EFFECT OF SERVICE QUALITY ON SUSTAINABLE COMPETITIVE ADVANTAGE IN THE MOBILE TELECOMMUNICATIONS INDUSTRY IN NAIROBI COUNTY

BY

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UNITED STATES INTERNATIONAL UNIVERSITY AFRICA

SUMMER 2016
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KENNETH NGUGI NJOROGE

A Research Project Submitted to the Chandaria School of Business in Partial Fulfillment of the Requirements for the Degree of Masters of Business Administration (MBA)

UNITED STATES INTERNATIONAL UNIVERSITY AFRICA

SUMMER 2016
DECLARATION

I the undersigned, declare that this research project is my own original work and has not been presented for examination or otherwise to any other university, college, tertiary institution or institute for academic credit other than the United States International University - Africa.

Signed: ________________________________  Date: ________________

Kenneth Ngugi Njoroge (ID 642890)

This research project has been submitted for examination with my authority as the designated supervisor.

Signed: ________________________________  Date: ________________

Dr. Juliana M. Namada

Signed: ________________________________  Date: ________________

Dean Chandaria School of Business
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ABSTRACT

This study sought to establish the effects of service quality on acquisition of a sustainable competitive advantage by mobile telecommunication companies in the Nairobi County of Kenya. Specifically, the study sought to investigate the effect of customer service and satisfaction on sustainable competitive advantage, and also the effect of network quality and network convenience on sustainable competitive advantage. The study was conducted in the month of July 2016 and included a total of 480 respondents selected from a sampling frame of 12,100,000 mobile subscribers in Nairobi County.

The study embraced a descriptive research design using a cross sectional research approach. The population of the study was drawn from the mobile subscribers of the three mobile service providers in Kenya namely: Safaricom, Airtel and Telkom Kenya. Stratified random sampling technique was used to determine the sample size. Data for the study was collected using a questionnaire personally administered by the researcher with the help of several research assistants. SPSS was used to analyze data collected from which descriptive statistics and inferential statistics of regression analysis were obtained. The data was presented in the form of tables and figures.

The study found that there was a strong positive relationship between service quality and sustainable competitive advantage. The study found that there was a significantly strong influence from all the three variables of the study on competitive advantage. Customer service and satisfaction was acquired through reduced costs, multiple products provision, high levels of customer support, effective employees who are knowledgeable and friendly to the employees and creating a sense of security, empathy and courtesy amongst the customers. The major factors influencing the acquisition of a sustainable competitive advantage through network quality were perceived network quality, perceived network security, ease of access and use of the network, low interruption rates, low levels of congestion, good speech quality and reliability of additional services such as mobile money. Finally, the study found that the third objective of convenience also positively contributed to sustainable competitive advantage and was mainly obtained from the ease of use of new products, ease of access and reduced waiting times for customer support, and additional convenient services such as mobile airtime on credit among other services.
The study concludes that in order to gain competitive advantage in Nairobi County, MTSPs must enhance their service quality levels. Convenience was surprisingly found to have a lock in effect that a good number of customers would prefer to remain with a convenient operator even if there existed some dissatisfiers such as high service charges. It is quite plausible that key focus on service quality constructs explains the apparent dominance of one mobile provider in Nairobi County.

Based on the finding of this study, it is recommended that MTSPs must continually invest in the key service quality constructs identified by this study namely customer service, network quality and convenience. This is because the mobile telecommunications industry is essentially a service industry and these factors serve as effective differentiators. Investment in service quality ensures a positive perception by customers and in the service industry perception is indeed reality!
ACKNOWLEDGEMENT

This research project is a product of intense effort and support by a number of individuals. Firstly, it key to appreciate God’s goodwill, grace and blessings which He has bestowed upon me. He has been a guide and a source of encouragement.

I would specifically like to acknowledge Dr. Juliana M. Namada for her intense critique, guidance and support in the conduct of this research. As my supervisor she has provided critical support, guidance and insights which have been key to the completion of the project.

I would also like to appreciate the United States International University - Africa fraternity and especially the Chandaria School of Business for this opportunity.

I would also like to thank friends and family for their support and encouragement in the process of my studies and it my prayer that God may bless them abundantly.
DEDICATION

This project is dedicated to my late dad Qs. David Njoroge Ngugi who inspired in me a yearning for the pursuit of knowledge.
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<th>Description</th>
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<tbody>
<tr>
<td>CA</td>
<td>Communications Authority of Kenya</td>
</tr>
<tr>
<td>CAK</td>
<td>Competition Authority of Kenya</td>
</tr>
<tr>
<td>GDP</td>
<td>Gross Domestic Product</td>
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<tr>
<td>GSM</td>
<td>Global System for Mobile Communications</td>
</tr>
<tr>
<td>GSMA</td>
<td>Global System for Mobile Communications Association</td>
</tr>
<tr>
<td>IEBC</td>
<td>Independent Electoral and Boundaries Commission</td>
</tr>
<tr>
<td>IMSI</td>
<td>International Mobile Subscriber Identity</td>
</tr>
<tr>
<td>IT</td>
<td>Information Technology</td>
</tr>
<tr>
<td>KPI</td>
<td>Key Performance Indicator</td>
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<tr>
<td>KNBS</td>
<td>Kenya National Bureau of Statistics</td>
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<tr>
<td>MTSP</td>
<td>Mobile Telecommunications Service Provider</td>
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<tr>
<td>MVNO</td>
<td>Mobile Virtual Network Operator</td>
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<tr>
<td>PIMS</td>
<td>Profit Impact of Marketing Strategy</td>
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<tr>
<td>SERVQUAL</td>
<td>Service Quality</td>
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<tr>
<td>SERVPERF</td>
<td>Service Performance</td>
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<tr>
<td>SPSS</td>
<td>Statistical Package for Social Sciences</td>
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<tr>
<td>RBV</td>
<td>Resource Based View</td>
</tr>
<tr>
<td>VRIN</td>
<td>Valuable, Rare, Inimitable, Non-substitutable</td>
</tr>
<tr>
<td>VRIIO</td>
<td>Valuable, Rare, Inimitable, Organized</td>
</tr>
<tr>
<td>VRIOLU</td>
<td>Valuable, Rare, Inimitable, Organized, Large market, Unmet customer needs</td>
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CHAPTER ONE

1.0 INTRODUCTION

1.1 Background of the Study

According to Parasuraman, Zeithaml, and Berry (1988), excellent service is a highly rewarding strategy because it results in more new customers, more business from existing customers, fewer lost customers, insulation from price competition and fewer mistakes in service provision that require re-performance of service. Further, profit impact of marketing strategy (PIMS) research has shown that companies that offer superior service are able to charge a premium price on their service offering while achieving higher than normal market share growth and profitability (Almanza & Tomas, 2011). In the service industry which is characterised by intangibility of product offering, the key to sustainable competitive advantage is to provide unique benefits that offset the higher prices. This according to Porter (1985), is the pursuit of the generic strategy of differentiation.

'Quality' comes from the Latin word 'Qualitas', which refers to the nature of a person or the nature of an object. In the past Quality meant accuracy and perfection (Al-Dararkah, 2002). According to the Japanese, quality is having zero defects thus doing things right the first time. Crosby (1979), defines quality as conformance to requirements while Garvin (1983) avers that quality can be determined from the number of internal and external failures. However, knowledge about product quality is not sufficient to comprehend service quality because of the unique characteristics of services. The major characteristics of services that result in this difficulty are their intangibility, heterogeneity and inseparability. The intangibility of services arises from their nature as performances and not objects thus precise manufacturing specifications regarding uniform quality cannot be set. Heterogeneity arises from their performance nature and thus they vary from producer to producer, customer to customer and from day to day. Inseparability relates to fact that production and consumption of many services are inseparable (Parasuraman et al., 1988).

There are two main models for measuring service quality namely SERVQUAL and SERVPERF. SERVQUAL which is attributed to Parasuraman, Zeithaml, and Berry (1988), measures the customer’s expectation of service and perception of actual service received. The SERVPERF model attributed to Cronin and Taylor (1992), measures the perceived
performance only and was proven to provide superior results in industries such as banking, retailing and fast food. SERVQUAL provides an instrument for measuring functional service quality applicable across a broad range of services. One of the most central aspects of SERVQUAL is that it is a powerful benchmarking, diagnostic and prescriptive tool (Safiek, 2012). SERVQUAL is not interested in “objective” quality but in perceived quality: this quality is based on customers’ judgement about excellence or superiority (Llosa, Chandon, & Orsingher, 1998). SERVQUAL assumes that the difference between the customer’s expectations and perceptions determines the quality. If this perceived quality meets expectations, then the customer is satisfied (Gul & Banu, 2010). Hence, it comes from a customer’s comparison of expectations and perceived performance. Expectations reflect the desires or wants of consumers. The focus on gaps between expectation and perceived performance has resulted in the model being referred to as a disconfirmation model.

The traditional SERVQUAL model has however been heavily criticised by researchers because of its inherent nature as a disconfirmation model. The main weaknesses of the model may be considered to be the use of gap scores, measurement of expectations, positively and negatively worded items, generalizability of its dimensions and the difficulties in defining a baseline standard for good quality (Cronin & Taylor, 1992). Cronin and Taylor (1992) have tested a performance-based measure of service quality, dubbed SERVPERF, in four industries (banking, pest control, dry cleaning and fast food). They found that this measure explained more of the variance in an overall measure of service quality than did SERVQUAL. SERVPERF is composed of the 22 perception items in the SERVQUAL scale, and therefore excludes any consideration of expectations. In a later defence of their argument for a perceptions-only measure of service quality, Cronin and Taylor (1992) acknowledge that while it is possible for researchers to infer consumers’ disconfirmation through arithmetic means; “consumer perceptions, not calculations, govern behaviour”. Finally, a team of researchers, including Zeithaml herself (Boulding et al., 1993), have recently rejected the value of an expectations-based, or gap-based model in finding that service quality was only influenced by perceptions. It is for the above reasons that a modified SERVPERF model will be used in this research specifically tailored for the mobile telecommunications industry.

Competitive advantage has been a cornerstone concept in the field of strategic management since it explains what accounts for differences in performance among firms (Amit and Zott, 2008; Ceccagnoli, 2009). However, it has been argued that competitive advantage is a
buzzword that is not well understood by academics, business executives and consultants (Markides, 2000). Further, understanding of what is competitive advantage and distinguishing this concept from organization performance remains a challenge for the discipline (Powell, 2001). Ansoff (1965) is the original scholar who attempts to define competitive advantage as the unique characteristics or specific properties of individual product markets which give a commercial entity a strong competitive position. The concept of competitive advantage is however attributed to Porter (1985) who introduced it to the world via his book by the same name. While Porter (1985) provides no clear definition of competitive advantage, he states that competitive advantage originates from the firm’s ability to create superior value for its buyers and adds that superior value is obtained from offering lower prices than competitors for equivalent benefits or providing unique benefits that more than offset a higher price.

In an attempt to classify all definitions of competitive advantage by the most important contributors in the field of strategic management, Sigalas and Pekka-Economou (2013) have identified two schools of thought concerning competitive advantage’s conceptual demarcation. The first school defines competitive advantage in terms of performance, e.g. high relative profitability, above average returns, benefit-cost gap, superior financial performance, economic profits, positive differential profits in excess of opportunity costs and cross-sectional differential in the spread between product market demand and marginal cost (Allen & Helms, 2006; Bakan & Dogan, 2012). The second school defines competitive advantage in terms of its sources or determinants, e.g. particular properties of individual product markets, cost leadership, differentiation, locations, technologies, product features and a set of idiosyncratic firm resources and capabilities (Chapman, 2005; Porter, 1985).

There exist various strategies that business can apply to become globally, nationally or industry competitive. These strategies have been developed by scholars and implemented by various organizations with differing results (Campbell-Hunt, 2000). Despite the existence of differing models and strategies, the competitive model developed by Porter (1985) remains the most popular and common. According to the Porters model, organizations must implement generic strategies of low cost, differentiation, focus and combination of strategies to acquire a competitive edge (Allen & Helms, 2006).

The sources of a company’s competitive advantage are usually analysed along two competing lines of study; one emphasizing the external factors which usually consist the
external environment characteristic factors and the other emphasizing internal factors which usually refer to company-specific resources, capabilities and knowledge (Čater & Čater, 2009). Although both external and internal factors have a statistically significant influence on a company’s performance, when analysis or comparison is done within a specific industry, the external factors assume less significance as they are presumed to affect all the players equally. Čater and Čater (2009) aver that internal factors are further reclassified into either tangible or intangible resources, with physical and financial resources being considered tangible and human and organizational resources being considered intangible. In modern times, intangible resources are considered more important in creating competitive advantage relative to tangible ones because they possess challenges in imitability. The difficulty in articulating or identifying them results in causal ambiguity which is considered a source of competitive advantage as it creates a barrier to imitation (Reed & DeFillippi, 1990).

One of the fundamental questions that the resource-based view (RBV) explores is how to explain intra-industry profitability differentials between companies (Peteraf and Barney, 2003). The RBV has been used to theorize linkages between causes (e.g. resources) and effects (e.g. competitive advantage, performance) (Hitt and Ireland, 1986; Wernerfelt, 1984; Barney, 1991). Barney (1991) offers the first comprehensive framework linking resources to sustained competitive advantage and superior performance. According to Barney (1991), such resources share the traits of being valuable, rare, difficult to imitate, and non-substitutable, most commonly abbreviated VRIN. Newbert (2007), suggests that resources must be deployed in order to generate rents. This then explains the next amendment of the VRIN framework by Barney (1997) to VRIO who argues that sustained competitive advantage derives from resources that are valuable, rare, difficult to imitate with “non-substitutable” incorporated under “difficult to imitate”, and that a company must be organized to exploit and deploy them. The RBV of the firm does not however explain where marketplace opportunities come from, and thus had to be extended in order to incorporate the additional requirements of being linked to customer unmet needs and to a sufficiently large addressable market segment allowing coverage of organizational fixed costs. This then resulted in the VRIOLU framework (Hinterhuber, 2013). Focusing on customers’ unmet needs mainly revolves around improved service quality and in the mobile telecommunication industry this can be a key source of sustainable competitive advantage.
The growth of information technology as a critical driver of the business environment has spurred the growth and expansion of the telecommunication industry. GSMA (2014) statistics shows that the world over, the telecommunication and tele-computing industries are among the fastest growing industries. As a consequence, the telecommunication industry has become an international global economic mover and has been home to some of the largest and most valuable companies such as Google, Apple, Microsoft, Oracle, Facebook and many others (GSMA, 2014).

Sub-Saharan Africa has become the third largest region globally in terms of unique mobile subscribers currently totalling at 367 Million unique subscribers and now accounts for 10% of the global subscriber base (GSMA Intelligence, 2015). In 2014 the mobile industry in Sub-Saharan Africa contributed approximately 5.7% of the Gross Domestic Product (GDP) value estimated to be slightly over 100 billion dollars. This level of contribution of relates to the pivotal role that telecommunication plays in the economy such as organizing, influencing, instructing, providing feedback and information, aiding in decision making and promoting both interpersonal and business relationships.

Sub-Saharan Africa has a number of highly competitive markets, with several featuring five or more operators. There are also a few outliers, such as Ethiopia, where the incumbent operator still has a monopoly. While mobile penetration rates are still lower than the global average, the region is heavily impacted by the low calling prices which have a heavy impact on the mobile telecommunications providers’ margins. Low margins have resulted in reduced ability to invest in network expansion and also in the demise of some mobile operators such as Zantel in Tanzania, Warid Telecom in Congo and Uganda and YU Mobile in Kenya (GSMA Intelligence, 2015).

It is thus critical for all mobile telecommunication service providers to find way of remaining competitive in their markets of operation and this creates a need for identifying sources of sustainable competitive advantage. Currently the Kenyan Telecommunications industry has four key players namely Safaricom, Airtel, Telkom (Orange), and Equitel (Finserve). As per the latest statistics from the Communication Authority the market share of the various players was as follows Safaricom had 67%, Airtel had 19.4%, Telkom had 11.2% while Equitel had 2.4% (Communications Authority of Kenya, 2015).
According to Hill and Jones (2013), a company has competitive advantage over its rivals if it is able to generate higher profitability than the average for all the firms in its industry and sustainable competitive advantage if the company is able to demonstrate superior profitability for a considerable number of years. In the Kenyan Telecom industry the market leader Safaricom has consistently reported large profits while its rivals have mainly been reporting losses. It then becomes imperative to examine the sources of sustained competitive advantage in order to see if a level playing ground exists in the industry. The mobile industry figures for Kenya particularly relating to market share statistics are not congruent with those for the rest of Sub-Saharan Africa and at first glance the statistics above would point to the existence of a dominant player given that the leading operator has more than 50% of the market share but could there be some other reason other than dominance that is causing the large difference in market share (Murumba, 2015)? The telecommunication industry is part of the service industry and all businesses in this industry whether large or small must consistently find ways of differentiating themselves from the competition. Is it possible that there is one strategy that has been employed by one firm over the years that has consistently given it an advantage over the other players?

1.2 Statement of the Problem

The relationship between service quality and competitive advantage as measured using profits took time to verify, part of the delay was due to the unfounded expectation that the connection was simple and direct. Investments in service quality, however, do not track directly to profits for a variety of reasons. First, just like advertising, service quality benefits are rarely experienced in the short term and instead accumulate over time, making them less amenable to detection using traditional research approaches (Allen & Helms, 2006; Shapiro, 2000). Secondly, many variables other than service improvements (such as pricing, distribution, competition, and advertising) influence company profits, making the individual contribution of service quality difficult to isolate (Bakan & Dogan, 2012). Third, mere expenditures on service quality improvements are not what lead to profits; instead, spending on the right variables and proper execution are responsible (Zeithaml, 2000).

The impact of service quality as a source of sustainable competitive advantage in the mobile telecommunications industry has been studied in many countries among them India, China, Greece, Thailand, Jordan, South Africa, Nigeria and Ethiopia. Jain (2013) conducted a
comparative study on the telecommunication service quality of two mobile telecommunications providers in the Western Uttar Pradesh region in India and found that service quality in the private firm was better in the public owned firm, however there was room for improvement by both firms. Wang & Lo (2002), examined the factors that significant drivers of service quality perception among customers in China’s telecommunication industry and found that the important drivers of service quality in the Chinese telecommunication industry were network quality and responsiveness with the other four factors reliability, assurance, empathy and tangibility were only of secondary importance. Van der Wal et al. (2002), conducted a study to measure the service quality in the cellular telecommunications industry in South Africa with a focus on customers’ perception. The study was conducted using the traditional SERVQUAL model and found that responsiveness, assurance and empathy could all be loaded into one factor as the South African customers could not distinguish between the three. Just like all the other prior studies it discovered that responsiveness had the most impact and tangibility had the lowest impact.

The Kenyan telecommunication industry has been especially turbulent in the recent past with several firms other than the leading operator exiting or threatening to exit the market. The success of the leading operator has been largely attributed to abuse of dominance but this may not necessarily be the case as the company may have largely been exploiting known sources of sustainable competitive advantage in mobile telecommunications which the other rivals were not. Service quality particularly in the mobile telecommunications sector is an area that has seen limited research conducted particularly in Kenya yet it is a viable source of sustainable competitive advantage and it is hoped that this research will elucidate its use and hopefully result in fewer exits in the Kenyan mobile telecommunication sector and increased profitability for all the operators. While there exists doubts on the actual reason for having one dominant player, there exists very few studies to show if competitive advantage was a key driver of this dominance. This consequently, leaves a research and literature gap that the study seeks to fill.

1.3 General Objective of the Study

The general objective of this study was to assess service quality as a source of sustainable competitive advantage in the mobile telecommunications industry in Nairobi County.
1.4 Specific Objectives of the Study

The study had the following specific objectives:

1.4.1 To examine the effect of customer service on sustainable competitive advantage in the mobile telecommunications industry in Nairobi County.

1.4.2 To determine the effect of network quality on sustainable competitive advantage in the mobile telecommunications industry in Nairobi County.

1.4.3 To ascertain the effect of convenience on sustainable competitive advantage in the mobile telecommunications industry in Nairobi County.

1.5 Significance of the Study

The study is significant to the following stakeholders:

1.5.1 Academicians and Researchers

The study is important to both strategists and marketers as it involves the exposition of a marketing feature namely service quality as a source of gaining competitive advantage. It also hopefully contributes to the body of knowledge regarding how mobile telecommunication operators can differentiate themselves from their competitors thus resulting in better business performance.

1.5.2 Policy and Decision Makers

The study eliminates the ambiguity between sustained competitive advantage and dominance. This will ensure that policies that ‘punish success’ are not put in place and also aid in justifying policies that are not tilted in favour of any operator in the mobile telecommunication industry in Kenya. The policy makers targeted by this study were the Communications Authority (CA). The Competition Authority of Kenya (CAK) and the Ministry of Information and Communication Technology.
1.5.3 Management of Mobile Telecommunications Companies

The information developed from this research underscores the importance of service quality as a source of sustainable competitive advantage and should thus convince management in the companies to include it as an arsenal for use in the mobile telecommunications space. For those already using it, it provides information on areas where service quality can be improved thus further securing their competitive position.

1.6 Scope of the Study

The study was limited in its examination of the perception of mobile telecommunication customers within Nairobi County with specific emphasis on seeking the perception of customers from the top three mobile telecommunications operators in Kenya. Equitel was excluded due to its unique characteristic as a Mobile Virtual Network Operator (MVNO) which primarily rides on Airtel’s network infrastructure and cannot thus exist without Airtel. Potential non-response from target respondents was mitigated by increasing the sample size to cater for such eventualities and assuring the respondents of utmost confidentiality and anonymity. Interested respondents were also provided with a summary of the findings of the study on request thus further providing an incentive for response.

1.7 Definition of Terms

1.7.1 Service

This is defined as an intangible product offered to a market for attention, acquisition, use or consumption that might satisfy a need or want (Armstrong & Kotler, 2014).

1.7.2 Quality

This is defined as the degree to which a set of inherent characteristics of an object fulfils requirements (ISO (the International Organization for Standardization), 2015).
1.7.3 Service Quality

This is the difference between the customer’s expectation of service level and their perception of the actual service level (Parasuraman et al., 1988).

1.7.4 Competitive Advantage

This is defined as the above industry average manifested exploitation of market opportunities and neutralization of competitive threats (Sigalas & Pekka-Economou, 2013).

1.7.5 Service Performance

Measurement of the actual level of service perception (Rodrigues, Barkur, Varambally, & Motlagh, 2011).

1.7.6 Customer Service

This refers to the mechanisms put in place by the telecom operator for handling customer queries and complaints (Chinunda, 2011).

1.7.7 Network Quality of Service

It is defined as the availability and quality of signals/network of telecom service provider (Jain, 2013).

1.7.8 Convenience

It refers to the processes and locations of the Mobile Telecommunications Services Provider (MTSP) that enhance ease in use of its services (Jain, 2013).

1.7.9 Responsiveness

It refers to the telecom service provider’s willingness to help customers and provide prompt service (Parasuraman et al., 1988).
1.7.10 Assurance

It is defined as the knowledge and courtesy of the MTSP’s employees and their ability to convey trust and confidence (Parasuraman et al., 1988).

1.7.11 Empathy

This refers to the caring attention the telecom service provider provides to its customers (Parasuraman et al., 1988).

1.8 Chapter Summary

This chapter presented the introduction of the study that entailed a background of the Kenyan Mobile Telecommunications Industry in general and the concept of competitive advantage. It further emphasized the importance of intangible resources as sources of competitive advantage in service industries. The chapter also presents a statement of the problem and comes up with research questions it seeks to answer. The study also provides the scope, importance of the study and a definition of significant terms as used in the study. Chapter two of the study presents the literature review of the study which is based on the study research questions. Chapter three comprises of the research methods adopted by the researcher to answer the research questions. Chapter four presents the study findings and Chapter five of the study comprised of the discussion, conclusions, and recommendation.
CHAPTER TWO

2.0 LITERATURE REVIEW

2.1 Introduction

This chapter reviews the available literature on the research questions of the study. It reviews the studies from journal articles, thesis papers and dissertations.

2.2 Customer Service and Sustainable Competitive Advantage

Competitive advantage has been a cornerstone concept in the field of strategic management since it explains what accounts for differences in performance among firms (Amit and Zott, 2008; Ceccagnoli, 2009). However, it has been argued that competitive advantage is a buzzword that is not well understood by academics, business executives and consultants (Markides, 2000). Further, understanding of what is competitive advantage and distinguishing this concept from organization performance remains a challenge for the discipline (Powell, 2001).

In an attempt to classify all definitions of competitive advantage by the most important contributors in the field of strategic management, Sigalas and Pekka-Economou (2013) have identified two schools of thought concerning competitive advantage’s conceptual demarcation. The first school defines competitive advantage in terms of performance, e.g. high relative profitability, above average returns, benefit-cost gap, superior financial performance, economic profits, positive differential profits in excess of opportunity costs and cross-sectional differential in the spread between product market demand and marginal cost. The second school defines competitive advantage in terms of its sources or determinants, e.g. particular properties of individual product markets, cost leadership, differentiation, locations, technologies, product features and a set of idiosyncratic firm resources and capabilities. In particular, Sigalas and Pekka-Economou (2013, p. 335) define competitive advantage as “the above industry average manifested exploitation of market opportunities and neutralization of competitive threats.” According to Barney (1991), sustained competitive advantage occurs where the firm is implementing a value creating strategy not being implemented simultaneously by rivals and other firms are unable to duplicate the benefits of this strategy. The concept of competitive advantage relates to a firm
maintaining a sustainable edge over rivals in a particular industry setting that cannot be eroded over time.

The sources of a company’s competitive advantage are usually analysed along two competing lines of study; one emphasizing the external factors which usually consist the external environment characteristic factors and the other emphasizing internal factors which are usually refer to company-specific resources, capabilities and knowledge (Čater & Čater, 2009). Although both external and internal factors have a statistically significant influence on a company’s performance, when analysis or comparison is done within a specific industry, the external factors assume less significance as they are presumed to affect all the players equally. Čater and Čater (2009) aver that internal factors are further reclassified into either tangible or intangible resources, with physical and financial resources being considered tangible and human and organizational resources being considered intangible. In modern times, intangible resources are considered more important in creating competitive advantage relative to tangible ones because they possess challenges in imitability. The difficulty in articulating or identifying them results in causal ambiguity which is considered a source of competitive advantage as it creates a barrier to imitation (Reed & DeFillippi, 1990). In the service industry which is characterised by intangibility of product offering, the key to sustainable competitive advantage is to provide unique benefits that offset the higher prices. This according to Porter (1985), is the pursuit of the generic strategy of differentiation.

2.2.1 Service Quality and Sustainable Competitive Advantage

Customer service may be simply understood to mean giving customers what they want. This is mainly done by fulfilling a multitude of less obvious customer needs, simply being friendly, delivering on time and attending promptly to customers’ needs. It thus usually includes all activities an organization undertakes and serves as the bond between an organization and its clients (Chinunda, 2011). A customer may thus be understood as someone who has dealing with an organization or entity where a product or service is provided to them in exchange for some consideration, usually monetary in nature. In normal business parlance, a customer can be a business to business customer or end user customer, here the emphasis is on the human end user and when dealing with a business entity the human representatives of that organization (Chinunda, 2011; Peppers & Rogers, 2011).
From the study of empirical literature, it was evident that the most influential dimensions for customer service in a mobile telecommunication environment were responsiveness, assurance, empathy and complaints handling. These are further elaborated below.

According to Jain (2013), responsiveness refers to the MTSP’s willingness to help customers and the ability to provide prompt service. More specifically, it relates to the nature of human interaction between an organization’s employees and its customers. Traditionally, four key indicators signalling the behaviour of employees towards customers are evaluated. The four key indicators are: whether employees provide services to customers promptly, whether employees are always willing to assist customers, whether employees respond to customer requests despite being busy, and whether service-related information is easily obtained from the service provider (Parasuraman et al., 1988).

Alnsour et al. (2014), explain that assurance refers to the knowledge and courtesy levels of employees and their ability to inspire trust and confidence. The key characteristics being examined from employees of the service provider are competence, courtesy, credibility and security. The principal indicators being examined here are: whether the employees have adequate knowledge to handle customer requests and queries, the level of courtesy and friendliness extended to customers by employees, whether customers feel that the employees can be trusted, and whether customers feel assured that customer service requests are duly followed up by the company’s employees (Jain, 2013).

Empathy refers to the personalized and caring attention paid by staff to customers (Alnsour et al., 2014). Here factors like accessibility, communication and level of understanding of the customer are key. The principal indicators of interest here are: whether the service provider understands the specific needs of the customers; whether the customers believe that the service provider has their best interests at heart; whether the service provider has convenient hours of service to all customers; and whether the service provider gives individualized attention to all its customers (Parasuraman et al., 1988).

Complaints handling refers to the ability of the mobile telecommunication services provider to handle customer complaints in a timely manner (Jain, 2013). The indicators of interest in this dimension are: whether the service provider has sufficient procedures to receive or handle customer complaints, whether the procedures for handling complaints are time
effective, and whether the procedures for handling complaints are short and direct (Jain, 2013).

2.2.2 Customer Satisfaction and Sustainable Competitive Advantage

The relationship between customer satisfaction and sustainable competitive advantage has been extensively analyzed by the academia around the world. In a study on service quality and customer satisfaction Agrawal (2008) found that the employee interaction with the customer is a key determinant of sustainable competitive advantage in companies.

In a study in the transport sector in India, Eboli and Mazzulla (2007) noted that the various factors that influenced customer satisfaction and service quality were cleanliness of the shelters, overcrowding, information systems, knowledgeable and helpful employees, security concerns and condition of the buses. The provision of this service attributes enhanced customer satisfaction and a competitive advantage for the company. Consequently, the provision of this service attributes enhanced customer satisfaction and the bus services acquired a competitive edge over its peers and competitors. In a related study in the banking sector Jham and Khan (2008) found that customer satisfaction and sustainable competitive advantage were strongly correlated. The service attributes that were identified as key to enhancing customer satisfaction included: facilities offered, employee behavior, the conditions and environment in the bank and the convenience. This was similar to the findings of Geetika et al., (2008).

Wang and Lo (2002), examined the factors that significant drivers of competitive advantage among customers in China’s telecommunication industry and found that the important drivers of service quality in the Chinese telecommunication industry were network quality and responsiveness with the other four factors reliability, assurance, empathy and tangibility were only of secondary importance. Santouridis and Trivellas (2010) study, examined the impact of service quality and customer satisfaction on competitive advantage, in the Greek mobile telephony sector. The research found out that the significant driver of service quality in the Greek telecommunication industry were customer service, pricing structure and the billing system, network quality was found to have a very high correlation with customer loyalty also considered a source of a source of sustainable competitive advantage.
Johnson and Sirikit (2002), study used a cross-sectional survey design to investigate service quality perception and competitive analysis in the Thai telecommunication industry. The study findings show that in Thailand customers placed primary emphasis on responsiveness and technical quality relative to the other parameters and advised that future studies should incorporate elements of technical quality as measures of service quality. They also discovered that the SERVQUAL model served as an early warning system of declines in levels of service quality and should be used regularly to assess perception. Alnsour et al. (2014) conducted a study to ascertain the effect of the service quality dimensions on competitive advantage in telecommunication firms in Jordan. Specifically, it explored whether service quality dimensions (tangibility, responsiveness, reliability, empathy and assurance) would positively affect customer loyalty as a measure of competitive advantage. The causal relationship between service quality perceptions and loyalty were confirmed in the Jordanian telecommunication industry. With responsiveness having the highest impact and tangibility having the lowest influence.

Power and Associates (2008a) undertook an analysis of customer satisfaction and service quality in the electric utilities using six major attributes: Reliability, quality, customer service, price, billing and payments and communications. The study was extended into a related study to cover high speed internet services and found that the major factors that influenced customer satisfaction as a competitive advantage attribute were: performance and reliability, customer service levels, billing systems and processes, promotions, offerings, and the cost of the service (Power and Associates, 2008a; 2008b). In addition, the study found that the levels of communication were a key determinant of customer satisfaction levels for the utilities companies. The factors were identified as key to acquiring a competitive advantage.

2.3 Network Quality and Sustainable Competitive Advantage

Network refers to the interconnection between two users (Kumar et al., 2012). There are various studies that have investigated the effect of network quality on service quality amongst telecommunication companies in various parts of the world. The relationship between network quality and sustainable competitive advantage is intertwined with the customer satisfaction attribute. According to Rahhal (2015) the network quality influences customer satisfaction levels and this enhances the acquisition of a competitive edge by the
company or organization. Rahhal (2015) investigated the effects of service quality dimensions on customer satisfaction using Syrian Mobile telecommunication services a case of the study. Rahhal (2015) found that the reliability of network, additional or value on services, network quality and responsiveness to customer needs was key to enhancing the levels of customer satisfaction in Syria. The study found that the acquisition of a competitive edge is influenced by the levels of network quality, reliability of the network and efficiency. These factors influenced customer satisfaction and consequently competitive advantage.

Todeva and John (2001) in the article *Shaping the Competition and Building Competitive Advantage in the Global Telecommunication industry*: noted that the primary role of telecommunication industries is to enhance communication and information transmission in the information sector. This deals with four major areas: hardware, network management systems, service contents and communication networks. The level of quality of this areas ensures that there is network quality and the level of service is very high.

Network quality is similar to customer service and product quality in traditional business models. Adewoye (2013) analyzed the effect of service quality on competitive advantage and noted that the levels of customer service in the banking sector were key to the acquisition of a competitive edge. Similarly, Ritho and Jagongo (2015) in the study on mobile banking noted that the provision of quality services that were reliable and secure was key to ensuring a competitive advantage for the commercial bank. In addition, Ritho and Jagongo (2015) noted that the levels of innovation, new products and services improved the quality of services offered and consequently a competitive advantage for the organization.

Security of services is also a key network quality aspect that influences competitive advantage. According to Shilako (2014) customers are very perceptive to issues of security, consequently, when they perceive that the services of a firm are secure, then the firm acquires customer loyalty which is a key competitive advantage attribute.

### 2.3.1 Network Quality and Customer Satisfaction

Johnson and Sirikit (2002) analyzed the effect of network quality on customer satisfaction using both fixed line and cellular mobile services. They found that the network quality and reliability of the network as well as the costs were key determinants of customer satisfaction and service quality perceptions in the telecommunication industry. According to Johnson &
Sirikit (2002), in a cross-sectional survey design to investigate service quality perception and competitive analysis in the Thai telecommunication industry, Thailand customers placed primary emphasis on responsiveness, network quality and technical quality relative to the other parameters in their level of customer satisfaction. The provision of services that satisfied the customer needs enhanced the acquisition of a competitive edge by the company.

Similar findings were presented by Van der Wal, Pampallis and Bond (2002) using cellular mobile services and found that the levels of network quality were key to enhancing customer satisfaction levels. Van der Wal et al. (2002), conducted a study to measure the service quality in the cellular telecommunications industry in South Africa with a focus on customers’ perception. The study found that in addition to the service quality metrics, the network quality levels was a key determinant of customer satisfaction and consequently, acquisition of a competitive edge by the company.

Negi (2009) explored the causal relationship between service quality dimensions and overall service quality while also identifying the service quality gaps experienced by the subscribers of the mobile services of Ethiopian Telecommunication Corporation (ETC). The study was conducted using a modified SERVQUAL model that incorporated two extra dimensions of Network Quality and Convenience among the traditional SERVQUAL dimensions. The study concluded that most customers of the ETC were unhappy with the quality of service provided and many areas of weakness that needed to be rectified were identified (Negi, 2009). This is however to be expected as the mobile telecommunication industry in Ethiopia is a pure monopoly with only one provider (World Bank, 2011).

2.3.2 Network Quality Metrics

In Kenya the mobile telecommunications service providers studied mainly use the Global System for Mobile Communication (GSM). All global operators and regulators usually determine the technical quality of service provided in GSM via the use of Key Performance Indicators (KPI’s). The KPI’s are usually derived from counters housed in specific elements of the GSM network that record all events that occur in the various interfaces. Various KPI’s are obtained from specific formulations regarding the relevant encounters which are standardized in order to ensure there is uniformity in determining the actual quality of service provided (Kumar, Anuradha, & Naresh, 2012).
In Kenya the industry regulator usually measures the following KPI’s: Call Completion Rate, Call Set Up Success Rate (CSSR), Call Drop Rate, Call Block Rate, Speech Quality, Call Set Up Time, Handover Success Rate, and (8) Receive Levels (Rx Lev) (Communications Authority of Kenya, 2014). The KPI’s are usually measured using specialized telecommunication equipment and do not usually include customer surveys. Given that our study focuses on customer perceptions, the indicators of interest to us are the ones that the end user has actual perception and experience with given that we are interested in the actual level of service performance. This study will therefore elucidate on the call set up time, call drop rate, speech quality and wide coverage area as the KPI’s that will provide feedback on the level of service.

Call set up time refers to the ability of a mobile cellular service to be obtained, within specified tolerances and other given conditions, when requested by the user (Ali, Shehzad, & Akram, 2010). In ordinary day usage it may be understood as the time taken before a successful call attempt is initiated. The set up time primarily depends on the level of utilization of an operators key network elements and is known to degrade when congestion is evident or network errors occur. Here the key indicator examined is whether the mobile service network connects immediately to a dialled number (Negi, 2009).

Call drop rate refers to the number of calls not completed successfully (Kumar et al., 2012). The mobile telecommunication customer would experience this as a sudden disconnection in an ongoing telephone call that does not occur due to lack of resources or the deliberate termination by the customer. The major cause is usually changes in the radio frequency environment (air interface) or incorrect GSM system parameters (Sharma & Bansal, 2014). The key indicator here would be whether the service network handles all calls successfully without maintaining any drop calls (Jain, 2013).

According to Kondo (2014), the two main factors in assessing speech quality are the overall perception and intelligibility. Perceived overall quality is the total impression of the listener of how “good” the quality of the speech is. The definition of “good” is left to the listener but is usually referenced to normal human natural air transmitted speech common in everyday conversations. Speech intelligibility refers to the accuracy with which what is said is heard and is measured as a ratio of correctly identified responses relative to the number of responses (Kondo, 2014). The key indicator here would be excellent voice quality that is easily intelligible as per our discussion (Negi, 2009).
Wide coverage area simply refers to the geographical footprint of the mobile telecommunication service provide within its country of operation (Ali et al., 2010). This is usually assessed via competitive benchmarking by the regulator or by the industry players themselves. The customer is also in a strong position to assess the coverage area as where there is no coverage, no mobile services are available. The indicator of interest here would be the geographical coverage of the service provider (Jain, 2013).

In the relationship between network quality and competitive advantage, it is key to analyse the effect of focus as a competitive advantage strategy as identified by Porter (1985). Focus strategy refers to the concentration by a firm to a particular segment of the market or niche of the total market as opposed to offering products and services to the entire market (Davidson, 2001; Porter, 1985; Bauer and Colgan, 2001; Hyatt, 2001). In focus strategies, companies identify markets that they can best concentrate on using the available resources and provide services and goods that meet the needs and wants of this target market. According to Bordean, Borza, and Glaser (2011), “Firms pursuing focus strategies have to be able to identify their target market segment and both assess and meet the needs and desires of buyers in that segment better than any other competitor”

Focus also includes the adoption of narrow competitiveness in the industry. Focus strategies are aimed at increasing the market share of a company at a given target market that is attractive to the firm or neglected by competitors (Allen & Helms, 2006). Niche markets in focus strategies arise from geographical factors, buyer characteristics product specifications and requirements. A successful focus strategy depends upon an industry segment large enough to have good growth potential but not of key importance to other major competitors (Porter, 1985). Market penetration or market development can be an important focus strategy. However, David (2011) argued that focus strategies are most effective where customers have distinct tastes and preferences that have not been identified or exploited by competitors.

2.4 Convenience and Sustainable Competitive Advantage

Convenience refer to the processes and locations from which use or consumption of the telecommunication service provider services can be accessed by the customer (Jain, 2013). Thus the customer would experience this as simplified processes that facilitate the use of services such as convenient top up facilities and if the provider has value added services
such as sale of handsets and maybe mobile money services, locations where these can be acquired would be easily accessible. Convenience is a major enhancer of a sustainable competitive advantage. The ease of access and ease of use are key attributes that can be used to enhance a competitive edge for the company or organization. When services are easily accessible or easy to use, then the company is able to attract and retain customers and thus acquire a competitive edge.

Singh and Srivastava (2014) investigated the factors that influenced the use and uptake of financial innovations in India and noted that convenience was one of the major determinants of uptake of financial innovations. According to the study by Singh and Srivastava (2014), financial innovations are sometimes not easy to use and access and consequently this inhibited their use and consumption by customers. Consequently, though use of technology may be a source of competitive advantage, it could be a source of customer attrition especially if it is not easy to use, understand or access. Convenience mainly focuses on the ease of access and ease of use. Some of the factors that influence ease of use and access include the costs of using the products or services or the costs incurred in accessing the services. According to Pichler (2001), the cost of accessing and using a product is a major competitive advantage for any organization. Pichler (2001) cited the use of credit cards in the United Kingdom as a key source of competitive advantage. Nevertheless, the concerns for costs and access were a major barrier to this competitive advantage.

One of the main issues facing many online merchants appears to be finality or non-repudiation of payments (Pichler, 2001). Currently, most merchants bear 100% of the fraud risk for online purchases – even if the transaction has been authorized by the bank. Fraud-related charge backs result from identity theft, stolen card use or consumers fraudulently denying transactions. The cards schemes have required the merchant to bear the full liability of a repudiated transaction. Other costs and fees are also incurred when charges are contested. In addition to the cost of processing charge backs, (Cyber Source, 2002a) identified the following additional negative impacts of online fraud: loss of staff time, loss of revenue, loss of customer goodwill, loss of goods, increase in staff resources, chargeback fines, revenue reconciliation inefficiency, bank fees, discount fees and shipping and handling costs. The factors identified above are major hindrances to the acquisition of a competitive edge by organizations that use credit cards and other online payment systems.
2.4.1 Ease of Access and Competitive Advantage

Managing customers according to their channel preference, that is, whether they purchase from a traditional channel (e.g., catalog, store), an electronic or digital channel, or multiple channels, has become a cornerstone of marketing strategy (Neslin & Shankar, 2007). Previous research has suggested that customers who use multi-channels for their shopping are more likely to spend money, revisit the store, and repeat product purchase when compared with single-channel shoppers; they also tend to exhibit greater retailer loyalty than single-channel shoppers (Dholakia, Zhao, & Dholakia, 2005; Kumar & Venkatesan, 2005; Lee, Kim, & Knight, 2008). This factor could inform market dominance and competitive edge in the telecommunication sector. When a company or organization has multiple service delivery channels which are easy to access, they the customer satisfaction levels are high and consequently, the firm acquires a competitive edge (Dholakia et al., 2005).

In a study on the banking sector it was identified that the use of multiple delivery channels was key to enhancing competitive advantages for banks. Some of the strategies used to enhance ease of access include: use of Automated Teller Machines, Online banking channels including use of social media; therefore to keep their customers happy, banks must offer pervasive integration of their channels and services (Kushwaha & Shankar, 2013).

The interaction between employee and customer experience with technology must be managed effectively to drive the effective performance of the organization (Fleming and Asplund, 2007), the interactions between customers and employees in service oriented industries are being mediated upon by more sophisticated technologies. Customers use a variety of service delivery channels, many of which are through self-service delivery channels (Xue, Hitt, & Harker, 2007), with a bigger chunk being the electronic commerce interactions that heavily rely on the customers uptake on the usage as relayed by Roberts and Toleman (2007) and their ability to utilize the technology. This is key to enhance competitiveness in a very competitive business environment. Customers who shop online experience more customer satisfaction than customers in other distribution modes including web-based investing activities as argued by Hines (2004). The multiplicity of service delivery channels enhances convenience and thus a competitive advantage for the organization.
However, Hoeg (2005) argues that customer segments should be defined based on two criteria: Customer orientation to technology and the complexity of the customer needs. It was found younger customers are more likely to be technologically sophisticated than the older customers, while the older customers are more likely to have significant wealth than younger customers, though there are exceptions to the rules that make it necessary to identify the combinations of technology orientation and complexity of financial-product need. However, transactions that require significant financial expertise – based on the product complexity or the customer’s needs – will usually need a high level of service experience and customization that clearly go beyond the automated system. To some degree, customer service is becoming automated to be more cost effective as assessed by Bulik (2004) when conducting a study on Customer Experience at Sprint. The study showed that businesses are trying to balance a certain level of customer service and a self-support system.

2.4.2 Ease of Use and Competitive Advantage

The ease of use is the degree to which a person believes that using a particular product or service would be free of effort. As such, all other factors held constant, a product or service perceived to be easier to use than another is more likely to be accepted by users. Wahab, (2008) states that perceived ease of use especially for new technologies and products are the most important and central factors in influencing customer satisfaction and thus a competitive edge.

According to a Meta-analysis done by Tomatzky and Kleins, (1982) there exists a relationship between the characteristics of a product or service and complexity. In addition, according to the research, complexity of a product or service is one of the three factors that had a consistent and significant relationship with the customer satisfaction and acquisition of a competitive edge. Tomatzky and Kleins (1982) found that compatibility, relative advantage and complexity have the most consistent significant relationship across a broad range of products and services. Rogers (1983), defines complexity as “the degree to which an innovation, product or service is perceived as relatively difficult to understand.” Further, according to Tomatzky and Kleins (1982), compatibility and relative advantage have both been dealt with so broadly and inconsistently in the existing literature as to be difficult to interpret.
Bandura, (1982) showed that it is important to consider the perceived ease of use and perceived usefulness in prediction of customer satisfaction which is key in building a competitive edge. Bandura suggested that in a given situation, behavioral intention can be best predicted by both “self –efficacy and outcome of judgments” (Chuttur, 2009). According to the study, Self-efficacy is similar to perceived ease of use and was defined as judgment of how well one can execute courses of action required to deal with prospective situations (Chuttur, 2009).

Cakmak and Tas (2012) conducted a study on the use of information technology in acquisition of a competitive edge using Turkish Contractor firms. The study found that the convenience provided by technology Turkish contractor firms was a major competitive advantage for the firms. Consequently, firms that provided services utilized technology enhanced their competitive advantage due to the increased convenience provided by the technology use. In addition, the study found that the levels of training of the employees using information technology, the levels of use of IT, and the levels of product knowledge by the employees enhanced the acquisition of a competitive edge by the contractors.

As earlier noted, the convenience attributes of ease of access and ease of use are related to the costs incurred in accessing the services. This is congruent to the cost leadership strategy identified by Porter (1985). Cost leadership refers to the use of a cost leadership strategy to organize and manage its value addition services in an endeavor to become the lowest product of a good or service as compared to its competitors in the industry (Bordean et al., 2006). Cost leadership is attainable through the interaction of a number of factors in the organization. According to Malburg (2000), cost leadership is an organization position that can only be attained through the arrangement of various activities in the value chain. Malburg (2000) noted that a low cost strategy in an organization is achieved through the employment of one or more of the factors. These factors that enhance the creation of a low cost strategy include the accurate determination and forecasting of demand, high capacity utilization, economies of scales, advances and advantages in the use of technology, outsourcing and learning with experience effects (Akan, Allen, Helms, & Spralls, 2006).

To achieve a cost leadership position, companies must have a low cost leadership strategy, low cost manufacturing and an employee based that is inclined towards cost reduction (Malburg, 2000). The company must also be committed to the process through initiatives
such as discontinuing activities with no cost benefits or outsourcing activities which would bring a cost advantage to the company (Malburg, 2001; Bordean et al. 2006).

Shin (2010) using the focus strategy in the study, *strategies for competitive advantage in electronic commerce* noted that convenience was a key determinant of competitive advantage in electronic commerce companies. According to Shin (2010) electronic commerce must be convenient to the customer in terms of geographical reach, ease of access, costs of accessing, perceived usefulness and having the requisite resources to access the product or service. This is similar to the technology acceptance model approach used by David F. D. (1989), which identified similar features to use of technology and ease of use. According to Shin (2010) customers must perceive the product or services to be easily accessible, cheap and affordable to them and have the requisite skills to use the product or service. The relationship between convenience and competitive advantage especially when using information communication technology is summed up by Palmer and Markus (2002) who noted that, “Strategic alignment suggests that the effect of information technology on performance will depend on how well the information technology strategy and corporate strategy coincide leading to competitive advantages”.

2.5 Chapter Summary

This chapter reviewed the existing literature on the research objectives and acquisition of a sustainable competitive advantage. The studies reviewed were mainly sourced from international sources due to a scarcity of local literature on the objectives. This was indicative of a research and practice gap that the study sought to fill. Chapter three below presents the research methodological framework used in the study.
CHAPTER THREE

3.0 RESEARCH DESIGN AND METHODOLOGY

3.1 Introduction

This chapter describes the methodology that was used to carry out the study and the choice of research design. The chapter elaborates on the rationale for the population and sampling design including sampling frame, sampling technique and sample size. The chapter also explains the data collection methods options, research procedures and data analysis method chosen. Lastly, the data analysis tools and techniques applied are explained.

3.2 Research Design

Research design is the plan and structure that is used to analyse the subject matter under study with the intention of answering the research questions (Cooper & Schindler, 2014). The research design guides the overall study to achieve the research objectives as well as answer the research questions. The study used the descriptive research design.

Saunders, Lewis and Thornhill (2009) hold that descriptive research is a research design which attempt to describe characteristics of a sample and relationships between phenomena, situations and events observed by the researcher. This approach provided the researcher with the opportunity to establish the relationship between service quality attributes and enhancement of competitive advantage in the mobile telecommunications industry in Nairobi County. The dependent variable was competitive advantage and the independent variables were service quality attributes and benefits.

3.3 Population and Sampling Design

3.3.1 Population

Population is defined as the collection of total elements that we wish to study and make inferences on (Cooper & Schindler, 2014). In this study the target population consisted of all mobile cellular services users in the Nairobi County of Kenya. These were estimated to be 12,100,000 mobile subscribers distributed as follows: Safaricom having 10,000,00,
Airtel Kenya having 1,200,000 and Telkom Kenya having 900,000 according to data from the GSMA Intelligence (2015). The numbers appear large given that the population of Nairobi is approximately 3,100,000 (Kenya National Bureau of Statistics (KNBS), 2009). This is however explained by the counting of subscriber numbers according to International Mobile Subscriber Identity (IMSI) as opposed to individual count. It is thus very possible to have one subscriber with up to four IMSI as they may have a voice mobile line, a tablet line, a modem line and home television box line. The numbers are considered estimates due to the prevalence of multiple cellular operator subscription among mobile customers in the County of Nairobi.

Table 3.1: Population Distribution

<table>
<thead>
<tr>
<th>Operator</th>
<th>Number of Subscribers (IMSI Count)</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Airtel Kenya</td>
<td>1,200,000</td>
<td>10%</td>
</tr>
<tr>
<td>Safaricom</td>
<td>10,000,000</td>
<td>83%</td>
</tr>
<tr>
<td>Telkom Kenya</td>
<td>900,000</td>
<td>7%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>12,100,000</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>

Source: GSMA Intelligence (2015)

3.3.2 Sampling Design

The sampling design may be considered as the sum total of procedures that guide the researcher in selection of an appropriate sample (Cooper & Schindler, 2014). It mainly involves grouping of population units to a frame, determining the sample size, allocating the sample to the classes of the frame units and then selecting the sample.

3.3.2.1 Sampling Frame

The sampling frame refers to the complete list of population elements from which the sample is selected (Saunders, Lewis, & Thornhill, 2012). The sampling frame for this study will consist of all cellular mobile telecommunications user within Nairobi County who are customers of the three main operators namely Airtel Kenya, Safaricom and Telkom Kenya.

The target population will be divided along the existing constituencies, also known as sub-counties, within Nairobi County. Currently there are 17 constituencies in Nairobi County namely: Westlands, Dagoretti North, Dagoretti South, Langata, Kibra, Kasarani, Roysambu,
Ruarka, Embakasi North, Embakasi South, Embakasi Central, Embakasi East, Embakasi West, Makadara, Kamukunji, Starehe; and Mathare (IEBC, 2015).

### 3.3.2.2 Sampling Technique

The sampling technique refers to the way a representative sample is selected from a target population (Cooper & Schindler, 2014). This study used the stratified random sampling technique. Stratified random sampling segments different respondents into mutually exclusive homogenous groups referred to as strata. Random samples are then chosen from the individual strata (Denscombe, 2010). This method eliminates sample bias as every member of the population has an equal chance of being selected based on their respective proportion.

The strata were thus be the sub-counties from which individual mobile subscribers reside; who were then be chosen at random in order to actualize the stratified random sampling technique.

### 3.3.2.3 Sample Size

The sample size may be defined as the representative number of elements or respondents chosen from a total population that will be studied (Peck, Olsen, & Devore, 2009). In determining the sample size, four main parameters have to be determined namely: the level of certainty required from the collected data as a representation of the total population, the accuracy required as the basis for the estimates made by the sample, minimum threshold data cases for the variables chosen and the size of the total population from which the sample is drawn (Fox & Bayat, 2007).

In determining our sample size the formula below initially developed by Yamane (1967) was used.

\[
n = \frac{N}{1 + Ne^2}
\]

Where:

\[
n = \text{sample size}
\]
\[ N = \text{size of the target population} \]
\[ e = \text{acceptable sampling error} \]

The study used a 95% confidence interval which then determined our sampling error (e) to be 5%. Given that our target population (N) was earlier determined to be 12,100,000 substituting these figures in the Yamane equation above yielded:

\[
n = \frac{12,100,000}{1 + (12,100,000 \times 0.05^2)}
\]

\[ = 399.94 \approx 400 \]

Incorporating a presumed non-response rate of 20% resulted in the following adjusted sample size:

\[ n^* = 120\% \times 400 = 480 \]

We thus determined our sample size to be 480 respondents with a 20% included margin of non-response ideally distributed as follows: 48 respondents from Airtel Kenya, 397 respondents from Safaricom; and 36 respondents from Telkom Kenya. This would provide a proportionate representation in line with the population and thus aid in eliminating sample bias.

3.4 Data Collection Procedures

This study used primary data which was gathered for the unique needs of this study directly from the field. The primary data was collected by means of a structured questionnaire which was well suited for data collection from a large number of respondents in a standard manner and at a relatively efficient mode. Saunders, Lewis, and Thornhill, (2012), explain that a questionnaire is a general term that denotes all data collection instruments that require respondents to answer the same set of questions asked in a predetermined manner.

The questionnaire used had both closed and open ended questions that examined the effect of the service quality constructs of customer service, network quality of service and convenience as a source of competitive advantage in the mobile telecommunications
industry. It used a five response Likert scale from strongly disagree to strongly agree. The questionnaire used had five main sections with the first section collecting background information on the respondents, the second related to the customer service perception, the third section examined the network quality of service perception, the fourth section examined the convenience perception on the telecommunication cellular services provided by the serving respondent and the fifth section collected information regarding the dependent variable which in our case was on sources of sustainable competitive advantage.

3.5 Research Procedures

Research procedures refer to the process followed by the researcher in conducting the study of interest (Bryman & Bell, 2011). The first step is usually the preparation of a proposal for review and acceptance which will contain the justification, data collection instruments, time schedule and the budget for the proposed study. The data collection instrument, in our case a questionnaire, was first be pre-tested to ensure the effectiveness and comprehensibility of the questions contained. This ensured that the time taken to answer the questions was determined and kept short so as to encourage better response rates.

The questionnaire was administered both online and in person with the help of research assistants. Reminders and follow-up calls were used to ensure that high response rates were achieved. The research assistants were trained on what the questionnaire required and on procedures for handling special respondents. In order to ensure adequate representation of the population, physical questionnaires were distributed as per the sample size tabulation in the appendix. Respondents were assured of anonymity and privacy and would be provided with an online copy of the final project findings on request.

3.6 Data Analysis

The data analysis process aims at conversion of raw data collected from the field into information which can be understood by the researcher and the target audience. There are several steps involved in undertaking research data analysis. First, data gathered from the questionnaires is coded and a code sheet for the questionnaire is obtained.

Secondly, data was entered into the Statistical Package for Social Sciences (SPSS) or other suitable software such as Excel depending on what software was chosen for analysis. Third,
the researcher then identified statistical procedures for use in analysing the data. Descriptive statistics are usually the first step of analyzing data in which the information is summarized, usually in the form of tables, in order to be able to show trends in the data through means, standard deviations, frequencies and percentages. Other inferential statistical measures such as regression analysis among many others can then be used to expound on the nature of relationships among variables.

This study utilized regression analysis, t-tests and descriptive statistics of means, modes and standard deviations. Analysed data was presented in form of tables and figures ensuring that collected data was reduced to a manageable size, summarized, presented and interpreted using statistical techniques (Cooper & Schindler, 2014).

3.7 Chapter Summary

This chapter presented and clarified the different approaches, methods and processes that the research adopted in the study. It described the research design, clarified the target population and the sampling design. The data collection methods and proposed data analysis procedures were also described. The researcher applied the stratified random sampling procedure and used questionnaires as data collection instruments.
CHAPTER FOUR

4.0 RESULTS AND FINDINGS

4.1 Introduction

This chapter presents the results and findings of the study based on the data collected and analyzed. The results are given in sections starting with information regarding the response rate, the demographic information of the respondents which has information on the gender, age, education level, number of sim cards possessed, the preferred mobile telecommunication service provider among others. This is followed by a section on the objectives of the study such as on the effects of customer service, network quality and network convenience on sustainable competitive advantage among mobile telecommunications service providers in Nairobi County.

4.2 Response Rate

The data used in analysis was collected from 390 respondents out of the 480 questionnaires distributed. This represents an 81% response rate which is deemed adequate for valid findings given the 70% threshold recommended (Mugenda & Mugenda, 2003). Table 4.1 below shows a summary of the response rate.

Table 4.1: Response rate

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Questionnaires Issued</td>
<td>480</td>
<td>100%</td>
</tr>
<tr>
<td>Questionnaires Returned</td>
<td>390</td>
<td>81%</td>
</tr>
</tbody>
</table>

4.3 Background Information

This section presents the demographic data of the respondents to this study.
4.3.1 Gender of Respondents

Majority of the respondents for this study were of the male gender representing 73% of the total respondents while female represented 27% of the respondents. This is as shown in Figure 4.1 below. The selection of respondents at random yielded a disproportionate number of male respondents relative to female respondents as the female respondents were less willing to participate in the study due to time constraints associated with more home management responsibilities and also higher privacy concerns. The male respondents were more forthcoming hence the higher response rate. Ordinarily, this would mean that there were more male mobile phone users relative to female ones, however the response issues identified above would invalidate the above conclusion. It is however true that in homesteads where only one phone could be procured it mainly belonged to the head of the family and in a patriarchal society like Kenya that person would most likely be male.

![Figure 4.1: Gender of Respondents](image)

4.3.2 Age of Respondents

There was average distribution of respondents across the various age brackets. Nevertheless, 32% representing a majority were in the ages 36 – 45 years while 29% of the respondents were of the ages 29 – 35 years. Twenty three percent of the respondents were of the ages between 15 – 25 years while the minority were of the ages above 46 years representing 16% of the total sample size. Table 4.2 below shows the age distribution of respondents.
The data shows that mobile phone use is evenly distributed among all ages of the population that is below 46 years. In Kenya, this represents the most economically active segment of the population. The age group above 46 years shows a considerable lower proportion of mobile phone use which can be mostly attributed to the slow uptake of technology among members in that age segment. The incorporation of the 15 – 25 age bracket recognizes that it is quite normal for persons below 18 years to have a mobile phone. This can be attributed to a need for communication between secondary school teenagers and parents particularly those in boarding school environments.

**Table 4.2: Age Distribution of Respondents**

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>15 - 25 yrs</td>
<td>89</td>
<td>23</td>
</tr>
<tr>
<td>26 - 35 yrs</td>
<td>113</td>
<td>29</td>
</tr>
<tr>
<td>36 - 45 yrs</td>
<td>125</td>
<td>32</td>
</tr>
<tr>
<td>above 46 yrs</td>
<td>63</td>
<td>16</td>
</tr>
<tr>
<td>Total</td>
<td>390</td>
<td>100</td>
</tr>
</tbody>
</table>

**4.3.3 Level of Education of Respondents**

The highest level of education for the respondents was a University degree which 28% of the sample size possessed. In addition, 50% of the respondents had at least a college diploma or certificate while 22% of the respondents had a secondary education level of education. The data shows that a majority of the respondents have some post-secondary education which is indicative of the level of competition in the Kenyan job market. None of the respondents had only primary level of education, indicating that the Government’s free primary education program has been quite successful and also acting as pointer of the importance of basic literacy to Kenyans. The education level is also important in ascertaining the rate at which a population adopts technological innovations such as mobile communication and payments. The data shows that at least 78% of the respondents had post-secondary education, showing that Nairobi County is a conducive environment for the diffusion of technological innovations. Table 4.3 below presents this data.
Table 4.3: Level of Education of Respondents

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Secondary</td>
<td>85</td>
<td>22</td>
</tr>
<tr>
<td>College</td>
<td>196</td>
<td>50</td>
</tr>
<tr>
<td>University</td>
<td>109</td>
<td>28</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>390</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

4.3.4 Number of SIM Cards Owned by Respondents

Respondents were asked whether they had more than one SIM Card. An overwhelming 77% of the respondents indicated that they had more than one SIM card while only 23% of the respondents had a single SIM card. This is an indicator of low levels of customer loyalty across the telecommunication companies. Figure 4.2 below presents this data.

![Figure 4.2: Respondents with More than One Sim Card](image)

4.3.5 Most Preferred Network by Respondents

In addition, respondents were asked to indicate the most preferred mobile service provider. Sixty nine percent of the respondents indicated that they preferred the Safaricom line, 19% indicated that they preferred the Airtel SIM card while 12% preferred the Orange line. From the findings of the study, it is clear the Safaricom holds a competitive advantage over its rivals. Some of the reasons fronted for this were: ease of access to the networks, additional
services such as M-Pesa, countrywide reach of Safaricom and effective customer service. Figure 4.3 below presents this data.

![Bar chart showing preferences]

**Figure 4.3: Respondents Most Preferred Line**

### 4.4 Customer Service and Sustainable Competitive Advantage

The first objective of this study focused on the findings on the aspects of customer service and customer satisfaction from the perception of the customer on the various mobile telecommunication companies in Nairobi County.

#### 4.4.1 Descriptive Statistics for Customer Service and Sustainable Competitive Advantage

The information was collected on a five-point Likert scale. The data was analyzed through mean and standard deviation. A mean value of more than 4.4 represented strongly agree, 3.5-4.4 ‘agree’, 2.5-3.4 ‘neutral’, 1.5-2.4 ‘disagree’ and lastly less than 1.5 ‘strongly disagree’. Standard deviation was used to indicate the dispersion of the responses which in turn showed the consensus. A value of more than 1.0 indicated lack of consensus and a value of less than 1.0 indicated consensus. The results are shown in table 4.4 below.
Table 4.4: Descriptive Statistics of Customer Service and Sustainable Competitive Advantage

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employees knowledgeable about products</td>
<td>390</td>
<td>3.81</td>
<td>.869</td>
</tr>
<tr>
<td>Courtesy of employees</td>
<td>390</td>
<td>3.74</td>
<td>.785</td>
</tr>
<tr>
<td>Satisfaction with multiple products</td>
<td>390</td>
<td>3.73</td>
<td>.998</td>
</tr>
<tr>
<td>Always willing to assist</td>
<td>390</td>
<td>3.63</td>
<td>.807</td>
</tr>
<tr>
<td>Attending to complaints</td>
<td>390</td>
<td>3.53</td>
<td>.950</td>
</tr>
<tr>
<td>Complete trust in employees</td>
<td>390</td>
<td>3.47</td>
<td>.844</td>
</tr>
<tr>
<td>Satisfaction with customer service levels</td>
<td>390</td>
<td>3.35</td>
<td>.887</td>
</tr>
<tr>
<td>Best interests when offering services</td>
<td>390</td>
<td>3.32</td>
<td>.856</td>
</tr>
<tr>
<td>Prompt response to my needs</td>
<td>390</td>
<td>2.92</td>
<td>1.072</td>
</tr>
<tr>
<td>Satisfaction with costs</td>
<td>390</td>
<td>2.68</td>
<td>1.257</td>
</tr>
<tr>
<td>Valid N (listwise)</td>
<td>390</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Key: 1= Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree, 5= Strongly Agree

From the mean it is clear that the respondents agreed that employees of mobile telecommunication companies were knowledgeable about the products offered, were courteous, very helpful and always attended to complaints raised. The respondents were also satisfied with the multiple products that the mobile telecommunication companies offered. The respondent were uncertain as to whether they could fully trust the employees of mobile telecommunication companies and also with the customer service levels they experienced from the providers. The lack in trust in employees can be attributed to numerous texts sent to mobile customers that were of a fraudulent nature mostly attributed to imprisoned persons. Most of the respondents suspected some measure of collusion between mobile telecommunication employees or agents and the fraudsters hence the uncertainty in the possible trust levels. Findings from the mean also show that the respondents were uncertain as to the adequacy of the speed of response to queries and costs levied by the mobile providers for services offered.

In all the above findings majority of the respondents exhibited consensus as evidenced with most of the findings having a standard deviation of less than one. There was however lack of consensus in the adequacy of costs levied and speed of response from customer service. Clearly the respondents were dissatisfied with the costs levied by the mobile telecommunication providers and also the speed of response when seeking customer service. The speed of response was a major complain for respondents who accessed customer service.
via call centers and complained of excessive waiting times and even non response after waiting for the long periods. The lack of consensus in the findings can be attributed to the incongruence of asking several respondents to rate their different mobile providers. It emerged that respondents from Airtel and Orange were quite satisfied with the speed of response while seeking customer service aid and also the rates charged for product offerings while those of Safaricom exhibited marked dissatisfaction.

The respondents also made several suggestions regarding measures that could be taken in order to enhance customer service and satisfaction levels with their mobile telecommunication services provider. The most recommended suggestions were increasing the number of customer care lines, ensuring that there was more transparency particularly in regard to pricing of data offerings, ensuring that there was ease in exit from subscribed services, having more interactive offerings with customers and more follow-up by customer care to ensure that issues raised are completely attended to and fully resolved.

4.4.2 Regression Analysis for Customer Service and Sustainable Competitive Advantage

Regression analysis was used to determine the effect of customer service on sustainable competitive advantage among mobile telecommunication providers in Nairobi County. The results are presented below.

Table 4.5: Model Summary of Customer Service and Sustainable Competitive Advantage

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.422a</td>
<td>.178</td>
<td>.176</td>
<td>.48103</td>
</tr>
</tbody>
</table>

a. Predictors: (Constant), Customer Service Perception

The R value shown by the model is 0.422 while the R square value was 0.178. This shows that customer service accounts for 17.8% of variations as a source of sustainable competitive advantage among mobile telecommunications providers in Nairobi County.
The ANOVA table is used to determine whether there is a statistically significant relationship between the dependent variable and the independent variable. The significance column provides the probability that the null hypothesis is true meaning that there is no relationship between the independent and dependent variable. In our case, the probability of the null hypothesis being true is 0.00 which is less than our predetermined significance of 0.05. The ANOVA table also shows that $F(1, 388) = 83.916$, $p = 0$. This means that the F value of 83.916, which is considered a large value, suggests that the model is a good fit. The null hypothesis is thus rejected and we conclude that there is a significant relationship between customer service and sustainable competitive advantage.

The coefficients table is only relevant once the ANOVA results show that there is a statistically significant relationship between the variables. The t-statistic and the significance level are usually used to determine which coefficients have predictive significance. For customer service our table provides $t = 9.161$, $p = 0$, further confirming that customer service had a significant impact on sustainable competitive advantage among mobile telecommunication service providers.
4.5 Network Quality and Sustainable Competitive Advantage

The second objective of this study focused on the effect of network quality perception on sustainable competitive advantage in the mobile telecommunication industry in Nairobi County. The findings are presented in the form of descriptive statistics, a discussion of the results of qualitative data and regression analysis tables.

4.5.1 Descriptive Statistics for Network Quality and Sustainable Competitive Advantage

The information was captured on a five-point Likert scale. The data was analyzed through mean and standard deviation using a 5-point Likert scale similar to that used in table 4.4 above. The results are shown in table 4.8 below.

Table 4.8: Descriptive Statistics of Network Quality and Sustainable Competitive Advantage

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Security in transactions</td>
<td>390</td>
<td>3.93</td>
<td>.825</td>
</tr>
<tr>
<td>Good network quality</td>
<td>390</td>
<td>3.91</td>
<td>.960</td>
</tr>
<tr>
<td>Reliability of additional services</td>
<td>390</td>
<td>3.76</td>
<td>1.039</td>
</tr>
<tr>
<td>Call initiation period is small</td>
<td>390</td>
<td>3.72</td>
<td>.924</td>
</tr>
<tr>
<td>Speech quality</td>
<td>390</td>
<td>3.68</td>
<td>1.052</td>
</tr>
<tr>
<td>No trouble initiating calls</td>
<td>390</td>
<td>3.68</td>
<td>.958</td>
</tr>
<tr>
<td>Calls go through</td>
<td>390</td>
<td>3.49</td>
<td>1.087</td>
</tr>
<tr>
<td>Low interruption rate</td>
<td>390</td>
<td>3.45</td>
<td>1.086</td>
</tr>
<tr>
<td>Levels of congestion</td>
<td>390</td>
<td>3.44</td>
<td>1.068</td>
</tr>
<tr>
<td>Clarity in moving vehicles</td>
<td>390</td>
<td>3.22</td>
<td>1.138</td>
</tr>
<tr>
<td>Valid N (list wise)</td>
<td>390</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Key: 1= Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree, 5= Strongly Agree

The mean data shows that the respondents agreed that they felt secure when using the services of their mobile telecommunications services provider and that their providers generally had good network quality. The mean data further shows that the respondents agreed that the additional services provided were reliable, call initiation period was quite small and that they had no trouble initiating calls from their mobile telecommunication service provider. The mean data also shows that the respondents were neutral when asked
whether their calls always went through, whether they experienced low call interruption and congestion rates and almost disagreed when asked about the clarity of calls when in moving vehicles.

The standard deviation data shows the degree of consensus among the respondents with a value of less than one indicating consensus and a value greater than one indicating lack of consensus. Our findings show that there was consensus among the respondents when asked about the security of transactions, the quality of the network, the call initiation period and the difficulty experienced in initiating calls. There was however lack of consensus with the reliability of additional services with most of the respondents being extremely happy with mobile money services offered by Safaricom but were not very happy with Airtel and Orange where they claimed there was difficulty in locating a mobile money agent. The respondents did not exhibit consensus in the speech quality experienced from the diverse mobile operators, in the period taken to initiate calls and also in their experience when initiating calls. In high density environs, the speech quality of Safaricom was reported to be a little below par and the respondents requested for more sites in such areas. Similarly the respondents did not also exhibit consensus on the clarity of calls when in moving vehicles. This suggests that mobile operators should improve coverage along the roads in order to more delight their customers.

The respondents also made a few suggestions on areas that the mobile telecommunication providers could improve on in order to enhance network quality and these were mainly along the areas of enhancing 3G data coverage in areas outside Nairobi County, improving services on international calls which were reported to be unclear and having a noticeable time delay, intermittency in network connection particularly when using data services. This is however a technical design attribute of 3G network which sometimes varies data services usage depending on the number of users. There was also a suggestion to improve the robustness of the various networks especially during the rainy season.

4.5.2 Regression Analysis for Network Quality and Sustainable Competitive Advantage

Regression analysis was used to determine the effect of network quality on sustainable competitive advantage among mobile telecommunication providers in Nairobi County. The results are presented below.
Table 4.9: Model Summary of Network Quality and Sustainable Competitive Advantage

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.570a</td>
<td>.325</td>
<td>.323</td>
<td>.43594</td>
</tr>
</tbody>
</table>

The R value shown by the model is 0.570 while the R square value was 0.325. This shows that network quality accounts for 32.5% of variations as a source of sustainable competitive advantage among mobile telecommunications providers in Nairobi County.

Table 4.10: ANOVA of Network Quality and Sustainable Competitive Advantage

<table>
<thead>
<tr>
<th>ANOVAa</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model</td>
</tr>
<tr>
<td>1</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>

a. Dependent Variable: Sustainable Competitive Advantage
b. Predictors: (Constant), Network Quality Perception

The ANOVA table is used to ascertain whether there is a statistically significant relationship between the dependent variable and the independent variable. The significance column provides the probability that the null hypothesis is true meaning that there is no relationship between the independent and dependent variable. In our case, the probability of the null hypothesis being true is 0.00 which is less than our predetermined significance of 0.05. The ANOVA table also shows that $F (1,388) = 186.598, p = 0$. The F value of 186.598 is a large value suggesting that the model is a good fit. The null hypothesis is thus rejected and we conclude that there is a significant relationship between network quality and sustainable competitive advantage.
Table 4.11: Coefficients of Network Quality and Sustainable Competitive Advantage

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td></td>
</tr>
<tr>
<td>(Constant)</td>
<td>1.822</td>
<td>.129</td>
<td>14.115</td>
<td>.000</td>
</tr>
<tr>
<td>1</td>
<td>Network Quality Perception</td>
<td>.479</td>
<td>.035</td>
<td>.570</td>
</tr>
</tbody>
</table>

a. Dependent Variable: Sustainable Competitive Advantage

The coefficients table is only relevant once the ANOVA results show that there is a statistically significant relationship between the variables. The t-statistic and the significance level are usually used to determine which coefficients have predictive significance. For network quality our table provides $t = 13.660$, $p = 0$, further confirming that network quality had a significant impact on sustainable competitive advantage among mobile telecommunication service providers.

4.6 Network Convenience and Sustainable Competitive Advantage

The third specific objective of this study focused on the effect of network convenience perception on sustainable competitive advantage in the mobile telecommunication industry in Nairobi County. The findings are presented in the form of descriptive statistics, a discussion of the results of qualitative data and regression analysis tables.

4.6.1 Descriptive Statistics for Network Convenience and Sustainable Competitive Advantage

The information was captured on a five-point Likert scale. The data was analyzed through mean and standard deviation using a 5-point Likert scale similar to that used in table 4.4 above. The results are shown in table 4.12 below.
The mean data shows that the respondents agreed that their present mobile telecommunication services provider was convenient, they felt secure when accessing support services and new product offerings were very easy to use. The respondents also agreed that new product offerings were generally easy to use and instructions on how to use any new services were generally easy to use. There was also agreement from the respondents that the cost of accessing customer support, this is quite rational given that all the providers have toll free numbers from which access to customer support was availed. There was also agreement that there were long waiting times when accessing customer support both physically and via call centers. The respondents were neutral on whether employees of telecommunication providers were easy to access when support was needed and also on whether they were accessible at all times. Finally, the respondents were neutral, but only just so, on the adequacy of the location of customer support centers.

The standard deviation column indicates the degree of consensus exhibited by the respondents with values below one indicating consensus while those greater than one indicating lack of consensus. The respondents exhibited consensus when providing feedback on the overall convenience of using their mobile provider, security in accessing support and also in the ease of use of new product offerings. For all the other responses, no consensus was exhibited with the respondents having diverse views on the introduction of new products and access to instructions on how to use the offering. Here the difference in opinion arose...
because most the respondents were happy when the offering was from Safaricom but were not similarly amused for offerings from Airtel and Orange suggesting that the latter two operators should invest more resources in this area. The cost of accessing customer support and the waiting times before accessing support did not also exhibit consensus with Airtel and Orange customers agreeing with the statements and Safaricom customers disagreeing by complaining that they mostly had to physically visit the support centers in order to have their issues resolved. There was also lack of consensus on the accessibility of employees when in need of support and also on whether the employees were always willing to assist. Lack of consensus was also exhibited in the location of customer support centers which proved to be convenient for Safaricom which has many physical customer support centers in Nairobi County unlike the other two operators who had support centers mostly in the central business district areas of the county.

The respondents also made a few suggestions on areas that the mobile telecommunication providers could work on to enhance convenience, most recurring was the suggestion that the number of customer care lines should be increased in order to lower the waiting times for service from call centers, there were also suggestions that Airtel and Orange should offer additional services similar to Safaricom, case in point was a suggestion for Airtel to introduce Airtel ‘Bonga’ points. Overall it was quite clear that Safaricom was way ahead of Airtel and Orange in terms of network convenience.

4.6.2 Regression Analysis for Network Convenience and Sustainable Competitive Advantage

Regression analysis was used to determine the effect of network convenience on sustainable competitive advantage among mobile telecommunication providers in Nairobi County. The results are presented below.

Table 4.13: Model Summary of Network Convenience and Sustainable Competitive Advantage

<table>
<thead>
<tr>
<th>Model Summary</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model</td>
</tr>
<tr>
<td>-------</td>
</tr>
<tr>
<td>1</td>
</tr>
</tbody>
</table>

a. Predictors: (Constant), Network Convenience Perception
The R value shown by the model is 0.601 while the R square value was 0.362. This shows that network convenience accounts for 36.2% of variations as a source of sustainable competitive advantage among mobile telecommunications providers in Nairobi County.

**Table 4.14: ANOVA of Network Convenience and Sustainable Competitive Advantage**

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Regression</td>
<td>1</td>
<td>39.481</td>
<td>219.722</td>
<td>.000</td>
</tr>
<tr>
<td></td>
<td>Residual</td>
<td>388</td>
<td>.180</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>389</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a. Dependent Variable: Sustainable Competitive Advantage
b. Predictors: (Constant), Network Convenience Perception

The ANOVA table is used to show whether there is a statistically significant relationship between the dependent variable and the independent variable. The significance column provides the probability that the null hypothesis is true meaning that there is no relationship between the independent and dependent variable. In our case, the probability of the null hypothesis being true is 0.00 which is less than our predetermined significance of 0.05. The ANOVA table also shows that $F(1,388) = 219.722, p = 0$. The F value of 219.722 is a pretty large value suggesting that the model is a good fit. The null hypothesis is thus rejected and we conclude that there is a significant relationship between network convenience and sustainable competitive advantage.

**Table 4.15: Coefficients of Network Convenience and Sustainable Competitive Advantage**

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td></td>
</tr>
<tr>
<td>(Constant)</td>
<td>1.241</td>
<td>.158</td>
<td>7.859</td>
<td>.000</td>
</tr>
<tr>
<td>1</td>
<td>Network Convenience Perception</td>
<td>.646</td>
<td>.044</td>
<td>.601</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>14.823</td>
<td>.000</td>
</tr>
</tbody>
</table>

a. Dependent Variable: Sustainable Competitive Advantage

The coefficients table is only relevant once the ANOVA results show that there is a statistically significant relationship between the variables. The t-statistic and the significance
level are usually used to determine which coefficients have predictive significance. For network convenience our table provides $t = 14.823, p = 0$, further confirming that network convenience had a significant impact on sustainable competitive advantage among mobile telecommunication service providers.

4.8 Chapter Summary

This chapter has presented the findings of the study based on data collected and analyzed. The major findings of the study are that the most important factors that influence acquisition of a competitive advantage for mobile telecommunication companies in Nairobi County were network convenience and network quality. Customer service and customer satisfaction were also important but the data showed that customers still chose to remain with the most convenient network provider irrespective of the level of satisfaction with charges and services provided. Service quality can thus be inferred to have a viable positive effect on sustainable competitive advantage given that all its various constructs have proven to have a positive impact. Chapter five below presents the findings of the study, the summary of findings, the discussion of key findings and the conclusions as well as recommendations of the study.
CHAPTER FIVE

5.0 DISCUSSION OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter presents the discussion of findings, the summary of findings, conclusions of the study and recommendations for improvement as well as areas where further studies can be conducted. The section on discussion of the findings will compare closely what previous studies and concepts on the study have shown with a view of having a deeper understanding of the subject and providing in-depth insight on the meaning of the results.

5.2 Summary of Findings

This study sought to establish the effects of service quality on acquisition of a sustainable competitive advantage by mobile telecommunication companies in the Nairobi County of Kenya. Specifically, the study sought to investigate the effect of customer service and satisfaction on sustainable competitive advantage, and also the effect of network quality and network convenience on sustainable competitive advantage. The study was conducted in the month of July 2016 and included a total of 480 respondents selected from a sampling frame of 12,100,000 mobile subscribers in Nairobi County.

The study embraced a descriptive research design using a cross sectional research approach. The population of the study was drawn from the mobile subscribers of the three mobile service providers in Kenya namely: Safaricom, Airtel and Telkom Kenya. Stratified random sampling technique was adopted to come up with the sample size. Data for the study was collected using a questionnaire personally administered by the researcher with the help of several research assistants. SPSS was used to analyze data collected from which descriptive statistics and inferential statistics of regression analysis were obtained.

The study found that, customer service and satisfaction was an important factor that influenced acquisition of a sustainable competitive edge for mobile service providers. This was evident from the results where customer service had a beta of 0.421 which showed that there was a significant positive relationship between customer service and sustainable competitive advantage. Customer service and satisfaction was acquired through reduced costs, multiple products provision, high levels of customer support, effective employees who
are knowledgeable and friendly to the employees and creating a sense of security, empathy and courtesy amongst the customers.

Secondly, the study found that network quality was also similarly important in the acquisition of a sustainable competitive advantage. The major factors influencing the acquisition of a sustainable competitive advantage through network quality were perceived network quality, perceived network security, ease of access and use of the network, low interruption rates, low levels of congestion, good speech quality and reliability of additional services such as mobile money. The beta coefficient of network quality was 0.479 which showed a positive significant relationship between network quality and sustainable competitive advantage.

Finally, the study found that the third objective of convenience also positively contributed to sustainable competitive advantage. Convenience of the mobile phone service provider was mainly obtained from the ease of use of new products, ease of access and waiting times for customer support, additional convenient services such as mobile airtime on credit among other services. The beta coefficient for convenience was 0.646 which showed that a positive significant relationship existed between convenience and sustainable competitive advantage.

5.3 Discussion of Findings

This section presents a discussion of the findings of the study.

5.3.1 Customer Service and Sustainable Competitive Advantage

Customer service and satisfaction is key in not only ensuring that customers are happy and loyal but also in enhancing sustainable competitive advantage. This study found that customer service enhances customer satisfaction and was an important factor that influenced acquisition of a sustainable competitive advantage for mobile telecommunication companies in Kenya. The study found that there was a strongly significant relationship between customer satisfaction and sustainable competitive advantage. This is similar to the findings of Jham and Khan (2008) who found that customer satisfaction and sustainable competitive advantage were positively correlated.

The findings of this study indicated that employee conduct when attending to customers were very critical in ensuring that customer satisfaction during service requests. The findings
were similar to those of Chinunda (2011) who found that customer service was key in enhancing acquisition of a sustainable competitive advantage. According to Chinunda (2011), customer service may be simply understood to mean giving customers what they want. This is mainly done by fulfilling a multitude of less obvious customer needs, such as simply being friendly, delivering on time and attending promptly to customers’ needs. It thus usually includes all activities an organization undertakes and serves as the bond between an organization and its clients. The attributes that were identified by Chinunda (2011), Alnsour et al. (2014) and Jain, (2013) are similar to those identified in this study. According to this study, the provision of multiple products and services, reduced costs, customer service levels, response to customer needs promptly (responsiveness), willingness to assist employees and having the best interest of the customer (empathy), courtesy of employees, knowledge ability of employees about organization products and services, perceived trust of the product (Assurance) and attention of complaints by the employees (complaints handling) were key to enhancing customer service levels and customer satisfaction.

The results of this study also show that key traditional service quality aspects of empathy, responsiveness, and assurance strongly impacted customer service perception by customers and were thus similar to the model of service quality as identified by Parasuraman et al., (1988) which identified empathy, responsiveness, assurance and complaints handling as key attributes towards enhancing customer service and customer satisfaction. Similarly, other scholars have identified customer service attributes as key to enhancing acquisition of a sustainable competitive advantage. Jain (2013) noted that responsiveness was key to enhancing customer service through four key indicators of provision of services to customers by employees promptly; a willingness to assist customers at all times by employees, employees’ response to customers’ queries despite being busy and the ease of obtaining service related information from the service provider (Parasuraman et al., 1988). This is similar to the findings of this study.

According to this study, provision of multiple products and prompt, resolute customer service levels greatly enhance customer satisfaction levels. The MTSP is then able to obtain sustainable competitive advantage through the enhancement of customer satisfaction. Similarly, Eboli and Mazulla (2007) noted that the provision of key customer service attributes enhances customer satisfaction and thus sustainable competitive advantage. According to Eboli and Mazulla (2007), the various factors that influenced customer
satisfaction and service quality were cleanliness of the shelters, overcrowding, information systems, knowledgeable and helpful employees, security concerns and condition of the buses. The provision of this service attributes enhanced customer satisfaction and a competitive advantage for the company. Similar attributes are identified in this study. Other scholars with similar findings to those of this study include: Jham and Khan (2008), Geetika et al., (2008), Santouridis & Trivellas (2010) and Johnson & Sirikit (2002) who found that customer satisfaction and sustainable competitive advantage were strongly correlated.

The findings of this study show that customers did not base their choice of network on costs levied and remained with their MTSP of choice irrespective of charges levied. This suggests that cost may not necessarily be a source of sustainable competitive advantage in Nairobi County as it did not result in customers changing alliance when cheaper options presented themselves. This is unlike in the study by Johnson and Sirikit (2002) where the costs of using the network were a key determinant of customer satisfaction. According to Johnson & Sirikit (2002), in a cross-sectional survey design to investigate service quality perception and competitive analysis in the Thai telecommunication industry, Thailand customers placed primary emphasis on responsiveness, cost, network quality and technical quality relative to the other parameters in their level of customer satisfaction.

5.3.2 Network Quality and Sustainable Competitive Advantage

This study found a positive significant relationship between network quality and sustainable competitive advantage. In this study, network quality was the second most important factor that influenced the acquisition of a sustainable competitive advantage for telecommunication companies in Kenya. Similarly, Kumar et al., (2012), Rahhal (2015) and Todeva & John (2001) found a significant positive correlation between network quality and sustainable competitive advantage.

The relationship between network quality and sustainable competitive advantage was linked to customer satisfaction levels. According to this study network quality perception was a product of customer satisfaction in the clarity of calls, speech quality, low levels of interruptions, ease of initiating calls, perceived security of the calls and networks, low levels of interruptions when in a moving object or vehicle and low levels of congestion on the network. This agrees with the views of Van der Wal, Pampallis and Bond (2002) among
customers using cellular mobile services who found that the levels of network quality were key in enhancing customer satisfaction levels. Van der Wal et al. (2002), conducted a study to measure the service quality in the cellular telecommunications industry in South Africa with a focus on customers’ perception. The study found that in addition to the service quality metrics, the network quality levels were a key determinant of customer satisfaction and consequently, acquisition of a competitive edge by the company.

The results of the study show that customers placed a high premium on good network quality and also considered it as a source of sustainable competitive advantage. This was similar to the findings of Rahhal (2015), who noted that the relationship between network quality and sustainable competitive advantage is intertwined with the customer satisfaction attribute. According to Rahhal (2015) the network quality influences customer satisfaction levels and this enhances the acquisition of a competitive edge by the company or organization. Rahhal (2015) specifically found that the reliability of network, addition of value added services, network quality and responsiveness to customer needs was key to enhancing the levels of customer satisfaction in Syria. The study found that the acquisition of a competitive edge is influenced by the levels of network quality, reliability of the network and efficiency.

The study found that customers considered security in transactions, short service initiation periods and low interruptions rates as important attributes of assessing network quality and thus sources of sustainable competitive advantage. This was in agreement with the findings of Ritho and Ambrose (2015) who found that there was a positive relationship between network quality and sustainable competitive advantage in the banking sector despite the difference in the specific industry definition. The study by Ritho and Ambrose (2015) also noted that the levels of innovation, new products and services improved the quality of services offered and consequently resulted in a competitive advantage for the organization. The study by Todeva & John (2001) also identified secure access to services as a source of sustainable competitive advantage in addition to other network qualities such as hardware, network management systems, service contents and communication networks. Shilako (2014) also noted that, security of services is also a key network quality aspect that influences competitive advantage. According to Shilako (2014) customers are very perceptive to issues of security and reward secure service providers with loyalty thus enhancing competitive advantage of a firm in an industry.
5.3.3 Network Convenience and Sustainable Competitive Advantage

This study found that there was a strong significant positive relationship between network convenience and sustainable competitive advantage. This is similar to the findings of Singh (2011), Picher (2001), Dholakia et al., (2005) and Kushwaha & Shankar, (2013) all of whom found a positive relationship between network convenience and sustainable competitive advantage. This study found that some of the factors that enhanced network convenience were: access of employee support by customers, prompt access to customer support facilities, ease of access to instructions on how to use products and services, perceived security when using the services and products of the company, location of the customer support services close to the customers and short waiting periods for services delivery for the customers. This is similar to the findings of Dholakia, Zhao, & Dholakia, (2005); Kumar & Venkatesan, (2005); Lee & Kim, (2008) and Neslin et al., (2006). The scholars found that the ease of access to products and services as well as ease of use were key factors influencing the acquisition of sustainable competitive edge. Wahab (2008) states that perceived ease of use especially for new technologies and products were the most important and central factors in influencing customer satisfaction and thus a competitive edge. This is similar to the findings of this study.

This study found that customers perceive ease of access and ease of use through ease of access to instructions on independent operation, nature of new product offerings and location of customer support centers. Similar to the findings of this study, Kushwaha and Shankar (2013) also found that the use of multiple delivery channels was key to enhancing competitive advantages for banks. Some of the strategies used to enhance ease of access include: use of Automated Teller Machines (ATMs), online banking channels including use of social media; therefore to keep their customers happy, banks needed to ensure widespread integration of their channels and services.

In addition, to ease of access and ease of use, the study found that the costs of accessing support services measured both in monetary terms and also regarding time spent was a key factor influencing the perception of convenience as a source of sustainable competitive advantage. The costs of using the services, the cost of accessing the services and the resources required to access the services were also important considerations. This is similar to the findings of Bulik (2004) who found that automation of customer service made it more cost effective both for the service provider and the customer. The convenience attributes of
ease of access and ease of use are related to the costs incurred in accessing the services (Bordean et al. 2006). Picher (2001) also similarly found that the cost of accessing and using support for a product is a major source of competitive advantage for any organization. Pichler (2001) cited the cost of support when using of credit cards in the United Kingdom as a key source of competitive advantage particularly in regards to potentially embarrassing payment scenarios. Unlike in the United Kingdom where the concerns for costs levied by service providers overshadowed convenience as a viable source of competitive advantage, MTSP customers in Nairobi County of Kenya exhibited peculiar nonchalance for costs levied and could happily be charged at premium levels for the convenience offered by product offerings. Convenience then acted as a key differentiator and thus an important source of sustainable competitive advantage.

5.4 Conclusions of the Study

5.4.1 Customer Service and Sustainable Competitive Advantage

This study concludes that the customer service and satisfaction is an important source of sustainable competitive advantage for MTSP in Nairobi County. In addition, the study concludes that some of the most important factors that enhance customer service and satisfaction are: the provision of multiple products and services, reduced costs, customer service levels, response to customer needs promptly (responsiveness), willingness to assist employees and having the best interest of the customer (empathy), courtesy of employees, knowledge ability of employees about organization products and services, perceived trust of the product (Assurance) and attention of complaints by the employees (complaints handling).

5.4.2 Network Quality and Sustainable Competitive Advantage

The study concludes a positive significant relationship exists between network quality and sustainable competitive advantage for MTSP in Nairobi County. Network quality was the second most important factor that influenced the acquisition of a sustainable competitive advantage for telecommunication companies in Kenya. Factors that enhance network quality include: customer satisfaction in the clarity of calls, speech quality, low levels of interruptions, ease of initiating calls, perceived security of the calls and networks, low levels of interruptions when in a moving object or vehicle and low levels of congestion on the network.
5.4.3 Convenience and Sustainable Competitive Advantage

The study concludes that a strong positive significant relationship exists between convenience and sustainable competitive advantage. Consequently, network convenience significantly enhances the acquisition of a sustainable competitive edge for telecommunication companies by acting as a key differentiator among the various MTSP’s in the County. The factors that enhanced network convenience for sustainable competitive advantage were: provision of employee support to customers, low access to customer supported, ease of access to instructions on how to use products and services, perceived security when using the services and products of the company, location of the customer support services close to the customers and short waiting periods for services delivery for the customers.

5.5 Recommendations of the Study

5.5.1 Recommendations for Improvement

5.5.1.1 Customer Service and Sustainable Competitive Advantage

Based on the finding that customer service and customer satisfaction are important factors that influence the acquisition of a sustainable competitive advantage, this study recommends that telecommunication companies in Kenya must continually invest in customer service and customer satisfaction to achieve a competitive advantage. Improving on customer service will require the mobile telecommunication companies to respond to the needs of the customers promptly, ensure continual staff development and training especially on products and services that the company offers and to conduct customer education awareness with the aim of building confidence and a sense of security in the company.

5.5.1.2 Network Quality and Sustainable Competitive Advantage

This study recommends that telecommunication companies must continually invest in network infrastructure to enhance the levels of customer satisfaction which will lead to a sustainable competitive advantage. This can be achieved by investing in the technical upgrade of hardware, software, employees and systems involved in service delivery to customers.
Investment in network infrastructure will lead to higher levels of call clarity, better network reception, improved speech quality and low levels of congestion and interruption on the network. This is key to enhancing a sustainable competitive advantage.

### 5.5.1.3 Convenience and Sustainable Competitive Advantage

Given that network convenience is a key source of sustainable competitive advantage in Nairobi County, it is necessary for the telecommunication companies to enhance network convenience factors such as customer support, ease of accessing customer support through service stations or information technology systems for customer support such as social media. Since most of the telecommunication companies have invested in social media customer support, it is important that as technology evolves they should similarly embrace new technologies that enhance customer support.

Secondly, telecommunication companies must invest in customer management systems at their service and retail stations to reduce customer waiting times when seeking support. In addition, mobile telecommunication companies must conduct massive customer education and awareness to enhance the ease of use of new products and services in addition to enhancing the ease of access to helpful instructions for customers.

### 5.5.2 Recommendations for Further Studies

This study recommends that future researchers could replicate this study in other Counties that do not share similar characteristics with the mainly urbanized Nairobi County in order to ascertain whether the study would yield similar findings using similar specific objectives. It would be of great interest to find out whether mobile customers in a rural setting would place similar importance to convenience given that they would naturally be less acclimatized to modern conveniences and instead prefer a more rustic, natural, and no frills existence.
REFERENCES


APPENDICES

APPENDIX I: INTRODUCTION LETTER

Kenneth Ngugi Njoroge,

United States International University- Africa,

P. O. Box 14634 -00800,

Nairobi, Kenya.

1st July, 2016

Dear Respondent,

RE: REQUEST FOR PARTICIPATION IN MY RESEARCH PROJECT

I am conducting research on “The effects of service quality on sustainable competitive advantage in the mobile telecommunication industry in Nairobi County” This is in partial fulfillment of the requirements of the Masters of Business Administration degree program at the United States International University - Africa.

I hereby request you to fill the attached questionnaire to your best knowledge and understanding. The information you provide will be treated with the utmost confidentiality and will only be used for academic purposes. Further if you wish to access a copy of the findings of the report I will gladly be able to avail this.

Thank you for your time and cooperation.

Kind regards,

Kenneth.
APPENDIX II: QUESTIONNAIRE

This questionnaire is designed to collect data on the effect of service quality on sustainable competitive advantage using the mobile telecommunication industry in Nairobi County as the case of the study. Please provide honest answers to the questions.

Section A: Background Information

1. What is your gender? □ Male □ Female

2. What is your age bracket?
   □ 15 - 25 years □ 26-35 years □ 36 - 45 years □ 46 years and above

3. What is your highest level of education?
   □ Primary □ Secondary □ College □ University

4. Do you have more than one mobile SIM card? □ No □ Yes

5. Which Mobile telecom's SIM card do you use most often? This is your primary mobile telecommunications service provider
   □ Airtel □ Safaricom □ Orange

6. In question 5 above which is your most preferred mobile service provider?.........................

7. Why? Give a brief explanation:
   ………………………………………………………………………………………………………
   ………………………………………………………………………………………………………
   ………………………………………………………………………………………………………

8. What is your constituency of residence in Nairobi County?
Section B: Customer Satisfaction

Please rate the following statements on your level of agreement or disagreement.

<table>
<thead>
<tr>
<th>Assessing your mobile telecommunications provider’s customer satisfaction</th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Neutral</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>9 I am satisfied with the service offering of my mobile phone service provider i.e multiple products or services</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>10 I am satisfied with the costs charged by my mobile phone provider</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>11 My mobile phone service provider levels of customer service makes me satisfied</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>12 Employees of my mobile phone service provider respond to my needs promptly</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>13 Employees are always willing to assist when facing service challenges</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>14 Employees are courteous when delivering services</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>15 Employees are knowledgeable about the products offered by the mobile phone service provider</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>16 I have complete trust in the employees of the service provider</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>17 Employees have my best interests when offering services</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>18 Employees attend to my complaints effectively</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

19. What other factors not listed above would greatly enhance the level of satisfaction with your mobile provider?

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........................................................................................................................................
........................................................................................................................................
........................................................................................................................................

69
Section C: Network Quality

Please rate the following statements on your level of agreement or disagreement.

<table>
<thead>
<tr>
<th>Assessing your mobile telecommunications provider’s network quality</th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Neutral</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>20 Good network quality keeps me satisfied with the mobile phone service provider</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>21 It feels secure when transacting over the networks of my service provider</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>22 My mobile service provider calls always go through</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>23 I have no trouble initiating a call with my mobile service provider</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>24 My mobile service provider has a low call interruption rate</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>25 The level of congestion in my mobile phone service provider's network is not significant</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>26 The speech quality experienced when using my mobile phone service provider is satisfactory</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>27 Initiating a call with my service provider takes a very short period</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>28 When in a moving vehicle calls from my mobile phone service provider are not interrupted</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>29 The additional services such as mobile money are very reliable</td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

30. Any other network quality issues that you may have noticed with your mobile provider?

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Section D: Network Convenience

Please rate the following statements on your level of agreement or disagreement.

<table>
<thead>
<tr>
<th>Assessing your mobile telecommunications provider’s network convenience</th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Neutral</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 2 3 4 5</td>
<td>1 2 3 4 5</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>31 I find using my mobile phone service provider convenient</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>32 Employees of my mobile phone service provider are willing to serve me at all times regardless of the hour</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>33 I can easily access my mobile service provider employees for support</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>34 I can easily use instructions on how to use services of the mobile service provider</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>35 New product offerings by mobile phone service provider are always easy to use</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>36 The cost of accessing customer support is low</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>37 My service provider introduces products that help in enjoying mobile services e.g. mobile airtime on credit</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>38 I feel secure when accessing support from my mobile service providers</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>39 Customer support services are located very far and I have to spend my resources to access them</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>40 There are very long waiting times before getting customer support</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

41. Are there any other ways not mentioned above that would greatly enhance the convenience with which your mobile phone provider offers services?  
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........................................................................................................................................................................
Section E: Service Quality and Sustainable Competitive Advantage

Please rate the following statements on your level of agreement or disagreement.

<table>
<thead>
<tr>
<th>Assessing service quality factors and mobile service provider competitive advantage</th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Neutral</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>42 My choice of mobile phone service provider is influenced by the cost of their services</td>
<td>1 2 3 4 5</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>43 My choice of mobile service provider is influenced by the individual attention given to customers by their employees</td>
<td>1 2 3 4 5</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>44 My Choice of mobile service provider is influenced by how closely they meet my needs</td>
<td>1 2 3 4 5</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>45 My choice of mobile service provider is influenced by how well my complaints are handled</td>
<td>1 2 3 4 5</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>46 I chose my preferred mobile service provider because they have the best network quality</td>
<td>1 2 3 4 5</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>47 The network quality of my mobile service provider is always reliable</td>
<td>1 2 3 4 5</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>48 The call clarity experienced when making a call with my mobile service provider is good</td>
<td>1 2 3 4 5</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>49 My mobile phone service provider has a network with a wide geographical reach</td>
<td>1 2 3 4 5</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>50 I can easily access customer support facilities for my mobile service provider</td>
<td>1 2 3 4 5</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>51 The additional services provider by my mobile service provider e.g. mobile money are convenient</td>
<td>1 2 3 4 5</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>52 I can easily access instructions on how to resolve problems from my mobile service provider</td>
<td>1 2 3 4 5</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>53 I feel secure when sharing information with my mobile phone service providers employees</td>
<td>1 2 3 4 5</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

54. Are there any other ways not mentioned above that would greatly enhance your preference for your mobile phone provider services?

........................................................................................................................................................................
........................................................................................................................................................................

Thank You.
### APPENDIX III: SAMPLE FRAME

<table>
<thead>
<tr>
<th>Sub-County</th>
<th>Demographic Population</th>
<th>Sample Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>Westlands</td>
<td>176,689</td>
<td>27</td>
</tr>
<tr>
<td>Dagoretti North</td>
<td>181,365</td>
<td>28</td>
</tr>
<tr>
<td>Dagoretti South</td>
<td>178,691</td>
<td>27</td>
</tr>
<tr>
<td>Langata</td>
<td>176,314</td>
<td>27</td>
</tr>
<tr>
<td>Kibra</td>
<td>178,284</td>
<td>27</td>
</tr>
<tr>
<td>Kasarani</td>
<td>202,284</td>
<td>31</td>
</tr>
<tr>
<td>Roysambu</td>
<td>200,984</td>
<td>31</td>
</tr>
<tr>
<td>Ruaraka</td>
<td>192,620</td>
<td>29</td>
</tr>
<tr>
<td>Embakasi North</td>
<td>181,388</td>
<td>28</td>
</tr>
<tr>
<td>Embakasi South</td>
<td>201,042</td>
<td>31</td>
</tr>
<tr>
<td>Embakasi Central</td>
<td>185,948</td>
<td>28</td>
</tr>
<tr>
<td>Embakasi East</td>
<td>163,858</td>
<td>25</td>
</tr>
<tr>
<td>Embakasi West</td>
<td>187,020</td>
<td>29</td>
</tr>
<tr>
<td>Makadara</td>
<td>160,434</td>
<td>25</td>
</tr>
<tr>
<td>Kamukunji</td>
<td>211,991</td>
<td>32</td>
</tr>
<tr>
<td>Starehe</td>
<td>166,041</td>
<td>25</td>
</tr>
<tr>
<td>Mathare</td>
<td>193,416</td>
<td>30</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>3,138,369</strong></td>
<td><strong>480</strong></td>
</tr>
</tbody>
</table>

Demographic Data Source: (Kenya National Bureau of Statistics (KNBS), 2009)