho, J. (2004) *Elements of Education and Social Science Research Methods*. Nairobi: Masola Publishers.
- Owens, L. K. (2002) *Introduction to survey research design*. SRL Fall 2002 seminar series. Retrieved from <http://www.srl.uic.edu>
- Papulova, E. and Papulova, Z.(2006) *Competitive strategy and competitive advantages of small and medium sized manufacturing Enterprises in Slovakia*. Slovakia: Slovakia Comenius University. Retrieved from <http://www.g-casa.com/download/papulova-competitive-strategy.pdf>
- Parasuraman, A., Zaithmal, V.A and Berry, L.L.(1985) A conceptual model of service quality and its implications for future research. *Journal of Marketing*, 49
- Pavier, X. and O'keeffe(2012) *Service innovation in direct banking: leveraging the customer experience*. Retrieved from <http://www.xavierpavie.com/pages/docs/cases/2012-07-xavier-pavie-innovation-in-direct-banking:-innovation-et-society-july-2012.pdf>
- Pearson, M.(2010) Innovation in Retail banking. *September 2010, 2<sup>nd</sup> annual edition*.Annales: EFMA and INFOSYS Retrieved from [bazekon.icm.edu.pl](http://bazekon.icm.edu.pl)
- Peppard, J.(2000) Customer Relationship management(CRM) in the financial services. *European Management Journal*, 18(3), 312-327.
- Peters, T. and Waterman, R.(2004) *In search of excellence*. London: Profile Books Ltd
- Philpott, K. and Doley, L.(2009) Channel innovation in the retail banking sector: Best practice initiatives, Customer-orientation and emerging strategic Foci. *International Journal of Arts and Sciences*, 3(2), 66-82 CD-ROM, Retrieved from [International Journal.org](http://InternationalJournal.org)
- Pitelis, C.N.(2009) *Edith Penrose's The Theory of Growth of the Firm Fifty Years Later*. UK : University of Cambridge. Retrieved from <http://ssrn.com/abstract=1477885>

- Pfeffer , J.(2005) 'Producing sustainable competitive advantage through effective management of people.' *Academy of management executives*. 19(4) Retrieved from [http://kimboal.battu.edu/selected %20writings/pfeffer%202005](http://kimboal.battu.edu/selected%20writings/pfeffer%202005)
- Porter, M.E. (1985) *Competitive advantage*. Creating and sustaining competitive advantage. New York : Free Press. Retrieved from <http://faculty.fugua.duke.edu>.
- Porter, M. (2012) *Strategic positioning in a challenging world: creating value*. Porter prize India Boston, MA/New-Delhi, India. Retrieved from <http://www.isc.hbs.edu/pdf/2012-0928-porter-prize-india.pdf>
- Prahalad, C.K. and Hamel, G.(1990) The core competence of the corporation. *Havard Business Review*.May-June 1990.Retrieved from <http://faculty.fugua.duke.edu>
- Prahalad, C. and Ramaswamy, V.(2004) *The future of a competition:Co-creating unique value with customers*. Boston, MA.: Havard Business School Press
- Ramstad , E. (2009) Expanding innovation systems and policy-an organization perspective. *Policy studies*, 30(5), 533-553.
- Ranjit,B.(2004) Knowledge management metrics. *Industrial management data systems* 104(6), 457-68
- Reed,R. and Defillipi, R. J(1990) Causal ambiguity, barriers to imitation and sustainable competitive advantage. *The Academy of Management Review*,15(1), 88-102
- Reichstein, T. and Salter, A. (2006) Investigating the sources of Process innovation among UK manufacturing firms. *Industrial and corporate change*, 15(4), 653-682 Retrieved from [http://www.SOC.aau.dk/fileadmin/user-user-upload/kbm/vof/kurser/2011/kvantitative-metoden/slides/TR-Investigating -the-sources.pdf](http://www.SOC.aau.dk/fileadmin/user-user-upload/kbm/vof/kurser/2011/kvantitative-metoden/slides/TR-Investigating-the-sources.pdf)
- Rekettye, G.(2009) *The connection between perceived service innovation, service value, emotional intelligence, customer commitment and loyalty in B2B:The case of Orian*, PHD programme , Hungary : University of Press

- Riddle, D.T.(2008) *Service innovation*. Service Growth Consultants. Inc. Retrieved from <http://www.servicegrowth.org/documents/service%20Innovation%20Q%26As.org>
- Reiney, D.L. (2005) *Product innovation: leading change through integrated product development*. Cambridge University Press. Retrieved from <http://bilder.buecher.de/zusatz/14/14726/14726794-rorw=1.pdf>
- Robinson, M. Sayer, D. and Pallister, I.(2007) *Banking on Innovation? The challenge for retail banks*.KPMG
- Rumelt, R.P.(1991) How much does industry matter? *Strategic management Journal* , (12),167-182.
- Sachdeva, M. (2011) *Innovation in services and its measurement at firm level. A literature review*. Academia.com. Retrieved from <http://www.academia.edu/1025338/innovation-in-services-and-its-measurement-at-firm-level-A-literature-review>
- Samson, D. (2010) *Innovation for business success: Achieving a systematic innovation capability*. Retrieved from <http://www.innovation.gov.au/industry/industryinnovationcouncils/Documents/innovationsforbusinessTechstrategy.pdf>
- Santamaria, I., Nieto M, J. and Miles I. (2012) *Service Innovations in manufacturing firms: Evidence from Spain*. Retrieved from <http://e.archivo.uc3m.es/.../service-santamaria-TECHNOVATION-2012.pdf>
- Saraph, J.V, Benson, P.G, and Schroeder, R.G. (1989) An instrument for measuring the critical factors of quality management. *Decision sciences* 20(4), 810-812
- Sawhney,M. Wolcott, R.,C. and Arroniz, I.(2006) The 12 different ways for a company to innovate. *MIT Sloan Management Review*. Spring, .47(3)
- Sebastiani, R. and Paiola, M.(2010) Rethinking service innovation: four patterns to evolution. *International Journal of Quality and Service Sciences*, 2 (1), 79-94

- Schumpeter, J.A.(1934) *The theory of economic development: An enquiry into profits, capital, credit, interest and the business cycle*. Cambridge Mass: Havard University Press.
- Shaker, A. (2007) ‘An innovative model of service development: A process guide for service managers.’ *The innovation Journal: The public sector innovation Journal* 12(1 / 4). Retrieved from [www.innovation.cc/volumes-issues/shaker-nsd02-2007 rev3.pdf](http://www.innovation.cc/volumes-issues/shaker-nsd02-2007_rev3.pdf)
- Sharma, S. Durand, R.M. and Gur-arie, O.(1991) *Identification and analysis of moderator variables* .Retrieved from <http://spa.host.edu.CA/2008/uploadfile/2009-10/20091009101336190.pdf>
- Shqipe, G., Gadaf, R. and Veland, R.(2013) *Innovation strategies and competitive advantages* .Retrieved from <http://www.mediawix.com/ugd/a836c-78d>
- Smith, J.D.(2001) *Competition-through-innovation: The third industrial stage*. MPPRA paper no.9531.Retrieved from <http://mpra-uni-muechen.de/9531/1/mpra-paper-9531.pdf>
- Smith, LL. (2002) *A Tutorial of Principal Component Analysis*. Retrieved from <http://31.222.67.35/376/4/5/9/307370239>
- SoftKenya(2013) *Banks in Kenya*. Retrieved from <http://softkenya.com/bank/>
- Spong, K. (2000) *Banking regulation. Its purposes, implementation and effects*.5<sup>th</sup> edition. Retrieved from <http://www.kc.frb.org/publicat/bankingregulation/regbooks2000.pdf>
- Stakes,R.(1998) *Case studies in strategies of quantitative inquiry*. California:Sage
- Staw, B., M. and Epstein, L.,D.(2000) What bandwagons brings: effects of popular management techniques on corporate performance, reputation and CEO pay. *Administrative Science Quarterly* (26), 581-524.
- Stewart, L.A.(2010) *The impact of regulation on innovation in the United States: A cross-industry literature review*. Information &Technology Foundation. <http://www.iom.edu/~media/files/Reports%20Files/2011/Health-IT/Commissioned-Paper-impact-of-Regulation-on-Innovation.pdf>

- Stakes, R.(1998) *Case studies in strategies of qualitative inquiry*. California : Sage
- Stavkevicius, I. and Jucevicius, G.(2010) Innovation strategy: an integrated theoretical framework. *ISSN1392-0758SOCIALINIAI MOKSLAI.3(69)* Retrieved from [.http://info.smf.ktu.it/Edukin/Zumalas/Archive/pdf](http://info.smf.ktu.it/Edukin/Zumalas/Archive/pdf)
- Stonebrake, P.W and Lovelock, G.K(1994) *Operations strategy: focusing on competitive excellence*. Boston, MA.: Allyn and Bacon,
- Sullivan,W., Agarwal, A. and Choudhary, S.(2013) *Word retail banking report*.Capegimini and Efma.
- Sund, K. J. (2008) *Innovation in the Postal Sector: Strategies, barriers and Enablers*.SAP Retrieved from <http://postal-management.epfl.ch/files/content/sites/postaleadership/files/shared/innovationpostalsectorSUND.pdf>
- Swallow, D. (2007) *Sustaining competitive advantage through core competence strategies*. Retrieved from <http://www.ctp.uk.com/uploaded/documents/Article%20sustaining%20competitive%20advantage%20through%20core%20competencies.pdf>
- Tan, C.L and Narsudin, A.M.(2010) Human resource management practices and organizational innovation: An empirical study in Malaysia. *Journal of Applied Business Research. 2(4), 105-115*
- Teece, D.J. (1986) *Profiting from Technological Innovation: Implications for integration, collaboration, licensing and public policy*. School of Business Administration, CA: University of California, Berkeley
- Teece, D. J. (1994) Firm organization, Industrial structure and Technological Innovation. *Journal of Economic Behavior and Organisation 31, 193-244* Retrieved from <http://demo.lib/course/seminars/teece.pdf>
- Tether, B. (2004) *Do services innovate (differently)?* CRID Discussion Paper No. 66 November 2004. Retrieved from [www.Eric.ac.uk/pdf/wp433.pdf](http://www.Eric.ac.uk/pdf/wp433.pdf)

- Tether, B. and Bascovusoglu-moreau E. (2012) *A different path to growth? Service innovation and performance amongst Uk Manufacturers* .Retrieved from <http://www.cbr.wcam.ac.uk/cric/pdf>
- Thatte, A. A. (2007) *Competitive advantage of a firm through supply chain responsiveness and supply chain management practices*. Toledo: University of Toledo. Retrieved from <http://202.154.59.182/ejournal/files/thatte->
- Thenasegaran, G. (2009) *Reliability and Validity issues in research*. Malaysia: University of Putra Malaysia. Retrieved from [http://eco.upm.edu.my/research bulletin/article/vol%204%20march%202009/35-40%20Garnesh.pdf](http://eco.upm.edu.my/research_bulletin/article/vol%204%20march%202009/35-40%20Garnesh.pdf)
- Thomas, J. W. (2007) *Marketsegmentation*. Retrieved from <http://www.decisionanalyst.com/Downloads/marketsegm.pdf>
- Tidd, J., Bessant J. and Pavitt, K.. (2001) *Managing innovation-integrating Technological, Market and Organizational change*(2<sup>nd</sup> ed.). John Wiley & sons.
- Tidd, J. and Hull, F.(2002) *The organization of new service development in USA and UK.SPRU policy research*. University of Sussex, 1-31.Retrieved from <http://www.sussex.ac.uk/units/spru/publications/imprints/sewps/swep76/swep76pdf>
- Tidd, J. (2006) *A review of innovation models*. Discussion paper 1/1 London. : Imperial College. Retrieved from <http://kt.udlap.mix/projects/cudi/sipi/files/innovation%20models%20imperial%20college%20London.pdf>
- Tolentino, A. (2000) *Labour management cooperation for productivity and competitiveness*. Geneva:ILO
- Toner, P. (2011) *Workforce skills and innovation: An overview of major themes in the literature*. OECD Centre for industry and innovation studies. Australia : University of Western Sydne. Retrieved from <http://www.oecd.org>

- Treacy, M. and Wiersema, F. (1993) 'Customer Intimacy and other value disciplines.' *Harvard Business Review* Retrieved from <http://www.a30.be/materialen-en-links/images/dbimages/docs/treacywiersema.pdf>
- Treacy, M. and Wiersema, F. (1995) *The discipline of market leaders*. MA : Perseus Books, Reading.
- Tsai, M.T.(2010) Innovation capability and performance in Taiwanese science parks: Exploring the moderating effects of industrial cluster fabric. *The International Journal of Organizational Innovation*. 2(4), 80-103
- Turner, A.G (2003) *Sampling frames and master samples*. Geneva: United Nation Secretariat
- Valluri, P. (2011) *Role of alternative channels in banking and wealth management*. Bangalore India: Finacle Infosys Limited.. Retrieved from <http://www.infosys.com/finacle>.
- Van der A,W. and Elfring, T.(2002) Realizing innovation in services; *Scandinavian Journal of Management*, 18(2), 155-171
- Verweire, K. and Revollo, J. E.(2009) *Sustaining competitive advantage through product leadership: How to achieve product leadership in service companies*. Research report. Flanders District Creativity. Retrieved from [http://www.flandersdc.be/download/en/20082188/file/product leadership-finaal.pdf](http://www.flandersdc.be/download/en/20082188/file/product%20leadership-finaal.pdf)
- Voss, C.A.(1992) Measurement of innovation and design performance in service. *Design Management Journal*, 3(1):40-46
- Voutsas, K. and Heinrich ,C. (2011) *Enhancing the banking customer value proposition through technology-led innovations*. Accenture 2011. Retrieved from [http://www.accenture.com/sitecollectionDocuments/PDF/Acenture study-Banking tech-E-DE.pdf](http://www.accenture.com/sitecollectionDocuments/PDF/Acenture%20study-Banking%20tech-E-DE.pdf)
- Wang, C. and Wang, Z.(2006) *Impact of internet on service quality in the banking sector*. Master Thesis department of Business Administration and Social Sciences, Luella:Luella University of Technology.
- Weiberg, G.M(1993) *Quality systems management*. New York: Dorset house

- Wingwon, B.(2012) Effects of entrepreneurship, organizational capability, strategic decision making and innovation towards the competitive advantage of SMEs enterprise. *Journal of Management and sustainability* 2(1), 137-150
- Wolfenbarger, M.F and Gilly, M.C.(2002) *comQ: Dimensionalising, Measuring and Predicting Quality of the E-tail Experience*. Working paper, Marketing Science Institute, Cambridge, M.A: Marketing Science Institute
- Yeasmin, S. and Rahman, K.F(2012) Triangulation research methods as the tool of social research. *BUP Journal 1(1)* Retrieved from <http://www.bup.edu.bd/jornal/154-163.pdf>
- Zaithaml, V.A, Parasuraman, A. and Malhotra, A.(2000) Service quality delivery through web sites: a critical review of extant knowledge. *Journal of the academy of marketing science*, 30(4), 362-75

## APPENDICES

### APPENDIX 1: A LETTER TO THE MINISTRY OF EDUCATION

KAITHIA DAVID ARUNGAI

P.O BOX 134 60600

MAUA

TEL 0727368416

SECRETARY

MINISTRY OF EDUCATION

P.O BOX .....

NAIROBI-KENYA

Dear sir/Madam

#### RE: APPLICATION FOR RESEARCH PERMIT

I hereby apply for the above named. I am a student based in Jomo Kenyatta University of Agriculture and Technology. I wish to conduct this exercise starting in the month of .....and promise to uphold the ethics required in conducting this research

Your faithfully

Kaithia David Arungai

Research student

APPENDIX 2: QUESTIONNAIRE ITEMS FOR CEOs, DIRECTORS AND BRANCH MANAGERS

PART 1: RESPONDENT PROFILE

1. What's your responsibility at the bank? Please tick on the applicable check box.

CEO  Director R&D  Director operations  Director marketing   
Branch manager  Others specify.....

2. What's your job experience in the current position? please tick as applicable

1-5 years  6-10 years  11-15 years  16-20 years  21 and above

3. Based on the bank ownership by capital, how would you classify your bank? Please tick where applicable.

Privately held shares  publicly held  government and publicly held   
Purely local bank  has international parent   
Others specify .....

4. How would your classify your bank based on the number of employees, capital base, branch network, customer deposits the CBK Act relative to other banks in the industry ?

Large player in the market  middle level bank  small bank

5. Does your bank has a committee for prioritizing innovation investment

Yes  No  Not Sure

**PART II: INNOVATION**

6. Based on your knowledge and experience with the bank, what has been the top management focus in the last 3 years? Please rank in the order of priority ,where 1- highest priority and 9 –lowest priority

<b>Priority</b>	<b>Ranking</b>
risk management	
customer management	
cost management	
balance management	
innovation	
people management	
organization restructuring	
merger and acquisitions	
Others specify .....	

7. What has been the main area of investment in innovation by your bank in the last three years? Please Rank in order of level of investment in that area where 1- highest investment area , 7 – Least investment area

<b>Investment area</b>	<b>Ranking</b>
Service Channels	
Customer service and experience	
Sales and marketing	
Service Processes	

Organization restructuring	
Business model	
Others specify .....	

8. There are several factors which are pushing the banking sector to innovate. Based on your banks value proposition what has been the main reasons behind service innovation in the last three years? Please rank in their order of importance where 1- extremely important 10- Not important at all

<b>Drivers</b>	<b>Ranking</b>
Attracting new customers	
Increasing revenues	
Retaining existing customers	
Increased competition	
Reducing costs	
Regulatory compliance	
Technological advancement and keeping up with	
Initiated by parent company/ Controlling Bank	
Others specify .....	

9. Having gone through the innovation phases in the last three years at your bank , how would you rate the performance of your bank since innovations were started starting year 0- as the base year in the last 3 years

<b>Innovation metrics used by the banks /results</b>	Decreased	Remained the same	Increased slightly	Increased significantly
Revenue growth from new products or services				
Customer satisfaction				
Profitability				
Productivity				
Better risk and compliance capabilities				
time to market for				

new products and services				
Customer deposits				
Customer accounts				
Number of branches				
Market share				
Non- performing loans				
<b>Others</b> <b>specify</b>				
1.				
2.				
3.				
4.				
5.				

PART III: SERVICE INNOVATION

Service Concept Innovation

10. *Hertog et al (2010), service concept refers to service offering(Frei, 2008) which depicts the value that is created between the service provider in collaboration with the customer.* Please indicate from the suggested list of different concepts on the left ,whether these services have either been 1- not started , 2- started and in process, 3- complete and not imitated by competitors and finally 4- imitated by competitors

<b>Service concept Innovation</b>	<b>1-Not started</b>	<b>2- Started and in process</b>	<b>3-Complete Not imitated competitors</b>	<b>4-Imitated by competitors -4</b>
Non-financial products				
Zero opening bank account charges				
Treasury and foreign exchange services				
Trade finance and bank				

guarantees				
Self-services				
Mobile payment /withdrawal services				
Agency banking services				
Direct mobile deposits into accounts				
Direct check deposits at ATM				
Sitting space for customers awaiting services				
Wheelchair banking				
Financial advice services				

Insurance services				
Investment services				
International /diaspora accounts				
Advance /credit service				
24 hour banking				
Custodial services				
Pay-slip loans				
Working capital management services				
Credit monitoring services				
Third party ATM				

partnership				
Collateral free loans				
<b>Others specify</b>				
1.				
2.				
3.				
4.				
5.				

**Service Process Innovation**

11. *Service process is the implementation of a new or significantly improved production or delivery method. This includes significant changes in techniques, equipment and/or software (OECD Oslo Manual, 2005). Please indicate whether any of the listed service process has been initiated at your bank in the last three years and if so, is the service imitated or is it unique to the industry.* Please indicate 1- not started, 2- started and in process, 3- complete and not imitated by competitors and finally 4- imitated by competitors .

<b>Process Innovation</b>	<b>Not started -1</b>	<b>Started and in process 2-</b>	<b>Complete 3-</b>	<b>Imitated by competitors -4</b>
Touchscreens for use by advisors and customers				
Automatic identification and 360 degree view				
Credit score rating for clients				
Extending opening hours and weekends				
Islamic 'banking concept				
Web banking				
Wire transfer directly from a customer account				
24 hour credit approval				

Debit card purchase at retail store				
ATM cards				
Mobile communication with customers				
Mobile utility bill payment services				
Third party guarantees for loans				
Automatic birthday/valentine /anniversary card wishes to customers				
SMS Security bank alerts in case of irregular bank activity				
Background				

check of all customers opening account with the bank				
Online chat services				
24 hour customer service				
Automated customer answering machine and directing calls				
Email alerts to customers				
SMS alerts to customers				
Debit purchase at gas/petrol stations				
Automatic payment for license /insurance payments etc				

<b>Others specify</b>				
<b>1</b>				
<b>2</b>				
<b>3</b>				
<b>4</b>				
<b>5</b>				

Service Marketing Innovation

12. *Service Market innovation is the implementation of a new marketing method involving significant changes in product design or packaging, product placement, product promotion or pricing.* Please indicate if your bank has initiated the service market innovations listed in the last 3 years. Indicate 1-Not started, 2- started and in process, 3- complete and not imitated, 4- imitated by competitors

<b>Service Marketing Innovation</b>	<b>1-Not started</b>	<b>2-Started and in process</b>	<b>3-Complete and not imitated</b>	<b>4-Imitated by competitors</b>
Personalized marketing offers				
Direct marketing to customers				
Retail banking				
Business banking				
Corporate banking				
Premium banking				
Web service offers /promotions				
Email alerts on new products and offers				
SMS alerts for new products /offers and promotions				

Outdoor banking sales				
Market segmentation based on price				
Market segmentation by geographical location				
Segmentation based on demographics				
Segmentation based on psychographic /lifestyle				
Monitoring customer usage, distribution and media segmentation				
<b>Others specify</b>				
1.				

2.				
3.				
4.				
5.				

Service Channel Innovation

13. *Service channel innovation: distribution channel can be described as any improved delivery method through which a bank can provide services to customers. Louden (2004) innovation in service channels in banking relating to branches, ATMs, internet banking and mobile banking .* Please indicate whether the listed innovations have been: 1-Not started 2- started and in process 3- compete and not imitated by competitors, 4- imitated by competitors

<b>Service Channel Innovation</b>	<b>1-Not started</b>	<b>2- Started and in process</b>	<b>3-Complete and not imitated by competitors</b>	<b>4-Imitated by competitors</b>
Mobile banking				
Internet/Online banking				
Self-service				

Branchless banking				
Contact centers				
Credit card offers				
Agency banking				
Remote deposit check capture				
Mobile based wealth management and advisory services				
Web chat or click to call				
Integration with social media like Facebook				
Fully automated origination for				

complex products				
Offer of payment and loan options at retail check out				
Bespoke tablet applications for banking				
Video conferencing for advisory services				
Cashless banking				
Different branch sizes or dedicated branches				
Use of branches for events and community				

services				
Remote Video conferencing booth with customers in the bank in different banks				
Paperless banking processes				
Cashless/card banking process				
Mobile banking				
Video surveillance at ATMs				
Call center /Interactive voice response (IVR)				
<b>Others specify</b>				

1.				
2.				
3.				
4.				
5.				

Organizational form Innovation

14. *Organizational form innovations are the implementation of a new organizational method in the firm's business practices, workplace organization or external relations (OECD, 2005).* Please indicate whether the listed innovations have been: 1-Not started 2- started and in process 3- compete and not imitated by competitors, 4- imitated by competitors

<b>Organizational form Innovation</b>	<b>1-Not started</b>	<b>2- Started and in process</b>	<b>3- Complete and not imitated</b>	<b>4-Imitated by competitors</b>
Team leader concept				
Decentralized service centers				
Matrix /flat organization structure				
Acquisition of other banks subsidiary				
Merger with other banks				
Open door policy				
Dress' down' code/ casual				

Personalized banking				
Employee participation on decision making				
Bottom up approach to strategy				
Customer –centric training				
Video conferencing among branches and headquarter				
Dedicated customer care desk				
<b>Others specify</b>				
1				
2				
3				
4				
5				

**PART IV: MODERATING VARIABLE-GOVERNMENT REGULATION**

- a) Please indicate the extent to which government regulations and the Banking Act and the CBK Act affect your bank as it attempts to innovate its services. Indicate 1- no effect, 2- lesser effect, 3- moderate effect , 4- high effect , 5- significant effect

	No effect -1	2- lesser effect	3- moderate effect	High effect -4	Significant effect -5
Service concept innovation					
Process innovation					
Market innovation					
Organization					

al form innovation					
Channel innovation					

b) Indicate the extent to which among the listed regulations below have had influence on the service innovations that have been carried out at your bank in the last three years

Regulation	1-No effect	2-negative effect	3-Not sure	3-positive effect
restrictions on branching and new entry				
restrictions on pricing (interest rate controls and other controls on prices or fees)				
line-of-business restrictions and regulations on ownership linkages among financial institutions				
restrictions on the portfolio of assets that banks can hold (such as requirements to hold certain types of securities or requirements and/or not to hold other securities, including requirements not to hold the control of non- financial companies);				
compulsory deposit insurance (or informal deposit insurance, in the form of an expectation that government will bail out depositors in the event of insolvency)				
capital-adequacy requirements				
reserve requirements (requirements to hold a certain quantity of the liabilities of the central bank);				
requirements to direct credit to favored sectors or enterprises (in the form of either formal rules, or informal government pressure);				
expectations that, in the event of difficulty, banks will receive assistance in the form of “lender of last resort”;				
Others specify ..... .....				

**PART V: COMPETITIVE ADVANTAGE**

After the implementation of the various service innovations listed above ,indicate whether the following attributes of the bank services has either 1-stayed the same , 2- reached the industry standards 3- lower than competitors 4- higher than competitors and industry

dimension	Stayed the same	Within industry standards	Lower than competitors	Higher than competitors and industry
<b>Cost of service</b>				
Opening bank account charges				
Interest rates				
ATM Withdrawal charges				
Agent banking charges				
New/Replacement ATM card costs				
Bank statement charges				
Over the counter withdrawal charges				
Exchange rate charges				
Base interest rates				

Loan origination fees				
Point of sale charges (Debit)				
Money order and bank draft charges				
Compensating balance				
Cashing cheques charges				
Money transfer charges				
Others.....				
<b>Quality of service</b>				
Banking hall appearance/ space				
Banking staff courtesy				
Customer care				
Privacy of customer information				
Customer satisfaction levels				
Convenience banking to customers				
Timely sharing of information between bank and customers				
Interest rates on deposits				
<b>Time</b>				
Cheque clearance				

Interaction time with teller				
ATM queuing time				
Time to introduce new service				
Loan approval time				
Customer call response				
ATM card issue time				
Waiting time at the bank				
Foreign currency approval				
Foreign currency /Diaspora account opening time				
<b>Flexibility in service</b>				
Opening and closing accounts				
Information and communication				
Technical services				
Non-banking services				
Adjustment to seasonal pressures and internet downtime				
Alternate banking hours /services				
Loan restructuring /renegotiation time				

PART VI: GENERAL QUESTIONS

QUESTION 1

Based on the recent innovations in service concept, processes, marketing, organizational forms and channel innovation at your bank, in your opinion what is the originality of the innovations?

Please tick the check box alongside each of the statements that apply to your bank

- 1 .The innovations are simply ‘copycat ‘from what is already done in other parts of the world
- 2. The focus has been lost on providing customer with efficient and affordable service
- 3. The Innovations are ‘me too ‘ kind of hype to keep up with the market pace
- 4. The innovations are well thought out and original and it has taken competitors to imitate them
- 5. Others specify .....

QUESTION 2

What challenges has faced your bank since it started thinking and innovating products, processes, channels, etc

- 1. Keeping up with new technological changes and obsolesce
- 2. Increased customer demands /knowledgeable customers
- 3. government regulations
- 4. non-banking and substitute product /service providers

- 5. Economic meltdown /poor economic performance
- 6. local /international based competition
- 7. Others specify .....

**QUESTION 3**

Based on the innovations so far implemented by your bank, what would you say is your winning formula? Please tick where applicable

- 1. Cost /service cost is very competitive
- 2. Time to introduce and market a new product is our edge
- 3. Our angle is flexibility in dropping or starting new products/modifying them
- 4. Our angle is quality of services
- 5. Our edge is based on ..... (specify)

**QUESTION 4**

What challenges does your bank face while innovating its services and remain competitive in the banking industry? Please list at least **FIVE** of the issues your bank faces

- 1.....
- 2.....
- 3.....
- 4.....
- 5.....
- 6.....

**End of the questionnaire**

**APPENDIX 3: INTERVIEW GUIDE FOR BANK'S CUSTOMERS**

1. Type of service customer your subscribe to in this bank  
Retail banking [ ] Business banking [ ] Treasury banking [ ] Corporate banking [ ]
2. Number of years you have been a member of this bank: 0-5 Years[ ] 6-10 Years[ ]  
above 10 Years[ ]
3. What is your perception concerning services offered by this bank? Very poor[ ] Poor[ ]  
Fairly good[ ] Good[ ] Excellent[ ]
4. Your perceptual rating in 3 above is mainly motivated by(**Tick appropriately**)
  - a) Time[ ] Cost[ ] Flexibility[ ] Quality[ ]
  - b) **Others (Specify)**.....

Item	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item- Total Correlation	Cronbach's Alpha if Item Deleted
------	----------------------------------	--------------------------------------	--------------------------------------	--

non-financial products	58.23	51.816	-.143	.680	APPE
zero charges for opening bank account	57.98	47.161	.509	.640	NDIX 4:
treasury and foreign exchange services	58.70	43.996	.442	.629	RELI
trade finance and bank guarantees	59.00	40.946	.809	.592	ABILI TY
self-services mobile	58.66	48.937	.086	.668	TEST
payment/withdrawal services	58.79	47.718	.232	.653	SERVI CE
agency banking services	58.87	43.532	.483	.624	CONC
direct mobile deposits	58.52	45.155	.395	.636	EPT
direct check deposits at ATM	58.32	53.230	-.215	.709	INNO
sitting space for customers waiting for services	59.21	42.406	.604	.611	VATI ON
wheel chair banking	59.66	45.474	.471	.633	
financial advice services	58.47	55.219	-.357	.714	
insurance services	59.52	53.414	-.243	.701	<b>Item</b>
investment services	59.01	52.183	-.160	.690	<b>total</b>
international /diaspora account	58.66	54.205	-.283	.710	<b>statisti</b>
advance /credit service	59.01	45.968	.261	.650	<b>cs/Loa</b>
24 hour banking	59.36	45.760	.341	.642	<b>dings</b>
custodial services	58.34	47.711	.209	.655	
pays lip loans	58.30	44.039	.642	.618	
working capital management services	59.34	40.248	.776	.589	
credit monitoring services	59.17	43.369	.473	.624	
third party ATM	58.23	47.622	.344	.647	
partnership					
collateral free loans	58.23	47.708	.409	.645	

SERVICE PROCESS INNOVATION

**Total Statistics/Loadings**

Item	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
touchscreen for use by advisors and customers	48.89	105.838	-.172	.880
automatic identification and 360 degree view	50.02	87.182	.775	.849
credit score rating for clients	49.79	89.546	.679	.853
extending opening hours and weekends	49.40	90.932	.660	.855
Islamic banking concept	48.90	102.711	.016	.874
web banking	49.54	85.283	.857	.845
twenty four hour credit approval	50.46	93.563	.554	.859
wire transfer directly from a customer account	49.40	88.867	.662	.854
debit card purchase at retail store ,point of sale	49.86	89.690	.701	.853
mobile communication with customers	48.80	98.658	.271	.867
mobile utility bill payments services	49.41	101.385	.072	.874
third party guarantee for loans	48.52	95.693	.782	.857
automatic birthday/valentine/anniversary card wishes for customers	49.64	87.954	.812	.849
SMS security bank alerts in case of irregular bank activity	49.43	85.946	.884	.845
background check on all customers opening account with the bank	49.69	85.915	.776	.848

online chat chat services	49.65	84.746	.962	.842
24 hours customers service	50.63	97.010	.648	.860
automatic customer answering machine and directing calls	50.64	97.631	.587	.861
email alerts to customers	49.11	112.247	-.422	.895
sms alerts to customers	49.14	102.529	.015	.876
debit purchase at gas /petrol stations	49.64	94.255	.524	.860
automatic payment for licence/insurance payments etc	50.54	111.584	-.789	.885

## SERVICE MARKETING INNOVATION

### Total Statistics/Loadings

Item	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
personalized marketing offers	35.44	23.496	.340	.562
direct marketing to customers	35.55	19.884	.746	.485
retail banking	35.69	23.119	.291	.562
business banking	35.54	25.584	-.121	.613
corporate banking	35.61	26.241	-.205	.633
premium banking	36.36	16.448	.847	.405

web service offers/promotions	35.76	17.735	.806	.437
email alerts on new products /offers and promotions	36.01	20.226	.350	.539
SMS alerts for new products /offers promotions	36.13	24.414	-.027	.620
market segmentation based on price	35.91	26.939	-.260	.665
market segmentation by geographical location	35.73	21.531	.274	.558
market segmentation based on demographics	36.16	25.533	-.115	.616
segmentation based on psychographic/lifestyle	36.53	25.908	-.166	.642
monitoring customer usage ,distribution and media ,segmentation	36.43	16.957	.762	.428

SERVICE CHANNEL INNOVATION

**Total Statistics/Loadings**

Item	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
mobile banking	64.49	69.253	.392	.799
internet /online banking	64.56	74.206	.036	.818
self -service	64.76	65.835	.509	.792
contact centers	64.20	66.273	.765	.784
branchless banking	63.99	77.359	-.190	.820
credit card offers	64.31	72.826	.232	.806
agency banking	63.58	65.485	.744	.783

remote deposit check capture	64.25	76.558	-.117	.818
mobile based wealth management and advisory services	64.68	63.069	.632	.784
web chat or click to call integration with social media like facebook	65.29	65.056	.764	.782
fully automated origination for complex products	64.02	69.021	.470	.796
offer of payment and loan options at retail check out	64.92	60.983	.854	.771
bespoke tablet applications for banking	64.57	71.422	.211	.809
video conferencing for advisory services	63.97	66.966	.608	.789
cashless banking	64.59	59.983	.846	.769
different branch sizes or dedicated branches	64.12	72.932	.136	.812
use of branches for events and community services	64.09	68.840	.548	.794
remote video conferencing booth with customers in the bank in different banks	63.90	78.088	-.261	.822
paperless banking processes	65.97	72.227	.430	.801
cashless / card banking processes	64.69	59.195	.842	.768
mobile banking	64.38	81.020	-.374	.836
video surveillance at ATMs	64.08	74.288	.089	.811
call center /interactive voice (IVR)	63.81	84.962	-.677	.843
	64.24	66.161	.689	.786

ORGANIZATIONAL FORM

**Total Statistics/Loadings**

Item	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
team leader concept	35.14	13.454	.650	.519
decentralized service centers	34.93	15.338	.478	.570
matrix /flat organization structure	34.47	16.961	.460	.590
acquisition of other banks subsidiary	34.61	18.220	.104	.639
merger with other banks	34.03	21.558	-.411	.701
open door policy	33.93	17.425	.333	.605
dress down code/casual	34.23	20.353	-.206	.698

personalized banking	34.18	17.935	.195	.624
employee participation on decision making	34.02	16.881	.628	.579
bottom up approach to strategy	34.39	14.693	.649	.538
customer centric training	34.05	22.223	-.538	.710
video customer among branches and headquarter	35.41	14.396	.522	.554
dedicated customer care desk	34.56	13.109	.767	.494

GOVERNMENT REGULATION

**Total Statistics/Loadings**

Item	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item- Total Correlation	Cronbach's Alpha if Item Deleted
regulation	24.45	26.293	.356	.557
restrictions on branching and new entry	24.17	25.024	.497	.600
restrictions on pricing - interest rate controls and other controls on prices and fees	25.91	25.541	.361	.698

line-of-business restrictions and regulations on ownership linkages among financial institutions	25.24	27.262	.344	.575
restrictions on the portfolio of assets that banks can hold	25.07	25.812	.516	.629
compulsory deposit insurance	25.51	22.554	.454	.719
capital adequacy requirements	25.32	23.510	.260	.637
reserve adequacy requirements	25.33	27.320	.553	.573
requirements to direct credit to favored sectors or enterprises	24.64	6.513	.406	.638
expectations that in the event of difficulty -lender of last resort	24.91	27.326	.559	.568

## COMPETITIVE ADVANTAGE

### Total Statistics/Loadings

Item	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
cost of service	110.04	51.912	.362	.549
open bank account charges	110.01	47.495	.034	.780
interest rates	110.03	54.031	.499	.581
ATM withdrawal charges	110.16	49.426	.180	.508
agent banking charges	110.07	45.188	.172	.633
new /replacement ATM card costs	109.79	47.266	.017	.467

bank statement charges over the counter	109.74	46.751	.061	.659
withdrawal charges	109.96	47.568	.034	.879
exchange rates charges	109.71	48.594	.112	.596
base interest rates	109.89	49.365	.167	.415
loan origination fees	110.38	49.207	.161	.506
point of sale charges -debit	110.17	47.627	.043	.582
money order and bank draft charges	110.02	43.655	.325	.600
compensating balance	110.27	44.993	.143	.435
cashing cheques charges	110.18	44.322	.244	.516
money transfer charges	109.60	43.555	.301	.600
banking hall appearances/space	110.34	47.388	.025	.678
banking staff courtesy	110.51	48.984	.150	.796
customer care	108.67	41.342	.129	.518
privacy of customer information	109.27	42.950	.360	.487
timely sharing of information between bank and customers	109.55	41.325	.541	.348
interest rate on customer deposits	109.54	45.176	.278	.224
convenience banking for customers	110.45	50.766	-.285	.230
check clearance	109.38	46.497	.124	.650
interaction time with the customer service representative	109.53	45.348	.246	.428
time in ATM queue	110.67	48.933	.138	.206
time it takes for new products to hit the market	109.80	48.916	.139	.210
loan approval time	110.33	47.342	.003	.570
customer response time by call or by email or SMS	109.89	51.494	.308	.448
time it takes to get a an ATM card	110.36	46.577	.055	.559
waiting time at the bank	110.35	46.381	.154	.546
time it takes to get foreign currency approval	108.97	40.203	.138	.609

diaspora account opening time	109.76	42.445	.283	.588
opening and closing an account	108.83	39.756	.290	.454
information and communication	109.50	43.091	.307	.594
technical services	110.15	46.816	.005	.571
non-banking services	109.50	45.478	.216	.532
adjustment to seasonal pressures and internet downtime	109.96	47.310	.002	.471
alternate banking hours	110.30	49.523	.176	.723
loan reorganization or restructuring time	109.74	48.988	.144	.801

APPENDIX 5: TABLE SHOWING QUANTITATIVE MEASUREMENT OF VARIABLES

Study Variable	Type of variable	Measurement scale	Level of measurement	Correlation
Competitive advantage of banks in Kenya	Dependent variable	Likert scale	Interval	Pearson
Service market innovation	Independent variable	Likert scale	Interval	Pearson

Service concept innovation	Independent variable	Likert scale	Interval	Pearson
Service process innovation	Independent variable	Likert scale	Interval	Pearson
Service channel innovation	Independent variable	Likert scale	Interval	Pearson
Government regulation	Moderating variable	Likert scale	Interval	Pearson

APPENDIX 6: TABLE SHOWING DATA COLLECTION PROCEDURE

TYPE OF DATA	PROCEDURE	INSTRUMENT	PRODUCTS
Quantitative data	Cross-sectional survey	Closed ended questionnaire items	Numerical data
Qualitative data	Cross-sectional survey	Open ended questionnaire items and	Categorical data

		structured interview	
--	--	-------------------------	--

APPENDIX 7: DATA ANALYSIS PROCEDURE

TYPE OF DATA	PROCEDURE	INSTRUMENT	PRODUCTS
Quantitative data	Data integrity testing(Test of validity)	Factor loadings SPSS	Valid data
	Univariate analysis	Frequency tables, Pie charts, bar graphs	Descriptive statics

	Compare sample differences between independence and the dependence variable	t test/p-values	Statistical significance
	Reliability test	Cron banch Alpha	Alpha coefficient Above 0.6- reliable data
	Relationships	Pearson moment correlation coefficient	Between -1 and +1
	Variation	MANOVA	$R^2$
	Prediction	Multiple regression	Beta coefficients
	Model fit	F test/p-values	Statistical significance
Qualitative data	Coding		Identify themes and patterns
	Categorization		Meaningful categories
	Classification		Assign appropriate categories

	Comparison		Attain frequencies
	Interpretation		Theoretical conclusions

APPENDIX 8: BUDGET

BUDGET ITEM	RATE	TOTAL DAYS	CHARGE
Printouts			30,300.00
Travel	2000	26	52,000.00
Mailing			21, 200.00
Telephone			26,500.00
Rent	1200	5	6000.00

Total			136, 000.00
-------	--	--	-------------

APPENDIX 9: RESEARCH TIME SCHEDULE

DATE	ACTIVITY
APRIL –MAY 2013	Concept presentation
JUNE- NOVEMBER 2013	Research proposal and seminar defense
DECEMBER2013-MARCH 2014	Pretesting and Data collection

APRIL -JULY 2014	Data analysis and presentation
AUGUST 2014 ONWARDS	Final defense and graduation

APPENDIX 10: SELF SERVICE INNOVATIONS, EQUITY BANK

SELF-SERVICE	EXAMPLES
ATMs	Cash out ATMs, Envelop Deposit ATMs, Intelligent Deposit ATMs
Card Services	Debit cards and Credit cards
Money transfer services	Visa personal payments,western union, Western Union Account Based

	Money Transfer, moneyGram, PayPal, Electronic fund Transfer, SWIFT service
Mobile banking	Eazzy 247, Airtel Money, M-PESA ATM Withdrawal, Orange Money, yuCash, M-KESHO
PayPal Withdrawal services	
Visa Personal Payments	
Online banking	
China UnionPay	

Source: Equity bank(2013). <http://www.ke.equitybankgroup.com/index.php>

#### APPENDIX 11: BANKING SERVICES, EQUITORIAL COMMERCIAL BANK

Service category	EXAMPLES
Personal banking	Current account, Saving account, Term deposit account, Credit facilities, Cash management ,Safe deposit lockers
Corporate banking	Current accounts, Term deposit accounts, Credit facilities, Cash

	management, Safe deposit Lockers
Senator Cards	Debit cards, Credit cards, Prepaid cards, Merchant Services
Access	Internet banking, mobile banking, Branch locations, ATM location
Media Centre	News, Events, Careers

Source: Equitorial Commercial bank(2013).<http://www.equitorialbank.ac.ke>

#### APPENDIX 12: BANK CLASSIFICATION, NSE KENYA

Category	List	Total
Large banks	Barclays bank,CFCStanbic holdings, Diamond Trust Bank Group, Equity Bank Group, Housing Finance Company of Kenya, Kenya Commercial Bank Group, National Bank Group, Credit bank, StandardChartered Kenya, and Cooperative bank of Kenya	10
Small banks	African Banking Corporation, Jamii Bora bank, Commercial	34

	bank of Africa, Cooperative bank of Kenya, Credit bank, Charterhouse bank, Chase bank(K), Dubai Bank Kenya, Equitorial Commercial bank, family bank, Fidelity commercial bank, Guardian bank, Fina bank, Giro Commercial bank, Imperial bank, Investment Er Morgages bank, Middle East bank, NIC bank, Oriental Commercial bank, Paramount Universal bank, Prime bank F, Consolidated bank of Kenya, Development bank of Kenya, Bank of Africa(K), Bank of India, Citibank N.A Kenya, Habib bank A.G Zurich, habib bank, Bank of Baroda(K), K-Rep, Ecobank ltd, Gulf Africa bank(K) and First Community bank, UBA kenya bank ltd, Trans National bank, Victoria commercial bank	
Total		44

Source:softkenya.com

#### APPENDIX 13: BANKS HEAD OFFICE LOCATION,KENYA

Barclays	Bunyala Road branch, P.O BOX 72058-00200Nbi.254 202 714 200
Bank of Africa	Reinsurance plaza, Taifa road. P.O BOX 69562-00400Nairobi.Tel.254203275000
African Banking Corporation Bank	ABC Bank House, Mezzanine floor, Koinange street. P.O BOX 46452-00100Nbi.Tel.254 426 33000
Bank of Baroda	Baroda House 29, Koinange Street. Tel. 254 020 227869.Mobile-0734

	597404
Bank of India	Bank of India building Kenyatta Avenue P.O BOX 30246, Nairobi.Tel.254202221414
Chase bank	River side Mews, Junction of Riverside, Riverside and Riverside Westlane along Riverside Drive.Tel.254 202 774 700,0703074277.P.O BOX 66015-00800Nbi.
Citibank	Citibank house Upper hill, P.O BOX30711,Nairobi.Tel. 254202711221
Commercial bank of Africa	Head Office-Mara Ragati roads Upper hill P.O BOX 30437-00100 Nairobi.Tel. 254202 711221/0711056000
Consolidated bank of Kenya	Head Office-Koinange Street, P.O BOX 51133-00200, Nairobi. TEL.254 203405
Development bank of Kenya	Development Bank Of Kenya-Finance House Loita Street,P.O BOX 30483,Nairobi.Tel.254020340401
Diamond trust Bank	Head Office-Diamond Trust Bank 8 <sup>th</sup> Floor, Nation Centre Kimathi Street,P.O BOX 61711, Nairobi.Tel.254202849000
Ecobank	Ecobank Towers, Muindi mbingu street. P.O BOX 47499Nbi.Tel. 254-20-2883000
Equitorial commercial bank	Equitorial Commercial Bank Centre Nyerere Road.,P.O BOX 52467-00200, Nairobi.Tel.254204981000
Equity bank	Equity centre, Hospital road, Upper Hill. P.O BOX 7510400200.Tel.254 20 2262000
Family bank	Fourways Tower Branch Muindi Mbingu Street, P.O BOX 74145-00200, Nairobi.Tel.25420318173, 0720 098300
Fidelity(Commercial) bank ltd	Head Office-7 <sup>th</sup> Floor Ipsbuilding Kimathi Street P.O BOX 34886-00100
Fina bank	Enterprise and Bamburi road.P.O BOX 18647-00500Nbi.Tel. 254 206 507 78
Guardian bank	Head Office-Guardian Centre Biashara Street, P.O BOX 67681-00200, NAIROBI.Tel.254202226771
Gulf African Bank	Geminia Insurance Plaza, Kilimanjaro Avenue, Upper Hill. P.O BOX

ltd	43683-00100, Tel. 254 202 718 608
Housing Finance	Rehani House Kenyatta Avenue Koinange Street. P.O BOX 30088-00100
K-Rep bank	K-Rep Centre ,Kilimani.P.O BOX 25 363-00603Nbi.Tel.254-020-3906000/1-7,0711 058000
Kenya Commercial bank	KenCom House, Moi Avenue, Nairobi.Tel. 254 0732187000
Middle East bank	Nairobi Branch-Mebank Tower Milimani Road.P.O BOX 47387-00100,Nairobi.Tel.254202723120
National bank of Kenya	National bank building, Harambee Avenue. P.O BOX 72866-00200,City square Nairobi.Tel.254202226471
Oriental commercial bank	Head Office-Apollo Centre 2 <sup>nd</sup> Floor Ring Road Westlands.P.O BOX 14357-00800,Nairobi.Tel.254203743278
Paramount Universal bank	Head Office- South Plaza 4 <sup>th</sup> Floor Woodvale Grove Westlands.P.O BOX 14001-00800,Nairobi.Tel.254204449266
Prime bank	Prime bank building, Chiromo lane-Riverside Drive. Westlands. P.O BOX 43825-00100,Nairobi.Tel.254204203000
Standard Chartered bank	Head Office –Chiromo 48 Westlands Roads.P.O BOX 30003-00100, Nairobi.Tel.254000000000
Trans-National bank	Head Office-Transnational Plaza, City Hall Way. P.O BOX 34353-00100,Nairobi.Tel.254202224235
UBA Kenya Ltd	1 <sup>st</sup> floor Apollo Centre, Ring road Westlands. P.O BOX 34154-00100Nbi.Tel.254-20-3740814
Victoria Commercial bank Ltd	
National Industrial Credit bank	Mercantile House, Koinange Street, P.O BOX 61064-00200 City Square, 0728 607701
Charterhouse bank	Longonot Place, 6 <sup>th</sup> flor Kijabe street.P.O BOX43252Nbi.Tel 254 202242246
Dubai bank	ICEA Building, Kenyatta Avenue. P.O BOX 11129, Nbi.00400.

	Tel.254-20-3111141
Giro Commercial bank	Giro House & Kimathi street. P.O BOX 46739 Nbi.00100.Tel. 254-20-217776
Imperial bank	Imperial Court, West lands road, 020 2840000 Nairobi
NIC bank	NIC House 1 <sup>st</sup> floor, Masaba road, Upper Hill Area. Tel.+254 20 202888000, 0711041000. P.O BOX 44599-00100
Habib bank A.G Zurich	Habib House, Koinange Street. P.O BOX 30584 00100 GPONbi. Tel.254 20 310694.
Habib bank	Exchange building, 17 <sup>th</sup> Koinange street, Nbi. Tel. 254 202218176
Equitorial Commercial bank	Equitorial commercial bank centre, Nyerere road, P.O BOX 52467-00200 Nbi, Tel. 254 204981 000
First community bank	Wabera Street, Prudential Assurance Building, 020 2843000. P.O BOX 26 219 GPO 00100 Nbi, Mobile 0726 736 883
Jamii Bora Bank	Unity House, Koinange street. P.O BOX 2274-0400 Nbi. Tel. 254-20-2224238/9, 0722201112
Middle East bank	Mebank Tower, Milimani road. P.O BOX 47387-00100 Nbi. Tel. 020 2723120
I&M Bank	I&M bank Tower, Kenyatta Avenue, City Centre. 0722203828/254(0)32212000
Cooperative bank	Cooperative House, Hail Salessie Avenue. P.O BOX 48231-00100 Nbi. Tel. 3276000

Source: [www.banks-kenya.com/Nairobi-banks-kenya.html](http://www.banks-kenya.com/Nairobi-banks-kenya.html).

#### APPENDIX 14: NUMBER OF BANKS BRANCHES IN NAIROBI

Bank	Number of branches
Barclays bank	50
Bank of Africa	13
ABC Bank	5
Bank of Baroda	4
Bank of India	3
Chase bank	6

Citibank	1
Commercial bank of Africa	13
Consolidated bank of Kenya	6
Cooperative bank	46
Charterhouse Bank ltd	5
Credit bank	3
Development bank of Kenya	1
Diamond trust Bank	15
Dubai bank of Kenya	2
Ecobank	4
Equitorial commercial bank	7
Equity bank	22
Family bank	15
Fidelity(Commercial) bank ltd	5
Fina bank	7
First community bank	9
Giro bank	5
Guardian bank	3
Gulf African Bank ltd	7
Housing Finance	5
Investment and Mortgages	14
K-Rep bank	6
Kenya Commercial bank	33
Middle East bank	3
National bank of Kenya	12
Oriental commercial bank	7
Paramount Universal bank	3
Prime bank	10
Standard Chartered bank	10
Trans-National bank	5

NIC bank	7
Stanbic bank Kenya ltd	13
Southern credit bank	4
UBA Kenya ltd	4
Victoria commercial bank	1
Imperial bank	5
Habib bank ltd	1
Habib bank A.G	3
Total	195

Source: [www.kenya-jambo.com/banken-in-kenya.pdf](http://www.kenya-jambo.com/banken-in-kenya.pdf) 2014