

**FACTORS INFLUENCING CONSUMER CHOICE OF MOBILE
TELEPHONE SERVICE PROVIDER: A CASE OF HOUSEHOLDS
IN NAIROBI COUNTY**

BY

WACHIRA ELIUD WAMBUGU


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A REASERCH PROJECT SUBMITTED IN PARTIAL FULFILMENT FOR THE
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DECLARATION

This research project is my original work and has not been presented for a degree in any other university.

Signed 

Eliud Wachira

L50/76792/2009

Date..... 25/04/2012

This research project has been submitted for examination with my approval as University Supervisor.

Signed 

Date..... 10/05/2012

Dr. Raphael Nyonje

Department of Extra Mural Studies

School of Continuous and Distance education

University of Nairobi

DEDICATION

This proposal is dedicated to my wife, Pamela and my Children, Stacy and Ben Wambugu. To all thank you for your support.

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I would like to acknowledge those who made it possible for me to successfully complete this project.

First is University of Nairobi which accorded me an opportunity to study and for availing to me at opportune time facilities that helped me to successfully complete this research proposal.

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ABBREVIATIONS AND ACRONYMS

DOT – Department of Telecommunication

TRAI – Telecom Regulatory Authority of India

ITU – International Telecommunication Union

CTIA – Cellular telecommunication and Internet Association

EPZA – Export processing Zones Authority

FCC – Federal Communications Commissions

MCMC - Malaysian Communications and Multimedia Commission

EDGE - Enhanced Data rates for GSM Evolution

GPRS - General Packet Radio Service

GPS - Global Positioning System

GSM - Global System for Mobile communications

HSDPA - High Speed Downlink Packet Access

HSPA - High Speed Packet Access

W-CDMA- Wideband Code Division Multiple Access

WiMAX - World Interoperability for Microwave Access

TAM – Technology Adoption Model

UTAUM – Unified Theory of Acceptance and Use of Technology

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ABSTRACT

In recent years, mobile phones has become a must have tool for survival. Its adoption has been exceptionally rapid in many parts of the world. In Kenya and especially in Nairobi mobile penetration has reached 88%, and is a common gadget that almost every adult have. But even being so common and greatly contributing into our lives, empirical study on consumers has been limited especially in academic world. As a result of its importance numerous factors need to be considered when choosing mobile phone. It is against these challenges that the topic "factors influencing consumer choice of mobile telephone service provider" was chosen for study and also adding to academic sphere some knowledge on mobile telephone consumers' behavior. This study focused on factors influencing consumer choice of mobile telephone service provider. The research has four objectives which include, establishing the extent at which demographic characteristics influences consumers choice; to examine how the social related factors influence of consumers; to investigate the level at which economic related factors influence the consumer; and to determine the level at which mobile service efficiency and effectiveness influence the consumer choice of mobile service provider in Nairobi.

This research study used descriptive survey. The target population consisted of individual user of mobile telephone services at the household level within Nairobi region. As per Kenya population and housing census of August, 2009, the household population in the study area was 985,016 households. The researcher used both stratified sampling and random sampling techniques. The researcher divided Nairobi region into four distinct zones namely, Nairobi West, Nairobi East, Nairobi North and Westlands as per the 2009 census. These zones formed the strata for further sampling, random sampling technique was then used to identify specific household giving a target sample of 384. Primary data was used in the study which was collected through a semi structured questionnaire. The researcher administered the questionnaires directly to the respondent at household level but where persons were not available, drop and pick later method was used. The data collected was entered and analyzed by simple descriptive analysis using Statistical Package for Social Scientists (SPSS). Descriptive analysis used helped to summarize and organize data in an effective and meaningful way. Measure of central tendency and measure of dispersion (mean and standard deviation) were also used. The analyzed data was presented in tables for easy understanding.

The study found out that consumer decisions were influenced by personal characteristics, like age, occupation, economic circumstances. People choose a mobile phone services offering a service or a place, or subscribe to a particular idea because they like its image, or because they feel its personality somehow corresponds to their own. The study concludes that demographic characteristic of a consumer, social and economic factors as well as mobile efficiency and effectiveness influence the choice of mobile service provider in Nairobi. As a way of recommendation, it is important for a company to understand how customers perceive efficiency. The study recommends that in order for mobile telephone service providers to be competitively advantaged and increase their customer base, there is need to invest heavily in technological advancements that yield improved coverage, reduce congestion and have cheaper rates.

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

In today world, people are increasingly dependent on mobile phone communication in carrying out their day to day activities. The services offered by mobile phone service providers, which includes voice and video calling, data (SMS/ MMS, SMS/MMS Alerts, Email, Web browsing & searching, Downloading content) and value added services (e-commerce, e-money transfer, Financial transactions, Mobile TV, Video calling, Video Sharing and Gambling) are widely used in various social and economic activities, like at work, socialization, security and even for convenience. The mobile communication system has become such an integral part of today's life that it has actually enslaves the users.

The number of mobile phone service providers has tremendously increased all over the world. Most world economies have liberalized telecommunication sector by enabling more players to actively get involved in the industry. For example, there were less than 200 mobile operators around the world in 1992, yet by the end of 2001, there were over 600 operators. By the end of 2001, there were over 940 million mobile cellular subscribers around the world compared to just over one billion fixed telephone lines (EPZA, 2005).

The mobile phone market in developed countries is reaching saturation levels with an average penetration rate of 116% at the end of 2010. This represented a marginal growth of 1.6% for 2009-2010 period. In comparison, the developing world increased its share of mobile subscriptions from an average of 53% of total mobile subscriptions at the end of 2005 to an average of 68% at the end of 2010. In Africa, the penetration rate is 41% (compared to a global average of 76%), which means there is still a significant growth potential (ITU, 2010)

The new subscriber is the target of the service providers and thus they are enticed with all kind of 'niceties' in order for them to subscribe. The subscriber has to decide which network to join. The success of any service provider depends on the efforts and investments input. In a competitive

market, service providers are expected to compete on both price and quality of services and also meet consumers' requirements and expectations in price and service quality (Melody, 2001). The nature of the competition today, in the global telecommunications industry seems to centre on market activities that aim at gaining competitive advantages through strategic combinations of resources and presences in multiple products and geographical areas (Chan-Olmsted and Jamison, 2001).

There are several factors that affect consumers buying decision process, (the process has five stages; problem recognition, information search, alternative evaluation, buying decision, and evaluation after buying decision) (Clow and Baack 2004: 61). Individual factors like motivation, personality, perception, learning, values, beliefs, attitudes and life style affect the process. Social factors that contribute to the process are personal influence, reference group, family influence, social class and culture. For instance, buying behavior of consumers from same culture or social group are similar to each other because they have similar lifestyles, their learning, perception and motivation are close to each other (Schwartz 1981: 86 and Staff 1997: 223). Another affecting factor on buying behavior is demographic factors. For example, consumers of different ages have different needs and wants, also their perception may change according to their ages. Comparing young consumers to adults, Autio (2005) observed that when adults pay more attention to price, the young consumers are concerned with image in the buying decision process.

Globally, telecommunication market has been liberalized in most economies. There is more than one service provider for new subscribers or those who wish to switch to choose from. This has created competition among the service providers forcing them to rollout different products, reduce prices and become more and more innovative. This has left the subscriber with an array of products to choose from. Thus choosing the one that suits their need best.

In developed countries like the US, which has one of the most developed telecommunication markets in the world, is leading the world in convergence between broadcasting, internet and telecommunication services. But for the last 20years US market has evolved rapidly. According to data from ITU (2010) over 285 million Americans were mobile phone services consumers, representing a penetration rate of 91%. The market has reached saturation only managing a 3.4%

growth. Mobile service provider companies have been investing heavily in an effort to improve coverage and service. The Federal Communications Commission (FCC) in its 14th annual report to congress reported that approximately 273 million people, or 95.8 percent of the U.S. population, are served by at least three mobile voice providers (Plunkett Research, 2010).

Mobile wireless service providers compete on the basis of pricing plans as well as on various non-price factors, such as technology deployment and network upgrades; product information and perception, and downstream product differentiation,. (FCC, 2010, pg 25). The big four US carriers – AT&T Inc, Verizon Wireless, Sprint Nextel Corp and T-Mobile USA – constantly change service plans and pricing to compete more effectively and gain market share by recruiting new subscribers (CTIA, 2010). This contrast very much with developing markets where the penetration levels and network geographical coverage area are still low, meaning that the voice market still has a big market to cover. This is evident by the high growth of mobile subscription rate from these markets.

Developing markets are currently experiencing one of the highest subscriber growth rates. In Indian, mobile market is one of the fastest growing markets in the world today. Indian Market is adding on average 8-10 million new mobile subscribers every month, by 31st March 2010 the total subscriber base was 621 Million (DOT, 2010). The tele-density in the country was 52.74 % in March 2010 (DOT, 2010). This shows that there is a huge population to tap from. This has led to ferocious competition between the mobile service providers.

The mobile market is clouded with a total number of eleven players with the largest three –Bharti Airtel Ltd., Reliance communications Infrastructure Ltd and Vodafone-controlling 60% of total market share (Jain and Havelia, 2009)

In Africa, mobile telephony has been critical in boosting access to telecommunications services and has substantially helped lift the number of telecommunication users. The rise of mobile phone usage has been driven by a combination of factors, such as demand, sector reforms, the licensing of new competition and the emergence of major strategic investors. Mobile subscriber numbers have increased rapidly from 88 million in 2005 to 333 millions in 2010, thus a mobile penetration of only 41.4% compared to the world average of 76% (Vota, March, 2010).

Nigeria, with five mobile phone service providers and four CDMA service providers (Vota, March, 2010), has a subscriber base of 114.6 million in January 2011. This represents a tele-density of 64%, (NCC, 2011) representing one of the highest penetration rates in Africa. With the mobile subscriber penetration potential being more than 100%, Nigeria mobile industry is experiencing stiff competition. The subscriber on the other had has a wide array of providers to choose from in accordance with ones preference.

Kenya is no different from other developing countries especially in Africa. The penetration rate is low at only 55%, but one of the highest in the region. According to CCK 1st quarter 2010/11 report, by September 2010, the total number of subscribers was 22 million. With four mobile service providers namely Safaricom, Airtel, Telkom Kenya (trading as Orange) and Essar Telcom (Trading as Yu) the competition in the market is very stiff. Currently the market is overly controlled by one player, Safaricom with a 76% market share, followed by Airtel with 13% then Telkom Kenya with 4% and finally Essar telcom has 7%

In recent years the industry has seen tremendous growth driven by reduction of prices, expansion of network coverage, introduction of new innovative services and establishment various content sales enterprises. In the first quarter of July-September 2010/2011 period, CCK noted that mobile voice calling tariffs reduced significantly. New investment on network expansion and technology has greatly improved network reliability and quality.

1.2 Statement of the Problem

The number of mobile phone service providers has tremendously increased all over the world. Most world economies have liberalized telecommunication sector by enabling more players to actively get involved in the industry. This has left the consumer of various services offered with a wide choice of mobile service providers to subscribe to. The process of choosing by the subscriber is determined by a number of factors. This study aim was to establish the various factors and how they influence a subscriber when choosing a mobile telephone service provider.

The study also examine whether new subscriber join a provider where most of family members, friends or social network groups are. With the lowering of inter network call cost, it is prudent to research on network effect phenomena to investigate whether it still an influence. The result will

help marketers to come up with proper marketing strategies while wooing new subscribers, in a low cost environment.

Consumer behavior in response to price variations and adverse changes in service is an important indicator of the level of competition in the mobile wireless services industry. If consumers are sufficiently well-informed to take prices and other non-price factors into account, they are in a better position to choose the provider that offers the best terms. A study to determine the effect of low tariff cost and other economic factors to new consumer (mobile subscriber) will help the industry while determining their cost strategy.

New investment on network expansion and technology has greatly improved network reliability and quality. Geographical network coverage thus is presumed as a factor considered by a potential subscriber while choosing a service provider. The industry is also developing and rolling out new products at a very fast rate. The level of competition among various industry players in terms of new and customized products is very stiff. This study investigated the link between network geographic coverage, service efficiency and effectiveness in influencing subscribers to join a particular network. This would enable the service providers to use their resources optimally while investing in new technology and expanding and optimizing their network.

1.3 Purpose of the Study

The purpose of the study was to investigate the factors that influence consumer choice of mobile telephone service provider in Nairobi region.

1.4 Objectives of the Study

The study was guided by the following objectives;

1. To establish the extent to which demographic characteristics of the consumers influence the choice of mobile service provider in Nairobi.
2. To examine how social related factors of consumers influence the choice of mobile service provider in Nairobi.

3. To investigate the extent to which economic related factors of the consumer influences the choice of mobile service provider in Nairobi.
4. To examine the level to which mobile service efficiency and effectiveness influence the consumer choice of mobile service provider in Nairobi.

1.5 Research Questions

The study strived to answer the following questions.

1. To what extent do demographic characteristics of consumers influence the choice of mobile service provider?
2. How do social factors influence the choice of mobile service provider in Nairobi?
3. To what level do economic factors influence the choice of mobile service provider?
4. To what level does the mobile service efficiency and effectiveness influence the consumer choice of mobile service provider?

1.6 Significance of the Study

This study would help the marketers in the mobile telecommunication industry to develop marketing strategies that are endearing with and are relevant to the customer, more so in the face of the speed at which the industry is changing.

The number portability technology was launched in April 2011 and will see more and more subscribers switching service providers (Nyabiagen, 2011). This research will assist the service providers to understand the consumer better in order to retain them.

The policy makers also would find this study useful in terms of aligning various policies with the fast changing mobile communication industry. This would in turn improve the adoption of various products rolled out by mobile telephone companies and increase the usage and acceptability of the services offered to the consumer.

1.7 Delimitation of the Study

This study tried to establish the various factors that influence a subscriber while choosing a mobile service provider. There are four factors that were researched on. These were the

demographic characteristics of the consumer, the social related factors, the economic related factors, and the service efficiency and effectiveness factors.

The study was carried out in the selected region within Nairobi region. The sample population consisted of individual user of mobile telephone services at the household level within Nairobi region. The sample was selected from consumers through a multistage sampling method. A total of 384 consumer household were selected from various parts of the region.

1.8 Limitation of the Study

Financing a comprehensive study that covered the whole region was a very big challenge. The limitation of available resources was a hindrance to a comprehensive study that would take care of the required ideal sample. To overcome this challenge, a smaller sample from a smaller geographical area was used in the study.

Access to some of the sampled household premises was difficult due to security reasons and some of the respondents feeling uncomfortable answering the questions. If access to a premise was denied, the questionnaire was dropped in the next accessible residence. Assuring the respondent of confidentiality helped in convincing them to provide truthful information.

The Time to reach the respondents was as well limited.

1.9 Assumption of the study

The assumption is that the population was a homogeneous one and the sample that was selected for further study was representative enough of the whole region.

The data collection instrument used was valid, reliable and measured the desired constructs. The respondent understood the questions and also truthfully and accurately answered the questionnaire without being subjective.

All the questionnaires were answered and returned within the target time frame.

1.10 Definition of Significant Terms

Mobile broadband - refers to mobile Internet access and other data services provided using Third Generation (3G) and Fourth Generation (4G) mobile network technologies, CDMA EV-DO, WCDMA/HSPA, and WiMAX.

Mobile operator – refers to mobile telephone service providers

CHAPTER TWO

LITREATURE REVIEW

2.1 Introduction

This chapter reviews previous works on consumer behavior in general and then specifically on the subject matter of this research. The chapter is divided into sections according to the research objectives and covers all the variables identified which includes general consumer choice behavior, demographic characteristics, social factors, economic factors, and effects of service efficiency and effectiveness and choice of mobile service provider.

2.2 Overview of Consumer Choice Behavior

Previous literature on the factors affecting the choice of mobile phone operator is not much. The industry itself has it but it's for their internal use. This has left the academic world with very little knowledge on this subject. A few academic articles and studies have dealt with mobile phone usage and grasped the consumer decision making process. Very few studies have dealt on factors that influence mobile phone consumer choice behavior, especially in the academic area.

Also the rate at which different parameters affecting the consumer are changing call for a detailed analysis of the market, in order to advice the stakeholders- marketers, policy makers, mobile operators and consumers in general- on the consumer tread. This study will contribute in deepening the knowhow of the industry's consumer demands, and note the changes that might have occurred and the tread.

A better understanding of consumers' behavioral patterns related to the choice of mobile phone services provider is critical to ensure successful uptake in the market. Consumer buying behavior refers to the actions a person takes in purchasing and using products and services, including the mental and social processes that precede and follow these actions. Marketers find it useful to categorize a consumer in terms of age, gender, income or occupation which are some of the descriptive characteristics of a population or demographics. Other cases they would like to know something about interests, in fashion or music, or the way a consumer spends leisure time or the

psychographics characteristics which refers to one's lifestyle and personality. An organization requires analyzing the behavior of a consumer in order to create a Marketing Mix (MM) that satisfies consumers, therefore the need to analyze the what, where, when and how consumers buy. Marketers can better predict how consumers will respond to marketing strategies. Why consumers make the purchases that they make, what factors influence consumer purchases and the changing factors in our society?

Consumer can be choosers, communicators, identity seekers, pleasure seekers, victims, rebels and activists and sometimes simultaneously. Consumers engage in information search before making choice. Consumer decision making process is usually guided by already formed preferences for a particular alternative. The process has five stages; problem recognition, information search, alternative evaluation, buying decision, and evaluation after buying decision (Clow and Baack 2004: 61).

Knowledge of consumer characteristics plays an extremely important role in many marketing applications, such as defining the market for a product or deciding on the appropriate techniques to employ when targeting a certain group of consumers. Several factors affect consumers buying decision process. Individual factors like motivation, personality, perception, learning, values, beliefs, attitudes and life style affect the process. Social factors that contribute to the process are personal influence, reference group, family influence, social class and culture. For instance, buying behavior of consumers from same culture or social group are similar to each other because they have similar lifestyles, their learning, perception and motivation are close to each other (Schwartz 1981: 86 and Staff 1997: 223). In a study was carried out by Odhiambo (2003) to determine mobile phone subscriber satisfaction in Nairobi found out that, customer service, assurances, service responsiveness, service access, reliability, service security, product/ service features, pricing, service credibility and service equity/ fairness were found to be major determinants of customer satisfaction. A current research is necessary to find out whether this is still the case bearing in mind that rate at which this industry is changing.

2.3 Demographic characteristics of Consumers and the Choice of Mobile Service Provider

Demographics are Statistics that measure observable aspects of a population such as birth rate, age distribution, education level or income. The changes and trends revealed in demographic studies are of great interests to marketers and policy makers, because the data can be used to locate and predict the size of markets for many products. Demographics are the basic “vital statistics” of a customer base. By segmenting on demographics, one can determine the specific statistical characteristics that set the customers apart.

All businesses target consumers, consequently, demographic segmentation is very crucial and cover characteristics such as age, gender, level of education, job classification (blue vs. white collar), income, marital status, and ethnic or religious background. It may not be necessary to use all of these criteria; rather, one focuses the research on those that are most appropriate to the product or service.

But, in recent past behavioral pattern is becoming less dependent on demographics. It is now so common to see men and women, or grandmother and granddaughters, having similar tastes. Hence useful as they might be, marketers should beware of using only demographics variables to predict consumer tastes. This calls for a continuous study of this change in behavior. This will in turn help the industry to rollout relevant products that relate with the consumer.

Different age groups have different needs and wants and a better understanding of the ageing process of consumers will continue to be of great importance to marketers as well as public policy decision makers. While people who belong to the same age group differ in many other ways, they do tend to share a set of values and common cultural experiences that they carry throughout life.

In a study of teen in America done by Mediamark Research Inc. and published by The Magazine Publishers of America (www.magazine.org/content/files/teenprofile04.pdf), found that the role of Teens in influencing household purchases is growing as parents rely on Teens’ advanced computer skills to research products online. In addition older teenagers have more influence than younger teenagers on household purchases of personal computers, cell phones and deodorant.

North American parents held the belief that their teenagers are mature enough to make decisions on these purchases. Parents approach their teenagers for youthful opinions as they are known as the most informative group, who always access to the internet or technology anytime of the day. Hence, the Generation Y and the upper end of the Millennial are considered co-purchasers and influencers in today's major purchasing (Hwa et al, 2011).

The consumer decision is influenced by personal characteristics, like age, occupation, economic circumstances, self concept, lifestyle and values. Each person has personality characteristics that influence their buying behavior and they choose a mobile telephone service provider that reflect their personality and accommodate their beliefs (Ofwona, 2007). It is thus imperative for the industry to understand the personality characteristics in order to provide services that are relevant to the subscriber and also subscriber can identify with. Personality characteristics are continuously changing and thus a study of the current trend is very important in determining the current trend.

In a research carried out in Finland on the use of mobile banking, it showed that the majority of users were young between the ages of 25-34 years old, while non users were relatively older generation of 50-64 years. A third of those within age 35-49 years were also using it. Also it was found that the age of purchasing a mobile phone among the young Finns has lowered from 18-19 to 14 – 15 (Pakola et al, n.d). This concurs with another study done in Kenya by Ontunya (2006) that observed that most of the users of mobile banking services were young and educated. Also they were predominantly men. Non users were the older and less educated. This can be attributed to the notion that people who are young engages in more risky adventures and are technologically equipped. Also, Gitari (2006) observed that 85% of mobile users in Nairobi were between 21-40 years old.

In another research by economic research found out that mobile phones in older age group mostly use them for business. This contrasts to the younger generation who use it for socialization and keeping in touch with their family members. A study on this will help the mobile service providers to design and target their products to specific group.

A consumer purchasing power determines whether to engage in any purchase of a product or service or not. The purchasing power is determined by the level of the occupation and level income of an individual. The income of consumers is a fundamental determinant of their need and wants. Therefore there is need for the industry players to understand the income and consumer spending patterns (Gitari, 2006). In Kenya, the service providers has lowered the voice calling rate and rolled out new products. A research to establish whether these changes have any effect to the subscriber, especially new subscribers, is very crucial for the industry.

Men and women differ in their tastes. This starts at very early stage of life. Why studying gender influence in the choice of mobile operator is important, is that behaviors and tastes of men and women are constantly evolving. In the past there was an assumption that men were the primary decision makers but this perspective is changing with the times (Solomon et al., 2010). A study done in Malaysia, showed that there were more male users compared to female taking an average of 56.4% (MCMC, 2007).

It is believed that an educated person is able to easily adapt to new ways of doing things and can easily use new technology. A research done conclude that, there is a relationship between mobile phone usage and educational level. Thus, either a person use or does not use mobile phone depends on his/her level of education. We need to explore the extent to which education does influence one while choosing a mobile service provider.

A family household is defined as a shared residence and common housekeeping arrangement i.e. any occupied housing unit regardless of the relationships among people living there according to European Community Household Panel. In the decision making process the decision often include two or more people, or families, all with differing expectations, who may not have the same level of investment in the outcome, the same tastes and preferences, or the same consumption priorities. Some experts have argued that as traditional family living arrangements have declined people are placing even greater emphasis on the role of siblings, close friends and other relatives to provide companionship and social support (Solomon et al., 2010).

A conclusive study is very crucial in exploring the influence of the family members while choosing a mobile operator. This study will explore whether the family actually a consideration when one is choosing a service provider.

2.4 Social Related Factors and Choice of Mobile Service Provider

Consumer behavior is influenced by social factors as reference groups (social networks), families and social roles and status. A person reference groups consists of all groups that have a direct (face to face) or indirect influence on his or her attitudes and behavior (Kotler and Keller, 2006). Marketers of products and services where group influence is strong must determine how to reach and influence opinion leaders in these reference groups. The family is the most important consumer buying organization in a society. Family members constitute the most influential primary reference group. In Kenya the family may have more influence on the choice of telephone provider because of calling habits and cost (Ofwona, 2007).

Friends' opinion and behavior influences purchase decision. People often choose a product offering a service or a place, or subscribe to a particular idea because they like its image, or because they feel its personality somehow corresponds to their own. Lifestyle is a function of inherent individual characteristics that have been shaped and formed through social interactions. It is a basic motivator that influences need and attitudes and consequently purchase and use decisions. Lifestyle thus influences one in choosing a particular service provider. A lot of product information, as well as recommendations to use or avoid particular brands, are picked up in conversations among real people, rather than by way of advertising messages (Solomon et al., 2010).

Individual choice is heavily influenced by the choices of others in the same household. There is some evidence that individual choice of operator is influenced by the total number of subscribers for each operator, but a much stronger effect is the operator choice of other household members. In their study of students, Birke & Swann (2007), found that friends were more than twice as likely to have the same operator as two randomly picked students. This tendency was particularly true for overseas students, who have to choose a mobile operator when they arrive in the UK, and who tend to have many friends of the same nationality. Italian students, for example,

strongly coordinate operator choice with their family. Interestingly, Italian students coordinated their mobile phone operator significantly with their mothers, but not with their fathers.

Culture and regions also influences one while choosing mobile service provider. Culture being the accumulation of shared meanings, rituals, norms and traditions among members of an organization as well as its economic and political systems. It includes both the abstract ideas such as values and ethics, and material objects and services such as cars, clothing, food, art and sports that are produced or valued by a group of people. Thus, individual consumers and groups of consumers are part of culture, and culture is the overall system within which other systems are organized. As a member of a large society, people share certain cultural values or strong held beliefs about the way the world should be structured, or smaller groups within the culture, such as ethnic groups, teens or people from certain parts of the country (Solomon et al., 2010). In a study done to compare the social behaviors in US and China a marked difference was noted and the researcher attributed it to the fact that US mobile,phone consumers rely more on economic rational when purchasing a mobile phone while pay very little attention to the possible reactions from their peers' about any specific features of product design, but their Chinese counterparts intend more to impress themselves and others with their mobile phones' fancy design and appearance, and are willing to pay a price for it (Yang, 2007). The researcher also concluded that the US consumers in general are less influenced by the reference groups than their Chinese counterparts.

There are substantial differences among social classes with respect to buying behavior and consumption of products and services. Because of this diversity, different social classes are likely to respond differently, to a product design and features as well as its marketing programs. People of the same social class are approximately equal in terms of their incomes and social status. They work in roughly similar occupations and tend to have similar tastes in product and services. The specific product and services we buy are often intended to make sure other people know what our social standing is – or what we would like to be. Thus, the distribution of wealth is important since it determines which group has the greatest buying power and potential. Gitari (2006) concluded that recommendation through friends and relatives help consumers in the

initial screening of available products but not the actual purchase. This study will study whether friends and family actually makes one to subscribe with a certain mobile provider.

2.5 Economic related Factors and Choice of Mobile Service Provider

The foundation underlying pricing strategy has three elements, the cost to the provider, competition and value to other customer. The cost that a firm needs to recover usually impose a minimum price, or floor, for a specific service offering, and the customer's perceived value of the offering set a maximum or ceiling. The price charged by competitors for similar or substitute services typically determines where within the floor – to – ceiling range, the price can be set. The price objectives are related to revenue and profits, building demands and developing a user base.

Price value is the cornerstone of every consumer purchase transaction. In economic terms, price equates to the level of consumer sacrifice. The amount of money consumer are prepared to sacrifice to get a particular service is directly related to their perception of the value of the service offers. Price and audibility affect consumer choice of operator according to a research done by Pakola et al (n.d). Mobile service providers offer several tariffs which has different billing structures. They use cost of airtime and simcards as part of their strategic positioning in order to attract subscribers. Pricing has a lot of influence on the choice of mobile service provider by a subscriber as experienced by Airtel, then trading as Zain, when they introduced low tariffs in the market in 2008 and again in 2010. In 2008, the Vuka tariff which was priced at Kes 8 per minute across the board saw 51% of all new subscribers joining its network. This was attributed to affordable on-net and cross-network calling rates (Editor wireless federation, 2008). Again in 2010 the company reduced its tariff to Kes 3 per minute causing traffic congestion to its biggest competitor (Airtel, 2010).

Price or cost of a product is one of the three generic marketing strategies (the other two are differentiation strategy and focus strategy) advanced by Michael Porter. Under this generic strategy a firm can offer a product at a low price in order to stimulate demand and gain market share. It is usually employed where the product has few or no competitive advantage or where economies of scale are achievable with higher production volumes. The generic strategies provide direction for firms in designing incentive systems, control procedures, and

organizational arrangements. In Kenya, the cost leadership strategy is being practiced by the mobile telecommunication industry. The cost of calling has dropped to as low as Kes 1 per minute and some operator are promising more reduction of price. This has partly worked for the industry as the total voice minutes increasing by 100% from 3.37 billion minutes in the 1st quarter 2010 to 6.67 billion minutes in 1st quarter 2011 (CCK, 2011).

The high tariff level results in a low level of affordability of services for users at the bottom of the pyramid. Tariff plans are targeted at different consumer groups and are aimed at providing a wide choice to the subscribers. Consumer choice is dictated by their perception of the tariff plan and how their perception of the tariff plan meet their specific telecommunication usage needs. In a study on tariffs and the affordability gap in mobile telephone services in Latin America and the Caribbean, Galperin (2010) found out that, the entry of new players in the regional market resulted in significant reductions in tariff levels and, therefore, greater affordability, even in a low-income environment. This collaborates with the Kenyan situation where the entry of new players in 2008 led to a significant drop on tariff. This was replicated in 2010 when Celtel Kenya limited, then trading as Zain, was acquired by an Indian company Airtel. The company has gained significant market share by using a low-cost business model similar to that of operators in South Asia.

There are challenges associated with low cost, customers' usually associate high price with high quality products, thus the challenge of low cost is to convince customers that they shouldn't equate price with quality instead feel they are getting good value. If a firm prices too low than the competition, it will experience a higher customer base, meaning it will be required to invest more in expansion in order not to lose the high value customer who does not mind paying more but getting quality service. Mobile tariffs are of significance because they are a good gauge of sector performance and affordability. Affordable tariffs determined the use of a package and the amount of use thereafter (Lokanathan et al, 2006).

There are other non monetary cost that a consumer sacrifices as economists have recognized that monetary price is not the only sacrifice consumers make to obtain a product and services. Demand, therefore, is not just a function of monetary price but is influenced by other costs as

well. Non monetary costs represent other sources of sacrifice perceived by the customers when buying and using a service. Time cost, search cost, convenience (inconvenience) cost and psychological cost often enter into the evaluation of whether to buy or rebuy a service, and may at times be more concerned than monetary price. Consumers will trade money for these other costs (Zeithaml et al., 2003). This study will look into the effect of the non monetary costs influence on mobile phone consumers.

In mobile communications industry network effect is present even when the networks are perfectly compatible and the prices almost the same. The proportion of off-net calls falls as mobile operators charge a premium for off-net calls, but even in the absence of any price differential between on-net and off-net, there is still a form of pure network effect, where a disproportionate number of calls are on-net (Birke & Swann, 2006). This arises due to the differences between on-net and off-net tariffs. Operators charge different prices depending on whether the call made by the user is directed to a member of the same operator (low or on-net tariff) or is made to a member outside the operator (high or off-net tariff). Consequently, the larger the installed base of the operator, the lower the expected communications cost for its users. In another research on students, Birke & Swann (2007), found that the students' effort to coordinate their choice of mobile operators was only true for operators that charge a price difference between on-and off-net calls, which shows that coordination is due to price differences rather than word-of-mouth recommendations.

2.6 Efficiency Related Factors and Choice of Mobile Service Provider

Service is a form of attitude which is related to satisfaction and also leads to consumer loyalty and future purchase. Service quality is essential and important for a mobile telephone service provider in establishing and maintaining loyal and profitable customer. Access to services is an essential part of the sales process. The distribution channels used can influence individual choice of service provider. There are three levels of distribution coverage. These are intensive, selective and exclusive. In intensive area coverage one gains coverage in as many places as possible. In Kenya mobile phone service providers use this in order to reach the masses in a wide geographical area. In selective, the choice of outlet or service offered is specifically relevant to

the buying situation. Wholesale airtime and some selected value added services are distributed using this system. The exclusive type, there is a limit to ones geographical area within which a distribution agency can operate.

Quality of a product is another factor considered while comparing mobile service providers' service efficiency and effectiveness. Quality is at the heart of what customer buy and therefore a bottom line measure of the impact of brand identity. It is important for a company to understand how customers perceive their service quality. There are many factors that determine consumer perception of the tariff plans offered by the mobile service providers. Example are availability of pricing information, regarding calls and value added services under tariff plans and the actual prices bundled in the particular tariff plans. Generally, service and product quality always lies in the minds of the consumers depending on individual buying capacity, buying behavior, demand, taste, and fashion criteria and obviously the competitive markets that provide significant differentiation strategies (Gitari, 2006)

Frustration with call quality is often a leading reason why consumers choose to switch mobile carriers. This fact is reiterated by a wireless call quality study by J.D. Power and Associates (2010) results that show a PP100 (problems per 100 calls) rate six times as great (42 PP100 vs. 8 PP100) for consumers who report they "definitely will switch" providers in the next twelve months when compared to users who report they will "definitely not switch" carriers. Voice calls on mobile networks can suffer from impairments like background noise, echoes and voice distortion. Improving voice call quality is a priority for network operators at the moment. The data speeds advertised by the operators are theoretical maximum download speeds: in practice, factors like the distance to the nearest base station and contention rates (the number of concurrent users) will result in variable, and generally considerably lower, data rates. Gitari (2006) found out that the most important factor considered by customers were good network coverage, access to airtime, fast response to complaints and excellent customer service.

By expanding along the value added services chain, Mobile service operators can capture an increasing share of the industry value. In particular, Mobile service operators must increasingly control the content supplied over their networks. If they can act as the gatekeepers to mobile

customers, they can extract a substantial percentage of all content revenues. However, if Mobile service operators ignore consumer preferences or fail to make use of partners' expertise in content development, they will not generate revenues but only create apathy for their services amongst consumers.

The challenge is on the mobile service providers to balance between the cost of their service and the quality of the service offered. Voice revenue will remain as the main revenue earner. Data revenue for mobile services is expected to increasingly be from non-SMS or messaging orientation to web based applications such as entertainment (music and video download, video on demand, and games); consumer centric financial services such as mobile payments and mobile wallets; and e-Education. These are traditionally non-telco based services that are today facilitated by collaborative efforts across value chain partners to succeed in new business models. The availability of higher speed delivery; and increased storage capacities also have impact. Other developments impacting mobile services worldwide are developments on standards, security, devices or handsets, enhancement of the mobile network and convergence to provide their customer the mobile services they would need and are willing to pay for.

In an article in the Daily Nation newspaper, Nyabiagen (2011) noted that with the commissioning of number portability system and with mobile service providers almost matched on the pricing front, service quality will emerge as a weapon for market share growth and executives in the mobile telephony market say it will define market share war in 2011. Number portability promises to put pressure on telecoms to improve their services and firm up their value-added services to attract and retain new subscribers.

In summary previous studies has indicated that service efficiency and effectiveness as being the second factor from price or cost of the mobile services, that influences a consumer in choosing a mobile service provider. Ofwona (2007), established that the cost of the service offered such as calls and SMS, the provider country network coverage, other peoples, (Family members, workmates and friends) choice of service providers, clarity in communication and courtesy of the customer care personnel were the factors identified in that order of importance in choosing a mobile phone service provider. This is collaborated by another investigation done in Finland on

consumer behavior in mobile phone markets which found out that, price, connectivity and value added packages were among the chosen criteria when it came to choosing the appropriate mobile service providers. The influencing factor to their choice was based on family, friends (word of mouth) and self search (Pakola et al, n.d). With the current prices which has actually flattened – there is no price differentiation- the industry need to know whether customer behavior and preference has changed and may be service efficiency and effectiveness is now considered as the most important factor over price.

2.7 Theoretical Framework

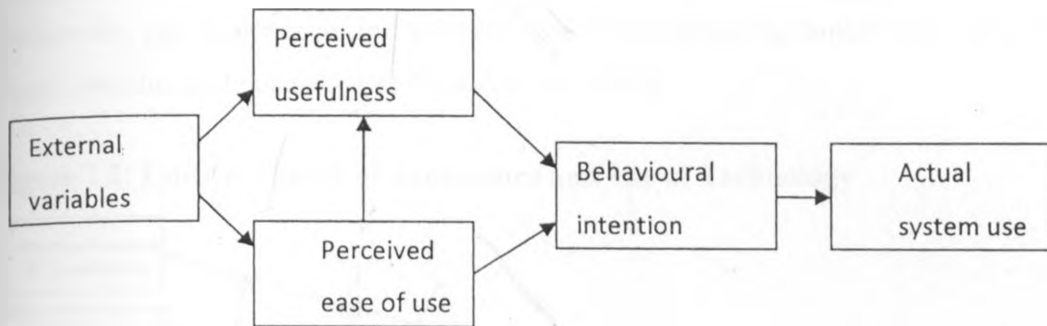
There are several theories that have been developed to explain consumer behavior such as the theory of reasoned action by Fishbein & Ajzen (1975); Theory of planned behavior advanced by Ajzen (1991); Technology acceptance model by Davis (1986); and Unified theory of acceptance and use of technology originated by Venkatesh et al. (2003). The last two are discussed further as they try to explain individual adoption behavior of information system

2.7.1 Technology Acceptance Model (TAM)

In 1985 Fred Davis proposed this model in his doctoral thesis. In advanced proposal Davis (1985) suggested that users' motivation can be explained by three factors: perceived ease of use, perceived usefulness, and attitude toward using the system. He hypothesized that the attitude of a user toward a system was a major determinant of whether the user will actually use or reject the system. The attitude of the user, in turn, was considered to be influenced by two major beliefs: perceived usefulness and perceived ease of use, with perceived ease of use having a direct influence on perceived usefulness. Technology Acceptance Model (TAM) was developed to explain information system usage behavior. This concept later found applications in studying adoption of consumer products like Cellular phones. It models how users accept and use technology. The model suggests that when users are presented with a new technology or new product, a number of factors influence their decision about how and when they will use it (Davis, 1989) The technology acceptance model specifies the causal relationships between system design features, perceived usefulness, perceived ease of use, attitude toward using, and actual usage behaviour. Overall, the TAM provides an informative representation of the mechanisms by

which design choices influence user acceptance, and should therefore be helpful in applied contexts for forecasting and evaluating user acceptance of information technology.

Figure 2.1: The Technology Acceptance Model



Source: Venkatesh et al. (2003)

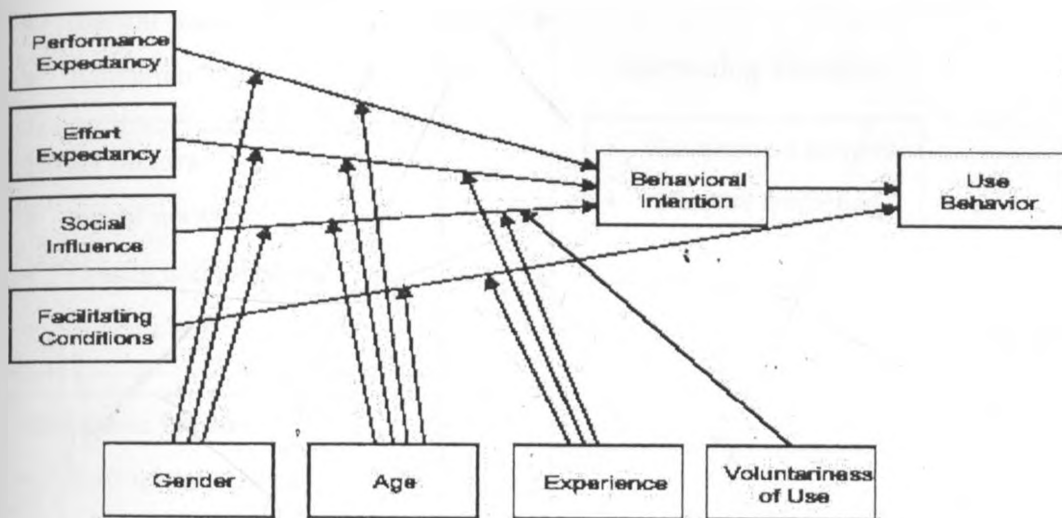
TAM has strong behavioral elements that assume that when someone forms an intention to act, they will be free to act without limitation. In the real world there will be many constraints, such as limited ability, time constraints, environmental or organizational limits, or unconscious habits which will limit the freedom to act. (Bagozzi et al, 1992). The attitude towards adoption depicts the prospective adopter's positive or negative orientation/ behavior about adopting a new technology. Attitudes are determined by relevant internal beliefs. Attitude towards adoption is influenced by factors such as : perceived ease of adoption; apprehensiveness; perceived utilities of technology (extrinsic motivation); enjoyment (intrinsic motivation). In addition, individual characteristics like age , qualification , their prior experiences in adopting technology; technology suppliers' commitment ; compatibility with existing technology and enhanced value are important factors. Social pressure is another important factor.;

2.7.2 Unified Theory of Acceptance and Use of Technology

This theory was developed through a review and consolidation of eight models that earlier research had employed to explain information system usage behavior; the theory of reasoned action; the technology acceptance model; the motivational model; the theory of planned behavior; a combined theory of planned behavior/technology acceptance model; model of PC

utilization; innovation diffusion theory; and social cognitive theory (Venkatesh et. al., 2003). The theory aims at explaining user intentions to use an information and communication system and subsequent usage behavior. The theory holds that four key independent factors are direct determinants of usage intention and behaviour (Venkatesh et. al., 2003). The factors are performance expectancy, effort expectancy, social influence, and facilitating conditions. Others are Gender, age, experience, and voluntariness of use affect the impact of the four key factors on usage intention and behavior (Venkatesh et. al., 2003).

Figure 2.2: Unified Theory of Acceptance and Use of Technology



Source: Venkatesh et al. (2003)

This theory was advanced to explain user adoption of information system behavior.

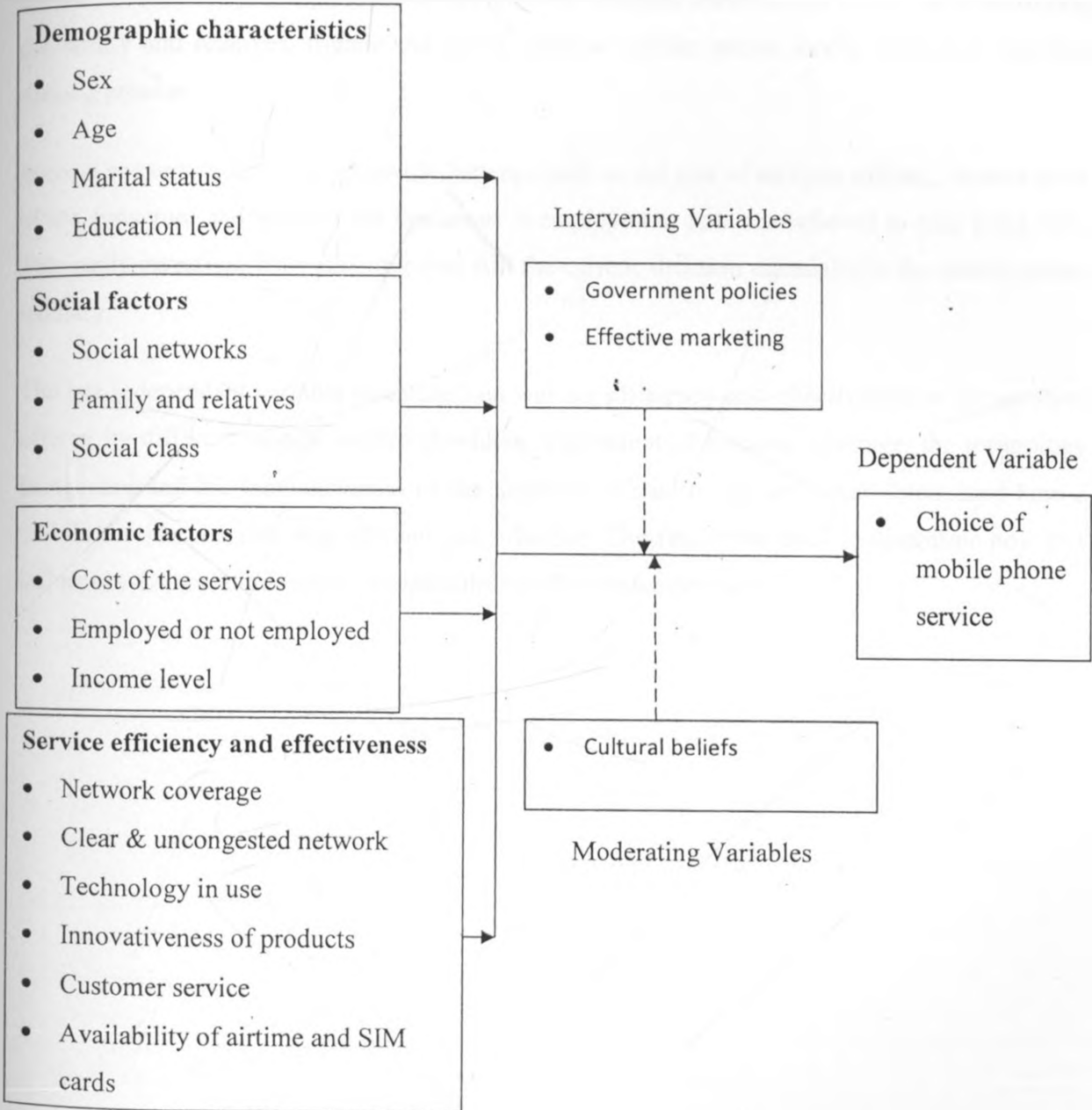
This research will try and show that technology acceptance and use of mobile phone technology is influenced by the following factors: performance expectancy, effort expectancy, social influence, and facilitating conditions. Others are Gender, age, experience as advanced by unified theory of acceptance and use of technology.

2.8 Conceptual Framework

The following conceptual framework guided this study;

Independent Variables

Figure 2.3: Summary of relationship between various variables



The researcher established the influence of demographic characteristics such as age, sex education level; marital status and occupation have to a consumer while choosing a mobile service provider.

The social groups that a consumer interacts with might influence a consumer in making a decision. These relationships were researched on to examine the influence of the social networks, the family and relatives, friends and social class on mobile phone service consumer decision making process.

In most consumer decisions economic factors - such as the cost of services offered, income level of the consumer and whether the consumer is employed or not- are believed to play a big role. This study investigated whether this was still the current situation especially in the mobile phone industry.

The last independent variable researched on was the efficiency and effectiveness of the services offered by different mobile service providers. The extent of network coverage, the technology being used and the innovativeness of the products offered to the consumer determined how a mobile service provider was efficient and effective. The researcher tried to determine how this influences the consumer while choosing the mobile service provider.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter details the method and procedures applied in conducting the research. The chapter is arranged in the following order; research design, the target population, sample and sampling procedure, method of data collection, (which includes pilot testing of the instrument, reliability and validity of data collected), method of data analysis and operationalization of variables.

3.2 Research Design

This research study used a descriptive survey to determine factors which influence individual consumer choice of mobile service provider in the mobile telephony industry. According to Mugenda and Mugenda (1999), descriptive research is the process of collecting data in order to answer questions concerning the current status of the subjects in the study. It determines and reports the way things are. It attempts to describe such things as possible behavior, attitude, values and characteristics.

Descriptive statistics utilize data collection and analysis techniques that yield reports concerning the measures of central tendency, variation, and correlation. The combination of its characteristic summary and correlation statistics, along with its focus on specific types of research questions, methods, and outcomes is what distinguishes descriptive research from other research types.

Descriptive study was the most suitable for this study as the aim was to profile the factors that are considered important in the consumer choice and their importance. Descriptive study was used to portray an accurate profile of persons, events and situations.

3.3 Target Population

Target population, as defined by Mugenda and Mugenda (1999), is that population to which a researcher wants to generalize the results of the study. In this research, the target population consisted of individual users of mobile telephone services at the household level within Nairobi region. As per Kenya population and housing census of August, 2009, the household population

in the study area was 985,016 households covering an area of 695.1 km². According to the same census 88.3% of the total households owned a mobile phone in Nairobi in August 2009. Thus the targeted population was 869,769 households. According to the 2009 census report, Nairobi region was divided into four sub regions namely Nairobi West, Nairobi East, Nairobi North and Westlands.

3.4 Sample Size and Sampling Procedure

Under this section, sample size and sampling procedure were discussed.

3.4.1 Sample Size

According to sample distribution table advanced by Krejcie and Morgan (1970), if the target population is more than 100,000 the sample size then is 384. Thus with a population of 869,769 the desirable sample size is 384. This is the total number of respondent household that was sampled.

3.4.2 Sampling Procedure

The researcher used both stratified sampling and random sampling techniques.

The sampling frame that was used to identify the households were the latest national census data of 2009. See appendix for an extract of the census result.

As per the 2009 census report Nairobi region is divided into four distinct zones namely, Nairobi West, Nairobi East, Nairobi North and Westlands. These zones formed the strata for further sampling. The next stage was to determine the number of households to be sampled in every zone. This was determined by proportionately allocating the number by use of the formula described below;

$$n_s = (N_z \times 384) / N_t$$

where;

n_s = Zone sample size

N_z = Zone total Population

N_t = Total Nairobi Household Population

Table 3.1: Table showing distribution of Sample size

Zone Name	Total number of Households	Percentage with Mobile Phone	Target Population	Sample size
Nairobi West	212,295	87.0%	184,697	81
Nairobi East	369,866	88.9%	328,811	145
Nairobi North	327,428	87.8%	287,482	127
Westlands	75,427	91.7%	69,167	31
TOTAL	985,016	88.3%	870,157	384

Source; Kenya National Bureau of Statistics (2009)

The four zones each formed an independent cluster, then a random sampling technique was used to identify specific household. Then within the household one respondent was picked by consensus but he had to be in a position to respond to all the questions.

Due to the huge number of households in the targeted area and the expansiveness of the geographical area, multi-stage cluster sampling is the best as it has the advantage of better representation through a subdivided structure that covers a wider and varied representation of the population. This also saved on time as this type of sampling involves less time and is convenient (Mugenda and Mugenda, 1999)

3.5 Data Collection Instrument

The researcher used primary data, which were collected by use of semi structured questionnaire survey instrument. These were administered directly to the respondent at household level by the researcher or research assistant and 'drop and pick later method' within the selected area.

Personal interviews were administered to those who were present and had time to sit through the interview. For the households without a person who could reasonably answer the questionnaire, drop and pick later method was used. The questionnaire consisted both open-ended and closed questions. The open ended questions permitted the respondent to give an insight of the relationship between the dependent and independent variable which would not have been addressed in the closed ended questions.

The questionnaire was divided into two main parts. Part A solicited general and demographic information i.e. gender, education, age and occupation of the respondent. Part A of the questionnaire was made of choices to be ticked off by respondents as well as open ended questions. Part B, identified factors influencing consumer choice and their relative importance made use of likert type scale to identify and rate the various responses. The scale was recorded on a widely used 5-point scale.

3.5.1 Pilot Testing of the Instrument

Pretesting of the survey instrument was done to ensure reliability and validity of the research instrument. The researcher prepared and pretested research instrument prior to conducting the research. This helped to measure the validity and reliability of the questionnaire used. Pretest survey was carried in Kiambu district, a satellite town of the larger Nairobi metropolitan area with similar characteristics with Nairobi region. Ten household respondents were picked randomly and interviewed.

3.5.2 Validity of the Instrument

Validity is the accuracy and meaningfulness of inferences, which are based on the research results (Mugenda & Mugenda, 1999). The ability of a test to measure what it is intended to measure. The research design ensured that there is control of all external and internal influences that may interfere and affect the variables being studied.

Internal validity was ensured by using well trained research assistants to collect the data. The researcher (assistant) tried as much as possible to abide by respondents convenient timelines. The environment must be comfortable for both the respondent and researcher.

The external validity was ensured by having a representative sample. I.e. the sample was taken consist of almost all characteristics of the population. As much as possible the research questions were relevant to the entire population.

3.5.3 Reliability of the Instrument

Reliability is the measure or the degree to which a research instrument grades some results after repeat trials. It refers to the tools being used to observe, measure and examine the variable understudy. Reliability is influenced by random error. As random error increases, reliability decreases. Random error is the deviation from a true measurement due to factors that have not effectively been addressed by the researcher. Reliability is determined by correlation coefficient which is also referred to as the coefficient of reliability. When the coefficient is high, the instrument is said to yield data that have a high reliability (Mugenda & Mugenda, 1999)

To ensure reliability of the data collected, random errors were minimized by accurately coding and avoiding ambiguous instructions. The questionnaire was brief but to the point to minimize interviewer and interviewee fatigue. The questionnaire was also pilot tested and coefficient of reliability computed to determine the level of reliability.

3.6 Methods of Data Analysis

The data collected was entered and analyzed by simple descriptive analysis using Statistical Package for Social Scientists (SPSS). The software was chosen because it is the most used package for analyzing survey data. The software had the following advantages: it was user friendly, could easily be used to analyze multi-response questions, cross section and time series analysis and cross tabulation; (i.e. related two sets of variables) and it could also be used alongside Microsoft excel and word. General information analysis used mean, standard deviation, frequency and percentages. Rating of factors was done by use of measure of central tendency- specifically the mean- and measure of dispersion, (standard deviation).

Descriptive analysis helped to summarize and organize data in an effective and meaningful way. It provided tools for describing collections of statistical observations and reducing information to understandable forms.

Operational Definition of Variables

<u>Objectives</u>	<u>Variables</u>	<u>Indicators</u>	<u>Measurements</u>	<u>Data Collection</u>	<u>Data analysis</u>
Establish the extent at which demographic characteristics of the consumers influence the choice of mobile service provider in Nairobi.	<u>Dependent</u> <ul style="list-style-type: none"> Choice of mobile operator <u>Independent</u> <ul style="list-style-type: none"> Demographic characteristics 	<ul style="list-style-type: none"> No of each sex Education level Occupation Marital status 	Ordinal	Questionnaire	Descriptive
Examine how social related factors of consumers influence the choice of mobile service provider in Nairobi.	<u>Dependent</u> <ul style="list-style-type: none"> Choice of mobile operator <u>Independent</u> <ul style="list-style-type: none"> Social related factors 	Member of; <ul style="list-style-type: none"> Family Reference group Social class 	Ordinal	Questionnaire	Descriptive
Investigate the level at which economic related factors of the consumer influences the choice of mobile service provider in Nairobi.	<u>Dependent</u> <ul style="list-style-type: none"> Choice of mobile operator <u>Independent</u> <ul style="list-style-type: none"> Economic related factors 	<ul style="list-style-type: none"> Income Cost of services offered Cost of getting the services 	Ordinal	Questionnaire	Descriptive
Determine the effect of service efficiency and effectiveness influence the consumer choice of mobile service provider in Nairobi.	<u>Dependent</u> <ul style="list-style-type: none"> Choice of mobile operator <u>Independent</u> <ul style="list-style-type: none"> Service efficiency and effectiveness 	<ul style="list-style-type: none"> Clear uncongested network Network coverage Availability of merchandise Problem resolution speed 	Ordinal	Questionnaire	Descriptive

CHAPTER FOUR

DATA ANALYSIS AND PRESENTATION

4.1 Introduction

This chapter presents the data analysis, interpretation, and presentation of findings of the research which sought to investigate the factors that influence consumer choice of mobile telephone service provider in Nairobi region. Analysis was done using SPSS software and the results of analysis were presented in tables and figures. The analysis was based on objectives of the study.

Table 4.1 Response Rate

Out of the target population of 384 respondents, the study managed to get response from 358 respondents, meaning that the response rate was 93.2%. The response rate (overall and per region) is also presented in table 4.1 below.

Table 4.1 Response Rate

Zone Name	Target Sample size	Actual Response	Response Rate (%)
Nairobi West	81	76	93.8
Nairobi East	145	134	92.4
Nairobi North	127	122	96.1
Westlands	31	24	77.4
TOTAL	384	358	93.2

4.2 Demographic Information

In order to capture the general information of the respondents, issues such as respondents' gender, age, marital status, level of education and occupation were addressed in the first section of the questionnaire. This was to get a better understanding of respondents who took part in the study.

Table 4.2 Gender of the Respondents

Gender	Frequency	Percent
Male	221	61.7
Female	137	38.3
Total	358	100.0

The results revealed that majority of the respondents were male comprising 62% while 39% were female. This implies that majority of the subscribers were males; this concurs with the study by Ontunya (2006) who observed that most of the users of mobile banking services were predominantly men.

Table 4.3 Ownership of the House

Responses	Frequency	Percent
Owns a House	160	44
Don't Own a House	198	56
Total	358	100

The study shows that majority of the respondents (56%) were not owners of the house while 44% revealed that they were the owners of the house. This implies that majority of the subscribers did not own houses.

Figure 4.4 Marital Status of the Respondents

Marital status	Frequency	Percent
Married	157	44
Single	190	53
No Response	11	3
Total	358	100.0

Findings portrayed in table 4.4 showed that a majority of the respondents were single comprising 53% while 44% were married. However, 3% did not reveal their marital status. This is in line

with studies by Gitari (2006), Ontunya (2006) in Kenya and Pakola et al, n.d in Finland who observed that majority of mobile users were young. This would explain why majority of the mobile phone service consumers were single.

Table 4.5 Own mobile Phone

Responses	Frequency	Percent
Own a Mobile	333	93
Don't Own	25	7
Total	358	100

Majority of the respondents (93%) revealed that they owned a mobile phone; only 8% did not own a mobile phone. It should be noted that this study was done in Nairobi region; however according to CCK 1st quarter 2010/11 report, the mobile telephony penetration rate countrywide is at only 55%, but Nairobi region has the highest.

Table 4.6 Number of mobile phones owned

No. of Mobile phone	Frequency	Percent
1	235	66
2	83	23
3	10	3
4	1	1
No response	29	8
Total	358	100

Results indicated that most respondents had one mobile phone comprising 66% while 23% had 2 mobile phones; three percent had 3 mobile phones. This kind of trend (whereby some consumers have more than one mobile phone service providers) is a consumer behavior in response to price variations and adverse changes in service is an important indicator of the level of competition in the mobile wireless services industry (Odhiambo 2003). According to Odhiambo (2003) in a study to determine mobile phone subscriber satisfaction in Nairobi, it was found out that,

customer service, assurances, service responsiveness, service access, reliability, service security, product/ service features, pricing, service credibility and service equity/ fairness were found to be major determinants of customer satisfaction. This trend of consumer of having more than one mobile phones may also be explained by number portability technology that was launched in April 2011 and have seen more and more subscribers switching service providers (Nyabiagen, 2011).

Table 4.7 Age of the Respondents

Age in Yrs	Frequency	Percent
19 and below	27	7.5
20-29	141	39.4
30-39	118	33.0
40-49	56	15.6
50 and above	16	4.5
Total	358	100.0

Most of the respondents were aged 20-29 years comprising 39.4 percent while 33 percent were aged 30-39 years. On the other hand, 15.6% were aged between 40-49 years with 7.5% aged 19 years and below. Majority of the subscribers fell between 20-29 and 30-39 years age bracket. This is in line a research carried out in Finland on the use of mobile phones; it showed that the majority of users were young between the ages of 25-34 years old. In Kenya, Ontunya (2006) observed that most of the users of mobile services were young people. On the other hand, Gitari (2006) in his study observed that 85% of mobile users in Nairobi were between 21-40 years old.

Table 4.8 Highest level of Education attained

Education Level	Frequency	Percent
primary	9	3
Secondary	111	31.0
Tertiary	165	46.1
University	73	20.4
Total	358	100.0

Most respondents had attained tertiary level of education comprising 46% while 31% had attained secondary level of education. The study also shows that 20% of the respondents had reached university. From the findings, it is evident that majority of the respondents were educated. This is in line with Ontunya (2006) study which found out that most of the users of mobile services were educated and young as seen earlier in table 4.7. It is believed that an educated person is able to easily adapt to new ways of doing things and can easily use new technology.

Table 4.9 Form of Employment

Responses	Frequency	Percent
Employed	267	74
No Employed	91	26
Total	358	100

Results in table 4.9 shows that majority of the respondents (74%) were in employment while 26% were not in any form of employment. According to Gitari (2006), occupation of an individual determines the purchasing power and is a fundamental determinant of the clients need and wants. Hence, employment status (either employed or unemployed) plays an important role in the consumer choice of a mobile service provider in regard to Gitari (2006) findings.

Table 4.10 Occupation

	Type of Employment	Percentage
Type of engagement	Self employed	24
	Employed	56
	Unemployed	20
Type of skill	Skilled worker	60
	Unskilled worker	40
Employing Organization	Non-profit organization	26
	Private sector	46
	Public sector	28

Findings portrayed in table 4.10 found that most of the respondents were employed comprising 56% while 24% were self employed. 20% were however unemployed. The study further inquired the employed respondents on the type of skill and found that most of the respondents were skilled workers comprising 60% while 40% were unskilled workers. Majority of the employed respondents were employed by the private sector comprising 46% while 28% were employed by the public sector; 26% revealed that they had been employed by the non-profit organizations. The study shows that majority of the respondents were in an occupation generating income and according to Gitari (2006), the level of the occupation and level income of an individual determines the purchasing power and is a fundamental determinant of the clients need and wants.

Table 4.11 Number of years using mobile services

Duration in Years	Frequency	Percent
1-3 yrs	31	8.7
4-6	119	33.2
7-9	151	42.2
10-12	27	7.5
13 & above	30	8.3
Total	358	100.0

Most respondents had used mobile services for a period of 7-9 years comprising 42.2% while 33.2% had used mobile phone services for a period of 4-6 years. On the other hand, 8.7% of the respondents had used the mobile services for a period of 1-3 years, 8.3% had used the services for a period of 13 years and above while 7.5% had used for 10-12 years. The study therefore shows that majority of the subscribers had used the mobile services for a period of less than 10 years; this can be confirmed by studies by Ontunya (2006) Gitari (2006) who found out that most subscribers were young people; this evidence why the subscribers had used the mobile services for such a period.

Table 4.12 Mobile Phone Providers Used

Mobile Phone Providers	Yes		No	
	Frequency	Percentage	Frequency	Percentage
Safaricom	275	77%	83	23%
Airtel	142	40%	216	60%
Orange	19	5%	339	95%
Yu	40	11%	318	89%

Results show that majority of the respondents used Safaricom comprising 77% while 40% used Airtel. 11% used Yu while 19% used orange. The study further inquired the respondents who owned more than one line, which line they used most of the time. This is in line with CCK 2010 report which revealed that Safaricom dominated the market with a market share of 79%. In this study, Safaricom dominated the market with a 77% market share. Airtel comes second while Orange is third; this concurs with CCK 2010 report as well.

Table 4.13 Line Most used

Mobile Line	No. Respondents who Used	
	Frequency	Percent
Safaricom	275	76.8
Airtel	142	39.7
Orange	19	5.3
Yu	40	11.2

Findings showed that majority of the respondents most used Safaricom line comprising 76.8% while 39.7% used Airtel. On the other hand, 11.2% used Yu (Essar) while 5.3% used Orange. This is in line with CCK 2010 report which revealed that Safaricom dominated the market with a market share of 79% followed by Airtel. The study further inquired why the respondents had more than one line. The respondents gave various reasons such as cheaper rates, network problems, reduced congestion, easier money transfer services, to reach friends and family and due to internet access services.

4.3 Factors that influence consumer choice of mobile service provider

In this section, the study inquired on the extent into which the respondents considered the importance of the various aspects while choosing their mobile service provider. This section utilized a likert scale of 1 = Very high extent; 2 = high extent; 3 = Moderate extent; 4 = Low extent; 5 = Not at all. Data was presented in mean and standard deviation.

Table 4.14 Factors that influence consumer choice of mobile service provider

Attributes	Mean	Standard deviation
Discount/ special offer price	1.33	.7657
Availability of scratch cards	1.38	.7678
Friends and social groups	1.42	.3755
Additional services e.g. m- commerce, internet connection	1.44	.6754
Low scratch card denomination	1.44	.3745
Low calling and SMS rate	1.55	.7734
Family members	1.58	.6866
Wide geographical network coverage	1.59	.7688
Clear and uncongested network	1.94	.2734
Price of SIM card	2.49	.6934
Work or business groups	2.50	.7678
Company participation in charity	3.35	.7677
Friendly, available and courteous customer service	3.68	.6967
Appeal of the company CEO and employees	4.01	.9886
Company colors'/ branding	4.22	.4345
Profitability of the company	4.52	.3445
After sales technical support	4.59	.2544

Results revealed that most respondents cited they considered to a high extent various attributes while choosing their mobile service provider. These were discount/ special offer price, availability of scratch cards, friends and social groups, additional services e.g. m- commerce, internet connection, low scratch card denomination, low calling and SMS rate, family members and a wide geographical network coverage as was shown by low mean scores of 1.33, 1.38, 1.42, 1.44, 1.55, 1.58 and 1.59 respectively. The least considered attributes were after sales technical support, profitability of the company, company colors and the appeal of the company CEO as

was shown by high mean scores of 4.59, 4.52, 4.22 and 4.01 respectively. The findings above, concurs with those of Gitari (2006) who found out that the most important factor considered by customers were good network coverage, access to airtime, fast response to complaints and excellent customer service. The researcher observes that service quality is essential and important for a mobile telephone service provider in establishing and maintaining loyal and profitable customer. Quality of a service may be undermined for example due to frustration with call quality which according to J.D. Power and Associates (2010) often a leads to the reason why consumers choose to switch mobile carriers. In a study by J.D. Power and Associates (2010) on a call quality, the results showed that a PP100 (problems per 100 calls) rate six times as great (42 PP100 vs. 8 PP100) for consumers who report they “definitely will switch” providers in the next twelve months when compared to users who report they will “definitely not switch” carriers. Thus, quality of a product is another factor considered while comparing mobile service providers’ service efficiency and effectiveness.

4.4 Consumers Demographic Characteristics and Choice of Mobile Service Provider

Table 4.15 Gender and Company’s Color/Branding

	Very high extent		Company color's/branding						No Response		Total		
	High extent		Moderate Extent		Low extent		Not at all						
	f	%	f	%	f	%	f	%	f	%			
Male	27	12.2	77	34.8	37	16.7	31	14.0	44	20.0	5	2.3	221
Female	16	11.7	57	41.6	24	17.5	23	16.8	16	11.7	1	0.7	137

The study shows that 41.6% of the female respondents agreed to a high extent that they considered company colors/branding in their choice for the mobile provider as compared to 34.8% of male respondents. This shows that women have a liking for colors when choosing a mobile provider as compared to their male counterparts. This concurs with a study by Solomon et al., (2010) who revealed that men and women differ in their tastes and therefore mobile operators should consider behaviors and tastes of men and women which are constantly evolving.

Table 4.16 Gender and Work or business groups

	Work or business groups										No Response	Total	
	Very high extent		High extent		Moderate Extent		Low extent		Not at all				
	f	%	f	%	f	%	f	%	f	%			
Male	87	39.4	84	38.0	29	13.1	13	5.9	3	1.4	5	2.0	221
Female	60	43.8	38	27.7	25	18.2	5	3.6	8	5.8	1	0.7	137

The study shows that most male respondents (38%) considered work or business groups to a high extent while 39.4% considered this to a very high extent as compared to the female whereby only 27.7% revealed that they considered work or business groups. This shows that men are moved by work and business groups when choosing a mobile provider. According to Gitari (2006) older age group mostly use mobile services for business. However, this contradicts our study to some extent since majority of the respondents in our study were youthful and not elderly as for the case of Gitari study.

4.3.2 Reasons for subscribing to the mobile service provider

This section utilized a likert scale of 1= most important, 2= important, 3= moderately important, 4= less important, 5= not important at all. Data was presented in mean and standard deviation.

Table 4.17 Reasons for Subscribing To the Mobile Service Provider

Attributes	Mean	Standard deviation
My family and relatives were already in the network	1.424	.2544
The network had most subscribers in the country	1.475	.7734
Most of my friends were in it	1.556	.6967
Most of my work mates or business associates	3.012	.6934
It was a present and I did not have much choice	3.434	.6754

Findings from the study showed that most of the respondents subscribed to their mobile service provider because family and relatives were already in the network, most of my friends were in it and that the network had most subscribers in the country as shown by mean scores of 1.42, 1.47

and 1.55 respectively. This is in line with Kotler and Keller, (2006) who revealed that consumer behavior is influenced by social factors as reference groups (social networks), families and social roles and status. On the other hand, Ofwona (2007) revealed that family may have more influence on the choice of telephone provider because of calling habits and cost and that friends' opinion and behavior influences purchase decision. In their study of students, Birke & Swann (2007), found out that friends were more than twice as likely to have the same operator as two randomly picked students. However, very few subscribed to their mobile service because it was a present and that they did not have much choice as shown by a mean score of 3.434.

Figure 4.18 Respondents Monthly Income

Income Bracket	Frequency	Percent
19000 & below	94	26.3
20000 - 49000	126	35.2
50000 - 79000	51	14.2
80000 - 109000	21	5.9
110000 - above	1	0.3
No Response	65	18.2
Total	358	100.0

Data presented in table 4.18 revealed that most respondents earned between Kshs 20,000 and 49,000 comprising 35.2% 26.3% earned KShs 19,000 and below. On the other hand, 14.2% earned between KShs 50,000 while 0.3% earned between Kshs 80,000-109,000 per month. The study shows that the mobile subscribers fell in different income categories. According to Gitari (2006), the purchasing power is determined by the level income of an individual. The income of consumers is a fundamental determinant of their need and wants. A consumer purchasing power determines whether to engage in any purchase of a product or service or not.

4.5 Frequency of usage of various mobile phone services

In this section the study sought to find out services most used by the consumers. The researcher utilized a likert scale of 1=Always, 2= Often, 3=Sometimes, 4=rarely and 5=Never. The results of the findings are as shown below in table 4.8.

Table 4.19 Frequency of usage of various mobile phone services

Services Used	Mean	Standard deviation
Voice	1.12	.954
SMS	1.48	.422
Mobile Commerce e.g. M- Banking, Money transfer. M- Marketing	2.04	.891
Internet e.g. Browsing, E- Mail	3.46	.870
Entertainment e.g. TV, Ziki	4.50	.776

Results showed that most respondents frequently used voice and SMS mobile services always as was shown by 1.12 and 1.48 respectively. However, services such as entertainment e.g. TV and Ziki were rarely used by the subscribers as was shown by a mean score of 4.50. Various factors influence usage of different mobile services. According to Ofwona (2007), the consumer decision is influenced by personal characteristics, like age, occupation, economic circumstances, self concept, lifestyle and values. Each person has personality characteristics that influence their buying behavior and they choose a mobile telephone service provider that reflect their personality and accommodate their beliefs. For example, according to Mediamark Research Inc, different age groups have different needs and wants and a better understanding of the ageing process of consumers will continue to be of great importance to marketers as well as public policy decision makers. In a study of teen in America done by Mediamark Research Inc. it was found out that the role of Teens in influencing household purchases is growing as parents rely on Teens' advanced computer skills to research products online. In addition older teenagers have more influence than younger teenagers on household purchases of things such as cell phones.

4.5.1 Age and the usage of various mobile phone services

Table 4.20 Cross tabulation between Age of Consumers and use of Voice Service

Age	Use voice services in your mobile phone												Total
	Always		Often		Sometimes		Rarely		Never		No response		
	f	%	f	%	f	%	f	%	f	%	f	%	
19 and below	17	4.7	5	1.4	1	0.3	2	0.6	1	0.3	1	0.3	27
20-29	110	30.7	17	4.7	6	1.7	5	1.4	3	0.8	0	0	141
30-39	102	28.5	10	2.8	1	0.3	3	0.8	1	0.3	1	0.3	118
40-49	52	14.5	2	0.6	0	0	1	0.3	0	0	0	0	55
50 and above	15	4.2	0	0	0	0	1	0.3	0	0	0	0	16
No Response	0	0	0	0	0	0	0	0	0	0	1	0.3	1
Total	296	82.7	34	9.5	8	2.2	12	3.4	5	1.4	3	0.8	358

The study shows that majority of the consumers who used voice always were between ages 20-29 followed by those in ages 30-39, then those between ages 40-49 as presented by 30.7%, 28.5% and 14.5% respectively. This is in line with a study carried out in Finland on the use of mobile services, it was found out that majority of users were young between the ages of 25-34 years old; in this study, majority of those who used voice always fell between 20-29 years of age.

Table 4.21 Consumers Age and SMS Cross tabulation

Age	Use of SMS												Total
	Always		Often		Sometimes		Rarely		Never		No response		
	f	%	f	%	f	%	f	%	f	%	f	%	
19 and below	15	4.2	10	2.8	0	0	0	0	0	0	2	0.6	27
20-29	54	15.1	62	17.3	23	6.4	1	0.3	0	0	1	0.3	141
30-39	22	6.1	52	14.5	32	8.9	11	3.1	0	0	1	0.3	118
40-49	9	2.5	14	3.9	22	6.1	9	2.5	1	0.3	0	0	55
50 and above	1	0.3	2	0.6	3	0.8	10	2.8	0	0	0	0	16
No response	0	0	0	0	0	0	0	0	0	0	1	0.3	1
Total	101	28.2	140	39.1	80	22.3	31	8.7	1	0.3	5	1.4	358

The study shows Short Message Service (SMS) was used often by majority of consumers between ages 20-29 and those between 30-39 years as presented by 17.3% and 14.5%

respectively. A further 15.1% of the respondents between 20-29 years of age revealed that they used SMS always. Unlike voice which was used always by majority of respondents who were young, SMS was used often as shown by 39.1% of the respondents. This also concurs with a study by Ontunya (2006) that observed that most of the users of mobile services were young.

Table 4.22 Age and Mobile Commerce e.g. M-banking, money transfer, M-marketing

Age	Mobile Commerce: M-banking, money transfer, M-marketing												Total
	Always		Often		Sometimes		Rarely		Never		No response		
	f	%	f	%	f	%	f	%	f	%	f	%	
19 and below	2	0.6	10	2.8	4	1.1	9	2.5	1	0.3	1	0.3	27
20-29	47	13.1	44	12.3	37	10.3	11	3.1	2	0.6	0	0	141
30-39	28	7.8	31	8.7	53	14.8	5	1.4	0	0	1	0.3	118
40-49	20	5.6	12	3.4	15	4.2	8	2.2	0	0	0	0	55
50 and above	10	2.8	2	0.6	4	1.1	0	0	0	0	0	0	16
No response	0	0	0	0	0	0	0	0	0	0	1	0.3	1
Total	107	29.9	99	27.6	113	31.6	33	9.2	3	0.8	3	0.8	358

Table above shows that majority of the consumers used mobile commerce such as M-banking, money transfer, M-marketing sometimes as shown by a percentage of 31.6%; with most respondents (14.8%) being between 30-39 years of age. However, a number of consumers between 20-29 years of age revealed that they used mobile commerce always and often as shown by 13.1% and 12.3% respectively. This is in line with a study done in Finland on the use of mobile banking, it showed that the majority of users were young between the ages of 25-34 years old, while non users were relatively older generation of 50-64 years. People in between 25-34 years are also considered educated as compared to those between 50-64 years of age and according to Solomon et al., (2010), it is believed that an educated person is able to easily adapt to new ways of doing things and can easily use new technology; in this case services such as M-banking, money transfer, M-marketing.

Table 4.23 Consumers Age and Internet e.g. browsing, Email Cross tabulation

Age	Internet e.g. browsing, Email											Total	
	Always		Often		Sometimes		Rarely		Never		No response		
	f	%	f	%	f	%	f	%	f	%	f		%
19 and below	10	2.8	14	3.9	2	0.6	0	0	0	0	1	0.3	27
20-29	42	11.7	49	13.7	21	5.9	25	6.9	4	1.1	0	0	141
30-39	8	2.2	33	9.2	36	10.1	36	10.1	4	1.1	1	0.3	118
40-49	6	1.7	8	2.2	9	2.5	31	8.7	1	0.3	0	0	55
50 and above	1	0.3	2	0.6	9	2.5	2	0.6	2	0.6	0	0	16
No response	0	0	0	0	0	0	0	0	0	0	1	0.3	1
Total	67	18.7	106	29.6	77	21.5	94	26.3	11	3.1	3	0.8	358

The study shows that majority of the respondents used internet services often as shown by 29.6% of the respondents with most of internet users being consumers between 20-29 years of age, followed by those between 30-39 years of age as shown by 13.7% and 9.2% respectively. A further 11.7% of the respondents between 20-29 years revealed that they used internet always while 10.1% of the respondents between 30-39 years used the internet sometimes and rarely respectively. The study shows that majority of the young people used internet services (email, browsing); this may be as a result of young people are educated and innovative. According to Solomon et al., (2010), it is believed that an educated person is able to easily adapt to new ways of doing things and can easily use new technology. A research done conclude that, there is a relationship between mobile phone usage of a service and educational level.

Table 4.24 Age and Use of Entertainment e.g. TV, Ziki

Age	Entertainment e.g. TV, Ziki											Total	
	Always		Often		Sometimes		Rarely		Never		No response		
	f	%	f	%	f	%	f	%	f	%	f		%
19 and below	7	2.0	6	1.7	4	1.1	3	0.8	6	1.7	1	0.3	27
20-29	17	4.7	10	2.8	38	10.6	42	11.7	34	9.5	0	0	141
30-39	1	0.3	3	0.8	21	5.9	42	11.7	50	14.0	1	0.3	118
40-49	3	0.8	4	1.1	7	2.0	15	4.2	26	7.3	0	0	55
50 and above	0	0	1	0.3	0	0	7	2.0	8	2.2	0	0	16
No response	0	0	0	0	0	0	0	0	0	0	1	0.3	1
Total	28	7.8	24	6.7	70	19.6	109	30.4	124	34.6	3	0.8	358

The study shows that most of the never used mobile entertainment as shown by 34.6% of the respondents. The study shows that while (11.7%) of the consumers between 20-29 years of age and 30-39 years of age used mobile entertainment rarely, 10.6% of the consumers between 20-29 years indicated that they used mobile entertainment sometimes while 4.7% used it always . The study also shows that most of consumers between 40-49 years and 50 years and above never used mobile entertainment. It can be observed that young people used entertainment services as compared to the elderly; according to Hwa et al, 2011 young people are known to be the most informative group, who always access to the internet or technology anytime of the day and hence may subscribe to entertainment services for information.

4.6 Attributes Consumers Would Want the New Provider to Have

The respondents were further asked if they were to change their current mobile service provider what attributes they wanted the new provider to have. The section used a likert scale of 1 = Very important; 2 = Important; 3 = Neither important/ Unimportant; 4 = Somewhat Important; 5 = Not Important.

Table 4.25 Attributes Consumers Would Want the New Provider to Have

Attributes Expected	Mean	Standard deviation
Clear and non congested network	1.32	.7688
Wide and national network coverage	1.55	.4345
Low cost of services offered	1.80	.2734
Fast data services	1.90	.6967
Friendly and available customer service	2.20	.6754
Family and Relatives	2.39	.6934
Image of the company	2.40	.7677
Services and products offered	2.77	.2544
My friends and social group	3.06	.7734
Ownership of the company	3.42	.7678
My workmates and business associates	3.73	.7657
Number of subscribers in the network	3.75	.3745

Results revealed that most respondents cited that if they were to shift from their current subscribers; they would go for a provider who has attributes such as clear and non congested network, wide and national network coverage, low cost of services and fast data services as important factors when choosing a mobile service provider as was shown by mean scores of 1.32, 1.55, 1.80 and 1.90 respectively. This is in line with Gitari (2006) who found out that the most important factors considered by customers were good network coverage, access to airtime, fast response to complaints and excellent customer service. This shows that the subscribers considers quality and efficiency of a mobile service provider and according to Gitari (2006), quality of a product is a factor highly considered while comparing mobile service providers' service efficiency and effectiveness. Service and product quality always lies in the minds of the consumers depending on individual buying capacity, buying behavior, demand, taste, and fashion criteria and obviously the competitive markets that provide significant differentiation strategies (Gitari, 2006).

However; the study found out that the mobile phone consumers considered attributes such as ownership of the company and number of subscribers in the network as unimportant as shown by mean scores of 3.42 and 3.75 respectively.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATION

5.1 Introduction

This section of the study presents the summary, conclusions and recommendations of the study which sought to investigate the factors that influence consumer choice of mobile telephone service provider in Nairobi region.

5.2 Summary

The study revealed that most of the respondents were male. In addition, a majority of the respondents were not owners of the house they were living in. Further, most of the respondents were not married.

The study found that most respondents owned mobile phones and had one mobile phone. Most of the respondents were aged 20-29 years comprising 39 percent while 32 percent were aged 30-39 years. 15% were aged between 40-49 years with 8% aged 19 years and below. In addition, most respondents had attained tertiary level of education comprising 46% while 31% had attained secondary level of education. 20% had attained university level of education. This is in line with Ontunya (2006) study which found out that most of the users of mobile services were educated and young. Further, most of the respondents were in employment comprising 74% while 26% were not in any form of employment.

On the topic of occupation, most of the respondents were employed. The study further inquired the employed respondents on the type of skill and found that most of the respondents were skilled workers. Majority of the employed respondents were employed by the private sector

The study established that more than half of respondents had used mobile services for a period of more than 7 years. Safaricom was the most used service provider followed by Airtel, then orange and the least used was Yu. This concurs with CCK 1st quarter 2010/11 report which had safaricom as having the highest consumers followed by Airtel then Yu and finally orange.

The study further inquired why the respondents had more than one line. The respondents gave various reasons such as cheaper rates, network problems, reduced congestion, easier money transfer services, to reach friends and family and due to internet access services.

On the area of the various factors that influence consumer choice of mobile service provider, most respondents cited they considered to a high extent various attributes while choosing their mobile service provider. These were discount/ special offer price, availability of scratch cards, friends and social groups; additional services e.g. m-commerce, internet connection, low scratch card denomination, low calling and SMS rate, family members and wide geographical network coverage. The least considered attributes were after sales technical support, profitability of the company, company colors and the appeal of the company CEO.

On the topic of the various reasons for subscribing to your mobile service provider, most of the respondents subscribed to their mobile service provider because family and relatives were already in the network, most of my friends were in it and that the network had most subscribers in the country. The study found that most respondents frequently used voice and SMS mobile services. The least used service was entertainment e.g TV and Ziki as The study further inquired the respondents if they were to change their current mobile service provider what attributes they wanted the new provider to have. Most respondents cited clear and non congested network, wide and national network coverage, low cost of services and fast data services.

5.3 Conclusion

The study concludes that demographic characteristics of the consumers influence the choice of mobile service provider in Nairobi. The consumer decisions were influenced by personal characteristics, like age and gender. The study shows that while women were influenced by colors and branding, men were influenced by factors such as work and business groups. Age also came out as determining factor in the choice of mobile phone provider. It was established that, young people were influenced by services such as internet, email browsing and mobile entertainment unlike elderly who were more influenced by mobile Commerce services such as M-banking, money transfer, M-marketing.

The study further concludes that social related factors of consumers influence the choice of mobile service provider in Nairobi. The study established that consumers considered factors such as work or business groups, family members and friends and social groups while choosing a mobile provider. It was established that a number of respondents had joined their respective mobile services providers since their family and relatives were already in the network or either because most of their friends were in it.

The study concludes that economic related factors influence the choice of mobile service provider in Nairobi. Most people chose mobile services that have discount/ special offer price, availability of scratch cards, additional services e.g. m- commerce, internet connection, low scratch card denomination, low calling and SMS rates. Consumers also consider mobile providers with attribute such as wide and national network coverage, fast data services and low cost of services offered.

The study concludes that mobile service efficiency and effectiveness influence the consumer choice of mobile service provider in Nairobi. Quality of a product is a factor considered while comparing mobile service providers' service efficiency and effectiveness. Consumers consider attributes such as fast data services, availability of scratch cards, and clear and non congested network when choosing a mobile provider. Quality and efficiency is at the heart of what customer buys and therefore a bottom line measure of the impact of brand identity. It is important for a company to understand how customers perceive their service efficiency in provision of its services.

5.4 Recommendation

The study recommends that following;

- i. Mobile telephony players need to employ various competitive strategies to achieve sustainable competitive advantage. These include differentiation which involves creating a product or service that is perceived as unique to a specific segment of consumer such as demographic, economic and social characteristic.

- ii. The study recommends that in order for mobile telephone service providers to be competitively advantaged and increase their customer base, there is need to invest heavily in technological advancements that yield improved coverage, clear and uncongested network, faster data services and have cheaper rates; also ensure efficiency in provision of services for example in ensuring availability of scratch cards.
- iii. Mobile providers should also be creative and come up with more mobile applications such mobile entertainment and other additional services as this would attract more consumers to join the network.

5.5 Recommendation for Further Research.

Mobile telecommunication industry is so fluid and rapidly changing. Periodical research should be carried out in order to understand consumer trends and need as new product and services are rolled out.

While choosing the current service provider most respondents quoted economic factor as their most considered factor, while if they were to change mobile provider, network efficiency was noted to be the main factor. Further research on these two factors and why consumers change their preference should be studied.

This study concentrated on the urban life where mobile penetration rate is very high compared to the national mobile penetration rate. The entire country should be researched on especially the rural characteristics.

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APPENDICES

Appendix I: Introduction Letter

Dear Respondents,

RE: COLLECTION OF SURVEY DATA.

I am a postgraduate student at the University of Nairobi, school of continuous and distance education. In order to fulfill the degree requirements, I am undertaking a research project on factors influencing consumer choice of mobile telephone service provider: a case of households in Nairobi region. You have been selected to form part of this study. This is kindly to request you to assist me collect the data by filling out the accompanying questionnaire.

The information you provide will be used for academic work only. My supervisor and I assure you that the information you give will be treated with strict confidence. At no one time will you or your household name appear in my report. A copy of the final paper will be availed to you upon request.

Your cooperation will be highly appreciated and thank you in advance.

Yours faithfully,

Eliud Wachira

MA (PPM) Student
University of Nairobi

Appendix II: Questionnaire for Research Respondents.

The information provided here will only be used for academic purposes and will be treated with maximum confidentiality. Do not write your name or any other form of identification on the questionnaire.

Part A: General and Demographic information

Please tick the appropriate answer in the box where applicable.

1. What is your gender? Male Female
2. Are you the owner of the house? Yes No
3. Which area of Nairobi do you reside _____
4. What is your marital status? Married Single
5. Do you own mobile phone? _____. How many? _____
6. What is your age?
 - a. 19 and below
 - b. 20 – 29
 - c. 30 – 39
 - d. 40 – 49
 - e. 50 and above
7. What is your highest level of Education attained?
 - a. Non
 - b. Primary
 - c. Secondary
 - d. Tertiary
 - e. University
8. Are you in any form of employment? Yes No
9. What is your occupation?
 - a. Type of engagement
 - i. Self employed

- ii. Employed ()
- iii. Unemployed ()
- b. Type of skill
 - i. Skilled worker ()
 - ii. Unskilled worker ()
- c. Employing Organization
 - i. Non-profit organization ()
 - ii. Private sector ()
 - iii. Public sector ()
- d. others (Please specify) _____

10. How long have you been using mobile services?

- a. 1 – 3 years ()
- b. 4 – 6 years ()
- c. 7 – 9 years ()
- d. 10 – 12 years ()
- e. 13 and above ()

11. Which mobile line(s) do you use?

- a. Safaricom ()
- b. Airtel ()
- c. Orange ()
- d. Yu ()
- e. Others (please specify) _____

12. If you own more than one line

- a. Which one do you use most of the time? _____
- b. Why do you have more than one line? _____

Part B: Factors that influence consumer choice of mobile service provider.

1. In your opinion, to what extent did you consider the importance of the following aspects while choosing your mobile service provider? (Tick as appropriate. Tick only one box per line)

1 = Very high extent; 2 = high extent; 3 = Moderate extent; 4 = Low extent; 5 = Not at all

	Attribute	1	2	3	4	5
1	Company colors'/ branding					
2	Wide geographical network coverage					
3	Clear and uncongested network					
4	Friendly, available and courteous customer service					
5	After sales technical support					
6	Additional services e.g. m- commerce, internet connection					
7	Price of SIM card					
8	Low calling and SMS rate					
9	Discount/ special offer price					
10	Low scratch card denomination					
11	Availability of scratch cards					
12	Company participation in charity					
13	Appeal of the company CEO and employees					
14	Profitability of the company					
15	Family members					
16	Friends and social groups					
17	Work or business groups					

2. You subscribed to your mobile service provider because – (Please number with no 1 (One) being the most important)

- Most of my friends were in it. _____
- My family and relatives were already in the network. _____
- It was a present and I did not have much choice. _____
- Most of my work mates or business associates. _____
- The network had most subscribers in the country. _____

3. Please indicate your Monthly income bracket

- a. 19,000 and below ()
- b. 20,000 – 49,000 ()
- c. 50,000 – 79,000 ()
- d. 80,000 – 109,000 ()
- e. 110,000 and above ()

4. How frequently do you use mobile phone services listed below?

	Services Used	Always	Often	Sometimes	Rarely	Never
1	Voice					
2	SMS					
3	Mobile Commerce e.g. M- Banking, Money transfer. M- Marketing					
4	Internet e.g. Browsing, E- Mail					
5	Entertainment e.g. TV, Ziki					

5. If you were to change your current mobile service provider what attributes should the new provider have?

1 = Very important; 2 = Important; 3 = Neither important/ Unimportant; 4 = Somewhat Important; 5 = Not Important

	Aspects	1	2	3	4	5
1	Wide and national network coverage					
2	Clear and non congested network					
3	Low cost of services offered					
4	Fast data services					
5	Services and products offered					
6	Friendly and available customer service					
7	Family and Relatives					
8	My friends and social group					
9	My workmates and business associates					
10	No of subscribers in the network					
11	Ownership of the company					
12	Image of the company					

Appendix III: Extracted household population pages from 2009 Census Report.

Volume IA

Table 2: Population Distribution by Sex, Number of Households, Area, Density and Administrative Units

	Male	Female	Total	Households	Area In Sq. Km.	Density
KENYA	18,182,458	19,417,839	38,610,097	8,787,954	581,313.2	66
NAIROBI	1,605,230	1,533,139	3,138,369	885,016	885.1	4,518
NAIROBI WEST	352,227	332,538	684,765	212,295	261.8	2,618
DAGORETTI	166,391	163,186	329,577	103,818	38.8	8,534
KAWANGWARE	59,430	53,858	113,288	38,249	3.9	28,092
GATINA	24,747	21,125	45,872	15,987	1.5	30,411
KAWANGWARE	34,883	32,731	67,614	22,262	2.4	28,258
KENYATTA /GOLF COURSE	18,710	18,646	35,355	9,401	9.8	3,714
KENYATTA /GOLF COURSE	10,878	11,840	22,818	5,987	5.1	4,476
WOODLEY	5,834	6,706	12,539	3,414	4.4	2,837
MUTUINI	9,018	8,958	17,973	8,454	5.0	3,583
KIRIGU	6,097	8,111	12,208	3,894	1.7	7,027
MUTUINI	2,918	2,847	5,765	1,760	3.3	1,758
RIRUTA	49,885	49,348	99,234	31,407	7.3	13,574
NGANDO	17,815	18,399	34,014	11,182	3.2	10,757
RIRUTA	32,370	32,850	65,220	20,245	4.2	18,717
UTHIRU-RUTHIMITU	16,828	16,647	32,575	9,868	7.9	4,124
RUTHIMITU	7,493	7,778	15,289	4,434	4.8	3,156
UTHIRU	8,435	8,871	17,306	5,434	3.1	5,656
WAIHAKA	18,323	15,731	31,054	9,439	6.0	6,242
KABIRIA	4,859	4,254	9,113	2,848	2.7	3,386
WAIHAKA	10,464	11,477	21,941	6,491	2.3	9,810
KIBERA	185,836	169,352	355,188	108,477	223.2	1,592
KAREN	7,450	8,338	13,788	4,223	38.6	348
KAREN	4,760	4,028	8,788	2,811	23.0	382
LENANA	2,882	2,310	4,992	1,382	18.8	301
KIBERA	48,001	39,548	87,549	26,878	1.8	56,483
KIBERA	5,293	4,493	9,786	3,237	0.2	65,197
LINDI	19,545	15,613	35,158	11,851	0.5	70,302
MAKINA	12,065	12,277	25,242	7,926	0.7	38,508
SIRANGA	-10,198	7,165	17,363	6,164	0.2	71,072
LAINI SABA	28,547	23,826	52,373	18,341	0.8	64,785
LAINI SABA	16,888	12,494	28,182	9,927	0.4	75,942
NYAYO HIGHRISE	12,859	11,332	24,191	8,414	0.4	61,981
LANGATA	10,887	8,648	19,534	5,434	31.0	614
HARDY	4,848	4,280	9,128	2,568	14.3	638
LANGATA	8,019	4,382	10,401	2,866	17.5	695
MUGUMO-INI	22,322	24,715	47,037	13,079	126.4	372
BOMAS	7,912	8,734	15,046	4,801	123.4	135
MUGUMO-INI	14,410	15,981	30,391	8,478	3.0	10,188
NAIROBI WEST	39,840	40,739	80,579	22,826	22.0	3,662
NAIROBI WEST	15,812	17,565	33,377	9,168	8.9	4,833
SOUTH C	24,028	23,174	47,202	13,759	15.1	3,128
SERANGOMBE	28,809	25,638	54,347	15,597	1.0	52,433
GATWIKIRA	13,580	11,411	24,991	7,270	0.3	85,323
OLYMPIC/KYANDA	15,229	14,127	29,356	8,327	0.7	38,478
NAIROBI EAST	582,554	561,862	1,144,416	369,886	226.7	8,048
EMBAKASI	468,097	457,878	925,775	298,942	203.8	4,540
DANDORA	71,452	70,594	142,046	47,808	3.8	38,254
DANDORA A'	28,382	28,115	56,477	20,183	2.0	28,073
DANDORA B'	43,090	42,479	85,569	27,645	2.0	43,918
EMBAKASI	45,354	42,610	87,970	25,082	60.0	1,467
EMBAKASI	32,674	32,360	65,034	19,616	16.0	1,444
MIHANGO	12,060	10,250	22,310	8,187	14.9	1,537
KARIOBANGI SOUTH	28,988	28,094	55,989	17,118	4.8	11,613
KARIOBANGI SOUTH	15,363	17,673	33,036	9,869	1.4	23,480
MOWLEM	11,632	11,321	22,953	7,250	3.4	6,722
KAYOLE	85,880	90,089	175,949	53,711	5.6	32,178
KAYOLE	68,665	70,656	140,321	45,872	2.4	56,655
KOMA ROCK	15,195	18,403	33,598	8,030	3.1	11,582
MUKURU KWA NJENGA	111,085	88,967	200,042	75,420	12.0	10,720
IMARA DAINA	38,488	31,178	70,841	26,222	3.9	18,042
MUKURU KWA NJENGA	71,819	58,782	130,401	49,198	8.1	18,002
NJIRU	26,377	24,078	49,453	18,441	8.1	8,480

Table 2: Population Distribution by Sex, Number of Households, Area, Density and Administrative Units

	Male	Female	Total	Households	Area In Sq. Km.	Density
NJIRU	11,847	10,635	22,482	7,498	5.2	4,330
SAIKA	13,530	13,441	26,971	7,943	3.9	6,955
RUAI	18,186	17,775	35,961	9,848	100.5	358
NGUNDU	4,870	4,643	9,513	2,532	51.5	185
RUAI	13,316	13,132	26,448	7,316	49.0	540
UMOJA	83,788	93,577	177,365	51,613	7.9	22,423
UMOJA 'II'	45,724	55,753	101,477	28,097	3.1	32,473
SAVANNAH	38,064	37,824	75,888	23,518	4.8	15,860
MAKADARA	114,457	104,184	218,641	72,924	23.1	9,485
MAKADARA	22,360	26,129	48,489	13,516	3.5	14,013
HAMZA	8,023	8,228	16,251	5,348	0.9	18,233
HARAMBEE	11,513	14,746	26,259	6,561	2.2	11,994
LUMUMBAJERICHO	2,824	3,155	5,979	1,807	0.4	15,747
MAKONGENI	10,721	9,342	20,063	6,280	1.3	15,648
KALOENI	4,153	3,608	7,761	2,538	0.6	12,796
MAKONGENI	6,568	5,734	12,302	3,744	0.7	18,204
MARINGO	12,842	12,554	25,396	8,031	1.1	22,890
MBOTELA	5,801	5,358	10,959	3,304	0.5	23,654
OFafa MARINGO	7,241	7,196	14,437	4,727	0.7	22,341
MUKURU NYAYO	27,277	26,026	53,303	17,367	5.9	8,983
HAZINA	10,492	10,393	20,885	6,445	4.4	4,773
NAIROBI SOUTH	16,785	15,633	32,418	10,912	1.8	20,802
VIWANDANI	41,257	30,133	71,390	27,740	11.3	6,337
LANDI MAWE	16,434	11,075	26,509	9,814	5.6	4,772
VIWANDANI	25,823	19,058	44,881	17,926	5.7	7,859
NAIROBI NORTH	545,701	516,385	1,062,086	327,428	109.3	9,721
CENTRAL	142,097	132,510	274,607	87,519	10.7	25,640
HURUMA	54,787	51,532	106,319	34,017	1.4	77,656
HURUMA	37,734	34,781	72,495	23,800	0.7	103,431
KIAMAIKO	17,053	16,771	33,824	10,217	0.7	50,820
NGARA	12,325	13,029	26,354	7,749	2.6	9,787
NGARA EAST	7,507	8,076	15,583	5,087	1.3	11,931
NGARA WEST	4,818	4,953	9,771	2,682	1.3	7,623
KARIOKOR	22,278	23,702	45,980	11,961	2.6	18,297
PANGANI	17,702	19,360	37,062	9,343	1.7	22,002
ZIWANI	4,576	4,342	8,918	2,618	0.8	10,764
MATHARE	47,113	39,984	87,097	31,426	1.8	54,979
MABATINI	15,286	12,974	28,260	9,809	0.4	79,740
MATHARE	11,205	9,258	20,463	6,617	0.8	25,040
MLANGO KUBWA	20,822	17,752	38,374	15,000	0.4	83,005
STAREHE	5,594	4,283	9,857	2,366	2.7	3,712
CITY CENTRE	5,450	4,161	9,611	2,331	1.3	7,184
CITY SQUARE	144	102	246	35	1.3	187
KASARANI	288,684	258,940	525,524	164,354	86.4	6,082
GITHURAI	41,463	46,112	87,575	29,465	5.0	17,683
GITHURAI	24,893	26,717	51,610	17,988	2.0	28,357
KAMUTHI	2,087	2,313	4,400	1,190	1.2	3,785
ZIMMERMAN	14,483	17,082	31,565	10,309	1.8	17,290
KAHAWA	29,866	28,571	58,437	14,950	15.1	3,740
KAHAWA WEST	13,086	9,872	23,038	6,074	5.1	4,487
KIWANJA	9,035	7,921	16,956	3,813	8.8	1,937
KONGO SOWETO	7,785	8,678	16,443	5,083	1.2	13,849
KARIOBANGI	19,902	19,440	39,342	12,802	1.1	35,778
KARIOBANGI NORTH	19,902	19,440	39,342	12,802	1.1	35,778
KASARANI	48,087	52,385	100,472	29,925	30.5	3,299
MWIKI	19,450	19,706	39,156	12,213	18.8	2,084
KASARANI	28,637	32,679	61,316	17,712	11.7	5,254
KOROGOCHO	21,858	19,988	41,846	12,909	0.9	48,961
GITATHURU	11,379	10,356	21,735	6,480	0.5	45,262
KOROGOCHO	6,376	5,000	10,376	3,129	0.2	48,136
NYAYO	5,203	4,832	9,835	3,300	0.2	52,288
ROYSAMBU	24,536	23,142	47,678	15,003	27.7	1,723
GARDEN	6,518	5,808	12,324	3,653	12.6	979
NJATHAINI	3,901	3,448	7,347	2,348	5.3	1,385
ROYSAMBU	14,119	13,888	28,007	9,002	9.8	2,864
RUARAKA	80,872	71,302	152,174	49,300	6.3	24,286
RUARAKA	31,395	29,346	60,741	18,651	3.9	15,581
MATHARE 4A	10,211	8,565	18,776	5,627	0.2	87,208

Table 2: Population Distribution by Sex, Number of Households, Area, Density and Administrative Units

	Male	Female	Total	Households	Area in Sq. Km.	Density
MATHARE NORTH	29,597	25,561	55,158	18,450	0.5	118,055
UTALII	8,669	7,830	17,499	6,572	1.7	10,362
PUMWANI	136,920	124,935	261,855	75,555	12.1	21,605
BAHATI	21,318	23,505	44,823	13,439	2.8	15,933
KIMATHI	10,701	10,904	21,605	6,989	1.3	16,814
UHURU	10,817	12,601	23,218	6,450	1.5	15,348
EASTLEIGH NORTH	46,285	40,131	86,426	19,725	5.9	14,626
AIR BASE	23,261	19,907	43,168	10,317	5.0	8,580
EASTLEIGH NORTH	23,034	20,224	43,258	9,408	0.9	49,286
EASTLEIGH SOUTH	45,776	42,187	87,963	28,095	1.5	57,928
CALIFORNIA	11,065	10,834	21,899	6,662	0.5	45,253
EASTLEIGH SOUTH /KIAMBIO	34,711	31,553	66,264	21,433	1.0	63,777
KAMUKUNJI	10,893	8,698	19,591	6,757	1.4	14,450
KAMUKUNJI	863	325	1,188	113	0.2	4,887
MUTHURWA	1,948	1,523	3,471	1,304	0.5	7,049
S. MOYO	8,082	6,850	14,932	5,340	0.6	24,072
PUMWANI	12,638	10,414	23,052	7,539	0.5	44,009
GIKOMBA	788	782	1,570	420	0.1	26,342
GOROFANI/ BONDENI	2,805	2,290	5,195	1,824	0.2	30,595
MAJENGO	8,945	7,342	16,287	5,285	0.3	55,323
WESTLANDS	124,748	122,354	247,102	75,427	97.4	2,538
WESTLANDS	124,748	122,354	247,102	75,427	97.4	2,538
HIGHRIDGE	27,979	25,741	53,720	16,021	41.9	1,283
HIGHRIDGE	13,803	13,364	27,267	8,075	3.7	7,293
KARURA	8,452	7,186	15,638	4,721	18.4	808
MUTHAIGA	5,824	5,191	10,815	3,225	18.8	576
KANGEMI	41,745	38,854	80,699	26,859	4.7	17,348
GICHAGI	10,164	9,290	19,454	6,409	0.9	22,243
KANGEMI	23,142	21,422	44,564	15,256	1.6	28,298
MT. VIEW	8,438	8,242	16,681	5,194	2.2	7,574
KILELESHWA	12,207	14,995	27,202	7,743	9.0	3,009
KILELESHWA	7,389	9,413	16,802	4,592	5.2	3,210
MUTHANGARI	4,818	5,582	10,400	3,151	3.8	2,734
KILIMANI	20,490	22,632	43,122	11,350	16.1	2,685
KILIMANI	14,020	14,912	28,932	7,419	9.0	3,227
MAZIWA	6,470	7,720	14,190	3,931	7.1	2,000
KITISURU	16,627	14,615	31,242	10,142	21.3	1,466
KITISURU	3,432	2,761	6,193	2,105	8.8	720
KYUNA	3,746	3,293	7,039	2,130	3.4	2,072
LORESHO	9,449	8,561	18,010	5,907	9.3	1,937
PARKLANDS	5,700	5,417	11,117	3,312	4.4	2,502
UPPER PARKLANDS	3,016	3,023	6,038	1,934	2.4	2,537
SPRING VALLEY	2,685	2,394	5,079	1,378	2.1	2,482

Table 15: Percentage of Households by Ownership of Household Assets and District

	Radio	TV Set	Mobile Phone	Landline	Compu- ter	Bicycle	Motorcycle	Car / Truck / Tuk tuk
KENYA	74.0	28.0	63.2	1.2	3.6	25.3	2.1	4.8
NAIROBI	79.3	61.6	88.3	4.6	13.4	11.4	1.3	12.2
NAIROBI WEST	79.7	57.0	87.0	4.8	14.1	12.4	1.3	13.0
NAIROBI EAST	79.4	61.3	88.9	3.2	11.7	11.5	1.3	10.7
NAIROBI NORTH	77.9	63.2	87.8	2.9	10.1	9.1	1.2	8.5
WESTLANDS	83.4	68.8	91.7	17.9	33.2	17.8	2.0	33.1
CENTRAL	85.1	40.4	75.0	0.9	3.7	25.9	2.2	5.8
NYANDARUA NORTH	87.0	30.5	74.5	0.4	1.2	36.1	2.8	4.0
NYANDARUA SOUTH	89.6	30.3	77.2	0.4	1.2	42.4	2.8	3.6
NYERI NORTH	87.9	41.6	76.9	0.7	1.8	25.9	2.1	5.1
NYERI SOUTH	87.2	40.4	77.8	1.0	3.5	16.2	1.9	5.6
KIRINYAGA	83.4	37.7	69.0	0.4	1.6	39.5	3.4	4.6
MURANGA NORTH	83.2	19.0	64.3	0.5	1.5	9.6	1.4	3.0
MURANGA SOUTH	82.5	20.6	62.6	0.4	1.1	26.4	2.0	3.0
KIAMBU								
EAST(KIAMBAA)	83.1	60.4	81.9	1.7	8.6	14.1	1.2	10.3
KIKUYU	84.1	64.8	84.5	1.8	9.7	17.1	1.4	10.0
KIAMBU WEST	83.9	53.7	78.5	1.4	4.9	19.9	1.7	7.6
LARI	85.6	41.3	75.3	1.1	2.4	24.3	2.3	5.5
GITHUNGURI	85.6	48.3	75.9	0.7	2.6	32.2	2.2	7.5
THIKA EAST	82.3	27.2	67.2	0.4	1.2	40.0	3.3	3.1
THIKA WEST	83.9	54.3	85.2	1.8	8.2	26.9	2.5	8.5
RUIRU	84.7	64.6	88.9	2.1	10.8	22.1	2.6	10.1
GATANGA	87.0	30.7	72.0	0.7	2.0	24.4	1.7	4.9
GATUNDU	87.9	34.9	72.1	0.4	1.3	28.2	2.2	5.1
COAST	62.3	26.6	65.1	1.3	3.8	24.6	2.4	4.0
MOMBASA	70.4	54.3	83.9	4.1	10.2	15.3	2.5	10.3
KILINDINI	68.5	42.7	79.1	1.0	4.1	11.9	2.0	3.6
KWALE	64.5	12.6	54.4	0.5	1.3	30.2	2.1	2.1
KINANGO	48.2	6.7	43.0	0.2	0.4	31.5	1.6	0.9
MSAMBWENI	61.0	14.9	57.1	0.8	1.9	37.4	2.1	2.5
KILIFI	51.2	14.9	56.6	0.6	2.4	27.7	2.6	2.7
KALOLENTI	52.4	14.7	51.9	0.5	1.4	17.8	1.9	1.6
MALINDI	54.1	16.7	62.7	1.6	2.8	38.7	4.1	3.6
TANA RIVER	45.3	4.2	34.2	0.3	0.6	23.9	1.2	0.9
TANA DELTA	45.2	3.7	38.5	0.4	0.7	25.5	1.0	0.9
LAMU	69.3	13.4	64.6	1.9	1.6	39.5	3.7	1.3
TAITA	79.1	18.5	64.9	1.6	2.1	24.3	1.8	2.5
TAVETA	76.9	14.9	64.4	1.1	1.4	55.2	6.9	1.8
EASTERN	74.6	20.7	59.0	0.6	1.6	31.5	2.2	3.6
MARSABIT	50.6	17.2	52.6	1.1	1.8	21.9	2.6	2.8
CHALBI	12.0	0.6	11.8	0.1	0.2	0.3	0.1	0.5
LAISAMIS	13.3	1.7	10.5	0.1	0.2	0.7	0.3	0.6
MOYALE	38.7	10.0	38.2	0.9	1.2	3.3	1.9	1.8
ISIOLO	51.3	27.1	53.6	1.0	2.3	8.5	2.2	4.0
GARBATULLA	37.1	5.4	28.8	0.6	0.3	1.8	0.4	1.1
MERU CENTRAL	81.1	31.8	66.6	0.4	1.0	26.3	1.6	4.8
IMENTI NORTH	80.7	43.4	73.1	1.1	3.0	19.0	1.6	6.8
IMENTI SOUTH	81.0	30.8	66.9	0.6	1.6	26.1	3.1	5.2

Appendix IV: Krejcie and Morgan Sample Distribution Table

Sample Size (S) Required for the Given Population (N)

N	S	N	S	N	S	N	S	N	S
10	10	100	80	280	162	800	260	2800	338
15	14	110	86	290	165	850	256	3000	341
20	19	120	92	300	169	900	269	3500	346
25	24	130	97	320	175	950	274	4000	351
30	28	140	103	340	181	1000	278	4500	354
35	32	150	108	360	186	1100	285	5000	357
40	36	160	113	380	191	1200	291	6000	361
45	40	170	118	400	196	1300	297	7000	364
50	44	180	123	420	201	1400	302	8000	367
55	48	190	127	440	205	1500	306	9000	368
60	52	200	132	460	210	1600	310	10000	370
65	56	210	136	480	214	1700	313	15000	375
70	59	220	140	500	217	1800	317	20000	377
75	63	230	144	550	226	1900	320	30000	379
80	66	240	148	600	234	2000	322	40000	380
85	70	250	152	650	242	2200	327	50000	381
90	73	260	155	700	248	2400	331	75000	382
95	76	270	159	750	254	2600	335	100000	384

Source: Krejcie and D.W. Morgan (1970).