

**MEDIATING EFFECT OF CUSTOMER SATISFACTION ON THE  
RELATIONSHIP BETWEEN CUSTOMER RELATIONSHIP MANAGEMENT  
PRACTICES AND CUSTOMER RETENTION AMONG MOBILE PHONE  
USERS IN SELECTED PUBLIC UNIVERSITIES IN KENYA**

By:

KENNEDY NTABO OTISO

**A Thesis Submitted To the School of Business and Economics in Partial  
Fulfillment of the Requirements for the Award of a Degree of Doctor of  
Philosophy in Business Management,  
Moi University.**

**March, 2015**

**DECLARATION**

**DECLARATION BY CANDIDATE**

I hereby declare that this thesis is my original work and has not been submitted for a degree award in any other University. Therefore no part of this thesis may be reproduced without the prior written permission of the author and/or Moi University.

Kennedy Ntabo Otiso.....Date.....

SBE/D.PHIL/BM/004/12.

**DECLARATION BY SUPERVISORS**

This thesis has been submitted for examination with our approval as University Supervisors.

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

Dr. Ronald Bonuke

Lecturer, School of Business and Economics

Moi University

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

Dr. Joel Chepkwony

Lecturer, School of Business and Economics

Moi University

## **DEDICATION**

To my dear wife and lovely children.

To my Heavenly Father whom I give honour and Glory.

## **ACKNOWLEDGEMENT**

I want to give thanks to God for giving me this opportunity, good health and peace of mind throughout the process of writing this thesis to its successful completion. This thesis has been made possible because of the wise counsel, inspiration, and professional guidance by dedicated supervisors, Dr. Ronald Bonuke and Dr. Joel Chepkwony both of Moi University, School of Business and Economics. I also want to appreciate all the Faculty members and staff in the school of business and economics as well as my classmates in PhD Business Management class for their moral support. Finally I wish to give special appreciations to my dear wife Phyllis Moraa Ntabo and my children who are the pillars in my life, for being there for me throughout this whole process and for giving up so much for me to pursue my studies.

## ABSTRACT

Customers have become more sophisticated and they are enjoying more alternative options of brands, for any organization, there is a need to understand what kind of service or products it offers, and for whom. Organizations have embraced the concept customer relationship management practices since it focuses on managing relationship between its current and prospective customer base hence helping in building long lasting relationships which consequently give the organization the joy of retained customers. The specific objectives of study were; to determine the effect of customer relationship management practices on customer retention, to assess the effect of customer satisfaction on customer retention and to assess the mediation effect of Customer Satisfaction on the relationship between customer relationship management practices and customer Retention. The study was guided by the social exchange theory which focused on the fundamental principle that humans in social situations choose behaviors that maximize their likelihood of meeting self-interests in those situations. Descriptive and explanatory research designs were utilized in this study and the following networks were sampled; Safaricom, Airtel, Orange and , yuMobile A questionnaire was used to collect data from sample size of 250 respondents who were sampled from the staff of public universities in the Western region which included Moi, Masinde Muliro, Maseno, Jaramogi Oginga Odinga, University of Eldoret and Kisii University. Data collected was analyzed by use of descriptive and inferential statistics. Multiple regressions were used to establish the effect between customer relationship management practices, customer satisfaction and customer Retention. Mediation test was conducted by following Baron and Kenny (1986) four steps. Further, sobel test were used to test the level of significant of the mediation. The results revealed that Perceived value, Customer relational experience and Loyalty programs had significant effect on Customer retention while Network quality was not significant in predicting Customer retention. Further, Perceived value, Customer relational experience and Loyalty programs had significant effect on Customer satisfaction, while Network quality was not significant in predicting Customer satisfaction. Also it was established that, Customer satisfaction was significant in predicting customer retention. Finally, Customer satisfaction had partial mediation effect on the relationship between Customer relationship management practices and Customer retention. The study recommends that service providers should put more emphasis on Customer Relationship Management Practices since they influence customer satisfaction and hence customer retention. The study provides new theoretical insight into factors influencing customer retention by incorporating customer satisfaction as a mediator in the relationship between Customer Relationship Management Practices and customer retention.

## TABLE OF CONTENTS

DECLARATION .....	i
DEDICATION .....	ii
ACKNOWLEDGEMENT .....	iii
ABSTRACT.....	iv
TABLE OF CONTENTS .....	v
LIST OF TABLES .....	ix
LIST OF FIGURES.....	x
LIST OF ABBREVIATIONS AND ACRONYMS.....	xi
OPERATIONAL DEFINITION OF TERMS .....	xii
<b>CHAPTER ONE</b> .....	1
<b>INTRODUCTION</b> .....	1
1.0. Overview.....	1
1.1. Background information .....	1
1.3. Statement of the Problem.....	4
1.4. Objectives of the study .....	6
1.4.1. General Objective of the Study .....	6
1.4.2. Specific Objectives of the Study .....	6
1.4.3. Research Hypotheses .....	7
1.5. Significance of the Study .....	8
1.6. Scope of the Study.....	8
<b>CHAPTER TWO</b> .....	10
<b>LITERATURE REVIEW</b> .....	10
2.0. Introduction. ....	10
2.1. The Concept of Customer Retention .....	10
2.2. Theoretical Framework.....	13
2.2.1. Social Exchange Theory .....	13
2.3. Concept of Customer Satisfaction.....	14
2.4. The Concept of Customer Relationship Management Practices .....	21
2.5. Network Quality and Customer Retention.....	22
2.6. Perceived Value and Customer Retention .....	23
2.7. Customer Relational Experience and Customer Retention.....	24
2.8. Loyalty Programs and Customer Retention .....	26
2.9. Conceptual Framework.....	31

<b>CHAPTER THREE</b> .....	34
<b>RESEARCH METHODOLOGY</b> .....	34
3.0 Overview.....	34
3.1 Research Perspectives.....	34
3.1.1 Research Philosophy.....	34
3.1.2. Research Purpose.....	35
3.1.2. Research Approach.....	36
3.1.3. Time Horizon .....	37
3.1.4. Research Strategy .....	38
3.2 Target Population .....	40
3.3 Sampling .....	41
3.3.1. Probability Sampling Method .....	41
3.3.2. Sampling Technique .....	41
3.3.3. Sample Size .....	42
3.4. Data Collection, Instrument and Procedure .....	43
3.4.1. Type of Data.....	43
3.4.2. Data Collection Instrument .....	44
3.4.3 Data Collection Procedure .....	44
3.5. Measures of Reliability and Validity.....	45
3.5.1. Reliability of Study Measures .....	45
3.5.2. Validity .....	46
3.6. Data Analysis and Presentation.....	47
3.6.1. Assumptions of Regression Model.....	49
3.7. Ethical Issues.....	52
<b>CHAPTER FOUR</b> .....	53
<b>DATA ANALYSIS, PRESENTATION AND INTERPRETATION</b> .....	53
4.0. Introduction.....	53
4.1. Response Rate .....	53
4.2. Profile of the Respondents .....	53
4.3. Descriptive Statistics .....	55
4.4. Scale Reliability of Study Variables.....	56
4.5. Test for Normality and Linearity.....	57
4.6. Validity of the Study Measures .....	58
4.6.1. Content Validity .....	58

4.6.2. Construct Validity.....	58
4.7. Factor Analysis.....	59
4.7.1. Factor Analysis Results of Network Quality .....	59
4.7.2. Factor Analysis Results of Perceived Value .....	60
4.7.3. Factor Analysis Results of Customer Relational Experience .....	62
4.7.4. Factor Analysis Results of Loyalty Programs.....	63
4.7.5. Factor Analysis Results of Customer Satisfaction .....	64
4.7.6. Factor Analysis Results of Customer Retention.....	65
4.8. Correlation Analysis .....	67
4.9. Test of Hypotheses .....	68
4.9.1 Relationship between Customer Relationship Management Practices and Customer Retention .....	68
4.9.2 Relationship between Customer Relationship Management Practices and Customer Satisfaction.....	69
4.9.3:Multiple Regression Results on the Relationship between Customer Satisfaction and Customer Retention.....	70
4.9.4 Mediating Effect of Customer Satisfaction on the Relationship between Network Quality and Customer Retention .....	71
4.9.5 Mediating Effect of Customer Satisfaction on the Relationship between Perceived Value and Customer Retention.....	73
4.9.6 Mediating Effect of Customer Satisfaction on the Relationship between Customer Relational Experience and Customer Retention.....	74
4.9.7 Mediating Effect of Customer Satisfaction on the Relationship between Loyalty Programs and Customer Retention .....	75
<b>CHAPTER FIVE.....</b>	<b>78</b>
<b>SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS .....</b>	<b>78</b>
5.0. Overview.....	78
5.1. Summary of Findings .....	78
5.1.1. Effect of Network Quality on Customer Retention .....	79
5.1.2. Effect of Perceived Value on customer Retention .....	79
5.1.3. Effect of Customer Relational Experience on Customer Retention .....	80
5.1.4. Effects of Loyalty Programs on Customer Retention.....	81
5.1.5. Mediating Effect of Customer Satisfaction.....	82
5.2. Conclusions .....	83



5.4. Limitations of the Study .....	51
5.5. Contribution of the Findings to Theory and Practice .....	86
5.5.1. Contribution to Theory .....	86
5.5.2. Contribution to Practice .....	87
References.....	89
Appendix I: Request Letter to Respondents .....	101
Appendix II: Questionnaire for Customers of Mobile Phone Service Provider .....	101
Appendix III: Research Budget.....	<b>Error! Bookmark not defined.</b>
Appendix IV: Research Work Plan.....	<b>Error! Bookmark not defined.</b>
Appendix V: Calculation for The Sobel Test .....	104
Appendix VI: Results of Inferential Statistics on the Relationship of the Study Variables .....	106

## LIST OF TABLES

Table 3.1 Target Population .....	45
Table 3.1 Sampling Frame of the Public Universities in Western Kenya Region .....	47
Table 4.1 Demographic Profile of Respondents .....	55
Table 4.2 Descriptive Statistical Analysis of the Study Variables .....	56
Table 4.3 Cronbach’s Alpha Reliability .....	57
Table 4.4 One Sample Kolmogorov-Smirnov Test .....	58
Table 4.5 Network Quality Rotated Component Matrix .....	61
Table 4.6 Perceived Value Component Matrix.....	63
Table 4.7 Customer Relational Experience Rotated Component Matrix .....	64
Table 4.8 Loyalty Programs Rotated Component Matrix .....	66
Table 4.9 Customer Satisfaction Rotated Component Matrix .....	67
Table 4.10 Customer Retention Rotated Component Matrix .....	68
Table 4.11 Pearson Correlation Coefficient of Study Variable .....	69
Table4.12 Multiple Regression Results on the Relationship between CRM Practices and Customer Retention .....	71
Table4.14 Multiple Regression Results on the Relationship between CRM Practices and Customer Retention .....	72
Table4.14 Multiple Regression Results on the Relationship between Customer Satisfaction and Customer Retention .....	73
Table 4.13 Results of the Mediating Effect of Customer Satisfaction on the Relationship between Network Quality and Customer Retention .....	74
Table 4.14 Results of the Mediating Effect of Customer Satisfaction on the Relationship between Perceived Value and Customer Retention .....	76
Table 4.15 Results of the Mediating Effect of Customer Satisfaction on the Relationship between Customer Relational Experience and Customer Retention .....	77
Table 4.16: Results of the Mediating Effect of Customer Satisfaction on the Relationship between Loyalty Programs and Customer Retention .....	78
Table 4.20 Summaries of the Hypothesis Tests and Results .....	79

## LIST OF FIGURES

Figure 2.1. Conceptual Framework of the Effects of CRM Practices on Customer Retention .....	20
Figure 3.2 Deductive and Inductive Approaches .....	41

## **LIST OF ABBREVIATIONS AND ACRONYMS**

CRM	Customer Relationship Management
CCK	Communication Commission of Kenya
NQ	Network Quality
PV	Perceived Value
CRE	Customer Relational Experience
LP	Loyalty Programs
CS	Customer Satisfaction
CR	Customer Retention

## **OPERATIONAL DEFINITION OF TERMS**

**Customer relationship management practices-**It entails all aspects of interaction (network quality, perceived value, customer relational experience, loyalty programs) that a company has with its customer, whether it is sales or service-related. CRM are the principles, practices, and guidelines that an organization follows when interacting with its customers. From the organization's point of view, this entire relationship not only encompasses the direct interaction aspect, such as sales and/or service related processes, but also in the forecasting and analysis of customer trends and behaviors, which ultimately serve to enhance the customer's overall experience (Peng and Wang, 2006, Andaleeb, 1996).

**Network quality-** Is the availability, reliability and stability of the network which provides customer satisfaction. Equally, the extent of signal coverage is an important determinant in customer loyalty (Brown and Gulycz, 2001).

**Perceived value-** Refers to customer evaluation of what is fair, right, or deserved for the perceived cost of the offering (Bolton and Lemon, 1999).

**Relational experience and customer satisfaction-** This is the process of consumer behavior that describes the basic step that an ultimate consumer goes through in satisfying what customer want in the market which is problem recognition to information search and choice and post decision evaluation (Pine and Gilmore, 1990).

**Loyalty programs--** A reward program offered by a company to customers who frequently make purchases. A loyalty program may give a customer advanced access to new products, special sales coupons or free merchandise. Customers typically register their personal information with the company and are given a unique identifier, such as a numerical ID or membership card, and use that identifier when making a purchase.

**Customer satisfaction-**Customer satisfaction refers to the extent to which customers are happy with the products and services provided by a business. Customer satisfaction levels

can be measured using survey techniques and questionnaires. Gaining high levels of customer satisfaction is very important to a business because satisfied customers are most likely to be loyal and to make repeat orders and to use a wide range of services offered by a business (Zeithaml and Bitner ,2000).

**Customer retention-** Is the activity that a selling organization undertakes in order to reduce customer defections. Successful customer retention starts with the first contact an organization has with a customer and continues throughout the entire lifetime of a relationship. Customer retention statistics are typically expressed as a percentage of long term clients, and they are important to a business since satisfied retained customers tend to spend more, cost less and make valuable references to new potential customers (Bateson and Hoffman, 2002).

# **CHAPTER ONE**

## **INTRODUCTION**

### **1.0. Overview**

This chapter examines background information to the study, the statement of the problem, purpose of the study, the research objectives, hypotheses of the study and the scope of the study.

### **1.1. Background information**

In recent years, retaining customers has become increasingly more important since the business environment is dynamic and competitive. Therefore, as the competitive business environment becomes more turbulent, the most important issue the sellers face is no longer to provide quality products or services, but keep loyal customers who will contribute long-term profit to organizations (Tseng, 2007). Bateson and Hoffman (2002), define customer retention as focusing a firm's marketing effort towards the existing customer's base.

Many firms recognize the importance of customer's retention but relatively few understand the economics of customer retention within their own firms. It is claimed that 5% improvement in customer retention can cause an increase in profitability of between 25 and 85 percent depending on the industry (Kerin, Hartley, & Rudelius, 2009; Reichheld & Sasser, 1990). Likewise, it is easier to deliver additional product and service to an existing customer than to a first-time "buyer" (Kotler & Keller, 2006; Wills, 2009). Organizations both private and public in today's dynamic market place are increasingly leaving anticipated marketing philosophies and strategies to the adoption of more customer-driven initiatives that seeks to understand, attract, retain and build long term relationship with profitable customers (Kotler, 2006, Gronroos, C 1994). This paradigm shift has undauntedly led to the growing interest in CRM practices that aim at ensuring

customer identification, interactions, customization and personalization that unreservedly lead to customer satisfaction, retention and profitability (Thompson, 2004, Gronroos *et al.*, 1996; Xu *et al.*, 2002, store, 2000). CRM practices is defined as, “activities that focuses on managing the relationship between a firm and its current and prospective customer base, as a key to success, (Gebert, 2003). It further, means developing a comprehensive picture of customer needs, expectations and behaviors and managing those factors to affect business performance. CRM practices help in building long lasting relationships and these relationships give a company joy of retained customers.

Customer Relationship Management (CRM) practices are the values and strategies or relationship marketing with particular emphasis on customer relationships turned into practical application. From extant literature, some of the CRM practices that influence customer satisfaction and retention include; service quality (network quality) (Brown and Gulycz, 2001; Antreas and Opoulos, 2003; perceived value (Oliver and DeSarbo, 1988; Bolton and Lemon, 1999), customer relational experience (Janiszewski, 2009; Li and Ho, 2008, Singh, 2008), loyalty programs (Deighton, 2000, and Kivetz and Simonson 2002).

Customer satisfaction is one of the most areas being researched in many service studies due to its importance in determining the success and the continued existence of the service business (Gursoy *et al.*, 2007). Customer satisfaction conceptually has been defined as feeling of the post utilization that the consumers experience from their purchase (Westbrook and Oliver, 1991; Um *et al.*, 2006). Opposite to cognitive focus of perceptions, customer satisfaction is deemed as affective response to a products or services (Yuan *et al.*, 2005). A consumer is deemed to be satisfied upon the experience weighted sum total produce a feeling of enjoyment when compared with the expectation



(Choi and Chu, 2001). In service studies, customer satisfaction is the customers' state of emotion after experiencing the service (Baker and Crompton, 2000; Sanchez *et al.*, 2006). Customer satisfaction is the extent of overall enjoyment that customer feel, the result that the service experience able to fulfill the customer desires, expectation, needs and wants from the service (Chen and Tsai, 2007). Taylor *et al.*, (2004) pointed out that customer satisfaction has a direct influence on customer loyalty. Kotler (2008) describes customer satisfaction is the feeling of happiness or unhappiness as a result of comparing the perceived performance of services or products with the expected performance. If the perceived performance does not meet the expected performance, then the customer will feel disappointed or dissatisfied. Homburg *et al.* (2008) suggested that customer satisfaction has been a crucial issue in marketing field in the past decades since satisfied customers are able to offer to the company such as customer loyalty and continuous profitability.

The focus of this thesis was on the mediating effect of customer satisfaction on the relationship between customer relationship management practices and customer retention among mobile phone service users in public universities of western Kenya region.

The demand for mobile phones in Kenya in the last few years has been more than most people expected and continues to expand. According to the Communications Commission of Kenya (CCK), mobile phone usage in Kenya has grown to an average of 65 percent a year for the past five years. This is twice the rate of growth in Asian countries. In Kenya, the growth rate is even higher. Statistics indicate that Kenya has more than 18 million subscribers, up from 6.5million in the year 2006 (Nokia, 2010). Penetration of mobile telephone in Kenya, like many other developing countries, is mainly driven by affordability and innovation.

Notwithstanding the impact of this revolution in peoples' lives and on the economy in general, there is a steady increase in dissatisfaction of the services offered by telecommunication providers. Consumers have raised varied concerns through traditional media, social media as well as direct complaints launched to the operators and regulators. Corporate customers in particular have voiced their concerns on the wanting quality of service offered by mobile telecommunication services providers. It is on this premise that this research was undertaken to establish the effect of CRM practices on customer satisfaction and customer retention.

### **1.3. Statement of the Problem**

When a new product hits the market every day, businesses in all industries face greater cut-throat competition than ever before. To counter competition firms are increasingly adopting more customer-driven initiatives that seeks to understand, attract, retain and build long term relationship with profitable customers (Kotler, 2006, Gronroos, 1994). In the telecommunication sector in Kenya firms have implemented Customer relationship management strategies to enhance customer satisfaction and retention. Some of the practices include improving Network quality, creating more superior customer value, enhancing customer relational experience and the introduction of loyalty programs. CRM practices help the organization to work smarter by optimizing services to the customers and maximizing revenue.

The key to stability in today's dynamic marketplace is in forging long-term customer relationships through customer relationship management practices and to succeed, a company must differentiate themselves through superior service and offer a consistent, convenient customer experience to gain an edge. They must abandon the view that customers represent immediate sales transactions and a quick buck. Customer

Relationship Management practices is the strongest and the most efficient approach in maintaining and creating relationships with customers, not only pure business but also ideate strong personal bonding within people. Once this personal and emotional linkage is built, it is very easy for an organization to identify the actual needs of a customer and help them to serve them in a better way. Customer relationship management practices can help make sure there is a thorough understanding throughout the organization of what customers really want, and then use that information to follow up with actions, solutions, and resolutions.

A number of studies have been carried out on the direct effect of individual CRM practices on customer satisfaction and retention. However, there are limited studies on the role of mediator in the relationships. Rahmat Madjid, (2013) examined customer trust as relationship mediation between customer satisfaction and loyalty also Peter Verhoef, (2003) focused on understanding of customer relationship management efforts on customer retention and customer share development.

The problem of this study was propelled by the need to empirically test the mediating role of customer satisfaction on the relationship between Customer relationship management practices and customer retention in the mobile phone service users in Kenya. This research will contribute to marketing literature by examining how customer satisfaction mediates the relationship between Customer relationship management practices on customer retention.

## **1.4. Objectives of the study**

### **1.4.1. General Objective of the Study**

The main objective of this study was to determine mediating effect of customer satisfaction on the relationship between customer relationship management practices on customer retention among mobile phone users in western Kenya region.

### **1.4.2. Specific Objectives of the Study**

- 1.** To determine the effect of CRM practices on customer retention
  - 1a)** To establish the effect of network quality on customer Retention
  - 1b)** To determine the effect of perceived value on customer Retention
  - 1c)** To assess the effect of relational experience on customer Retention
  - 1d)** To assess the effect of loyalty programs on customer Retention
- 2.** To assess the effect of CRM practices on customer satisfaction
  - 2a).** To establish the effect of network quality on customer satisfaction
  - 2b).** To determine the effect of perceived value on customer satisfaction
  - 2c).** To assess the effect of relational experience on customer satisfaction
  - 2d).**To assess the effect of loyalty programs on customer satisfaction
- 3.** To assess the effect of customer satisfaction on customer retention
- 4.** To assess the mediation effect of Customer Satisfaction on the relationship between CRM Practices and customer Retention.
  - 4a).**To assess the mediation effect of customer satisfaction on the relationship between network quality and customer Retention.
  - 4b).** To determine the mediation effect of Customer satisfaction on the relationship between perceived Value and Customer Retention.
  - 4c).** To determine the mediation effect of customer satisfaction on the relationship between relational experience and Customer Retention.

**4d).** To determine the mediation effect of customer satisfaction on the relationship between loyalty programs and Customer Retention.

### **1.4.3. Research Hypotheses**

**H0<sub>1</sub>:** CRM practices has no significant effect on customer retention

**H0<sub>1a</sub>:** Network quality has no significant effect on customer Retention.

**H0<sub>1b</sub>:** perceived value has no significant effect on customer Retention.

**H0<sub>1c</sub>:** Customer Relational Experience has no significant effect on customer Retention.

**H0<sub>1d</sub>:** Loyalty programs have no significant effect on customer Retention.

**H0<sub>2</sub>:** CRM practices has no significant effect on customer satisfaction

**H0<sub>2a</sub>:** Network quality has no significant effect on customer satisfaction.

**H0<sub>2b</sub>:** perceived value has no significant effect on customer satisfaction.

**H0<sub>2c</sub>:** Customer Relational experience has no significant effect on customer Satisfaction.

**H0<sub>2d</sub>:** Loyalty programs have no significant effect on customer satisfaction.

**H0<sub>3</sub>:** Customer satisfaction has no significant effect on customer retention

**H0<sub>4</sub>:** Customer satisfaction does not significantly mediate the relationship between CRM practices and Customer Retention

**H0<sub>4a</sub> :** Customer Satisfaction does not significantly mediate the relationship between network quality and customer retention.

**H0<sub>4b</sub> :** Customer satisfaction does not significantly mediate the relationship between perceived value and customer retention

**H0<sub>4c</sub>:** Customer satisfaction does not significantly mediate between relational experience and Customer Retention.

**HO<sub>4d</sub>**) Customer satisfaction does not significantly mediate the relationship between loyalty programs and customer retention.

### **1.5. Significance of the Study**

This study provides empirical support for mediating effect of customer satisfaction on the relationship between CRM practices and customer retention in the in the mobile service sector in Kenya.

Marketing students and scholars will benefit from this research as a source of literature in the customer relationship management practices. The students/scholars will also gain new knowledge and insight on the importance of customer relationship management practices and customer retention.

The managers of mobile phone service providers will find new information on the factors influencing the buying behavior of customers and come up with strategies to address the ever changing customer needs to enhance customer retention. Further the information derived from this study will guide managers in designing workable CRM practices in order to r create and deliver customer value, thereby achieving customer satisfaction and customer retention.

### **1.6. Scope of the Study**

The study focused on the mediating effect of customer satisfaction on the relationship between customer relationship management practices on customer retention among mobile phone users in western Kenya region. The study was carried out in Public Universities of Western Kenya Region which adequately supported the research findings. It covered six public Universities in Western Kenya Region. The sample population was limited to only employees of those six universities. The study was conducted in Five months. Data was collected from targeted respondents in the various Departments of the

Universities as was provided in the payroll based on their payroll numbers; systematically in order to avoid repetition. The study covered the customers of the mobile phone service users in the Public Universities of western Kenya.

## **CHAPTER TWO**

### **LITERATURE REVIEW**

#### **2.0. Introduction.**

This chapter reviews and discusses relevant and documented information on the concept of the Customer Relationship Management practices, customer satisfaction and customer retention.

#### **2.1. The Concept of Customer Retention**

Customer retention is increasingly being seen as an important managerial issue, especially in the context of saturated market or lower growth of the number of new customers. It has been also acknowledged as a key objective of relationship marketing, primarily because of its potential in delivering superior relationship economics, i.e. it cost less to retain than to acquire new customers. (Ghavami 2006). Bateson and Hoffman (2002), define customer retention as focusing a firm's marketing effort towards the existing customer's base. This explain the view that instead of trying to acquire a new customers, firms engulfed in customers' retention efforts must make sure that the existing customer are satisfied as so to create and maintain long term relationship. (Payne 2005).

Many companies recognize the importance of customer's retention but relatively few understand the economics of customer retention within their own firms. Since the start of 1990s research has identified the financial benefits of customer's acquisition versus customer retention. Fred Reichard and Earl Sasser, published revealing research which demonstrated the financial impact of customer retention. They found even a small increase in customer retention produced a dramatic and positive effect on profitability: a five percentage points increase in customer retention yielded a very high improvement in



profitability in present value terms. These results have had a significant impact in drawing attention to the critical role customer retention has to play within CRM strategy (Payne 2005). Lovelock *et al* (1999), said in business context, loyalty is used to describe the willingness of a customer to continue patronizing a firm's goods and services over a long period of time and on a repeated and preferably exclusive basis, and voluntarily recommending the firm's products to friends and associates.

In their view, customers will continue to be loyal to a particular firm if they feel and realize that better value is being offered (Obeng *et al.*, 2006). Kotler (2009), assured that most important consideration to attain high customer loyalty is from firms to deliver high customer value. He continued to stress that it has been the practice by firms to devote much attention and effort to attracting new customers rather than retaining existing ones. In addition to that, traditionally, firms emphasize more on making sales rather building relationship, on pre-selling and selling rather than caring for the customer afterward. When addressing the term of customer retention for the telecommunication industry, the definition could be customized to "Customers continuously and with high level of commitment into consuming its products/services and being satisfied from the services/products". Therefore, to ensure the customer's continuity of consuming the telecommunication services, the telecommunication industries need to achieve customers' satisfaction first hence customer retention.

Customers are the fortitude of firms (Gupta and Zeithaml, 2006) and their main agenda is to produce a customer (Ang and Buttle, 2006). Firms would not be able to uphold and increase their performance without customers (Gupta and Zeithaml, 2006; Buttle, 2004) as firms are believed to have no revenues, no profits and therefore no market value (Ang

and Buttle, 2006). Furthermore, a worldwide survey conducted by “The Economist” revealed that about 65% of respondents (senior executives of multinational companies) had admitted that customers are their top most priority to achieve their targeted firm performance in the next three years (Gupta and Zeithaml, 2006). Similarly, several past studies claimed that the existence of a firm is mainly to create and sustain an advantageous relationship with its preferred customers (Ang and Buttle, 2006; Ryals and Knox, 2005). As such, customer retention has been the center of discussion (Larivie`re and Poel, 2005; Terblanche and Hofmeyr, 2005) and the key agenda of firms since the last decade (Gupta and Zeithaml, 2006; Buttle, 2004; Larivie`re and Poel, 2005). Saturated markets and high levels of competition within industries have necessitated the practice of customer retention strategies among firms (Singh, 2006; Honts and Hanson, 2011). In addition, it has been discovered that recruiting new customers is essentially a costly affair as compared to retaining the existing customers (Woo and Fock, 2004; Trasorras *et al.*, 2009; Ghavami and Olyaei, 2006). Actually, the practice is believed to enable the firms to sustain in the said intense competition besides enjoying significant savings from retaining existing customers. This is supported with past studies, which ascertained a significant relationship between improvement in satisfaction and customer retention (Ryals and Knox, 2005; Singh, 2006; Trasorras *et al.*, 2009; Stengel, 2003). For instance, firms can increase profits by 25 to 95 percent with a mere increase of 5 percent in customer retention rates.

## **2.2. Theoretical Framework**

This section reviewed major theoretical framework applicable to the study and understanding of the customer retention. The theories discussed underpin the study variables and show how theories may be used to explain the phenomena of CRM practices, customer satisfaction and customer retention.

### **2.2.1. Social Exchange Theory**

The theory attempts to explain the nature of the relationships between Customer relationship management practices, Customer satisfaction and Customer Retention. The theoretical model adopted for this study was derived from the social exchange theory (Homans, 1958), which posits that all human relationships are formed by the use of cost-benefit analysis and comparisons of alternatives. Homans suggested that when an individual perceives the cost of a relationship outweighs the perceived benefits, then the person will choose to leave the relationship. The theory further states that persons that give much to others try to get much from them, and persons that get much from others are under pressure to give much to them.

The social exchange relationships between two parties develop through a series of mutual exchanges that yield a pattern of reciprocal obligations to each party. Social exchange theory indicates that individuals are willing to maintain relationships because of the expectation that to do so will be rewarding. Individuals voluntarily sacrifice their self-benefits and contribute these benefits to other individuals with the expectation for more future gains. Thibaut and Kelly (1959) propose that whether an individual retains a relationship with another one depends on the comparison of current relationship, past experience and potential alternatives. The constant comparison of social and economic

outcomes between a series of interactions with current partners and available alternatives determines the degree of an individual's commitment to the current relationship.

The theory is appropriate for this study because service encounters can be viewed as social exchanges with the interaction between service provider and customer being a crucial component of satisfaction and providing a strong reason for continuing a relationship (Barnes, 2007). Social exchange theory attempts to account for the development, growth and even dissolution of social as well as business relationships. In other words, people (or business firms) evaluate their reward - cost ratio when deciding whether or not to maintain a relationship. Rewards and costs have been defined in terms of interpersonal (e.g. liking, familiarity, influence), personal (gratification linked to self esteem, ego, personality) and situational factors (aspects of the psychological environment such as a relationship formed to accomplish some task). In a services context, considering the level of interpersonal contact needed to produce services, there is a range of psychological, relational and financial considerations that might act as a disincentive for a hypothetical change of service providers. In the late 1960s and early 1970s, exchange theory began to play a major role in family studies. Scholars pointed out how exchange theory could be applied to a variety of family issues such as mate selection, courtship, sexual bargaining, marital quality, marital power, family violence, and many others at both the micro- and macro-levels.

### **2.3. Concept of Customer Satisfaction**

Customer satisfaction is perceived as a relative judgment that considers the qualities versus the cost and efforts obtained through a purchase (Ostrom and Lacobucci, 1995). Customer satisfaction is considered as important outcome of a buyer-seller

interaction (Roos *et al.*, 2006; Smith and Barclay, 1997). The literature contains two general conceptualizations of customer satisfaction: transaction-specific satisfaction and cumulative satisfaction (Bolton and Drew, 1991; Cronin and Taylor, 1994; Shankar *et al.*, 2003). While transaction-specific satisfaction may provide specific diagnostic information regarding a specific product or service encounter, cumulative satisfaction resulting from a series of transactions or service encounter is a more fundamental indicator of a firm's past, current and future performance (Anderson *et al.*, 1997; Lam *et al.*, 2004; Oliver, 1997). Therefore this study focuses on cumulative satisfaction and defines satisfaction as the emotional state developed from a relationship that resulted from customer interactions over time.

The notion of customer satisfaction is part of a wider focus on building total customer value, which can be defined as: "the perceived monetary value of the bundle of economic, functional and psychological benefits customers expect from a given market offering" (Kotler and Keller, 2009). Zeithaml and Bitner (2000), define customer satisfaction as follows: "Satisfaction is the customer evaluation of a product or service in terms of whether that product or service has met their needs and expectations.

Customer satisfaction has been fundamental to the marketing concept for over three decades (Parker and Mathews, 2001). It is widely recognized in the good and service sectors that customer satisfaction as the main performance indicator and the key to success for any business organization (Mihelis, Grigoroudis, Siskos, Politis, and Malandrakis, 2001). However, the intangible nature of customer satisfaction make the term hard to measure. Therefore, many researchers attempt to discover the antecedents and consequences of customer satisfaction in order to provide a better understanding of

customer, increase market share and profitability, reduce cost and enhance product or service performance as well as internal quality control (Anderson and Sullivan, 1993; Ndubisi and Chan, 2005). Sprowls and Asimow (1962) contrasted and discussed customer behavior model and reported that customer satisfaction result in repeated purchase and emphasize the importance of customer satisfaction for the organization. In early 1970s, Anderson (1973) and Olshavask and Miller (1972) investigated customer satisfaction based on the expectation and perceived product performance. Churchill and Suprenant (1982) study identify the antecedent and construct measurement of customer satisfaction based on disconfirmation paradigm. Previous studies define customer satisfaction as “disconfirmation paradigm” (Churchill and Suprenant, 1982), which is a result of confirmation/disconfirmation of expectations that compare product (or service) performance with their expectations and desire (Spreng, MacKenzie, and Olshavsky, 1996). Boulding, Kalra, Staelin, and Zeithaml (1993) conceptualized customer satisfaction into transaction specific and cumulative (Anderson, Fornell and Lehmann, 1994). The transaction specific viewed customer satisfaction as evaluative judgement after a specific buying process (Hunt 1977; Oliver, 1993). However, cumulative customers’ satisfaction emphasizes more on the total evaluation based on total consumption over time (Johnson and Fornell 1991; Fornell 1992). Other researchers consider the term customer satisfaction as an attitude or evaluation formed by customers who compares pre-purchase expectations about the outcome of a product or service from the actual performance they received (Oliver, 1980; Fornell, 1992).

According to Hoyer and MaCInnis (1997), consumers measure their experiences of a product or service after acquisition, consumption and disposition. Customer satisfaction / dissatisfaction require experience with the product which depends on the quality and

value of the service (Anderson *et al.*, 1994). Any discrepancy may cause disconfirmation (Hoyer *et al.*, 1997), thus, failure to meet the needs and expectations is assumed to result in dissatisfaction with the product or service". Hoyer and MaCInnis (1997), argued that a favourable outcome means they are satisfied whilst an unfavourable outcome results in dissatisfaction. The conceptual relationship between customer satisfaction and service quality has generated mixed results among researchers. Anderson *et al.* (1994) point out a distinction between customer satisfaction and future experience a customer gets when he comes into contact with a product or service and value received. Recent studies have also pointed out that service quality is an antecedent of customer satisfaction (Anderson and Sullivan, 1993; Cronin and Taylor, 1992). There is however, consensus that further studies would have to be done on this issue. Satisfaction is based on the customer's previous experiences with the service provider, advice of friends and associates, competitors offering and information from marketers (Kotler, 1997). It has also been argued that satisfaction/dissatisfaction with a product or pleasure will lead to satisfaction. In contrast, negative emotions such as grief, sadness, distress, sorrow, regret, disappointment, anger, agitation, will engender dissatisfaction (Zeithaml and Bitner, 2000; Hoyer and MaCInnis, 1997). Services are influenced by customers' state of mind and emotions, even Positive feelings such as happiness, excitement.

Customers stay longer in consuming company services due to a developed sense of security and loyalty brought about by the satisfaction and they deepen their relationship with the company. Customers will also demonstrate less price sensitivity, due to the fact that the products and services provided exceed the customers' expectations and thus raising the individual switching costs. Customers tell and recommend company product or service. Satisfied customers tend to tell others of the benefits of the products and

services received, thus marketing the organizations products and services. Theoretically, service attributes can be considered as a cognition-based construct, while customer satisfaction is mainly an effective and evaluative response (Oliver, 1993).

Social science literature indicates that cognitive thought processes trigger affective responses (Weiner, 1996), suggesting that customer assessments of service attributes affect their satisfaction attitude. That is, the degree to which suppliers could meet the requirements of customers influenced the strength of the customers' positive attitude toward the service providers (Turnbull and Moustakatos, 1996). Customer satisfaction is a complex construct and has been defined in various ways (Besterfield, 1994; Barsky, 1995; Kanji and Moura, 2002; Fecikova, 2004). Recently, researchers have argued that there is a distinction between customer satisfactions as related to service experiences. The distinction is due to the inherent intangibility and perishability of services, as well as the inability to separate production and consumption. Hence, customer satisfaction with services and with goods may derive from, and may be influenced by, different factors and therefore should be treated as separate and distinct (Veloutsou *et al*, 2005).

Research has shown that it cost between five to six times more to attract a new customer than to keep an existing customer. Companies can also boost profits anywhere from 25% to 125% by retaining merely 5% more existing customer and also that happy customers will tell to others of their positive experience, whereas dissatisfied customers tell 9 to 12 how bad it was. It is also assumed that Only one out of 25 dissatisfied customers will express dissatisfaction and Two third of customers do no feel valued by those serving them.(Adapted from Gary Luck, The Ash ridge journal, Customer Satisfaction Strategy, autumn (2006).



The customers will have expectations that relate to the company branches and offices that they visit their staff and deal with the organization as all customers' needs and wants change over time and thus the organization seeking to satisfy these needs has to be dynamic and responsive to the customer's expectations. Schneider and Bowen (1995) assert that "service organizations must meet three key customer needs to deliver service excellence," Security, esteem and justice. They also identified an array of service quality factors that are important for customers including timeliness and convenience, personal attention, reliability and dependability, employee competence and professionalism, empathy, responsiveness, assurance, and availability and tangibles such as physical facilities and equipment and the appearance of personnel.

Customer satisfaction holds the potential for increasing the organizations customer base, increase the use of more volatile customer mix and increase the firm's reputation, (Fornell1992, Levesque and Mc Daugall, 1999). This means that firms in the mobile industry should satisfy their customers so that they can become loyal and remain with them. Marketing theory and practice suggest that mobile phone firms should improve their service by satisfying their customers, so as to obtain and sustain advantage in the intensely competitive business environment. This is because the main output of customer satisfaction is customer loyalty, and a firm with bigger share of loyal customers, profit from increased repurchase rate, greater cross buying potential, higher price willingness, positive recommendation behavior and lower switching tendencies. Furthermore, long term customers tend to take less of company time and are sometimes less sensitive to the price, Gan *et al* (2006). They further indicate that retaining customers become the priority for most enterprises and there is compelling arguments for managers to carefully consider the factors that might increase customer retention rate. In any case, the cost of creating a

new customer has been estimated to be five times the cost of retaining existing customers, (Reichheld 1996). A retained customer will always show resistance to competitors' enticement and will be able to give both solicited and unsolicited referral (Omotayo *et al*, 2008). Customer retention is, therefore, crucial to mobile cellular companies; because improvement in customer retention can cause an increase in profitability; depending upon the industry (Reichheld and Sasser, 1990). The mobile telephone industry has undergone rapid changes in the recent years. The deregulation of the industry has caused a lot of service providers to enter the industry hence increasing the competition in the industry. The competition in the industry can be described as fierce and stiff.

The cellular phone companies are, therefore, doing everything possible to attract new customers and retain the existing ones. Service quality has, therefore, become very crucial for the service providers in the retention of their customers. In recent times, subscribers have complained vehemently on the quality of services provided by service providers. A substantial number of customers of mobile telephones have taken service providers to task for rendering unsatisfactory services. However, there is little empirical research undertaken, as far as can be ascertained on how quality service leads to customer retention in the mobile telephony industry. The study aims at investigating whether a service provider in general is doing what customers perceive as quality service to improve customer retention. The study is undertaken to clarify certain questions related to customer retention in the mobile telephone Industry.

## **2.4. The Concept of Customer Relationship Management Practices**

CRM practices is defined as, “systems that focuses on managing the relationship between a company and its current and prospective customer base, as a key to success, (Gebert, 2003). It further, means developing a comprehensive picture of customer needs, expectations and behaviors and managing those factors to affect business performance. CRM activities help in building long lasting relationships and these relationships give company’ joy of retained customers. Relationship marketing is a way to obtain trust and satisfaction, which in turn ensures sustainable success of an organization, (Lo, 2012). It is also regarded as part of sales function; as sales department study buying habits and trends of customers and try to match service level. Customer relationship management practices have attracted the attention of both marketing practitioners and researchers over the last decade. Despite, or maybe due to, the attention drawn to the subject, a clear agreement on what CRM practices is and especially how CRM practices should be developed remains lacking. A CRM practice is the values and strategies or relationship marketing with particular emphasis on customer relationships turned into practical application. (Peelen *et al.*, 2006). CRM practices are a strategy view of how to handle customer relationship from a company perspective. “The strategy deals with how to establish developed and increase customer relation from profitability perspective, based upon the individual customer needs and potentials.

The basic underlying CRM practice is that the basis of all marketing and management activities should be the establishment of mutually beneficial partnership relation with customers and other partners in order to become successful and profitable” (Ghavami *et al.*, 2006). “A CRM practice is the integration of customer focuses in marketing, sales, logistics, accounting i.e. in all parts of the organization operation and structure. Those are

the activities a business performs to identify, qualify, acquire, develop and retain increasingly loyal and profitable customers by delivering the right products or services to the right customer through the right channel at the right time and the right cost” (Johansson and Storm, 2002). CRM practices can best be described as an evolution of marketing from product or brand management to customer management (Peelen 2006). According to Xu and Yen et al (2002) states that successful companies will use customer information to build relationships on the levels that customers want them and by organizing the information about each customer a singular view can be made of each client throughout the company no matter how many customers they have.

## **2.5. Network Quality and Customer Retention**

Provision of a reliable service which can satisfy customers, is critical for retaining customers and a tool to protect organizations from customer churn (Brown and Gulycz, 2001). The relationship between service quality and customer satisfaction is somewhat reciprocal. Previous research on this relationship can be divided into two schools of thoughts, one considers a satisfied customer perceived highly about service quality (Brown and Gulycz, 2001), and the other argue that service quality leads to customer satisfaction (Antreas and Opoulos, 2003; Cronin and Taylor, 1992; Spreng and MacKoy, 1996). Nevertheless both schools agree that there is a strong correlation between customer satisfaction and service quality.

Availability, reliability and stability of the network are key in customer satisfaction. Equally, the extent of signal coverage is an important determinant in customer loyalty. With the onset of money transfer services, real time delivery of transactional messages is now essential. To this extent, measurement of customer satisfaction in relation to network

performance is important. SERVQUAL model developed by Parasuraman *et al* (1988) suggested that there is a difference between customer satisfaction and the provider's actual service performance.

Delivering a service performance, which can satisfy customers, is critical for retaining customers and a tool to protect organizations from customer churn (Brown and Gulycz, 2001). Marketing scholars and practitioners equally emphasize on the issue of customer satisfaction or generating loyalty among customers, which helps in maintaining existing cash flows and guarantee stable future (Teas, 1994; Zeithaml *et al.*, 1996). While the manufacturing sector is concerned with the repurchase, most of the services depend on the continuity and thus focus on customer retention (Anderson *et al.*, 1994). In an environment with reduced calling rates such as Kenyan markets, customer satisfaction has now become vital.

## **2.6. Perceived Value and Customer Retention**

Perceived value has its root in equity theory, which considers the ratio of the consumer's outcome/input to that of the service provider's outcome/input (Oliver and DeSarbo, 1988). The equity concept refers to customer evaluation of what is fair, right, or deserved for the perceived cost of the offering (Bolton and Lemon, 1999). Perceived costs include monetary payments and non-monetary sacrifices such as time consumption, energy consumption, and stress experienced by consumers. In turn, customer-perceived value results from an evaluation of the relative rewards and sacrifices associated with the offering. Customers are inclined to feel equitably treated if they perceive that the ratio of their outcome to inputs is comparable to the ratio of outcome to inputs experienced by the company (Oliver and DeSarbo, 1988). And customers often measure a company's ratio of

outcome to inputs by making comparisons with its competitors' offerings. Customer value is "the fundamental basis for all marketing activity" (Holbrook, 1994, p. 22). And high value is one primary motivation for customer patronage. In this regard, Sirdeshmukh, Singh, and Sabol (2002) argue that customer value is a superordinate goal and customer loyalty is a subordinate goal, as it is a behavioral intention. According to goal and action identity theories, a superordinate goal is likely to regulate subordinate goals. Thus, customer value regulates "behavioral intentions of loyalty toward the service provider as long as such relational exchanges provide superior value" (Sirdeshmukh *et al.*, 2002, p.21). Prior empirical research has identified perceived value as a major determinant of customer loyalty in such settings as telephone services (Bolton and Drew, 1991), airline travel and retailing services (Sirdeshmukh *et al.*, 2002). Chang and Wildt (1994) report that customer-perceived value has been found to be a major contributor to purchase intention.

## **2.7. Customer Relational Experience and Customer Retention**

The consumer's satisfaction or dissatisfaction is consequences of consumption or service experiences (Janiszewski, 2009). The process of consumer behavior describe the basic step that an ultimate consumer goes through in satisfying what customer want in the market which is problem recognition to information search and choice and post decision evaluation (Pine and Gilmore, 1990). Customer retention is based on experiences in the interpretation of the exchange relationship in the marketplace. The ongoing buyer seller relationships take many different forms. The buyer's perception of the effectiveness of the exchange relationship is a significant mobility barrier and potential competitive advantage for the seller that insulates from price competition.

Relationship Quality emerged from the field of Relationship Marketing (RM). Due to the importance of relationship marketing in today's businesses, relationship quality is essential for assessment of relationship strength and the satisfied degree of customer needs and expectations (Crosby and Evans and Cowles, 1990; Smith, 1998). Successful exchange events can finally lead to an enduring buyer-seller relationship if they are properly treated from both a buyer and a seller's perspectives (Crosby *et al.*, 1990). In some service contexts, since service is invisible and heterogeneous, customers would feel high uncertainty and risk in the transaction (Li and Ho, 2008). Whereas, good relationship quality could reduce service uncertainty and risk for the purpose of increasing customers' reliability to develop long-term relationships (Crosby *et al.*, 1990; Li and Ho, 2008). In other words, higher quality of relationship creates association between service providers and customers, and fosters long-term stable exchanges where both parties can gain mutual benefits (Singh, 2008).

Relationship quality does not have a widely accepted definition and measures (Singh, 2008). Various dimensions have been put forward to measure relationship quality within marketing researches. One attempt to conceptualize relationship quality has been proposed by Crosby *et al.* (1990), who viewed relationship quality as a high-order construct and should contain at least two dimensions: trust and satisfaction. Morgan and Hunt (1994) drew commitment-trust theory by proposing that trust and commitment are two basic constructs for measuring relationship quality. By integrating different research viewpoint, Chakrabarty, Whitten and Green (2007) discussed that relationship quality is measured in terms of trust, commitment, culture, interdependence, and communication. Otherwise, Lages *et al.* (2005), from a perspective of business organization rather than consumers, suggested that relationship quality reflected the intensity of information

sharing, communication quality, long-term orientation and satisfaction with the relationship between the exporter and importer. Although there are no consensus regarding the components that form up relationship quality, it is generally accepted that trust and satisfaction are two significant factors for measuring relationship quality. Especially in the context of service markets, high relationship quality perceived by customers is achieved through customer trusts and customer satisfaction, which are two key points for service providers to consolidate stable long-term relationship with their customers, and in turn achieve customer retention and loyalty behavior. Therefore, we study relationship quality by focusing on trust and satisfaction from customers' perspectives.

## **2.8. Loyalty Programs and Customer Retention**

Loyalty programs have long been an important element of customer relationship management for firms. Information technology that enables firms to practice individual-level marketing has facilitated the spread of loyalty programs into such diverse industries as gaming, financial services, and retailing (Deighton 2000). Actually, academic researchers have begun to study loyalty programs. Behaviorally oriented researchers, such as Soman (1998) and Kivetz and Simonson (2002), have studied the effect of delayed incentives on consumer decisions. Zhang, Krishna, and Dhar (1999), Kim, Shi, and Srinivasan (2001), and Kopalle and Neslin (2003) have proposed analytical models to study the impact of loyalty programs in categories with different structures. This study contributes to the literature that is focused on empirically measuring response to loyalty programs (Drèze and Hoch 1998; Sharp and Sharp 1997).



Loyalty programs that base rewards on cumulative purchasing are an explicit attempt to enhance retention. Such programs encourage repeat buying and thereby improve retention rates by providing incentives for customers to purchase more frequently and in larger volumes. However, dynamically oriented promotions, such as loyalty programs, represent just one possible technique for increasing customer retention. Repeat buying may also be encouraged through various means such as short-term discounts on merchandise or reduced shipping charges. Therefore, it is important to develop models that can simultaneously estimate the influence of dynamic and current factors on long term customer behavior. A relevant study by Sharp and Sharp (1997) analyzes individual-level data by using a one-period switching model to measure the ability of a loyalty program to alter normal repeat-purchase rates.

Unfortunately, the study's results are inconclusive. In contrast, Drèze and Hoch (1998) report on a category specific loyalty program that results in increases for both the specific category and total store traffic. It should be emphasized that studies that question the value of loyalty programs (e.g., Dowling and Uncles 1997; Sharp and Sharp 1997) are largely based on research that uses single-period switching models. Additional research with models that fully replicate the dynamics of consumer response is needed to judge the effectiveness of dynamically oriented loyalty programs. For a frequency program to be effective in increasing loyalty, it must have a structure that motivates customers to view purchases as a sequence of related decisions rather than as independent transactions. That is, the structure must give customers an incentive to adopt a dynamic perspective. O'Brien and Jones (1995) suggest that the major factors that customers consider when evaluating programs are the relative value of awards and the likelihood of achieving a reward.

Furthermore, the likelihood of achieving a reward is a function of cumulative buying thresholds and time constraints. These design elements (e.g., thresholds, rewards, time constraints) combine with individual-level requirements and preferences to determine the customer's expected benefits of participating in a loyalty program. A special characteristic of loyalty programs is that their attractiveness may change dynamically with a customer's decisions. As purchases are made, both the customer's investment in the program and the customer's likelihood of earning a reward increase. Conversely, when a customer decides not to purchase in a given period, the likelihood of earning a reward decreases, because the customer moves no closer to the reward threshold, and the time left to earn rewards shrinks. The assessment of a program's attractiveness is further complicated because customers usually have imperfect knowledge of their future requirements and of the marketing policies of the firm. These dynamic factors are a challenge in the modeling of customer response to loyalty programs. This study empirically estimates the impact of a reward program and other elements of the marketing mix on customer buying behavior over time by developing a model that replicates dynamic consumer response to a loyalty program.

In contrast to previous models, the current model considers the impact of previous purchasing activity and customer expectations. The underlying behavioral assumption is that a reward program can motivate customers to base their purchasing decisions both on the current environment and on a long-term goal of achieving a frequent buyer reward. In other words, an effective reward program can encourage customers to make decisions that maximize expected utility over an extended time horizon rather than at each purchase occasion. This assumption is consistent with previous findings in the literature that expectations of the future can affect consumers' current-period decisions (e.g., Boulding

*et al.* 1993; Lemon, White, and Winer 2002). The empirical section of this article uses individual-level customer data from an Internet grocer to develop a dynamic model of customer retention. The model identifies the key factors that influence customers to make repeat purchases over time. A loyalty program that bases awards on the level of purchasing over a specified period is a prime example of such a decision problem. A further benefit of dynamic programming methods is that the estimated coefficients can be used to conduct simulations that replicate the consumer's dynamic decision process.

The primary contribution of this research is a framework for modeling the influence of a reward program and other marketing instruments on customer retention. Firms have multiple options for their promotional budgets, so models that can quantify the long-term effects of loyalty programs and other options (e.g., pricing, coupons, shipping fees) can help the firm justify its choices. Although most database marketing applications focus on tasks such as customer scoring that are designed to maximize the profitability of single-period mailing efforts (Bult and Wansbeek 1995), the current research focuses on customers' response to a range of marketing instruments over an extended period. The model provides the means to support multi-campaign direct marketing in environments in which customers have a dynamic orientation. In terms of substantive findings, the results suggest that the loyalty program under examination is successful in changing customer behavior and in motivating customers to increase purchasing. In addition to a statistically significant estimate for the loyalty reward parameters, formulations that assume that customers are dynamically oriented fit better than do models that do not include a dynamic structure.

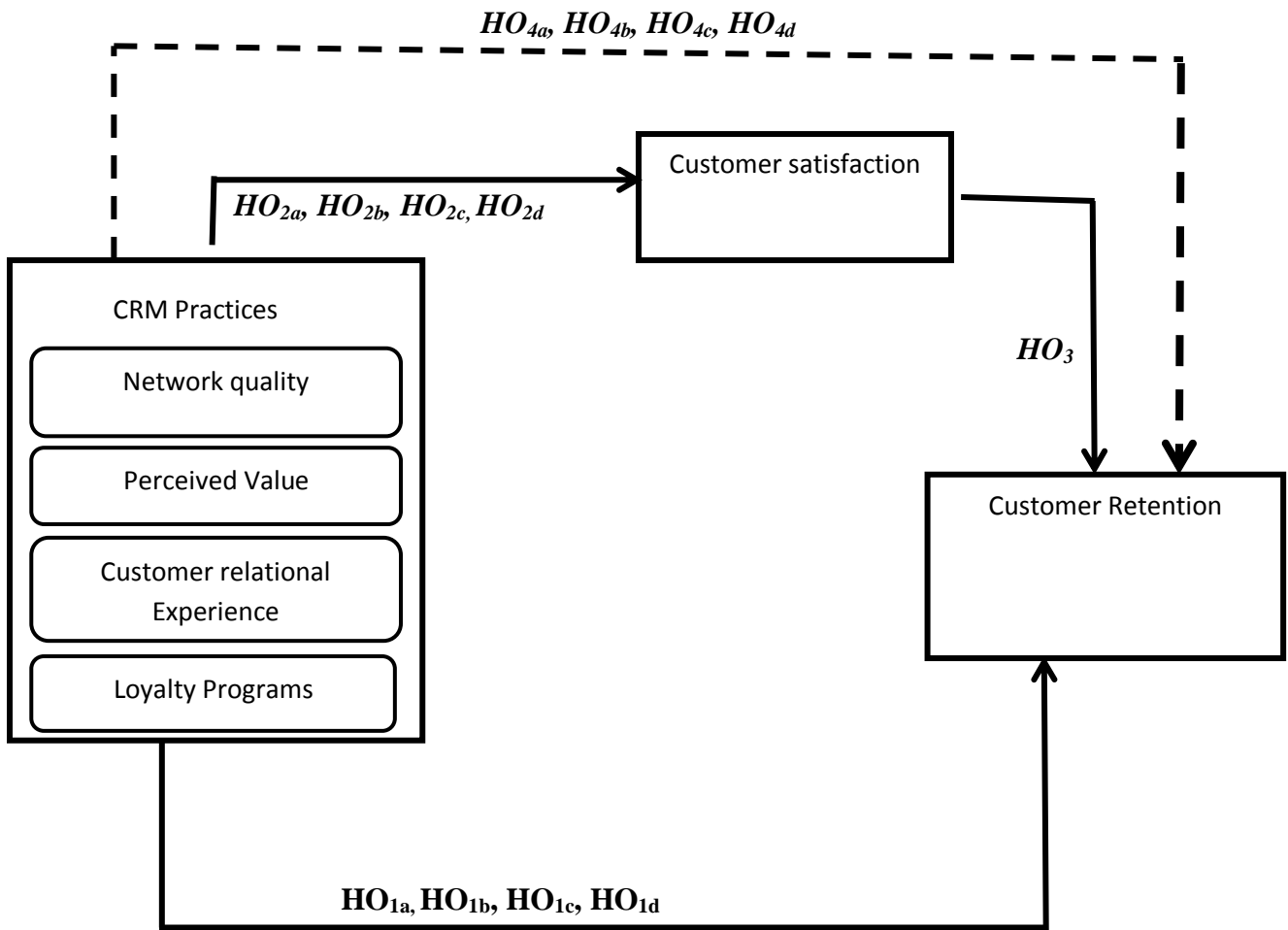
There are several theoretical reasons the reward based loyalty program being studied should positively affect both customer retention and customer share development. First, psychological investigations show that rewards can be highly motivating (Latham and Locke 1991). Research also shows that people possess a strong drive to behave in whatever manner necessary to achieve future rewards (Nicholls 1989). According to Roehm, Pullins, and Roehm (2002, p.203), it is reasonable to assume that during participation in a loyalty program, a customer might be motivated by program incentives to purchase the program sponsor's brand repeatedly. Secondly, because the program's reward structure usually depends on prior customer behavior, loyalty programs can provide barriers to customers' switching to another supplier. For example, when the reward structure depends on the length of the relationship, customers are less likely to switch (because of a time lag before the same level of rewards can be received from another supplier). It is well known that switching costs are an important antecedent of customer loyalty (Dick and Basu 1994; Klemperer 1995). Despite the theoretical arguments in favor of the positive effect of loyalty programs on customer retention and customer share development, several researchers have questioned this effect (e.g., Dowling and Uncles 1997; Sharp and Sharp 1997). In contrast, Bolton, Kannan, and Bramlett (2000) and Rust, Zeithaml, and Lemon (2000) show that loyalty programs have a significant, positive effect on customer retention and/or service usage. This study builds on the theoretical argument in favor of the positive effect that loyalty programs have on customer retention and customer share development.

## **2.9. Conceptual Framework**

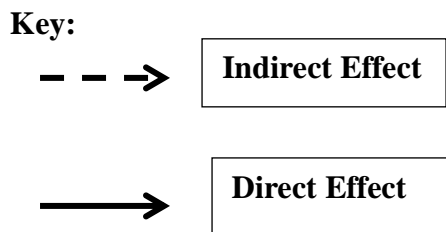
Conceptual framework is a system of variable relationships that is logically designed to present the systematic view of the research problem. It specifies more exactly the variables to be studied i.e. independent and dependent variables. This study demonstrated how customer retention depends on such variables as network quality, and loyalty programs and the mediator customer satisfaction. This study used the idea of organizational climate and the Bagozzi (1992) model which relates perception and attitudes to behavior as the conceptual foundation for its analysis.

The diagrammatic relationship between the independent and dependent variables is summarized in the figure 2.1 below;

**Figure 2.1. Conceptual Framework depicting the effects of CRM practices on customer**



Source: Developed by the author, (2014)



**Table 2.1: Operationalization of the Study Variables**

<b>Research Variable</b>	<b>Type of Variable</b>	<b>Number of Items measured</b>	<b>Type of Measurements</b>
Network quality	Independent Variable	8	Likert scale of 1-5
Perceived value	Independent Variable	8	Likert scale of 1-5
Relational experience	Independent Variable	10	Likert scale of 1-5
Loyalty programs	Independent Variable	13	Likert scale of 1-5
Customer satisfaction	Mediator	14	Likert scale of 1-5
Customer Retention	Dependent Variable	11	Likert scale of 1-5

**Source: Researcher, 2014**

## **CHAPTER THREE**

### **RESEARCH METHODOLOGY**

#### **3.0 Overview**

This chapter presents the methodological concerns that were used in conducting the research and provides a justification for each step taken. It involves the General Research Perspectives, Population of the Study, Sampling, Data collection, Reliability and Validity of Data Collection Instruments, Data analysis and Presentation.

#### **3.1 Research Perspectives**

Research methodology defines the systematic and scientific procedures used to arrive at the results and findings for a study against which claims for knowledge are evaluated (Nachamias *et al.*, 1996; Saunders *et al.*, 2007). A methodology is therefore shaped by the perspectives the researcher chooses to approach a study. The perspectives that usually shape a research work can be broadly grouped into five umbrellas (Research Philosophy, Research Purpose; Research Approach; Time Horizon; Research Strategy) (Saunders *et al.*, 2007);

##### **3.1.1 Research Philosophy**

Research Philosophy refers to the assumptions and beliefs that govern the way we view the world (Saunders *et al.*, 2007); it underpins the general approach and direction that the researcher chooses to take about the whole research. Many authors like saunders *et al* 2000:2007;Sullivan T.J. (2001); Cooper and Schindler (2006) and Malhotra and Birks (2007) agree that research can be influenced by positivism or phenomenological beliefs. Research philosophy is positivism where “knowledge or the world is thought to exist independent of people’s perceptions of it and that science uses objective techniques to



discover what exists in the world” (Sullivan T.J. 2001 p.47). On the other hand it is phenomenological where “reality of the world is thought to arise out of the creation and exchange of social meaning during the process of social interactions” (Sullivan T.J. 2001 P. 48). In this study positivism was chosen more than phenomenological perspective because we believe that customer retention as pertaining mobile phone service users can be defined objectively through the use of established theoretical frameworks and structured instruments to assess and analyze it, upon which generalizations can be made from the findings.

### **3.1.2. Research Purpose**

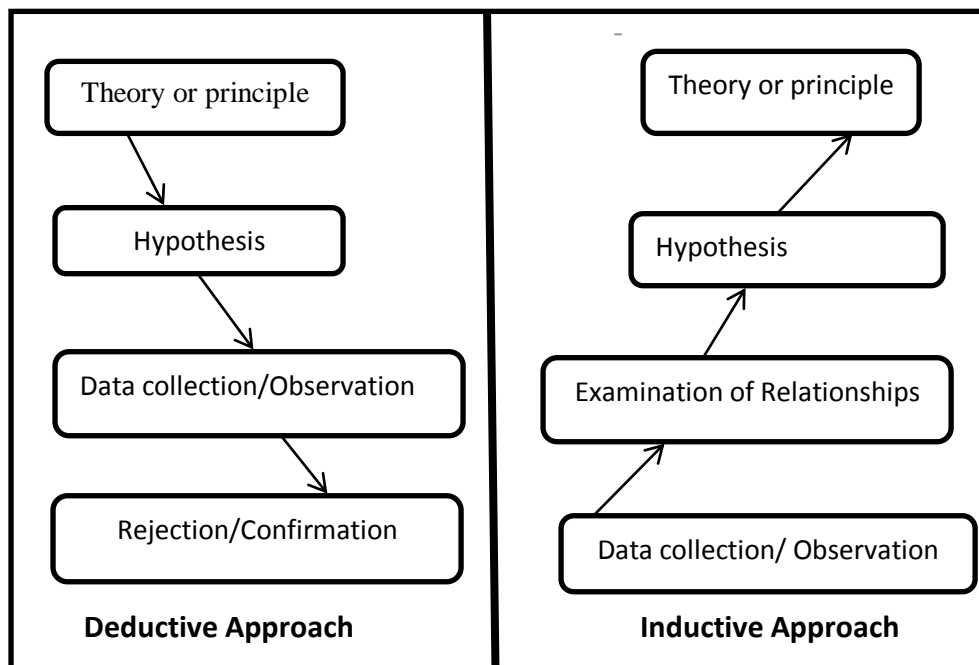
The research purpose is abroad statement of what the research hopes to achieve. According to purpose, research could be broadly divided into exploratory, descriptive and explanatory (Saunders *et al* 2000, 2007; Cooper and Schindler 2006). An explanatory research is a study that is conducted to “find out what is happening, to seek new insights, to ask questions and to assess phenomena in a new light” (Robson2002:59). It is mainly used when a researcher wants to have a clearer understanding of a situation or a problem, where the area of study is so new or vague, important variable may be known or defined. It therefore uses such methods as searching documented materials, asking for expert’s opinion, and conducting a focus group interviews.

A descriptive research is a study that seeks to “portray an accurate profile of persons, events or situations” (Robson 2002:59 in Saunders *et al* 2007). It involves formalizing the study with definite structures in order to better describe or present facts about a phenomenon as it is perceived or as it is in reality.

An explanatory research is a study that seeks to establish relationship that exists between variables. In other words, its purpose is to identify how one variable affects the other; it seeks to provide an explanation to the causes and/ or effects of one or more variables (Saunders *et al* 2000, 2007; Cooper and Schindler 2006, Malhotra and Birks, 2007). It is often termed as causal studies. They are also used when the purpose of the study is to answer “why” in a given context. This study had significant combination of both the two: Descriptive and explanatory purposes. Firstly, the study sought to describe or portray a reality regarding CRM Practices with customer retention and to better understand those CRM Practices that customers are satisfied or dissatisfied with, so it was descriptive. Secondly, the study sought to determine the effect of CRM Practices on customer retention and to examine its relationship therefore it was explanatory.

### **3.1.2. Research Approach**

Research may be approached from deductive or inductive perspectives. It is deductive where it begins with the development of a Theory or Hypothesis and a strategy is designed to test it in a context to verify or reject its claims. So it is thinking from general to specific. On the other hand, the approach is inductive where the research begins with an observation of a phenomenon in an environment, then data is collected upon which a theory is developed or generalization is made. Thus, thinking from specific to general.



**Fig 3.2. Deductive and Inductive Approaches**

**Source:** Based on (Sullivan T.J. 2001, Cooper and Schindler 2006, Saunders *et al*, 2007)

This study selected existing empirical theories and models, applying and testing them in measuring customer retention in the context of the mobile phone users in Kenya. Therefore this study is deductive.

### **3.1.3. Time Horizon**

According to time horizon, research design can be longitudinal or cross-sectional. Cross-sectional study focuses on a particular phenomenon at a specified period of time (Saunders *et al* 2007). In this case, one sample of a population can be taken and studied at particular time as in a single cross-sectional study or two or more samples of a target population could be studied once as in multiple cross sectional study (Malhotra and Birks 2007). On the other hand it is longitudinal where a particular phenomenon is studied at different periods of time. This can also take a form of a single longitudinal study where only one sample is studied at different time periods or multi-longitudinal where two or

more samples are studied at different periods of time. This study chose a cross-sectional study because data was collected from a cross section of Mobile phone service users once and not for different periods of time.

#### **3.1.4. Research Strategy**

Research Strategy is a general plan of how to answer the research questions. It is mainly guided by the research questions and research objectives, among other things. It determines to a large extent the choice of data collection methods. The main research strategies are action research, ethnographic studies, experiments, surveys, case study, grounded theory or archival research (Saunders *et al* 2000, 2007; Cooper and Schindler 2006; Malhotra and Birks 2007).

Action Research: The term “action Research” was first used by Lewin in 1946. It is a study that investigates a specific problem in a specific environment and afterwards an appropriate intervention is designed and implemented to solve the problem or improve the situation. It is a research in action rather than about action (Coghian and Brannick 2005 in Saunders *et al* 2007). It is diagnostic and evaluative, involves people or subjective of study in solving the problem and its more collaborative in nature.

Ethnographic studies: The word “ethno” is a Greek word that refers to a people, race or cultural group, combines with the suffix “graphy” meaning “knowing something or a knowledge of something” to produce the term ethnography. It is a study explains or describes the cultural bases of a people, usually conducted in the people’s natural environmental settings. In such a study, the research may choose to study a characteristic of a people’s culture by being part of and participating in the activities of the people or

situation being studied (Saunders *et al* 2000, 2007; Sullivan J.T. 2001; Cooper and Schindler 2006; Malhotra and Birks 2007).

Experiment: experiments are a type of causal study in which a researcher investigates changes in one variable while manipulating one or more other variables under controlled conditions. It is usually conducted in natural sciences and social psychology. Its main purpose is to study causal links in variables under given situations (Saunders *et al* 2000, 2007; Cooper and Schindler 2006).

Survey: A survey is a type of method associated with deductive approach and is conducted usually in business and management research to collect data that seek a characteristic or the opinion of a target population. It allows for the collection of large amount of data from a large population economically. It is most frequently conducted to answer research questions relating to “who, what, how much and how many” involved in a problem study. It often uses structured questionnaire and interviews.

Case study: A case study is “a strategy for doing research which involves an empirical investigation of a particular contemporary phenomenon within its real life context using multiple sources of evidence” (Robson 2002:178 in Saunders *et al* 2007). It is mostly used where the purpose is to gain a rich and an in-depth understanding of the context of the research and the processes being enacted (Morris and Wood, 1991 in Saunders *et al* 2007). It therefore uses multiple data collection sources, termed triangulation. Mostly it is related explanatory and exploratory research that seeks to find out “why”, “what”, and “how” issues in the case context. Yin (2003 in Saunders *et al*) maintains that case studies can be single or multiple, holistic or embedded.

Grounded theory: A grounded theory is often associated with inductive approach. It is “a research methodology for developing theory by letting the theory emerge from the data or

be grounded in the data” (Sullivan 2001). It is the strategy that seeks to build theory to predict or explain behavior

Archival research: It refers to a study that uses administrative records and documents as the principal sources of data. It is usually used when the purpose is to find out about the past and changes over time, and often forms the starting point for explanatory, exploratory or descriptive studies.

This study chose basically the survey strategy because it sought the opinion of a population about a specific subject matter and it combined the use of qualitative and quantitative methods

### **3.2 Target Population**

The target population for the study was the users of Mobile Phone services and enjoying the use of Customer Relationship Management practices. Burns and Groove (1997) argues that a target population is the entire aggregation of respondents that meets designated set of criteria. The Target population of the study consisted of staff in public universities’ in Western Kenya Region. The study defined Western Kenya as the region covering North Rift, former Nyanza province and former Western province. The public universities in the Western region included Moi, Masinde Muliro, Maseno, Jaramogi Oginga Odinga, University of Eldoret, Kisii University as at June, 2014. The staff in these Universities was characterized by grade, gender, working experience, level of education, and level of mobile phone exposure. The study targeted a population of 15007 which was indicated in official records in the payrolls of respective universities. The following is how the 15007 was arrived as a target population for this study;

**Table 3.1. Target Population**

<b>Strata</b>	<b>Target Population</b>
Moi University	6, 900
Maseno University	2,500
Masinde Muliro University of Science and Tech.	1,400
Jaramogi Oginga Odinga University	2,070
Kisii University	837
University of Eldoret	1300
<b>TOTAL</b>	<b>15007</b>

**Source: Survey Data**

### **3.3 Sampling**

The process of sampling involves any procedures using a small number of items or parts of the entire population to make conclusions regarding the whole population

#### **3.3.1. Probability sampling method**

Probability sampling is most common in survey-based studies where you need to make inferences from the sample about a population to answer questions or to meet set objectives (Saunders *et al.*, 2003). This method was chosen because each element in the population had a chance of being included in the sample (Roberts-lombard, 2002)

#### **3.3.2. Sampling Technique**

In selecting the sample of 250 respondents, a stratified simple random sampling was used. This technique was chosen because the population consisted of mobile phone users in each stratum. Stratified random sampling ensures greater representiveness across the

entire population and also results in a smaller sampling error, giving greater precision in estimation (Wegner, 2000).

### 3.3.3. Sample size

The sample size of each stratum in stratified random technique will be proportionate to the population size of the stratum when viewed against the entire population. This means that each stratum (each University) has the same sampling fraction (Castillo, 2009). The simple random sampling or probability sampling was used so that each and every one in the target population had an equal chance of inclusion. The sample size of Universities in each stratum and the number of respondents was obtained using coefficient of variation. Nassiuma (2000) asserts that in most surveys or experiments, a coefficient of variation in the range of 21% to 30% and a standard error in the range 2% to 5% is usually acceptable. The Nassiuma's formula does not assume any probability distribution and is a stable measure of variability. Therefore, a coefficient variation of 30% and a standard error of 2% were used in this study. The upper limit for coefficient of variation and standard error will be selected so as to ensure low variability in the sample and minimize the degree or error.

The formula will be;

$$S = \frac{N(CV)^2}{(CV)^2 + (N-1)e^2}$$

where S = the sample size

N = the population size

Cv = the Coefficient of Variation

e = standard error



Therefore, the sample size of Universities will be as indicated in the table below;

$$= \frac{15007(0.3^2)}{0.3^2 + 15007 - (0.02)^2} = 250$$

**Table 3.1: Sampling Frame of the Public Universities in Western Kenya Region**

<b>Name of University</b>	<b>Total Population</b>	<b>Sample Size</b>
Moi University	6, 900	102
Maseno University	2,500	36
Masinde Muliro University of Science and Tech.	1,400	20
Jaramogi Oginga Odinga University	2,070	30
Kisii University	837	13
University of Eldoret	1300	20
<b>TOTAL</b>	<b>15007</b>	<b>250</b>

**Source: Survey Data, 2014**

### **3.4 Data collection, Instrument and Procedure**

Primary Data was collected using a questionnaire. The percentages in table 3.2 reveal the number of questionnaires that were distributed to the respondents in the six strata at the public Universities in Western region of Kenya to respondents willing to participate in the research.

#### **3.4.1. Type of Data**

There are two types of data i.e. primary and secondary data. “Primary data is a data originated by the researcher for the specific purpose of addressing the research problem” (Malhotra N.K. and Birks D.F. 2007, pg 94). It is what the researcher originally collects

from the sample or target population. Secondary data are data collected for some purpose other than the problem at hand (Malhotra and Birks 2007, pg 94).

For purposes of this research, the researcher found it appropriate to use the primary data and the basic instrument for collecting that data was a questionnaire.

### **3.4.2. Data Collection Instrument**

The questionnaire was used as the data collection instruments to enable achieve the stated objectives. The instrument was appropriate as it helped in collecting the primary data. The questionnaire was designed based on the five point likert-type scales. This was so because it was to enable answer specific research questions and help achieve the objectives of the study. Closed ended questions were used as they were deemed to motivate the respondents and save time.

### **3.4.3 Data collection Procedure**

According to many scholars, in the use of survey strategy, the main instruments used are self-administered/interviewer administered or structured interviews and questionnaire or a combination of both (Saunders *et al* 2000; cooper and Schindler 2006; Malhotra N.K and Birks D. F 2007). A total of 250 copies of questionnaire were administered to the participants in the entire study. For this study, the questionnaire was administered by twelve research assistants, the research assistants were selected basing on their qualifications and availability. Those with Bachelor of Business Management were given first priority and further trained on how to effectively collect data.

### **3.5. Measures of Reliability and Validity**

Saunders et al 2000; cooper and Schindler 2006; and Malhotra N. K and Birks D. F. 2007 agree that in any research, it is expedient as a matter of reliability and validity check that the questionnaire should be pre-tested before final administration. The measurement scale in the questionnaire were deemed to have content and construct validity because they reflect the key components of CRM practices, Customer satisfaction and customer retention described in the literature.

#### **3.5.1. Reliability of study measures**

Reliability refers to whether a measurement instrument is able to yield consistent results each time it is applied. In order to test for reliability, Cronbach alpha coefficient was used since was the common method used for assessing reliability for a measurement scale with multi-point items. The reliability of the study measures was assessed by Cronbach's Alpha coefficient, which was used to assess the internal consistency or homogeneity among the research instrument items (Sekaran, 1992). The coefficient that reflects homogeneity among a set of items varies from 0 to 1. A good reliability should produce at least a coefficient value of 0.70 (Hair et al., 1995) but coefficients up to 0.62 are acceptable in social research studies (Kritsonis and Hurton, 2008). For this research the reliability coefficients met the criteria since all the reliability coefficients of the study variables were above 0.7. The concepts of validity and reliability require the researcher to ensure data is gathered and treated in a manner that will not include change to interpretation. This means there is need to record the problem of the study as closely as possible (Creswell, 2003). However there is no absolute reliability in undertaking a research. The use of questionnaires is one source of bias because of literacy problems which may be present in the target respondents.

### 3.5.2. Validity

Validity refers to whether the statistical instrument measure what it is intended to measure, i.e. accuracy of measurement (Sullivan T.J. 2001; Saunders *et al.*, 2000;2007). Validity is concerned with whether the findings are really what they appear to be about. This study will address the four approaches to establishing validity; face validity, content validity, criterion validity and construct validity (Zikmund *et al.*, 2010). Face validity was established by inspecting the contents being studied for their appropriateness to logically appear to reflect what was to be measured further, face validity involves assessing whether a logical relationship exist between the variables and the proposed measure.

To establish content validity this research was validated by determining the variables which have been defined and used in literature previously. Additionally, opinions from experts were sought to provide relevant inputs adding to what had been identified from the literature. Piloting a questionnaire was crucial and had highlighted ambiguities and other potential pitfalls (Somekh and Lewin, 2005). The pilot study was carried out in Egerton University. Feedback from the pilot study enabled the researcher to make changes where necessary to the questionnaire. In addition, the respondents may have experienced boredom because the questions may seem monotonous and towards the end of the questionnaire, the respondent may not pay keen attention to details of the question. Yet another bias that may be experienced in the course of this research is acquiescence. This issue may arise when the respondent tends to agree with an issue whenever they are not sure or undecided. To overcome this possible bias, the study was to provide a short questionnaire. Reliability test was performed on the questionnaire items using Cronbach alpha. However the threshold that is acceptable in closely related researches is 0.7 and this is what will be the guide to this study (Eisenmerger *et al*, 1986).

### 3.6 Data Analysis and Presentation

To establish the main characteristics of the study variables, descriptive statistics, factor analysis using principal component method with varimax rotation and Pearson correlations analysis was done and relevant tests conducted. To establish the statistical significance of the respective hypotheses, ANOVA of F-tests as well as multiple linear regression analysis was conducted, appropriate at 95 percent confidence level ( $\alpha=0.05$ ). The questionnaire returned from the field was coded, edited and keyed into the computer to facilitate statistical analysis. Statistical package for social sciences (SPSS) version 17 was used to assist in analysis. Analyzed data was interpreted and presented in tables.

Data analysis was undertaken using multiple regressions to examine the way a number of independent variables relate to one dependent variable. Multiple regression was used as a technique to analyze continuous variable (Steel and Ovalle, 1984). Baron and Kenny (1986, 2003) four steps were also used to test mediation; the SOBEL Test was also used to test the magnitude of confidence among the variables. The dependent variable is assumed to be a linear function as;

**Model 1:** Effects of CRM Practices on Customer Retention

$$CR = \beta_0 + \beta_1 NQ + \beta_2 PV + \beta_3 RE + \beta_4 LP + e,$$

**Model 2:** effects of CRM Practices on Customer Satisfaction

$$CS = \beta_0 + \beta_1 NQ + \beta_2 PV + \beta_3 RE + \beta_4 LP + e,$$

**Model 3:** Effects of Customer satisfaction on Customer Retention

$$CR = \beta_0 + \beta_1 CS + e,$$

Where;

CR= Customer retention; CS= Customer Satisfaction;  $\beta_0$  = a constant;  $\beta_1, \beta_2, \beta_3, \beta_4$ =beta values; CRM Practices (NQ – Network quality; PV – perceived value ; RE – Relational Experience; LP – Loyalty programs); e - Error term

#### **Model 4**

#### **Mediation**

A variable may be considered a mediator to the extent to which it carries the influence of a given independent variable (IV) to a given dependent variable (DV). Mediation can be said to occur when (1) the IV significantly affects the mediator, (2) the IV significantly affects the DV in the absence of the mediator, (3) the mediator has a significant unique effect on the DV, and (4) the effect of the IV on the DV shrinks upon the addition of the mediator to the model, Baron and Kenny (1986, 2003).

Mediation was tested using the four models as suggested by Baron and Kenny (1986)

$$CR = \alpha + \beta_1 CRM + e \quad \text{Model 1}$$

$$CS = \alpha + \beta_1 CRM + e \quad \text{Model 2}$$

$$CR = \alpha + \beta_1 CS + e \quad \text{Model 3}$$

$$CR = \alpha + \beta_1 CRM + \beta_2 CS + e \quad \text{Model 4}$$

#### **Sobel test equation**

$$(t\text{-test}) z\text{-value} = a*b/\text{SQRT}(b^2*sa^2 + a^2*sb^2)$$

Where;

a = raw (unstandardized) regression coefficient for the association between IV and mediator.

sa = standard error of a.

b = raw coefficient for the association between the mediator and the DV (when the IV is also a predictor of the DV).

sb= standard error of b.

### **3.6.1 Assumptions of Regression Model**

Most statistical tests rely upon certain assumptions about the variables used in the analysis. When these assumptions are not met the results may not be trustworthy, resulting in a Type I or Type II error, or over- or under-estimation of significance or effect size(s). As Pedhazur (1997, p. 33) notes, "Knowledge and understanding of the situations when violations of assumptions lead to serious biases, and when they are of little consequence, are essential to meaningful data analysis". However, as Osborne, Christensen, and Gunter (2001) observe, few articles report having tested assumptions of the statistical tests they rely on for drawing their conclusions. This creates a situation where we have a rich literature in education and social science, but we are forced to call into question the validity of many of these results, conclusions, and assertions, as we have no idea whether the assumptions of the statistical tests were met. Several assumptions of multiple regression are "robust" to violation (e.g., normal distribution of errors), and others are fulfilled in the proper design of a study (e.g., independence of observations).

#### **3.6.1.1 Normality**

Regression assumes that variables have normal distributions. Non-normally distributed variables (highly skewed or kurtotic variables, or variables with substantial outliers) can distort relationships and significance tests. There are several pieces of information that are useful in testing the assumption; visual inspection of data plots, skew, kurtosis, and P-P plots give researchers information about normality, and Kolmogorov-Smirnov tests provide inferential statistics on normality. Outliers can be identified either through visual inspection of histograms or frequency distributions, or by converting data to z-scores.

Bivariate/multivariate data cleaning can also be important (Tabachnick & Fidell, p 139) in multiple regressions. Most regression or multivariate statistics texts (e.g., Pedhazur,

1997; Tabachnick & Fidell, 2000) discuss the examination of standardized or studentized residuals, or indices of leverage. Analyses by Osborne (2001) show that removal of univariate and bivariate outliers can reduce the probability of Type I and Type II errors, and improve accuracy of estimates.

### **3.6.1.2. Linearity**

Standard multiple regression can only accurately estimate the relationship between dependent and independent variables if the relationships are linear in nature. As there are many instances in the social sciences where non-linear relationships occur (e.g., anxiety), it is essential to examine analyses for non-linearity. If the relationship between independent variables and the dependent variable is not linear, the results of the regression analysis will under-estimate the true relationship. This under-estimation carries two risks: increased chance of a Type II error for that independent variables, and in the case of multiple regression, an increased risk of Type I errors (over-estimation) for other independent variables that share variance with that independent variable.

Authors such as Pedhazur (1997), Cohen and Cohen (1983), and Berry and Feldman (1985) suggest three primary ways to detect non-linearity. The first method is the use of theory or previous research to inform current analyses. However, as many prior researchers have probably overlooked the possibility of non-linear relationships, this method is not foolproof. A preferable method of detection is examination of residual plots (plots of the standardized residuals as a function of standardized predicted values, readily available in most statistical software).

The third method of detecting curvilinearity is to routinely run regression analyses that incorporate curvilinear components or utilizing the nonlinear regression option available



in many statistical packages. It is important that the nonlinear aspects of the relationship be accounted for in order to best assess the relationship between variables.

### **3.6.1.3. Reliability of Measurement**

The nature of our educational and social science research means that many variables are also difficult to measure, making measurement error a particular concern. In simple correlation and regression, unreliable measurement causes relationships to be underestimated increasing the risk of Type II errors. In the case of multiple regression or partial correlation, effect sizes of other variables can be over-estimated if the covariate is not reliably measured, as the full effect of the covariate(s) would not be removed. This is a significant concern if the goal of research is to accurately model the “real” relationships evident in the population. Although most authors assume that reliability estimates (Cronbach alphas) of .7-.8 are acceptable (e.g., Nunnally, 1978) and Osborne, Christensen, and Gunter (2001) reported that the average alpha reported in top Educational Psychology journals was .83, measurement of this quality still contains enough measurement error to make correction worthwhile.

### **3.7. Limitations of the study**

Majorly the study utilized Baron and Kenny’s (1986) approach which is limited on data availability as well as on independent variable relationships. Second the findings may be limited generalization across populations of opportunities.

Third the study was based on the users of mobile phones in the public universities of western Kenya region and may therefore be limited in terms of external validity and generalizability.

Fourth, we do not know how seller perceived value impacts on buyer trust, satisfaction with and commitment to a customer.

Fifth, like most empirical research, the findings of this study are based on information generated from the phone users that is self-reported data. The information that customers generates is not the only source of information about CRM practices, Customer satisfaction and customer retention.

Sixth, the researcher would have wanted to cover more mobile phone users for the study but due to the limited time frame available for the study, only 250 questionnaires were administered.

Seventh, convincing customers to answer the questionnaires was rather challenging as some of them claim they are busy and therefore do not have time. Besides, some people could not respond to all the items on the questionnaire which makes them invalid and therefore have to exclude from the data.

Despite these challenges, the findings from the study were valid and would be of great benefit to mobile phone operators, telecommunication experts and regulators.

### **3.8. Ethical issues**

The major ethical concern which was considered important included; informed consent, confidentiality and privacy. The respondents were provided with adequate information concerning the study. The researcher explained to the respondents that participating in the study was voluntary and that they were free to withdraw from it at any time they deem fit. Also clarity was provided on the nature of the research and procedures, and they were allowed to ask questions before, during and at the end of the study. No one was coerced to respond to the survey. The respondent were also guaranteed protection through anonymity and by keeping the information given confidential and if there was going to be need for disclosure their consent was sought. All the respondents were treated with respect and equality.

## **CHAPTER FOUR**

### **DATA ANALYSIS, PRESENTATION AND INTERPRETATION**

#### **4.0. Introduction**

This Chapter consists of analysis, presentation and Interpretation of Data focusing on the mediating effect of customer satisfaction on the relationship between customer relationship management practices on customer retention among mobile phone service users in Western Kenya region. The descriptive statistics, correlations and the results of the regression models including their interpretations are presented.

#### **4.1. Response Rate**

The study intended to collect data from 250 respondents, but data was successfully collected from 222 respondents. This represents a response rate of 88.8 percent of the target population, which falls within the confines of a large sample size (Anderson, Sweeney and Williams, 2003)

#### **4.2 Profile of the Respondents**

The respondents' profiles of interest in this study were; Gender, Age of respondent, highest level of education, mobile phone service provider, and service provider used most and lengthy of time of usage of the services.

The total sample for the survey consists of 222 respondents. The gender distribution of the survey respondents is 65.3 per cent males and 34.7 per cent females. The results also indicated that the samples have age predominantly of 45 years and above, which is 46.4 per cent. More than 50 per cent of the respondents use Safaricom mobile phone service provider. Majority of the respondents have college or higher education level where 10.4 per cent are professional qualification, 13.5 per cent are diploma or advanced diploma

holder, 16.2 per cent have degrees and 53.2 per cent have postgraduate level of education. Only 6.8 per cent of respondents have attained high-school level. The results are presented in Table 4.1

**Table 4.1: Demographic Profile of Respondents**

<b>Variables</b>		<b>Frequency</b>	<b>Percentage</b>
<b>Gender</b>	Male	145	65.3
	Female	77	34.7
<b>Age</b>	18-24	20	9.0
	25-34	18	8.1
	35-44	81	36.5
	45 and above	103	46.4
<b>Level of Education</b>	O-Level	15	6.8
	Certificate	23	10.4
	Diploma	30	13.5
	Bachelor's Degree	36	16.2
	Post Graduate Degree	118	53.2
<b>Mobile Service Provider</b>	Safaricom	111	50
	Airtel	80	36
	Orange	28	12.6
	Yu-mobile	3	1.4
<b>Mobile Service Provider used often</b>	Safaricom	104	46.8
	Airtel	68	30.6
	Orange	37	16.7
	Yu-mobile	13	5.9
<b>Period of Usage</b>	1-3 years	18	8.1
	4-7 years	91	41.0
	8-10 years	82	36.9
	Over 11 years	31	14.0

Source: Research Data (2014)

### 4.3. Descriptive Statistics

For clear determination of the responses made to the research items, the mean, standard deviation, skewness and kurtosis of the study variables were determined as highlighted in Table 4.2

**Table 4.2: Descriptive statistical analysis of the study variables**

<b>Variables</b>	<b>Mean</b>	<b>Std dev</b>	<b>Skewness</b>	<b>Kurtosis</b>
<b>NQ</b>	3.3584	0.70455	-0.905	0.824
<b>PV</b>	3.0748	0.76270	-0.353	0.629
<b>CRE</b>	3.3468	0.66391	-1.012	1.466
<b>LP</b>	3.2955	0.65043	-0.744	1.967
<b>CS</b>	3.4234	0.79292	-0.583	-0.248
<b>CR</b>	3.2450	0.71781	-0.620	0.325

NQ=Network Quality, PV=Perceived Value, CRE=Customer Relational Experience, LP=Loyalty Programs, CS=Customer Satisfaction and CR=Customer Retention

Source: Research Data (2014)

From Table 4.2 Network Quality have a mean score of 3.3584 and standard deviation of 0.76270 and its normal curve is skewed to the right with a skewness of -0.905 and Kurtosis measure of 0.824. Perceived Value have a mean score of 3.0748 and a standard deviation of 0.76270, its skewness and kurtosis is -0.353 and 0.629 respectively making it skewed to the right side of the curve. The Customer Relational Experience has a mean score of 3.3468 and a standard deviation of 0.66391, it is skewed to the right with -1.012 and kurtosis of 1.466. Loyalty Programs has a mean score of 3.2955 and a standard

deviation of 0.65043, with skewness of -0.744 and a kurtosis of 1.967. Customer satisfaction is the mediator which has a mean of 3.4234 and a standard deviation of 0.79292, its skewness is -0.583 and its peakedness of -0.248. The customer retention is the dependent variable which has a mean of 3.2450 and a standard deviation of 0.71781. The normal curve is skewed to the right with a skewness of -0.620 and a kurtosis of 0.715.

#### 4.4. Scale reliability of study Variables

The reliability of an instrument is defined as its ability to consistently measure the phenomenon it is designed to measure. The reliability of the questionnaire was therefore tested using Cronbach alpha measurements. From the table 4.3

**Table 4.3. Cronbach's Alpha Reliability**

<b>Variables</b>	<b>Number of Items</b>	<b>Cronbach Alpha Coefficient</b>
<b>NQ</b>	<b>7</b>	0.839
<b>PV</b>	<b>5</b>	0.808
<b>CRE</b>	<b>5</b>	0.724
<b>LP</b>	<b>5</b>	0.749
<b>CS</b>	<b>4</b>	0.722
<b>CR</b>	<b>5</b>	0.716

NQ=Network Quality, PV=Perceived Value, CRE=Customer Relational Experience, LP=Loyalty Programs, CS=Customer Satisfaction and CR=Customer Retention

Source: Research Data (2014).

The reliability coefficients ( $\alpha$ ) of each variable are as follows: Network quality (0.839); Perceived Value (0.808); Customer Relational Experience (0.724); Loyalty Programs (0.749); Customer satisfaction (0.722) and Customer retention (0.716). The reliability coefficients of most of the variables are above 0.70, which concurs with the suggestion made by Nunnally (1978). The internal consistency was considered to be sufficient and adequate. As indicated in the above table Cronbach's alpha was computed separately for the study variables to enable assess the internal consistent among the study variable.

#### 4.5. Test for Normality and Linearity

Kolmogorov-Smirnov test (K-S) one sample test was used in order to enable compare the shapes of the distribution to the shape of the normal curve and assumption of the normality of the population distribution. Table 4.4 vividly explains the same from the results of normality of Network quality, Loyalty programs, relational experience, perceived value, customer satisfaction and customer retention.

**Table 4.4: One sample Kolomogorov-Smirnov Test**

<b>Variables</b>	<b>Statistic</b>	<b>Sig.</b>	<b>Mean</b>	<b>Std. dev.</b>
<b>NQ</b>	0.184	0.000	3.3584	0.70455
<b>PV</b>	0.091	0.050	3.0748	0.76270
<b>CRE</b>	0.239	0.000	3.3468	0.66391
<b>LP</b>	0.171	0.000	3.2955	0.65043
<b>CS</b>	0.218	0.000	3.4234	0.79292
<b>CR</b>	0.127	0.002	3.2450	0.71781

NQ=Network Quality, PV=Perceived Value, CRE=Customer Relational Experience, LP=Loyalty Programs, CS=Customer Satisfaction and CR=Customer Retention

Source: Research Data (2014).

From the table, the result reveals that relating to the study variables are normally distributed.

## **4.6. Validity of the Study measures**

Validity refers to the extent to which a research instrument measures what it was intended to measure (Zikmund et al., 2010). This study addressed the two approaches to establish validity i.e. content validity and construct validity.

### **4.6.1. Content Validity**

To establish content validity the content of this research was validated by determining the variables which have been defined and used in literature previously. In this study the dimensions of variables were identified from the customer relationship management practices literature. Additionally, opinions were sought from experts who provided relevant inputs adding to what had been identified from the literature. An assessment of content validity requires experts to attest to the content validity of each instrument (Sekaran, 2000). In order to ensure content validity, previously validated measures were pretested and the preliminary questionnaire was pretested on a pilot set of respondent for comprehension, logic and relevance. Respondents in the pretest were drawn from two Universities which were similar to those in the actual study in terms of characteristics; familiar with the research topic under investigation. The respondents of the pre-test were not from the target population since they would have brought biasness in the research.

### **4.6.2. Construct Validity**

Construct validity demonstrates the extent to which the constructs hypothetically relate to one another to measure a concept based on the theories underlying a research (Zikmund, 2000). Further, construct validity measures “the degree to which a scale measures what it intends to measure” (Garver and Mentzer, 1999) and it is assessed by factor analysis in this research. In order to assess the construct validity, 40 items are examined by principal



components extraction with varimax rotation. The Kaiser-Meyer-Olkin (KMO), The Bartlett's test, is significant in this study and confirms the appropriateness of the factor analysis for the data set.

#### **4.7. Factor Analysis**

Factor analysis was conducted to create variable composites from the original attributes and to identify a smaller set of factors that explain most of the variances between attributes. Factor analysis was done on Network Quality, Perceived Value, and Customer Relational Experiences, Loyalty Programs, Image, Customer Satisfaction and Customer Retention.

##### **4.7.1. Factor Analysis Results of Network Quality**

Results show that the 7 items for Network Quality were sorted and clustered into two components. The Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy and Barlett's Test of Sphericity were used. The KMO measure of sampling adequacy indicated a value of (KMO=0.630) indicating that the sample size was adequate for the variables entered into analysis. The Barlett's Test of Sphericity was significant  $X^2=1026.167$ ,  $df = 21$ ,  $p<0.000$ , implying that the factor analysis was appropriate for the study and there was relationship among variables. The results are presented in Table 4.5. The results of the principal component analysis indicate that, there are two factors whose Eigenvalues exceed 1. The Eigenvalue of a factor represents the amount of total variance explained by that factor. For Network Quality, the first factor has Eigenvalue of 3.584 and the second factor has Eigenvalue of 1.532, the two factors explain 73.091% of the total variance. The first factor explains 51.199% of this variance, while the second variable explained 21.892% of this variance. Varimax rotation tries to maximize the

variance of each of the factor, so the total amount of variance accounted for the redistribution over the extracted factor. Principal component analysis with varimax rotation is widely adopted as a reliable method of factor analysis (Malhotra and Galleta, 1999). See Table A8 for total variance explained of network quality.

**Table 4.5: Network Quality Rotated Component Matrix**

Scale item	Factor Loadings	
	1	2
Successful in completion		.950
Adequate network coverage		.922
Network clarity		.622
Prompt money transfer	.798	
Ease of connection to other networks	.811	
Network Innovativeness	.700	
Technological Knowledge	.885	
<b>Notes:</b> Eigenvalues	3.584	1.532
Percentage of Variance		
KMO Measure of sampling adequacy	.630	51.199%
Approx. Chi-Square	1026.167, Df 21,	21.892%
Sig.	.000	
Extraction Method: Principal component Analysis		
Rotation Method: Varimax with Kaiser Normalization		
Rotation converged in 3 iterations		
Source: Research Data (2014)		

#### 4.7.2. Factor Analysis Results of Perceived Value

The Kaiser Criterion was used to determine the number of factors to extract for analysis. Results show that the 5 items for Perceived Value are sorted and clustered into one component. The Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy and Barlett's Test of Sphericity were used. The KMO measure of sampling adequacy indicated a value of (KMO=0.767) indicating that the sample size was adequate for the variables entered into analysis. The Barlett's Test of Sphericity was significant

$\chi^2=418.074, df=10, p<0.000$ , implying that the factor analysis was appropriate for the study and there was relationship among variables for the Perceived Value. From Table 4.6, the results of the principal component analysis indicate that, there is one factor whose Eigenvalues exceed 1. The Eigenvalue of a factor represents the amount of total variance explained by that factor. For Perceived Value, the first factor has Eigenvalue of 2.918 which explain 58.352% of the total variance, the percentage of variance combines for the succeeding items to make up 100% variance. Varimax rotation tries to maximize the variance of each of the factor, so the total amount of variance accounted for the redistribution over the extracted factor. Principal component analysis with varimax rotation is widely adopted as a reliable method of factor analysis (Lee, 2010).

**Table 4.6: Perceived Value Component Matrix**

Scale item	Factor Loadings
	1
Good Value for money	.839
Value ease of use	.811
Convenience of using service provider	.783
Overall ability to give up High	.812
Convenience of using service provider	.783
Overall ability to give up High	.812
Over ability is high	.531
<b>Notes:</b> Eigenvalues	2.918
Percentage of Variance	58.352%
KMO Measure of sampling adequacy	0.767
Approx. Chi-Square	418.074, Df 10, Sig. .000
Extraction Method: Principal component Analysis	
Rotation Method: Varimax with Kaiser Normalization	
Rotation converged in 3 iterations	
Source: Research Data (2014)	

### **4.7.3. Factor Analysis Results of Customer Relational Experience**

Results show that the 5 items for Relational Experience are sorted and clustered into two component. The Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy and Barlett's Test of Sphericity were used. The KMO measure of sampling adequacy indicated a value of (KMO=0.631) indicating that the sample size was adequate for the variables entered into analysis. The Barlett's Test of Sphericity was significant  $X^2=381.993, df=10, p<0.000$ , implying that the factor analysis was appropriate for the study and there was relationship among variables for the Customer Relational Experience. The results show that the 5 items of Customer Relational Experience are sorted into two components. The results of the principal component analysis indicate that, there are two factors whose Eigenvalues exceed 1. The Eigenvalue of a factor represents the amount of total variance explained by that factor. For Customer Relational Experience, the first factor has Eigenvalue of 2.490 and the second factor has Eigenvalue of 1.331, the two factors explain 76.430% of the total variance. The first factor explains 49.803% of this variance, while the second variable explained 26.627% of this variance. Varimax rotation tries to maximize the variance of each of the factor, so the total amount of variance accounted for the redistribution over the extracted factor. Principal component analysis with varimax rotation is widely adopted as a reliable method of factor analysis (Sinkkonen, Malhotra and Galleta, 1999).

**Table 4.7: Customer Relational Experience Rotated Component Matrix**

Scale item	Factor Loadings	
	1	2
Safety with service provider	.878	
Employees are courteous	.808	
Simple Procedures	.773	
Prior Information on planned activities provided		.848
Ease of making electronic credit transfers		.878
<b>Notes:</b> Eigenvalues	2.490	1.331
Percentage of Variance	49.803%	26.627%
KMO Measure of sampling adequacy	.630	
Approx. Chi-Square 381.993, Df 10, Sig .000		
Extraction Method: Principal component Analysis		
Rotation Method: Varimax with Kaiser Normalization		
Rotation converged in 3 iterations		

Source: Research Data (2014)

#### 4.7.4. Factor Analysis Results of Loyalty Programs

The Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy and Barlett's Test of Sphericity were used. The KMO measure of sampling adequacy indicated a value of (KMO=0.549) indicating that the sample size was adequate for the variables entered into analysis. The Barlett's Test of Sphericity was significant  $X^2=477.317, df=10, p<0.000$ , implying that the factor analysis was appropriate for the study and there was relationship among variables for the Relational Experience. The results in Table 4.8 show that the 5 items of Loyalty Program are sorted into two components. The results of the principal component analysis indicate that, there are two factors whose Eigenvalues exceed 1. The Eigenvalue of a factor represents the amount of total variance explained by that factor. For Loyalty Program, the first factor has Eigenvalue of 2.385 and the second factor has Eigenvalue of 1.448. The two factors explain 76.669% of the total variance. The first factor explains 47.709% of this variance, while the second variable explained 28.961% of

this variance. Varimax rotation tries to maximize the variance of each of the factor, so the total amount of variance accounted for the redistribution over the extracted factor. Principal component analysis with varimax rotation is widely adopted as a reliable method of factor analysis (Sinkkonen et al, Malhotra and Galleta, 1999).

**Table 4.8: Loyalty Programs Rotated Component Matrix**

Scale item	Factor Loadings	
	1	2
Accumulation of reward points	.829	
Discounts offered to customers		.821
Enjoy Low charges during off peak	.930	
My service provider offers gifts	.905	
Regularly updated on service changes	.095	
<b>Notes:</b> Eigenvalues	2.385	1.448
Percentage of Variance		
KMO Measure of sampling adequacy .549	47.709%	26.490%
Approx. Chi-Square 477.317, Df 10, Sig. .000		
Extraction Method: Principal component Analysis		
Rotation Method: Varimax with Kaiser Normalization		
Rotation converged in 3 iterations		

Source: Research Data (2014)

#### 4.7.5. Factor Analysis Results of Customer Satisfaction

The Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy and Barlett's Test of Sphericity were used. The KMO measure of sampling adequacy indicated a value of (KMO=0.594) indicating that the sample size was adequate for the variables entered into analysis. The Barlett's Test of Sphericity was significant  $X^2=307.448, df=6, p<0.000$ , implying that the factor analysis was appropriate for the study and there was relationship among variables. The results of the principal component analysis indicate that, there are two factors whose Eigenvalues exceed 1. The Eigenvalue of a factor represents the amount of total variance explained by that factor. For Customer satisfaction, the first factor has Eigenvalue of 2.231 and explain 55.768% of the total variance and the second

factor has Eigenvalue of 1.148 and explain 28.697, the two factors explain 84.464% of the total variance. The first factor explains 55.768% of this variance, while the second variable explained 28.697% of this variance. Varimax rotation tries to maximize the variance of each of the factor, so the total amount of variance accounted for the redistribution over the extracted factor. Principal component analysis with varimax rotation is widely adopted as a reliable method of factor analysis (Sinkkonen, Malhotra and Galleta, 1999).

**Table 4.9: Customer satisfaction Rotated Component Matrix**

Scale item	Factor Loadings	
	1	2
Satisfied with this service provider's services	.909	
Service provider is successful		.707
Service provider meets my expectations	.870	
Overall, service provider has met my expectations	.952	
<b>Notes:</b> Eigenvalues	2.231	1.148
Percentage of Variance	55.768%	28.697%
KMO Measure of sampling adequacy	.729	
Approx. Chi-Square	307.448, Df 6, Sig. .000	
Extraction Method:	Principal component Analysis	
Rotation Method:	Varimax with Kaiser Normalization	
Rotation converged in	3 iterations	

Source: Research Data (2014)

#### 4.7.6. Factor Analysis Results of Customer Retention

Results show that the 5 items for network quality are sorted and clustered into two components. The Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy and Barlett's Test of Sphericity were used. The KMO measure of sampling adequacy indicated a value of (KMO=0.578) indicating that the sample size was adequate for the

variables entered into analysis. The Barlett’s Test of Sphericity was significant  $X^2=341.686$ ,  $df=10$ ,  $p<0.000$ , implying that the factor analysis was appropriate for the study and there was relationship among variables. The results show that the 5 items of Customer Retention are sorted into one component. The results of the principal component analysis indicate that, there is one factor whose Eigenvalues exceed 1. The Eigenvalue of a factor represents the amount of total variance explained by that factor. For Customer Retention, one factor has Eigenvalue of 2.409. The factors explain 50.179% of the total variance. Varimax rotation tries to maximize the variance of each of the factor, so the total amount of variance accounted for the redistribution over the extracted factor. Principal component analysis with varimax rotation is widely adopted as a reliable method of factor analysis (Sinkkonen et al, Malhotra and Galleta, 1999)

**Table 4.10: Customer Retention Rotated Component Matrix**

Scale item	Factor Loadings
	1
I consider the company as my first choice	.528
Patronizing the company in few more years	.830
Encouraging others to patronizing the service provider	.874
Say Positive things about the service provider	.566
I will recommend the service provider to some who seems my advice	.597
<b>Notes:</b> Eigenvalues	2.409
Percentage of Variance	50.179%
KMO Measure of sampling adequacy	.578
Approx. Chi-Square	341.686, Df 10, Sig. .000
Extraction Method: Principal component Analysis	
Rotation Method: Varimax with Kaiser Normalization	
Rotation converged in 3 iterations	

Source: Research Data (2014)



#### 4.8. Correlation Analysis

The correlation shown in the table below presents bivariate correlations between variables. Since a single construct in the questionnaire was measured by multiple items, the average score of the multi-items for a construct was computed and used in further analysis such as correlation analysis and multiple regression analysis (Wang and Benbasat, 2007).

From the table attached, When the correlation coefficient value ( r ) range from 0.10-0.29, is considered to be weak, 0.30-0.49, medium, 0.5-1.0 is considered strong, Wong &Hiew (2005). According to Field (2005), correlation coefficient should not go beyond 0.8 to avoid Multicollinearity. In this research, the highest correlation coefficient is 0.69, thereby implying that there was no multicollinearity problem in this research, since the value is less than 0.8. The NQ is positively and statistically significant (r=0.501, p<0.00), PV is positively and statistically significant (r=0.541, p<0.00 (2 tailed at 1% level of significance), CRE is positively and statistically significant (r=0.707,p<0.00(2 tailed at 1% level of significance), CS is positively and statistically significant, (r=0.434,p<0.00(2 tailed at 1% level of significance), CR is positively and statistically significant. ALL the NQ, PV, CRE and LP were correlated to customer retention and were positively and statistically significant.

**Table 4.11. Pearson Correlation Coefficient of Study Variable**

	NQ	PV	CRE	LP	CS	CR	Sig. (2 tailed)
NQ	1						
PV	.516	1					
CRE	.707	.790	1				
LP	.723	.542	.673	1			
CS	.434	.214	.524	.518	1		
CR	.501	.461	.512	.587	.646	1	

NQ=Network Quality, PV=Perceived Value, CRE=Customer Relational Experience, LP=Loyalty Programs, CS=Customer Satisfaction and CR=Customer Retention

Source: Research Data (2014)

## **4.9. Test of Hypotheses**

Thirteen Hypotheses were proposed to examine the direct and indirect effects of CRM practices, customer satisfaction and customer retention, the direct relationship between CRM practices and customer satisfaction and the mediating effect of customer satisfaction on the indirect relationship between CRM practices and customer retention.

### **4.9.1 Relationship between Customer Relationship Management Practices and Customer Retention**

In order to test for multicollinearity among the predictor variables, variance-inflation factor (VIF) and tolerance were applied. The multicollinearity statistics showed that the tolerance indicator for NQ, PV, CRE and LP are all greater than 0.1, and their VIF values are less than 10. The result indicates that no multicollinearity problem has occurred (Neter et al., 1996; Ott and Longnecker, 2001). The F-statistics produced was significant at 1 per cent level (Sig. F , 0.1), thus confirming the fitness for the model. Therefore, there is a statistically significant relationship between the CRM practices factors and the Customer retention.

The coefficient of determination  $R^2$  was 49.8per cent. Thus, the CRM practices can significantly account for 49.8 per cent in the relationship. The results shows that CRE ( $p < 0.00$ ), LP ( $p < 0.00$ ) PV ( $p < 0.05$ ) all significantly affect the Customer retention. Based on Table 4.13, it indicated the most important CRM practices that affect the consumer Retention is as indicated above. NQ however, was found not to be significantly associated with consumer Retention.

**Table 4.12 Multiple Regression Results on the Relationship between CRM Practices and Customer Retention**

<b>Predictor Variables</b>	<b>B</b>	<b>t-value</b>	<b>Std error</b>	<b>Sig.</b>	<b>Tolerance</b>	<b>VIF</b>
Constant	.626	3.09	.202	.0202		
NQ	.007	.085	.081	.932	.373	2.680
PV	.637	2.866	.222	.005	.042	3.933
CRE	.531	3.888	.137	.000	.146	6.836
LP	.488	4.224	.116	.000	.213	4.696

**Notes:** Overall Model F= 35.595, P<0.05, R=0.706, R<sup>2</sup>=0.498, adjusted R<sup>2</sup>= 0.484  
NQ=Network Quality, PV=Perceived Value, CRE=Customer Relational Experience, LP=Loyalty Programs

Source: Research Results (2014)

#### **4.9.2 Relationship between Customer Relationship Management Practices and Customer Satisfaction**

In order to test for multicollinearity among the predictor variables, variance-inflation factor (VIF) and tolerance were applied. The multicollinearity statistics showed that the tolerance indicator for NQ, PV, CRE are all greater than 0.1, and their VIF values are less than 10. The result indicates that no multicollinearity problem has occurred (Neter et al., 1996; Ott and Longnecker, 2001). The F-statistics produced was significant at 1 per cent level (Sig. F .01), thus confirming the fitness for the model. Therefore, there is a statistically significant relationship between the CRM practices factors and the Customer retention. The coefficient of determination R<sup>2</sup> was 43.8 per cent. Thus, the CRM practices can significantly account for 43.8 per cent in the relationship.

The results shows that CRE ( $p < 0.00$ ), LP ( $p < 0.00$ ) PV ( $p < 0.05$ ) all significantly affect the Customer satisfaction. Based on Table 4.14, it indicated that the most important CRM practices that affect the customer satisfaction is as indicated. NQ however, was found not to be significantly associated with consumer satisfaction

**Table 4.14 Multiple Regression Results on the Relationship between CRM Practices and Customer Retention**

Predictor Variables	B	t-value	Std error	Sig.	Tolerance	VIF
Constant	.969	4.242	.228	.000		
NQ	.110	1.190	.093	.236	.383	2.613
PV	.575	6.614	.087	.000	.370	2.704
CRE	.944	7.673	.123	.000	.423	2.366
LP	.435	4.563	.095	.000	.423	2.366

**Notes:** Overall Model F= 42.350,  $P < 0.05$ ,  $R = 0.662$ ,  $R^2 = 0.438$ , adjusted  $R^2 = 0.428$   
NQ=Network Quality, PV=Perceived Value, CRE=Customer Relational Experience, LP=Loyalty Programs

Source: Research Results (2014)

#### **4.9.3: Multiple Regression Results on the Relationship between Customer Satisfaction and Customer Retention**

In order to test for multicollinearity among the predictor variables, variance-inflation factor (VIF) and tolerance were applied. The multicollinearity statistics showed that the tolerance indicator for CS is greater than 0.1, and their VIF values are less than 10. The result indicates that no multicollinearity problem has occurred (Neter et al., 1996; Ott and Longnecker, 2001). The F-statistics produced was significant at 1 per cent level (Sig. F .01), thus confirming the fitness for the model. Therefore, there is a statistically significant relationship between the Customer Satisfaction and Customer retention. The coefficient of determination  $R^2$  was 41.7 per cent.

Thus, the Customer Satisfaction can significantly account for 41.7 per cent in the relationship. The results shows that CS ( $p < 0.00$ ), significantly affect the Customer Retention. Based on Table 4.14, it indicated that CS affects the customer Retention as indicated.

**Table4.14 Multiple Regression Results on the Relationship between Customer Satisfaction and Customer Retention**

Predictor Variables	B	t-value	Std error	Sig.	Tolerance	VIF
Constant	1.244	7.597	.164	.000		
CS	.585	12.541	.047	.000	1.000	1.000

**Notes:** Overall Model  $F= 157.2$ ,  $P<0.05$ ,  $R=0.646$ ,  $R^2=0.417$ , adjusted  $R^2= 0.414$

CS=Customer Satisfaction

Source: Research Results (2014)

#### **4.9.4 Mediating effect of Customer Satisfaction on the Relationship between Network Quality and Customer Retention**

In order to test mediation effect, zero order correlations between variables were computed. Zero order correlations assess the relationship between two variables, while ignoring the influence of other variables in prediction (Baron & Kenny, 1986), and Kenny (2003). First, the Zero order correlation between Network Quality and Customer Retention was calculated ( $\beta=.501$ ;  $t=8.585$ ;  $p<.001$ ). Second the Zero order correlation between Network Quality and Customer Satisfaction was calculated ( $\beta=.488$ ;  $t=7.141$ ;  $p<.000$ ). Third the Zero order correlation between Customer satisfaction and Customer Retention was calculated ( $\beta=.585$ ;  $t=12.541$ ;  $p<.000$ ). The findings suggest that all the three Zero order correlations were significant at 0.01 significant level. Finally, the full

model in which the Zero order correlation between Network Quality, Customer satisfaction and Customer Retention was tested. The initial significant relationship between network quality and customer retention shrinks upon the addition of the mediator (Customer satisfaction) to the model. ( $\beta=.277$ ;  $t=5.015$ ;  $p<.000$ ). These results provide support for the fourth hypothesis by clearly indicating that the relationship between network quality and customer retention is partially mediated by customer satisfaction. Further, in order to examine whether the hypotheses is significant, Sobel Test was used to obtain the Z values and examine the significant of the direct effect (Baron and Kenny, 1986). Baron indicated that the test can provide a significant test for the indirect effect of the independent variable on the dependent variable via the mediator. The Z-value obtained is  $t=6.21710226$  and is greater than the significant level 1.96 and significant. The null hypothesis is rejected and therefore it can be concluded that Customer satisfaction partially mediates the effect of Network quality to customer retention. In summary, by using the sobel test, the result shows the significant value for the indirect effect of Network quality on customer retention via the mediator-customer satisfaction.

**Table 4.13 Results of the Mediating effect of Customer Satisfaction on the Relationship between Network Quality and Customer Retention**

Steps	Predictor Variables	$\beta$	Std error	t	Sig.
1 <sup>st</sup> Step:	Constant	1.531	.204	7.506	.000
	NQ	.501	.059	8.585	.000
2 <sup>nd</sup> Step:	NQ	.488	.068	7.141	.000
3 <sup>rd</sup> Step	CS	.585	.047	12.541	.000
4 <sup>th</sup> Step	NQ	.277	.055	5.015	.000
	CS	.478	.049	9.728	.000

**Notes:** 1st Step (NQ and CR), 2<sup>nd</sup> Step, (NQ and CS), 3<sup>rd</sup> Step (CS and CR), i.e. 1-3 are significant, hence it is necessary to continue to 4th Step (NQ controlled by CS and CR)  
NQ=Network Quality, CS= Customer satisfaction, CR= Customer Retention

Source: Research Results (2014)

#### **4.9.5 Mediating effect of Customer Satisfaction on the Relationship between Perceived Value and Customer Retention**

In order to test mediation effect, zero order correlations between variables were computed. First, the Zero order correlation between perceived Value and Customer Retention was calculated ( $\beta=.434$ ;  $t=7.705$ ;  $p<.001$ ). Second the Zero order correlation between Perceived and Customer Satisfaction was calculated ( $\beta=.223$ ;  $t=3.252$ ;  $p<.000$ ). Third the Zero order correlation between Customer satisfaction and Customer Retention was calculated ( $\beta=.585$ ;  $t=12.541$ ;  $p<.000$ ). The findings suggest that all the three Zero order correlations were significant at 0.01 significant level.

Finally, the full model in which the Zero order correlation between Perceived Value, Customer satisfaction and Customer Retention was tested. The initial significant relationship between Perceived Value and customer retention shrinks upon the addition of the mediator (Customer satisfaction) to the model. ( $\beta=.318$ ;  $t=7.101$ ;  $p<.000$ ). These results provide support for the fourth hypothesis by clearly indicating that the relationship between perceived Value and customer retention is partially mediated by customer satisfaction. Further, in order to examine the hypotheses, Sobel Test was used to obtain the Z values and examine the significant of the direct effect. The Z-value obtained is  $t=3.17118868$  and is greater than the significant level 1.96 and significant. The null hypothesis is rejected and therefore conclude that Customer satisfaction partially mediates the effect of perceived value to customer retention.

**Table 4.14 Results of the Mediating effect of Customer Satisfaction on the Relationship between Perceived Value and Customer Retention**

Steps	Predictor Variables	$\beta$	Std error	t	Sig.
1 <sup>st</sup> Step:	Constant	1.911	.178	10.715	.000
	PV	.434	.056	7.705	.000
2 <sup>nd</sup> Step:	PV	.223	.068	3.252	.000
3 <sup>rd</sup> Step	CS	.585	.047	12.541	.000
4 <sup>th</sup> Step	PV	.318	.045	7.101	.000
	CS	.519	.043	12.036	.000

**Notes:** 1<sup>st</sup> Step (PV and CR), 2<sup>nd</sup> Step, (PV and CS), 3<sup>rd</sup> Step (CS and CR), i.e. Steps 1-3 are significant, hence it is necessary to continue to 4th Step where (PV controlled by CS-CR)

PV=Perceived Value, CS= Customer satisfaction, CR= Customer Retention

Source: Research Results (2014)

#### **4.9.6 Mediating effect of Customer Satisfaction on the Relationship between Customer Relational Experience and Customer Retention**

In order to test mediation effect, zero order correlations between variables were computed. First, the Zero order correlation between customer relational experience and Customer Retention was calculated ( $\beta=.553$ ;  $t=8.834$ ;  $p<.001$ ). Second the Zero order correlation between Customer relational experience and Customer Satisfaction was calculated ( $\beta=.626$ ;  $t=9.132$ ;  $p<.000$ ). Third the Zero order correlation between Customer satisfaction and Customer Retention was calculated ( $\beta=.585$ ;  $t=12.541$ ;  $p<.000$ ). The findings suggest that all the three Zero order correlations were significant at 0.01 significant level. Finally, the full model in which the Zero order correlation between Customer relational experience, Customer satisfaction and Customer Retention was tested.



The initial significant relationship between customer relational experience and customer retention shrinks upon the addition of the mediator (Customer satisfaction) to the model. ( $\beta=.258$ ;  $t=4.089$ ;  $p<.000$ ). These results provide support for the fourth hypothesis by clearly indicating that the relationship between network quality and customer retention is partially mediated by customer satisfaction. Further, in order to examine the hypotheses for, Sobel Test was used to obtain the Z values and examine the significant of the direct effect. The Z-value obtained is  $t=7.33155385$  and is greater than the significant level 1.96 and significant. The null hypothesis is rejected and therefore conclude that Customer satisfaction partially mediates the effect of customer relational experience to customer retention

**Table 4.15 Results of the Mediating effect of Customer Satisfaction on the Relationship between Customer Relational Experience and Customer Retention**

Steps	Predictor Variables	$\beta$	Std error	t	Sig.
1 <sup>st</sup> Step:	Constant	1.393	.214	6.522	.000
	CRE	.553	.063	8.834	.000
2 <sup>nd</sup> Step:	CRE	.626	.069	9.132	.000
3 <sup>rd</sup> Step	CS	.585	.047	12.541	.000
4 <sup>th</sup> Step	CRE	.258	.063	4.089	.000
	CS	.471	.053	8.911	.000

**Notes:** 1st Step (CRE and CR), 2<sup>nd</sup> Step, (CRE and CS), 3<sup>rd</sup> Step (CS and CR), i.e. Steps 1-3 are significant, hence it is necessary to continue to 4th Step where (CRE controlled by CS and CR)  
 CRE=Customer Relational Experience, CS= Customer satisfaction, CR= Customer Retention

Source: Research Results (2014)

#### **4.9.7 Mediating effect of Customer Satisfaction on the Relationship between Loyalty Programs and Customer Retention**

In order to test mediation effect, zero order correlations between variables were computed. First, the Zero order correlation between Loyalty Programs and Customer Retention was calculated ( $\beta=.647$ ;  $t=10.734$ ;  $p<.001$ ). Second the Zero order correlation

between loyalty Programs and Customer Satisfaction was calculated ( $\beta=.632$ ;  $t=8.989$ ;  $p<.000$ ). Third the Zero order correlation between Customer satisfaction and Customer Retention was calculated ( $\beta=.585$ ;  $t=12.541$ ;  $p<.000$ ). The findings suggest that all the three Zero order correlations were significant at 0.01 significant level.

Finally, the full model in which the Zero order correlation between loyalty Programs, Customer satisfaction and Customer Retention was tested. The initial significant relationship between loyalty Programs and customer retention shrinks upon the addition of the mediator (Customer satisfaction) to the model. ( $\beta=.380$ ;  $t=6.188$ ;  $p<.000$ ). These results provide support for the fourth hypothesis by clearly indicating that the relationship between loyalty Programs and customer retention is partially mediated by customer satisfaction. Further, in order to examine the hypotheses for, Sobel Test was used to obtain the Z values and examine the significant of the direct effect. The Z-value obtained is  $t=7.30833212$  and is greater than the significant level 1.96 and significant. The null hypothesis is rejected and therefore conclude that Customer satisfaction partially mediates the effect of loyalty Programs to customer retention

**Table 4.16: Results of the Mediating effect of Customer Satisfaction on the Relationship between Loyalty Programs and Customer Retention**

Steps	Predictor Variables	$\beta$	Std error	t	Sig.
1 <sup>st</sup> Step:	Constant	1.112	.202	5.493	.000
	LP	.647	.060	10.734	.000
2 <sup>nd</sup> Step:	LP	.632	.070	8.989	.000
3 <sup>rd</sup> Step	CS	.585	.047	12.541	.000
4 <sup>th</sup> Step	LP	.380	.061	6.188	.000
	CS	.423	.050	8.392	.000

**Notes:** 1<sup>st</sup> Step (LP and CR), 2<sup>nd</sup> Step, (LP and CS), 3<sup>rd</sup> Step (CS and CR), i.e. Steps 1-3 are significant, hence it is necessary to continue to 4<sup>th</sup> Step where (LP controlled by CS and CR)

LP=Loyalty Programs, CS= Customer satisfaction, CR= Customer Retention.

Source: Research Results (2014)

**Table 4.20 Summaries of the Hypothesis tests and results**

<b>Hypothesis Statement</b>	<b>Results</b>
H0 <sub>1a</sub> : Network quality has no significant effect on customer retention	Accept the H <sub>o</sub>
H0 <sub>1b</sub> : perceived Value has no significant effect on customer retention	Reject the H <sub>o</sub>
H0 <sub>1c</sub> : customer relational experience has no significant effect on customer retention	Reject the H <sub>o</sub>
H0 <sub>1d</sub> : there is no association between Loyalty programs and customer retention	Reject the H <sub>o</sub>
H0 <sub>2a</sub> : Network quality has no significant effect on customer satisfaction	Accept the H <sub>o</sub>
H0 <sub>2b</sub> : perceived value has no significant effect on customer satisfaction	Reject the H <sub>o</sub>
H0 <sub>2c</sub> : Customer Relational experience has no significant effect on customer satisfaction	Reject the H <sub>o</sub>
H0 <sub>2d</sub> : Loyalty programs have no significant effect on customer satisfaction	Reject the H <sub>o</sub>
H0 <sub>3</sub> : Customer satisfaction has no significant effect on customer retention	Reject the H <sub>o</sub>
H0 <sub>4a</sub> ): Customer satisfaction does not significantly mediate the relationship between network quality and customer retention	Reject the H <sub>o</sub>
H0 <sub>4b</sub> ): There is no significant relationship between mediation effect of customer satisfaction and its relationship with perceived value and customer retention	Reject the H <sub>o</sub>
H0 <sub>4c</sub> ): there is no significant relationship between mediation effect of customer satisfaction and its relationship with customer relational experience and customer retention	Reject the H <sub>o</sub>
H0 <sub>4d</sub> ): customer satisfaction does not significantly mediate the relationship between loyalty programs and customer retention	Reject the H <sub>o</sub>

Source: Research Results (2014)

## **CHAPTER FIVE**

### **SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS**

#### **5.0. Overview**

This chapter consists of summary of findings of the study in line to the research objectives and hypotheses, conclusions and recommendations. Recommendations were also made on how Customer Relationship Management (CRM) practices affect customer retention when mediated by Customer satisfaction. The study was based on thirteen objectives and thirteen hypotheses. The discussions of the following sections highlight the key findings of the study

#### **5.1. Summary of findings**

The study examined the mediating effect of customer satisfaction on the relationship between customer relationship management practices on customer retention among mobile phone users in public universities of western Kenya region. The study was guided by the following objectives; to determine the effect of Network Quality on Customer Satisfaction, determine the effect of Perceived Value on Customer Satisfaction, determine the effect of Customer Relational Experience on Customer Satisfaction, determine the effect of Loyalty Programs on Customer Satisfaction, determine the mediation effect of Customer Satisfaction on the relationship between Network Quality and Customer Retention, determine the mediation effect of Customer Satisfaction on the relationship between Perceived Value and Customer Retention, determine the mediation effect of Customer Satisfaction on the relationship between Customer Relational Experience and Customer Retention and determine the mediation effect of Customer Satisfaction on the relationship between Loyalty Programs and Customer Retention. Preliminary analyses focused on establishing the characteristics of the respondents and

descriptions of the response on the measures of the study variable. Also Hypotheses tests were conducted to address the objectives of study.

#### **5.1.1. Effect of Network Quality on Customer retention**

Hypothesis Ho<sub>1</sub> postulates that Network Quality has no significant effect on Customer Retention.

From the findings, it was indicated that Beta coefficients (NQ),  $\beta = 0.007$ ,  $t = 0.085$ ,  $p = 0.932$ . The Null hypothesis was therefore accepted since its p-value is  $> 0.05$ . The Network quality was therefore found to have an insignificant effect on Customer Retention. This results are contrary to previous research findings (Brown and Gulycz, 2001), which suggests that provision of a reliable Network Quality can satisfy customers which is critical for retaining customers by satisfying them. Similar research findings by (Antreas and Opoulos, 2003; Cronin and Taylor, 1992; Spreng and Mackoy, 1996) argues that Network Quality leads to customer satisfaction.

#### **5.1.2. Effect of Perceived Value on customer Retention**

The study had proposed the null hypothesis; Ho<sub>2</sub>: perceived Value has no significant effect on customer retention. From the findings, it was found that Beta coefficients (Perceived Value),  $B = -0.637$ ,  $t = -2.866$ ,  $p = 0.005$ . The Null hypothesis was therefore rejected since its p-value is  $< 0.05$  and an alternative hypothesis were accepted, meaning that there is an effect of Perceived Value on customer retention. This results supports prior researches that Perceived Value has its root in equity theory, which considers the ratio of the consumer's outcome/input to that of the service provider's out- come/input (Oliver and DeSarbo, 1988). Again from, customer-perceived value results from an evaluation of the relative rewards and sacrifices associated with the offering. Customers

are inclined to feel equitably treated if they perceive that the ratio of their outcome to inputs is comparable to the ratio of outcome to inputs experienced by the company (Oliver and DeSarbo, 1988). (Holbrook, 1994, p. 22), argues that, Customer value is “the fundamental basis for all marketing activity” And high value is one primary motivation for customer patronage hence retention. In this regard the findings of this study is supported by, Sirdeshmukh, Singh, and Sabol (2002), who argued that customer value is a superordinate goal and customer loyalty is a subordinate goal, as it is a behavioral intention and this enhances retention.

### **5.1.3. Effect of Customer Relational Experience on Customer Retention**

Hypothesis Ho<sub>3</sub>stulated that customer relational experience has no significant effect on customer retention. From the findings, it was indicated that Beta coefficients (Customer Relational Experience),  $\beta=-0.531$ ,  $t=-3.388$ ,  $p=0.005$ . The Null hypothesis was therefore rejected since its p-value is  $<0.05$  and an alternative hypothesis was accepted, meaning that Customer relational experience had an effect on Customer Retention. This result supports prior researches that focused on Customer Relational Experience and Customer Retention, Further due to the importance of relationship marketing in today’s businesses, relationship quality is essential for assessment of relationship strength and the satisfied degree of customer needs and expectations (Crosby and Evans and Cowles, 1990; Smith, 1998). Successful exchange events can finally lead to an enduring buyer-seller relationship if they are properly treated from both a buyer and a seller’s perspectives (Crosby *et al.*, 1990). In some service contexts, since service is invisible and heterogeneous, customers would feel high uncertainty and risk in the transaction (Li and Ho, 2008). Whereas, good relationship quality could reduce service uncertainty and risk for the purpose of increasing customers’ reliability to develop long-term relationships

(Crosby *et al.*, 1990; Li and Ho, 2008). In other words, higher quality of relationship creates association between service providers and customers, and fosters long-term stable exchanges where both parties can gain mutual benefits (Singh, 2008). This is further supported by Chakrabarty, Whitten and Green (2007) who discussed that relationship quality is measured in terms of trust, commitment, culture, interdependence, and communication. Otherwise, Lages *et al.* (2005), from a perspective of business organization rather than consumers, suggested that relationship quality reflected the intensity of information sharing, communication quality, long-term orientation and satisfaction with the relationship.

#### **5.1.4. Effects of Loyalty Programs on Customer Retention**

Hypothesis H0<sub>4</sub> posited that there is no association between Loyalty programs and customer retention. From the findings, was indicated that Beta coefficients (Loyalty Programs),  $\beta=0.488$ ,  $t=4.224$ ,  $p=0.000$ . The Null hypothesis was therefore rejected since its p-value is  $<0.05$  and an alternative hypothesis were accepted, meaning that loyalty programs have an effect on customer retention. From the prior research by (Latham and Locke 1991) supports the findings by asserting that, there are several theoretical reasons the reward based loyalty program being studied should positively affect both customer retention and customer share development. First, psychological investigations show that rewards can be highly motivating. Previous studies from the literature review also showed that people possess a strong drive to behave in whatever manner necessary to achieve future rewards (Nicholls 1989). According to Roehm, Pullins, and Roehm (2002, p.203), it is reasonable to assume that during participation in a loyalty program, a customer might be motivated by program incentives to purchase the program sponsor's brand repeatedly. Second, because the program's reward structure usually depends on

prior customer behavior, loyalty programs can provide barriers to customers' switching to another supplier.

### **5.1.5. Mediating effect of Customer Satisfaction**

On mediation effect of customer satisfaction on the relationship between Customer Relationship management practices on and customer retention, the study had postulated four null hypotheses;

H<sub>05a</sub>): Customer satisfaction does not significantly mediate the relationship between network quality and customer retention

H<sub>05b</sub>): There is no significant relationship between mediation effect of customer satisfaction and its relationship with perceived value and customer retention

H<sub>05c</sub>): there is no significant relationship between mediation effect of customer satisfaction and its relationship with customer relational experience and customer retention

H<sub>05d</sub>): customer satisfaction does not significantly mediate the relationship between loyalty programs and customer retention

From the findings there was partial mediation in the relationship between variables where (NQ= ( $\beta=.510$ ,  $t=8.585$ ,  $p<.05$  and  $\beta=.277$ ,  $t=5.05$ ,  $p<.05$ )), (PV= ( $\beta=.434$ ,  $t=7.705$ ,  $p<.05$  and  $\beta=.318$ ,  $t=5.015$ ,  $p<.05$ )), (CRE=( $\beta=.553$ ,  $t=6.522$ ,  $p<.05$  and  $\beta=.258$ ,  $t=4.089$ ,  $p<.05$ )), LP=( $\beta=.647$ ,  $t=10.734$ ,  $p<.05$  and  $\beta=.380$ ,  $t=6.188$ ,  $p<.05$ )). The null Hypotheses were therefore rejected. The result indicated that on the overall there is partial mediation since both predictor variables predict the dependent variable. According to (Baron and Kenny, 1986), and Kenny (2003), the mediating effect of the variable customer satisfaction was analyzed by using the four steps procedure. The purpose of the steps, especially 1-3 was to help establish that Zero-order relationships among variables exists and If one or more of these relationships are non-significant, then mediation is not



possible or likely. If they are significant one proceed to step 4, from here, the results had partial mediation.

## **5.2. Conclusions**

The mediating effect of customer satisfaction on the relationship between customer relationship management practices on customer retention among mobile phone users in public universities of western Kenya region has been empirically examined in this study. Results of this study provided support for the Hypotheses linking CRM practices, customer satisfaction and customer Retention. The concept and its roots were introduced by reviewing the existing academic literature, as the competitive environment becomes more turbulent, the most important issue the sellers face is no longer to provide excellent, good quality products or services, but also to keep loyal customers who will contribute long-term profit to organizations (Tseng, 2007).

This study identified the number of customers, or percentage of total customers whose experience with their telecommunication service provider's products or services meets or exceeds their expectations. In a competitive market place where businesses compete for customers, customer satisfaction is seen as a key differentiator and increasingly has become a key element of business strategy. According to the study, Customer satisfaction is about how products and services meets consumer's needs. It is the impression of customers about services provided. Therefore, from the findings, customer relationship management practices have become an alternative means for organizations to build strong, ongoing associations with their customers.

Again from the research, as part of marketing strategy, customer relationship management practices seeks to acquire and retain customers by providing good quality customer services, and therefore has become one of the keys to success in acquiring strong competitiveness in the present markets, because of its implications for access to markets, generation of repeat purchase, creation of exit barriers, and the view that it benefits all parties (Andaleeb, 1996). It is concluded that Customer Relationship management Practices is concerned about building customer satisfaction by providing value to all the parties involved in the relational exchanges (Peng and Wang, 2006), as customer retention is the final goal of relationship marketing.

In conclusion, customer relationship management practices in today's business, it make sense to understand how the relationship are executed in practice and how this type of marketing take effect, e.g. influencing long-term relationship building and customer loyalty. As more and more enterprises realize the importance of becoming customer centric in today's competitive economy, they embrace Customer Relationship Management (CRM) as core business strategy" (Wu, 2008). Where CRM is a way of "developing a comprehensive picture of customers' needs, expectation and behaviors and managing those factors to affect business performance" (Hoots 2005). Or it is "about managing customer knowledge to better understanding and serving them"(Rahimi 2008). In conclusion, the findings of this study have important implications for both academic marketing literature and practice. The managers will also find some useful implications that are relevant and can be applied in designing an appropriate CRM Practices for their customers.

In general, this study looked at the mediation effect of customer satisfaction on the relationship between CRM Practices and customer satisfaction amongst mobile phone users in western Kenya Region. In particular, the study examined the relationships between the study variables. All the relationships were significant and partially mediated. It is evident that from the study CRM practices emphasized in the trading relationships, will lead to repeated purchases hence consumer retention. This also enables Mobile phone service providers to ensure that the greater the customer satisfaction, the higher the consumer retention levels.

The study concluded that, the quality of a service is subjectively perceived by customers during the interactions with a Mobile phone service providers has critical impact on customers' evaluation of service quality. Effective communication of pricing policies as well as flexible pricing for various services offered play a great role in customer retention. The study concluded that since highly satisfied customers are expected to make future purchases and recommend the source to other customers, high levels of customer satisfaction are likely to lead to customer retention. The study also concluded that there exist very high levels of customer satisfaction Mobile phone service providers. Customer satisfaction was found to have a direct relationship with customer retention. Thus, when customers are satisfied with the services offered them by mobile network operators, they are likely to be loyal to them. Finally, the study found that Reliability has a direct effect on customer retention without necessarily using customer satisfaction as a conduit. The implication of this finding is that customers place a high premium on reliable Mobile phone service providers in western Kenya region.

## **5.5. Contribution of the findings to Theory and Practice**

The study gives recommendations for both Theory and Practice. The recommendations will act as eye opener to both the academicians and practitioners in marketing and help in filling the gap in the context of the mediation effect of Customer satisfaction on the relationship between CRM practices(Network quality, Perceived Value, Customer relational Experience and Loyalty Programs) and Customer retention

### **5.5.1. Contribution to Theory**

The findings of this study are expected to provide several useful and meaningful implications for both academics and practitioners alike. This study is believed to boost the database of existing literature pertaining to customer satisfaction and retention within the mobile phone service provider. Further, this study has also demonstrated that customer satisfaction is indeed highly reliable on customer retention in the mobile phone industry in particular. In addition, the research model of this study could serve as a reference point for academics in order to further and enhance students' understanding on the key variables i.e. Customer relationship management practices (network quality, Perceived Value, Customer Relational Experience and Loyalty Programs) satisfaction, retention measures of this study. The findings of this study have also highlighted that customer satisfaction could be the effect of customer retention; hence it has made clear, the common misconception about similarity between customer retention and satisfaction measures. Future researchers should provide a broad and more inclusive definition of CRM and constructs which may measure the interaction patterns between both variables. In addition, researchers may also use other tests like Arorian Test and Goodman test to find out the level of significant in the variables.

### **5.5.2. Contribution to Practice**

This study recommends that businesses operating in an intensely price based competitive environment, dependent on high economies of scale and with low levels of staff-customer interaction are bound to suffer shocks in their market positions and profitability unless huge investments are made in more relational strategies like building Customer Relational experience, loyalty programs and satisfaction. The study also recommends that companies must focus on those attributes of trust which consumers use to judge the trustworthiness of the services offered. The study further recommends that Mobile phone service provider companies should emphasize on building a positive brand image to meet customer's expectation and offer more benefits to customer. The practitioners i.e. service providers would be made aware of the importance of factors generated from factors analysis in enhancing the customer satisfaction. In other words, service providers could improve these factors and their respective attributes by devising appropriate strategies to retain more existing customers. In line with this, firms need to preserve their existing customers from switching to competitors by improving their existing price-based and non-price based offerings. This would tie-up customers with the firm's offerings and hence, the firm itself.

The study recommends that mobile telecommunication operators who are interested in building brand loyalty should endeavor to satisfy their customer through the provision of enhanced mobile services. Additionally, the study recommends that in order to increase customer Satisfaction, it is essential for service firms to actively manage their customers' price perceptions. The study recommends that operators offer something valuable to customers in service interaction process, such as reward and promotional offers, in order to gain customer satisfaction, which is expected to enhance customer retention.

Moreover, the study recommends that companies must focus on those attributes of customer satisfaction which consumers' base on to judge the retention of the services offered. Additionally, the study recommends that firms should commit or embrace CRM practices to enhance relationships with their customers; the customers are also likely to be committed to maintaining the relationship with that organization, thereby resulting to Retention. The study further recommends effectiveness of communication between the service provider and the consumer as it is very essential in influencing the trust that customers develop in the firm, their satisfaction with that firm and subsequently their retention in the firm. The study also recommends that an organization reciprocates to its customers as it is also likely to retain them. Finally, the study recommends that firms should ensure customer satisfaction as it is a good predictor of future purchase behaviour, an indication of customer retention. Satisfied customers generate profits because they are responsible for a large percentage of sales and are less costly to develop than new customers. Rapid improvements in information technology allow mobile phone providers and their frontline staff to track customer characteristics more easily and respond with appropriate marketing offers.

## REFERENCES

- Adrian Payne & Pennie Frow (2005), "A Strategic Framework for Customer Relationship Management". *Journal of Marketing* Vol. 69 ,pp 167-176.
- Ahn, J.H., Han, S.P., and Lee, U.S. (2006), "Customer churn analysis: Churn determinants and Andaleeb, S. S. (1996). An Experimental Investigation of Satisfaction and Commitment
- Anderson, E. and Sullivan, M.W. (1993). *The Antecedents and Consequences of Customer Satisfaction for Firms*. *Marketing Science*, Vol. 12(2), pp. 125-43.
- Anderson, E., Fornell, C., and Lehmann, D. R. (1994). *Customer Satisfaction, Market Share, and Profitability: Finding from Sweden*. *Journal of Marketing*, 58(July), pp.53-66.
- Anderson, E., Fornell, C., & Rust, R. (1997). *Customer Satisfaction, Productivity, and Profitability: Differences between goods and services*. *Marketing science*,16(2),129-145.
- Ang, L. and Buttle, F. (2006). *Customer retention management processes - a quantitative study*. *European Journal of Marketing*. 40(1/2): 83-99.
- Antreas D.A. and Opoulos AI (2003). *Modeling customer satisfaction in telecommunication: Assessing the multiple transaction points on perceived overall performance of the provider*. *Product Operational Management*, 12(2): 224-245.
- Arora, K.C. (2007). *Total Quality Management*. New Delhi: S. K. Kataria & Sons.
- Babbie, E. (2011). *The Basics of Social Research* (5th ed.). Belmont, California, USA: Cengage Learning.
- Bagozzi, Richard P. and Youjiae Yi (1988), "On the Evaluation of Structural Equation Models," *Journal of the Academy of Marketing Science*, 16 (Winter), 74–94.
- Baron, R. M., & Kenny, D. A. (1986). The moderator-mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology*, 51, 1173-1182.
- Barsky, J. (1995), *World-Class Customer Satisfaction*, Irwin Professional, Burr Ridge, IL.
- Bateson and Hoffman (2002), *Essentials of Service Marketing: Concepts and Cases*
- Berry, W. D., & Feldman, S. (1985). *Multiple Regression in Practice*. Sage University Paper Series on Quantitative Applications in the Social Sciences, series No. 07-050). Newbury Park, CA: Sage.

- Besterfield, D.H. (1994), *Quality Control*, Prentice-Hall, Englewood Cliffs, NJ.
- Bill Karakostas, Dimitris Kardaras, Eleutherios Papathanassiou (August 2004), “*The state of CRM adoption by the financial services in the UK, an empirical investigation*”. Science Direct, Information and management 42 p853-863.
- Bolton, R.N. & Drew, J. (1991). *A multistage model of customers’ assessments of service quality and Value*. Journal of consumer research, 17(4), 875-884.
- Boulding, William, Ajay Kalra, Richard Staelin, and Valarie Zeithaml (1993), “*A Dynamic Process Model of Service Quality: From Expectations to Behavioral Intentions*,” Journal of Marketing Research, 30 (February), 7–27.
- Brown S.A. and Gulycz, M. (2001). *Customer relationship management: A strategic imperative in the world of e-business*: New York: Wiley.
- Bult, Jan Roelf and Tom Wansbeek (1995), “*Optimal Selection for Direct Mail*,” Marketing Science, 14 (4), 378–95.
- Buttle, F. (2004). *Customer Relationship Management: Concepts and Tools*. Elsevier: Oxford.
- Castillo et, al (2009). *Understanding Qualitative and Quantitative Research Paradigms*
- Chakrabarty, S., Whitten, D. & Green, K.(2007). *Understanding Service Quality and*
- Chang, Tung-Zong and Albert R. Wildt. (1994). “*Price, Product Information, and Purchase Intention: An Empirical Study*,” Journal of the Academy of Marketing Science, 22(1): 16 –27.
- Choi TY, Chu R, (2001). *Determinants of hotel guests “ satisfaction and repeat patronage in Hong Kong hotel industry*. Int. J. Hosp. Manage., 20: 277-297.
- Churchill, G. A., and Surprenant, C. (1982). *An Investigation into the Determinants of Consumer Satisfaction*. Journal of Market Research, Vol. 19, pp. 491-504.
- Cohen, J., & Cohen, P. (1983). *Applied multiple regression/correlation analysis for the behavioral sciences*. Hillsdale, NJ: Lawrence Erlbaum Associates, Inc.
- Cooper and Schindler (2003; 2007) *Business Research Methods* (10th ed.). New York: McGraw- Hill Irwin
- Coviello, N.E., Brodie, R.J., Danaher, P.J. and Johnston, W.J. (2002). *How firms relate to their markets: An empirical examination of contemporary marketing practices*. Journal of Marketing. 66(3): 33-46.
- Creswell, J. W. (2003). *Qualitative, quantitative, and mixed methods approaches* (2nd



- ed.). Thousand Oaks, CA: Sage.
- Cronin, J. and Taylor, A. (1992). *Measuring service quality: A re-examination and extension*. *Journal of Marketing*, 56: 55-68.
- Cronin, J., & Taylor, S. (1994). SERVPERF versus SERVQUAL: Reconciling performance-based and perceptions-minus-expectations measurement of service quality. *Journal of Marketing*, 58(1), 125-131.
- Crosby, Lawrence A., Kenneth R. Evans, and Deborah Cowles (1990), "Relationship Quality in Services Selling: An Interpersonal Influence Perspective," *Journal of Marketing*, 54 (July), 68–81.
- Dall'Olmo Riely et al (1997), "The Variability of Attitudinal Repeat-Rates", *International Journal of Research in Marketing*, 14, 5, 437-450.
- Deighton, John (2000), "Frequency Programs in Service Industries," in *Handbook of Services Marketing and Management*, T. Swartz and D. Iacobucci, eds. London: Sage Publications, 401–408.
- Dick, Alan S. and Kunal Basu (1994), "Customer Loyalty: Toward an Integrated Conceptual Framework," *Journal of the Academy of Marketing Science*, 22 (Spring), 99–113.
- Djiofack, Z., C. and Keck, A. (2009). *Telecommunications Services in Africa: The Economic Growth*. *World Development* 37(5): 9.
- Dowling, Grahame R. and Mark Uncles (1997), "Do Customer Loyalty Programs Really Work?" *Sloan Management Review*, 38 (Summer), 71–82.
- Drèze, Xavier and Stephen J. Hoch (1998), "Exploiting the Installed Base Using Cross Merchandising and Category Destination Programs," *International Journal of Research in Marketing*, 15 (5), 459–71.
- Egan, J. (2001). *Relationship Marketing: Exploring Relational Strategies in Marketing*, Emmanuel Toili (2011). "Collymore Next Safaricom CEO". *Daily Nation*.
- Fecikova, I. (2004), "An index method for measurement of customer satisfaction", *The TQM Magazine*, Vol 16 No. 1, pp. 57-66.
- Fournier, Susan and Julie L. Yao (1997), "Reviving Brand Loyalty: A Reconceptualization within the Framework of Consumer-Brand Relationships", *International Journal of Research in Marketing*, 14, 5, 451-472.
- Fournier, Susan, Susan Dobscha and David Glen Mick (1998), "Preventing the Premature Death of Relationship Marketing", *Harvard Business Review*, (January-February), pages?

- Gay, T. (1990), *Social Research Methods*. New Delhi: Prentice Hall.
- George M. Zinkhan and A. Parasuraman, (2002), “*Marketing to and Serving Customers through the Internet: An Overview and Research Agenda*” ,*Journal of the Academy of Marketing Science* No.30; pp 286
- Ghavami AO (2006). *The Impact of CRM on Customer Retention*. Masters Thesis. Lulea University of Technology.
- Grönroos, C. (2004). *The Relationship Marketing Process: Communication, Interaction*,
- Gruen TW, Summers JO, Acito F, (2000). *Relationship marketing activities, commitment, and membership behaviors in professional associations*. *J. Mark.*, 64(3): 34-49.
- Gupta, S. and Zeithaml, V. (2006). *Customer metrics and their impact on financial performance*. *Marketing Science*, 25(6): 718–739.
- Gustafsson, A., Johnson, M.D., and Roos, I. (2005), “*The Effects of Customer Satisfaction*, Hall.
- Hair, J. F., Anderson, R. E., & Tatham, R. L. (1995).*Multivariate data analysis with Readings* (4<sup>th</sup> Ed.). Engelwood Cliff: Prentice-Hall International.
- Hammond, Kathy (1997), *Brand Loyalty for Frequently Bought Goods*. *London Business School*: Unpublished PhD thesis.
- Hart et al. (1999), “*Are Loyalty Schemes a Manifestation of Relationship Marketing?*” *Journal of Marketing Management*, 15, 6, 541-562.
- Herrmann, A., Xia, L., Monroe, K.B., and Huber. F., (2007) “*The Influence of Price Fairness on Customer Satisfaction: The empirical test in the context of automobile Purchases*. *Journal of Product & Brand Management*, Vol. 16 Iss: 1, pp.49 - 58
- Hoekstra, Janny C., Peter S.H. Leeflang, and Dick R. Wittink (1999), “*The Customer Concept: The Basis for a New Marketing Paradigm,*” *Journal of Market-Focused Management*, 4 (1),43–76.
- Honts, R. and Hanson, J. (2011). *Maximizing customer retention a strategic approach to effective churn management*. Accenture White Paper
- Hoots, M., (2005). *Customer relationship management for facility managers*. *Journal of Facilities Management*, 3(4),346–361
- Horne, Suzanne and Steve Worthington (1999), “*The Affinity Credit Card Relationship: Can it Really be Mutually Beneficial?* ”, *Journal of Marketing Management*,15, 7, 603-616.

- Hunt, K. H. (1977). *Conceptualization and Measurement of Consumer Satisfaction*(ed.), Cambridge, MA: Marketing Science Institute Information Systems, (Winter 2007-2008), 1-15.
- Jacobs, W. and Randy, S. (1999). *Measuring Service Quality: A re-examination and extension*. *Journal of Marketing*, 56, pp 55-68.
- Janiszewski, C. (2009). *The consumer experiences*. *Association for consumer research*. University of Florida.
- Jean, C. and Jacques, T. (2008). *Continuous Improvement in Public Services – A Way Forward, Managing Service Quality*, 8(5): 339-349.
- Jun Wu (2008) “*Customer Relationship Management in Practice: A case study of Hi-tech company from China*”, *Service Systems and Service Management*, International Conference, Sch. of Econ. & Manage. Beijing University of Posts & Telecommunication, Beijing.
- Kanji, G. and Moura, P. (2002), “*Kanji’s business scorecard*”, *Total Quality Management*, Vol.13 No. 1, pp. 13-27.
- Kannan, and Mathew D. Bramlett (2000), “*Implications of Loyalty Program Membership and Service Experiences for Customer Retention and Value,*” *Journal of the Academy of Marketing Science*, 28 (Winter), 95–108.
- Kano, N. (2007). *Guide to TQM in Service Industries*. Tokyo: Asian Productivity Organization.
- Kapferer, Jean-Noël (1999). *Strategic Brand Management*. 2<sup>nd</sup> Edition. London: Kogan Page.
- Kerin, R.A., Hartley, S.W., & Rudelius, W. (2009). *Marketing* (9th ed.). Boston: McGraw-Hill Irwin.
- Kim WG, Han JS, Lee E, (2001). *Effects of relationship marketing on repeat purchase and word of mouth*. *J. Hosp. Tourism Res.*, 25(3): 272-288.
- Kim, B., M. Shi and K. Srinivasan (2001). \Reward programs and tacit collusion, "Marketing Science20(2): 99-120.
- Kim, M.K., Park, M.C., and Jeong, D.H. (2004) “*The effects of customer satisfaction and Kivetz, Simonson (2002), “Promotion Reactance: The Role of Effort-Reward Congruity,*” *Journal of Consumer Research*, 31 (4), 725-737.
- Klemperer, Paul (1995). “*Competition When Consumers Have Switching Costs: An Overview with Applications to Industrial Organization, Macro Economics, and International Trade,*”

- Kopalle, Praveen and Scott A. Neslin (2003). “*The Economic Viability of Frequency Reward Programs in a Strategic Competitive Environment*,” *Review of Marketing Science*, (accessed April 16, 2004), available at <http://www.bepress.com/romsjournal/vol1/iss1/art1>].
- Kothari, C. R. (2007). *Research Methodology: Methods and Techniques*. New Delhi: WishwaPrakashan.
- Kotler P, Keller K, (2006). *Marketing Management*. 12<sup>th</sup> ed. New Jersey: Pearson Prentice Hall.
- Kotler, P. & Armstrong, G. (2010), “*Principles of Marketing*”, 13th ed. New Jersey: Prentice.
- Kritsonis W. A., & Hurton, L (2008). *Practical Application for Educational Research and Basic Statistics*. Houston, Texas: National Forum Journals
- Kukar-Kinney, M., Xia, L, Monroe, L.B., (2007) “*Consumers’ perceptions of the fairness*”
- Kumar, V., Andrew, J.P. and Robert, P.L. (2007). *How valuable is word of mouth?* *Harvard Business Review*, 85(10): 139–146.
- Kuo, Y.F., Wu, C.M. and Deng, W.J. (2009), *Computers in Human Behavior*, Volume 25, Issue.
- Lam T, Zhang H, (1999). *Service quality of travel agents: the case of travel agents in Hong Kong*. *Tourism Manage.*, 20: 341–349.
- Lam, S.Y., Shankar, V., Erramilli, M.K., & Murthy, B. (2004). *Customer value, satisfaction, loyalty, and switching costs: An illustration from a business-to-business service context*. *Journal of the academy of Marketing Science*, 32(3), 293-311.
- Larivie`re, B. and Poel, D. V. D (2005). *Predicting customer retention and profitability by using random forests and regression forests techniques*. *Expert Systems with Applications*. 29 (2): 472 484.
- Latham, Garry P. and Edwin A. Locke (1991). “*Self-Regulation through Goal Setting*,” *Organizational Behavior and Human Decision Processes*, 50 (2), 212–47.
- Lemon KN, Zeithaml VA, (2001). *What drives Customer Equity?* *Mark. Manage.*, 10: 20-25.
- Lemon, Katherine, Tiffany Barnett White, and Russell Winer (2002). “*Dynamic Customer Relationship Management*,” *Journal of Marketing*, 66 (January), 1–14

- Levesque, Terrence and Gordon H. G. McDougall (1999), *Determinants of Customer Satisfaction in Retail Banking*, *International Journal of Bank Marketing*, 14(7), 12-20.
- Liu, C. Y. (2009). *Customer Satisfaction in the service sector*, Tokyo: Asian Productivity Organization.
- Lommeruda, K. E. and Sjørgard, L. (2003), “*Entry in telecommunication: Customer Loyalty*.”
- Louviere, J.J., Hensher, D. A. and Swait, J. (2000). *Stated choice methods and applications*. New York: Cambridge University Press.
- Malhotra, N. K., and Birks D. (2007). *Common method variance in IS research: A comparison of alternative approaches and a reanalysis of past research*. *Management Science*, 52,1865–1883. (December) doi:10.1287/mnsc.1060.0597.
- Martin-Consuegra, D., Molina, A. and Esteban, A., (2007), “*An Integrated Model of Price*, McGraw-Hill.
- Mihelis, G., Grigoroudis, E., Siskos, Y., Politis, Y., and Malandrakis, Y. (2001). *Customer Satisfaction Measurement in the Private Bank Sector*, *European Journal of Operational Research*, 130 (2), pp. 347-360.
- Mike Hoot, (2005) “*Customer Relationship Management For Facility Managers*”, *Journal of facilities management*, 2005, 3,4 ABO/INFORM Global pg.346.
- Morgan, Robert M. and Shelby D. Hunt (1994), “*The Commitment–Trust Theory of Relationship Marketing*”, *Journal of Marketing*, 58 (July), 20–38
- Naichianas et al (1996) *Research Methods in Social Sciences*, 5<sup>th</sup> ed., Arnold, Santa cruz
- Ndubisi, N., and Chan, K. (2005). *Factorial and Discriminant Analyses of the Underpinnings of Relationship Marketing and Customer Satisfaction*. *International Journal of Bank Marketing*, Vol. 23, No.7, pp. 542-557.
- Nokia, (2010) *Kenya Telecommunications Sector Performance Review: 1999 2003*”  
Research ICT Africa Report
- Nunnally, J. C. (1978). *Psychometric Theory*. New York: McGraw-Hill
- O’Brien, Louise and Charles Jones (1995), “*Do Rewards Really Create Loyalty?*”  
*Harvard Business Review*, 73 (May–June),75–82.
- Oliver, R.L. (1988; 1997). *Satisfaction: A behavioral perspective on the consumer*. New York: McGraw-Hill.

- Oliver, R.L. (1993). *A conceptual model of service quality and service satisfaction: Compatible goals, different concepts*. In T.A. Swartz, D.E. Bowen, & S.W. Brown (Eds.), *Advances in services marketing and Management* (pp. 65-85). Greenwich, CT: JAI Press.
- Olshavsky, R.W., and Miller, J.A. (1972). *Consumer Expectations, Product Performance, and Perceived Product Quality*. *Journal of Marketing Research*, Vol. IX(February), pp. 19-21.
- Osborne, J. W., Christensen, W. R., & Gunter, J. (April, 2001). *Educational Psychology from a Statistician's Perspective: A Review of the Power and Goodness of Educational Psychology Research*.
- Ostrom, A., & Iacobucci, D. (1995). *Consumer trade-offs and the evaluation of services*. *Journal of Marketing*, 59(1), 17-28.
- Papper Don and Marth Rogers (2004). "Managing Customer Relationship", *Harvard 3 Business Review*", 77 pp 151-60.
- Parasuraman, A., Berry, L.L. and Zeithaml, V.A. (1998). *Guidelines for Conduction Service Quality Research*, *Marketing Research*, 2(4): 34-44.
- Parker, C., and Mathews, B.P. (2001). *Customer Satisfaction: Contrasting Academic and Consumers' Interpretations*. *Marketing Intelligence and Planning*, Vol. 19, No.1,pp. 38-44.
- Pedhazur, E. J., (1997). *Multiple Regression in Behavioral Research* (3<sup>rd</sup> ed.). Orlando, FL:Harcourt Brace.
- Peng, Leong Yow & Wang, Qing (2006). *Impact of Relationship Marketing Tactics (RMTs) on switchers and stayers in a competitive service industry*. *Journal of marketing management*, 22, pp 25-59.
- Peter Verhoef, (2003), *Understanding of Customer Relationship Management Efforts on Customer Retention and Customer Share Development*
- Pine, Joseph B, and James H. Gilmore (1999),*The Experience Economy: Work is Theatre and every Business a Stage*, Boston, MA: Harvard Business School Press.
- Preacher, K.J., & Hayes, A.F. (2004).*SPSS and SAS procedures for estimating indirect effects in simple mediation models Behavior Research Methods, Instruments, & Computers*, 36, 717-731.
- Rahimi.and Gwinner, K. P. (2008). *Internet Retail Customer Loyalty: The Mediating*

- Role of Relational Experience: *International Journal of Service Industry Management*, Vol. 14 Iss: 5, pp.483 - 500
- Reichheld, F.F. & Sasser, Jr., W.E. (1990; 1996). *Zero defections*. Quality comes to services. *Harvard Business Review*, 68(5), 105-111.
- Rivie`re, B., Cadotte, E.R., Woodruff, R.B and Jenkins, R.C. (2006). Developing zones of tolerance for managing passenger rails services quality, *International Journal of Quality and Reliability Management*, 24 (1): 7-31.
- Robson (2002) *Business research methods*. Oxford University Press.
- Roehm, Michelle L., Ellen Bolman Pullins, and Harper A. Roehm Jr. (2002), “*Designing Loyalty Building Programs for Packaged Goods Brands*,” *Journal of Marketing Research*, 39 (May), 202-213.
- Roos, I., Gustafsson, A., & Edvardsson, B. (2006). *Defining relationship quality for customer- driven business development*. *International Journal of service Industry Management*, 17(2), 207-223.
- Ryals, L.J. and Knox, S. (2005). *Measuring risk-adjusted customer lifetime value and its impact on relationship marketing strategies and shareholder value*. *European Journal of Marketing*. 39 (5/6): 456-472.
- Samit Chakravorti (2006) “*CRM a Content Analysis of Issues and Best Practices*”, *Journal of Consumer Marketing* Vol. No 20 pp 385-398.
- Saunders et. al (2000;2007), *Research Methods for Business Students 2<sup>nd</sup> Edition*, Financial times/prentice Hall.
- Shankar, V., Smith, A., & Rangaswamy, A (2003). *Customer satisfaction and loyalty in online and offline environments*. *International Journal of Research in Marketing*, 20 (2), 153-175.
- Sharp, B. and A. Sharp, (1997). *Loyalty Programs and Their Impact on Repeat-Purchase Loyalty Patterns*. *International Journal of Research in Marketing* 14 (No. 5), 473-486.
- Singh, H. (2006). *The importance of customer satisfaction in relation to customer loyalty and retention*. UCTI Working Paper. Asia Pacific University College of Technology and Innovation, Malaysia.
- Sirdeshmukh, Sigh, and Sabol (2002). *Understanding the structure of customers’ satisfaction evaluations of service Delivery*.

- Smith, J.B., & Barclay, D.W. (1997). *The effects of organizational differences and trust on the effectiveness of selling partner relationships*. *Journal of Marketing*, 61(1), 3-21.
- Soderlund, M., and Rosengren, S. (2008), “*Revisiting the smiling service Worker and customer*.”
- Soman, Dilip (1998), “*The Illusion of Delayed Incentives: Evaluating Future Effort-Money*.”
- Somekh and Lewin (2005). *Research Methods in social Sciences*.
- Spreng, R. A., & Mackoy, R. D. (1996). *An empirical examination of a model of perceived service quality and satisfaction*. *Journal of Retailing*, 72(2): 201–214.
- Spreng, R. A., MacKenzie, S. B., and Olshavsky, R. W. (1996). *A Reexamination of the Determinants of Consumer Satisfaction*. *Journal of Marketing*, Vol. 60 (July), pp.15-32.
- Sprowls, R.C., and Asimow, M. (1962). *A Model of Customer Behavior for the Task Manufacturing Corporation*. *Management Science*, Vol. 8 (3), pp. 311-324.
- Stanton, W. J., Michael J. E, and Bruce J. W. (1994) *Fundamentals in Marketing*. 10th ed.
- Stengel, G. (2003). *Ten tips for measuring and improving performance*. Stengel Solutions.
- Stone, M., Woodcock, N., and Machtynger, L. (2000). *Customer Relationship Marketing: switching barrier on customer loyalty in Korean mobile telecommunication services”*
- Sullivan T. J (2001). *Methods of Social Research*. Fort Worth, TX
- Tabachnick, B. G., Fidell, L. S. (2001). *Using Multivariate Statistics* (4th ed.). Needham Heights, MA: Allyn and Bacon
- Teas, F. (1994). *Closeness, Strength and Satisfaction: Examining Nature of Relationships between providers of Financial Service and their Retail Customers*, *Psychology and Marketing*, 14 (8): 765 790.
- Terblanche, N.S. and Hofmeyr, J. (2005). *A study of two customer retention measures: the American customer satisfaction index and the conversion model*.
- Trasorras, R., Weinstein, A. and Abratt, R. (2009). *Value, satisfaction, loyalty and retention in professional services*. *Marketing Intelligence & Planning*. 27 (5): 615-632.



- Tseng, Yi Ming (2007). *The Impacts of Relationship Marketing Tactics on Relationship Quality in Service Industry. The business Review, Cambridge, Vol, 7 number 2.*
- Turel, O., and Serenko, A. (2006), “*Satisfaction with mobile services in Canada: An empirical*”
- Turnbull, P., & Moustakatos, T. (1996) *Marketing and investment banking: relationships & competitive advantage.* International Journal of Bank Marketing, 14, 38-49
- Uncles, Mark D., Kathy Hammond, Andrew S. C. Ehrenberg and R. E. Davis((1994), “*A Replication Study of Two Brand-Loyalty Measures*”, European.
- Wassenaar, V., Andaleeb, S. S. and Conway, C. (2005). *Customer Satisfaction in the Restaurant Industry: An Examination of the Transaction-specific model.* Journal of Services Marketing, 20 (1): 3-11.
- Weilbacher, W. M. (1993), *Brand Marketing.* Linconwood, IL: NTC Books, Ch. 7.
- Weiner, B. (1996). *An attribution theory of motivation and emotion.* New York: Springer-Verlag.
- Wiersma W(1995). *Research Methods in Education: An Introduction* (6<sup>th</sup> Ed)
- Winter, T. (1999). *An Exploratory study of service Quality In The Malaysian Public Service,* International Journal of Quality and Reliability Management, 2007, 24(2): 177-190.
- Woo, K. and Fock, H.K.Y. (2004). *Retaining and divesting customers: an exploratory study of right customers, at-risk right customers, and wrong customers.* Journal of Services Marketing. 18 (3): 187-197.
- Wu, D. and Pan, A. (2009). *A critical Approach to Examining the Effects of Service Failures in Customer Relationship: The case of Swedish and U. S. Airlines* Journal of Travel Research,7: 35 – 40.
- Xia, L., Monroe, K. ,& Cox, J..(2004). “*The Price Is Unfair! A Conceptual Framework of Price fairness Perceptions*”
- Zeithaml, V.A., Berry, L.L., and Parasuraman, A. (1996).*The behavioral consequences of service quality.* Journal of Marketing, 60(2): 31-46.
- Zeithaml, Valarie A., Leonard L. Berry, and A. Parasuraman (2000),“*The Behavioral Consequences of Service Quality,*” Journal of Marketing, 60 (April), 31–46.
- Zhang, Z. John, Aradhna Krishna, and Sanjay K. Dhar (1999; 2000),“*The Optimal*

*Choice of Promotional Vehicles*, "Management Science, 46 (3), 348–62  
Zikmund, W. G., Babin, B.J., Carr, J. C. and Griffin, M. (2010). *Business Research  
Methods* (8th Ed.). Canada: SouthWestern, Cengage, Learning Canada.

## **APPENDIX I: REQUEST LETTER TO RESPONDENTS**

**Moi University**

**School of Business and Economics**

**Dear Respondent,**

### **QUESTIONNAIRE FOR CUSTOMERS OF MOBILE PHONE SERVICE PROVIDER**

I am a Ph.D. student at Moi University in the School of Business and Economics, Majoring in Marketing. In order to complete my study, I am conducting research to focusing on “The effects of customer relationship management practices on customer retention among Mobile phone user in Universities of Western Kenya region: the mediating role of customer satisfaction” This study will enable me to make suggestions that will help in improving services that will meet your needs as a customer. Finally, the results of this study will provide valuable insight to research institutions that wish to improve the education of our future students.

Your participation and opinion will be of great value to me and the mobile phone industry. The information you will provide will be kept confidential. To ensure your anonymity, no name or other means of identification are requested in this survey. Your completed survey will only be accessed by the researchers of this study.

Thank you for participating in this study. If you have any questions or comments on this study, please contact me using mobile phone 254-0706836051 or e-mail. ntabootiso@yahoo.com. Moi University P.O. Box 3900, Eldoret.

Your input is greatly appreciated.

Sincerely,

Ntabo Otiso  
ntabootiso@yahoo.com  
Researcher

**APPENDIX II: QUESTIONNAIRE**

**Section A: CRM PRACTICES**

**PART I**

*In your opinion how is the network quality of your mobile network in terms of the following dimensions*

*1- much worse than expected, 2- worse than expected, 3- equal to expectations, 4- better than expected, 5- much better than expected*

**Network Quality**

NQ1	Successful in completion of calls, SMS, MMS, Line activation, credit reloading	1	2	3	4	5
NQ2	Providing adequate network coverage	1	2	3	4	5
NQ3	Network clarity and speed for call to other services	1	2	3	4	5
NQ4	Providing prompt money transfer services	1	2	3	4	5
NQ5	There is ease of connection to other networks from my service provider	1	2	3	4	5
NQ6	Network innovativeness-ability to use current technology to improve services	1	2	3	4	5
NQ7	Employee have technological knowledge and skills in solving customer problems	1	2	3	4	5

**PART II**

*Please circle the most appropriate number of each statement which corresponds most closely to your desired response*

*1- Strongly disagree, 2- disagree, 3- undecided, 4- Agree, 5- Strongly agree*

**(a). Perceived Value**

PV1	This service provider is good value for money	1	2	3	4	5
PV2	I Value the ease of using this mobile service provider	1	2	3	4	5
PV3	I value the convenience of using this service provider	1	2	3	4	5
PV4	Compared to what to give up, the overall ability of the service provider to satisfy my wants and needs is high	1	2	3	4	5
PV5	Overall, the value of the service provider to me is high	1	2	3	4	5

**(b). Customer Relational Experiences**

RE1	I feel safe with my service provider	1	2	3	4	5
RE2	The employees are courteous	1	2	3	4	5
RE3	Simple procedures in transactions	1	2	3	4	5
RE4	I am provided with prior information on planned activities	1	2	3	4	5
RE5	Ease of Making Electronic Credit transfers	1	2	3	4	5

**(c). Loyalty Programs**

LP1	Service Provider always accumulates reward points for its customers	1	2	3	4	5
LP2	My Service provider offers discounts(economic incentives) to its customers	1	2	3	4	5
LP3	I enjoy low charges during off-peak hours	1	2	3	4	5
LP4	My Service provider offers gifts.	1	2	3	4	5
LP5	I am regularly updated on service changes	1	2	3	4	5

**SECTION B. Customer Satisfaction**

CS1	I am satisfied with this service provider’s services	1	2	3	4	5
CS2	The service provider is successful	1	2	3	4	5
CS3	My service provider meets my expectations.	1	2	3	4	5
CS4	Overall, this service provider has met my expectations	1	2	3	4	5

**SECTION C. Customer Retention**

CR1	I consider the company as my first choice	1	2	3	4	5
CR2	I will patronize the company more in the next few years	1	2	3	4	5
CR3	I have encouraged others to patronize the service provider	1	2	3	4	5
CR4	I say positive things about the service provider to other colleagues	1	2	3	4	5
CR5	I recommend the service provider to someone who seeks advice	1	2	3	4	5

**SECTION C: Respondent Personal Information**

*Please tick [✓] the appropriate box that best describes you*

1. Gender of respondents:

Male

Female

2. Please select your Age:

18-24

25-34

35-44

Over 45 Years

3. Select your Highest Level of Education:

O-Level

Certificate

Diploma/HN Diploma

Bachelor’s Degree

Post Graduate Degree

4. Mobile service provider(s): Tick all the networks you use

Safaricom

Airtel

Orange

yuMobile

5. Which Mobile service provider do you use **most often** as your **network**?

Safaricom

Airtel

Orange

yuMobile

6). For how long have you used services of this Phone Service provider?

1-3 years

4-7 year

8-10years

Over 11years

*Thank you for participating in this study*

## APPENDIX V: CALCULATION FOR THE SOBEL TEST

© 2010-2014, Kristopher J. Preacher

To conduct the Sobel test

Details can be found in Baron and Kenny (1986), Sobel (1982), Goodman (1960), and MacKinnon, Warsi, and Dwyer (1995). Insert the  $a$ ,  $b$ ,  $s_a$ , and  $s_b$  into the cells below and this program will calculate the critical ratio as a test of whether the indirect effect of the IV on the DV via the mediator is significantly different from zero.

Input:		Test statistic:	Std. Error:	$p$ -value:
$a$	<input type="text"/>	Sobel test:	<input type="text"/>	<input type="text"/>
$b$	<input type="text"/>	Aroian test:	<input type="text"/>	<input type="text"/>
$s_a$	<input type="text"/>	Goodman test:	<input type="text"/>	<input type="text"/>
$s_b$	<input type="text"/>			

Alternatively, you can insert  $t_a$  and  $t_b$  into the cells below, where  $t_a$  and  $t_b$  are the  $t$ -test statistics for the difference between the  $a$  and  $b$  coefficients and zero. Results should be identical to the first test, except for error due to rounding.

Input:		Test statistic:	$p$ -value:
$t_a$	<input type="text"/>	Sobel test:	<input type="text"/>
$t_b$	<input type="text"/>	Aroian test:	<input type="text"/>
		Goodman test:	<input type="text"/>

The reported  $p$ -values (rounded to 8 decimal places) are drawn from the unit normal distribution under the assumption of a two-tailed  $z$ -test of the hypothesis that the mediated effect equals zero in the population.  $\pm 1.96$  are the critical values of the test ratio which contain the central 95% of the unit normal distribution.

We should note that there are three principal versions of the "Sobel test" - one that adds the third denominator term (Aroian, 1944/1947 - this is the version popularized by Baron & Kenny as the Sobel test), one that subtracts it (Goodman, 1960), and one that does not include it at all. We stress that researchers should consult MacKinnon, Lockwood, Hoffman, West, and Sheets (2002), as well as sources cited therein, before attempting to interpret the results of any of these tests. Researchers should consult Krull & MacKinnon (1999) before attempting to apply the Sobel test to parameter estimates obtained from multilevel modeling.

Formulae for the tests provided here were drawn from MacKinnon & Dwyer (1994) and from MacKinnon, Warsi, & Dwyer (1995):

Sobel test equation

$$z\text{-value} = a*b/\text{SQRT}(b^2*s_a^2 + a^2*s_b^2)$$

Aroian test equation

$$z\text{-value} = a*b/\text{SQRT}(b^2*s_a^2 + a^2*s_b^2 + s_a^2*s_b^2)$$

Goodman test equation

$$z\text{-value} = a*b/\text{SQRT}(b^2*s_a^2 + a^2*s_b^2 - s_a^2*s_b^2)$$

The Sobel test equation omits the third term of the variance estimate in the denominator. We recommend using the Aroian version of the Sobel test suggested in Baron and Kenny (1986) because it does not make the unnecessary assumption that the product of  $s_a$  and  $s_b$  is vanishingly small. The Goodman version of the test subtracts the third term for an unbiased estimate of the variance of the mediated effect, but this can sometimes have the unfortunate effect of yielding a negative variance estimate.

The Sobel test and the Aroian test seemed to perform best in a Monte Carlo study (MacKinnon, Warsi, & Dwyer, 1995), and converge closely with sample sizes greater than 50 or so.

**APPENDIX VI**  
**Results of Inferential statistics on the relationship of the study variables**

**Table A1: Reliability analysis: Inter-Item Correlation Matrix of Network quality**

**NETWORK QUALITY**

**Reliability Statistics**

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.839	.839	7

**Inter-Item Correlation Matrix**

	Successful in completion	Adequate network coverage	Network clarity	Prompt money transfer	ease of connection to other networks	Network Innovativeness	Technological Knowledge
Successful in completion	1.000	.861	.510	.310	.239	.233	.060
Adequate network coverage	.861	1.000	.521	.403	.254	.382	.173
Network clarity	.510	.521	1.000	.484	.536	.303	.330
Prompt money transfer	.310	.403	.484	1.000	.813	.370	.583
ease of connection to other networks	.239	.254	.536	.813	1.000	.385	.522
Network Innovativeness	.233	.382	.303	.370	.385	1.000	.700
Technological Knowledge	.060	.173	.330	.583	.522	.700	1.000

**Table A2: Reliability analysis: Inter-Item Correlation Matrix of Perceived value**

**PERCEIVED VALUE**

**Reliability Statistics**

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.808	.814	5

**Inter-Item Correlation Matrix**

	Good Value for money	Value ease of use	convenience of using service provider	Overall ability to give up High	Over ability is high
Good Value for money	1.000	.562	.503	.639	.453
Value ease of use	.562	1.000	.565	.537	.385
convenience of using service provider	.503	.565	1.000	.619	.223
Overall ability to give up High	.639	.537	.619	1.000	.186
Over ability is high	.453	.385	.223	.186	1.000



**Table A3: Reliability analysis: Inter-Item Correlation Matrix of Customer Relational Experience**

**CUSTOMER RELATION EXPERIENCE**

**Reliability Statistics**

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.724	.734	5

**Inter-Item Correlation Matrix**

	Safety with service provider	Employees are courteous	Simple Procedures	Prior Information on planned activities provided	Ease of making electronic credit transfers
Safety with service provider	1.000	.562	.503	.073	-.054
Employees are courteous	.562	1.000	.565	.536	.213
Simple Procedures	.503	.565	1.000	.377	.226
Prior Information on planned activities provided	.073	.536	.377	1.000	.560
Ease of making electronic credit transfers	-.054	.213	.226	.560	1.000

**Table A4: Reliability analysis: Inter-Item Correlation Matrix of Loyalty Programs**

**LOYALTY PROGRAMS**

**Reliability Statistics**

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.649	.638	5

**Inter-Item Correlation Matrix**

	Acculation of reward points	Discounts offered to customers	Enjoy Low charges during off peak	My service provider offers gifts	Regularly updated on service changes
Acculation of reward points	1.000	-.020	.653	.579	.205
Discounts offered to customers	-.020	1.000	-.100	.029	.411
Enjoy Low charges during off peak	.653	-.100	1.000	.821	-.103
My service provider offers gifts	.579	.029	.821	1.000	.133
Regularly updated on service changes	.205	.411	-.103	.133	1.000

**Table A5: Reliability analysis: Inter-Item Correlation Matrix of Customer Satisfaction**

**CUSTOMER SATISFACTION**

**Reliability Statistics**

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.722	.715	4

**Inter-Item Correlation Matrix**

	Satisfied with this service provider's services	Service provider is successful	Service provider meets my expectations	Overall, service provider has met my expectations
Satisfied with this service provider's services	1.000	.428	.637	-.032
Service provider is successful	.428	1.000	.592	.527
Service provider meets my expectations	.637	.592	1.000	.163
Overall, service provider has met my expectations	-.032	.527	.163	1.000

**Table A6: Reliability analysis: Inter-Item Correlation Matrix of Customer Retention**

**CUSTOMER RETENTION**

**Reliability Statistics**

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.716	.716	5

**Inter-Item Correlation Matrix**

	I consider the company as my first choice	Patronizing the company in few more years	Encouraging others to patronizing the service provider	Say Postive thngs about the service provider	I will recommend the service provider to some who seems my advice
I consider the company as my first choice	1.000	.355	.288	.258	.089
Patronizing the company in few more years	.355	1.000	.773	.291	.237
Encouraging others to patronizing the service provider	.288	.773	1.000	.267	.481
Say Postive thngs about the service provider	.258	.291	.267	1.000	.313
I will recommend the service provider to some who seems my advice	.089	.237	.481	.313	1.000

**Table A7: Reliability Analysis: Inter-Item Correlation Matrix**

**Correlations**

		NETWOR K	VALUE	EXPERIEN CE	LOYAL TY	IMAGE	MOUTH	SATISF ACTIO N	RETENTION
NETWORK	Pearson Correlation	1	.516**	.707**	.723**	.693**	.503**	.434**	.501**
	Sig. (2-tailed)		.000	.000	.000	.000	.000	.000	.000
	N	222	222	222	222	222	222	222	222
VALUE	Pearson Correlation	.516**	1	.790**	.542**	.465**	.665**	.214**	.461**
	Sig. (2-tailed)	.000		.000	.000	.000	.000	.001	.000
	N	222	222	222	222	222	222	222	222
EXPERIENCE	Pearson Correlation	.707**	.790**	1	.673**	.720**	.720**	.524**	.512**
	Sig. (2-tailed)	.000	.000		.000	.000	.000	.000	.000
	N	222	222	222	222	222	222	222	222
LOYALTY	Pearson Correlation	.723**	.542**	.673**	1	.760**	.446**	.518**	.587**
	Sig. (2-tailed)	.000	.000	.000		.000	.000	.000	.000
	N	222	222	222	222	222	222	222	222
IMAGE	Pearson Correlation	.693**	.465**	.720**	.760**	1	.458**	.618**	.630**
	Sig. (2-tailed)	.000	.000	.000	.000		.000	.000	.000
	N	222	222	222	222	222	222	222	222
MOUTH	Pearson Correlation	.503**	.665**	.720**	.446**	.458**	1	.200**	.464**
	Sig. (2-tailed)	.000	.000	.000	.000	.000		.003	.000
	N	222	222	222	222	222	222	222	222
SATISFACTION	Pearson Correlation	.434**	.214**	.524**	.518**	.618**	.200**	1	.646**
	Sig. (2-tailed)	.000	.001	.000	.000	.000	.003		.000
	N	222	222	222	222	222	222	222	222
RETENTION	Pearson Correlation	.501**	.461**	.512**	.587**	.630**	.464**	.646**	1
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	.000	
	N	222	222	222	222	222	222	222	222

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

**Table A8: Network quality Total Variance Explained**

**Total Variance Explained**

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3.584	51.199	51.199	3.584	51.199	51.199	2.806	40.080	40.080
2	1.532	21.892	73.091	1.532	21.892	73.091	2.311	33.010	73.091
3	.889	12.706	85.797						
4	.477	6.819	92.616						
5	.262	3.741	96.358						
6	.166	2.378	98.736						
7	.089	1.264	100.000						

Extraction Method: Principal Component Analysis.

**Table A9: perceived value total Variance Explained**

**Total Variance Explained**

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.918	58.352	58.352	2.918	58.352	58.352
2	.903	18.068	76.419			
3	.495	9.898	86.318			
4	.404	8.085	94.402			
5	.280	5.598	100.000			

Extraction Method: Principal Component Analysis.

**Table A10: customer relation experience total Variance Explained**

**Total Variance Explained**

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.490	49.803	49.803	2.490	49.803	49.803	2.103	42.058	42.058
2	1.331	26.627	76.430	1.331	26.627	76.430	1.719	34.371	76.430
3	.504	10.077	86.507						
4	.435	8.704	95.211						
5	.239	4.789	100.000						

Extraction Method: Principal Component Analysis.

**Table A10: Loyalty Programs total Variance Explained**

**Total Variance Explained**

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.385	47.709	47.709	2.385	47.709	47.709	2.383	47.664	47.664
2	1.448	28.961	76.669	1.448	28.961	76.669	1.450	29.005	76.669
3	.636	12.726	89.396						
4	.403	8.065	97.461						
5	.127	2.539	100.000						

Extraction Method: Principal Component Analysis.

**Table A11: Customer Satisfaction total Variance Explained**

**Total Variance Explained**

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.231	55.768	55.768	2.231	55.768	55.768	1.917	47.937	47.937
2	1.148	28.697	84.464	1.148	28.697	84.464	1.461	36.527	84.464
3	.337	8.434	92.899						
4	.284	7.101	100.000						

Extraction Method: Principal Component Analysis.

**Table A12: Customer Retention total Variance Explained**  
**Total Variance Explained**

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.409	50.179	48.179	2.409	48.179	48.179
2	.945	20.905	67.083			
3	.866	17.318	84.401			
4	.604	12.084	96.485			
5	.176	3.515	100.000			

Extraction Method: Principal Component Analysis.

**Table A 13: KMO and Barlet's Test of Study constructs**  
**NETWORK QUALITY**

**KMO and Bartlett's Test**

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	.630
Bartlett's Test of Sphericity	Approx. Chi-Square
	1026.167
	df
	21
	Sig.
	.000

**PERCEIVED VALUE**

**KMO and Bartlett's Test**

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	.767
Bartlett's Test of Sphericity	Approx. Chi-Square
	418.074
	df
	10
	Sig.
	.000

## **CUSTOMER RELATION EXPERIENCE**

### **KMO and Bartlett's Test**

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	.631	
Bartlett's Test of Sphericity	Approx. Chi-Square	381.993
	df	10
	Sig.	.000

## **LOYALTY PROGRAMS**

### **KMO and Bartlett's Test**

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	.549	
Bartlett's Test of Sphericity	Approx. Chi-Square	477.317
	df	10
	Sig.	.000

## **CUSTOMER SATISFACTION**

### **KMO and Bartlett's Test**

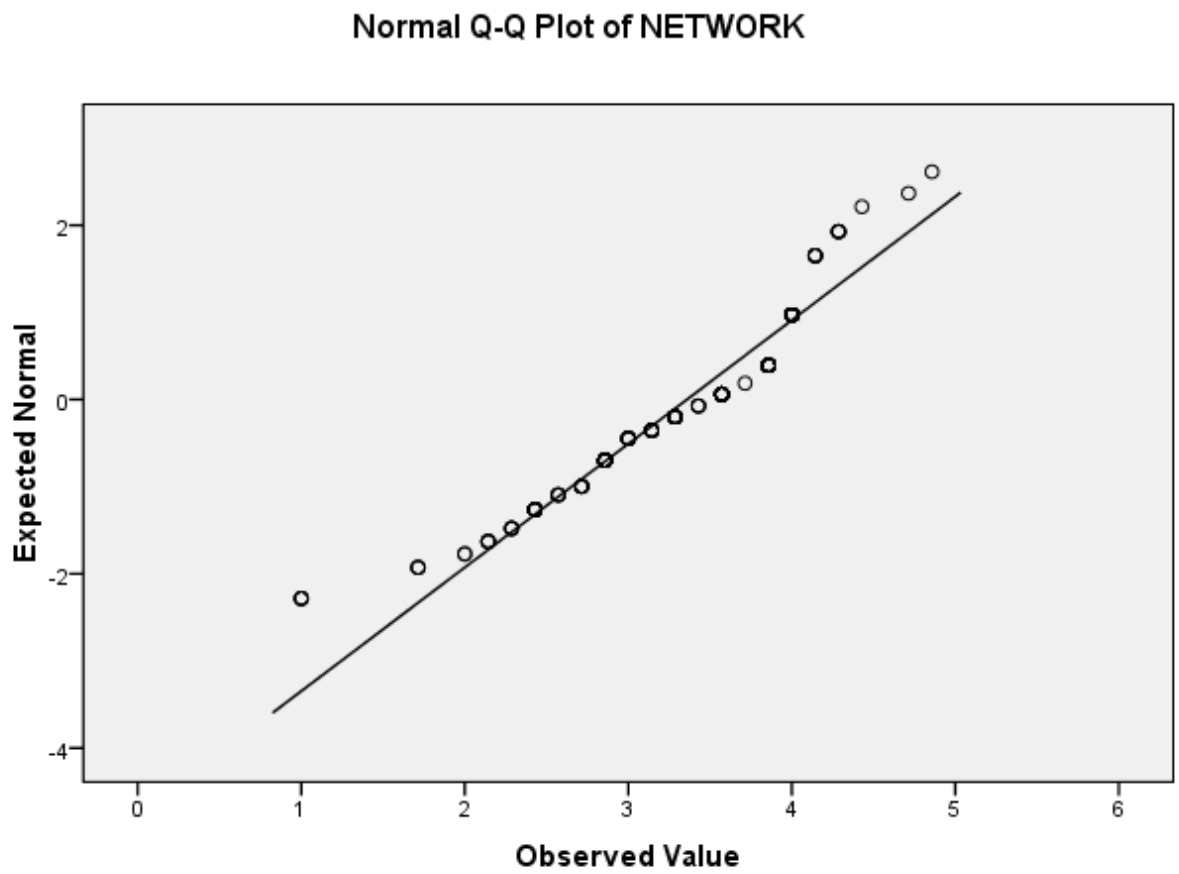
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	.594	
Bartlett's Test of Sphericity	Approx. Chi-Square	307.448
	df	6
	Sig.	.000

## **CUSTOMER RETENTION**

### **KMO and Bartlett's Test**

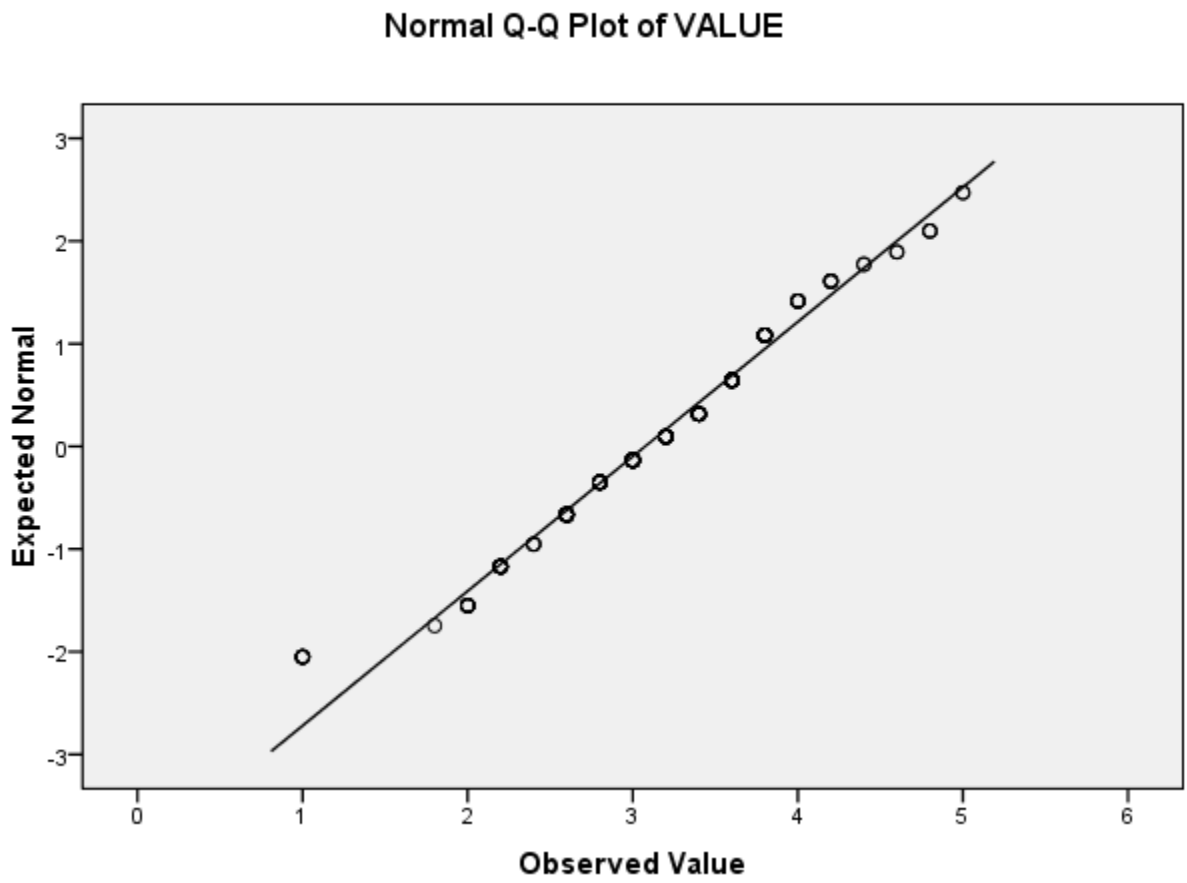
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	.578	
Bartlett's Test of Sphericity	Approx. Chi-Square	341.686
	df	10
	Sig.	.000

**Figure A1: Normality and Linearity of Network Quality**

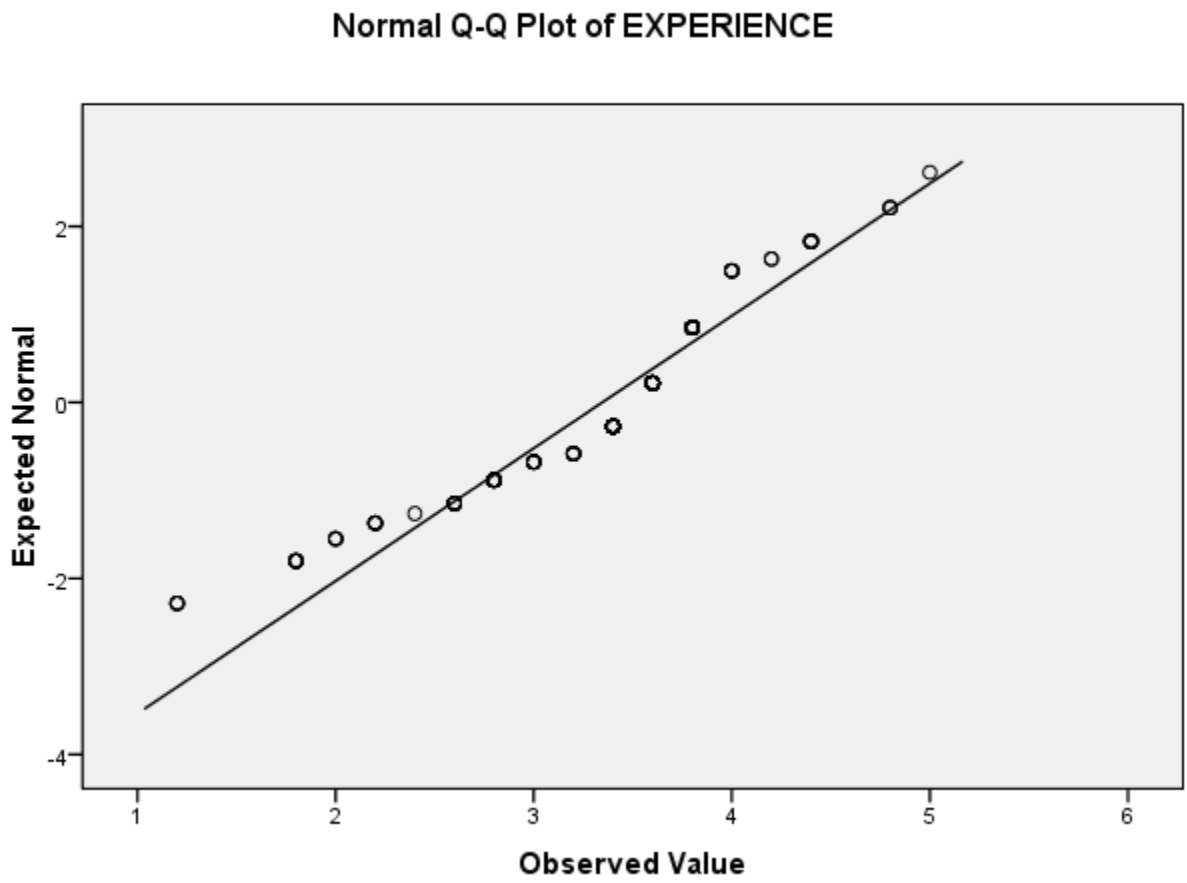




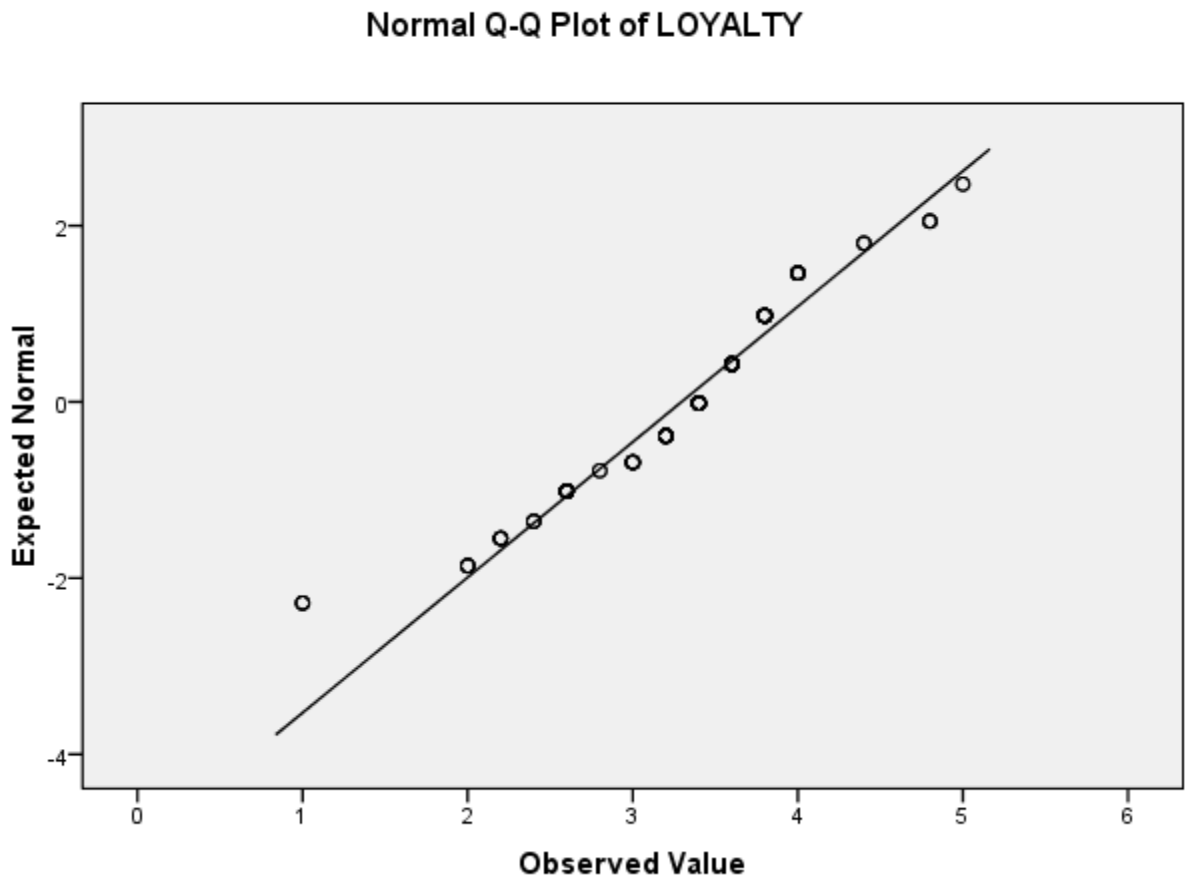
**Figure A2: Normality and Linearity of Perceived Value**



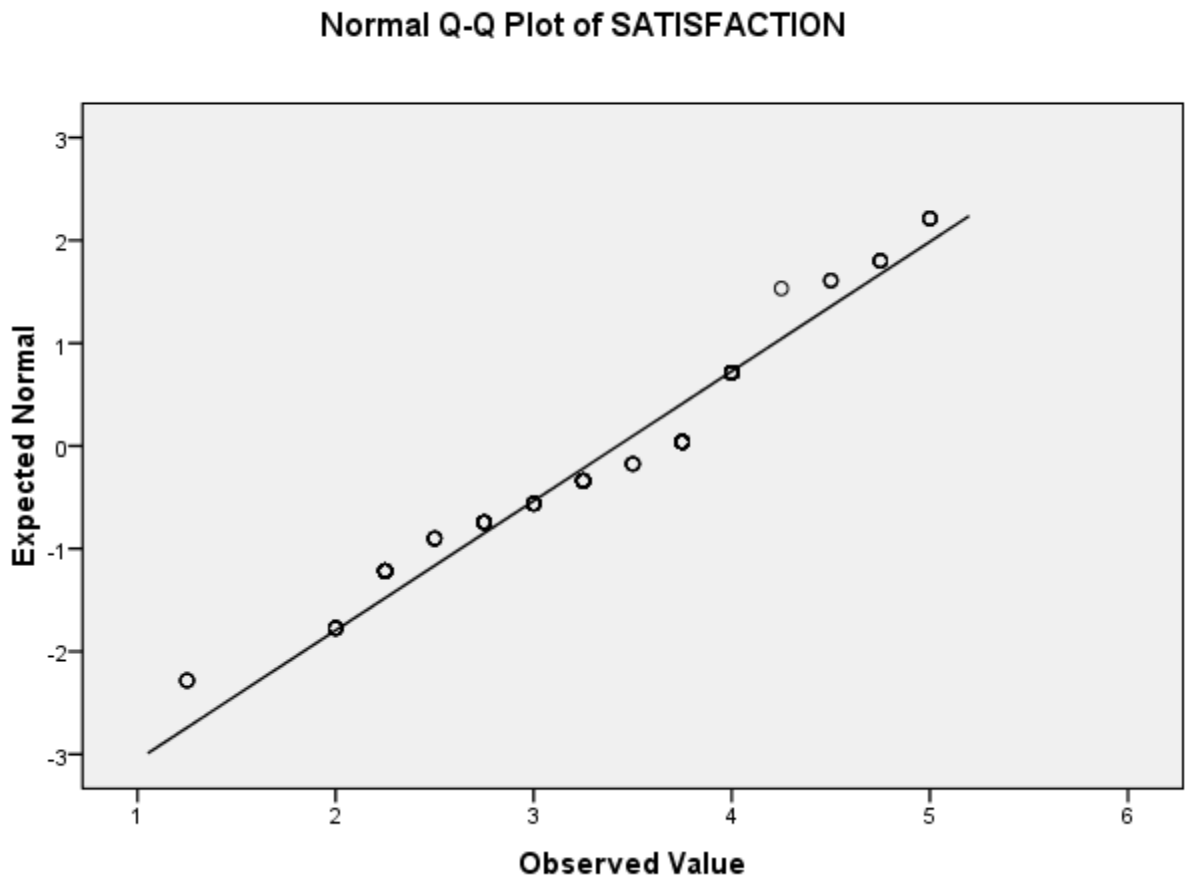
**Figure A3: Normality and Linearity of Customer Relational Experience**



**Figure A4: Normality and Linearity of Loyalty Programs**



**Figure A5: Normality and Linearity of Customer Satisfaction**



**Figure A6: Normality and Linearity of Retention**

