

**DELIVERY OF SERVICE QUALITY IN THE MOBILE TELEPHONY
INDUSTRY IN KENYA**

BY

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DECLARATION

I, Esther Mathei Kiilu, hereby declare that this project is my own work and effort and that it has not been submitted anywhere for any award.

Signature: Date:

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DEDICATION

This research project is dedicated to my dear family. To my parents my late Dad Kiilu Maingi and my mum Mrs Kiilu. To my three brothers and sister for their consistent support and sacrifices they made throughout my education.

ACKNOWLEDGMENT

First and foremost I thank the Almighty God for his countless blessings that has seen me through my studies.

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To the customers of the four mobile telecommunication providers who willingly responded to the questionnaires of the project I thank them sincerely. Without their input, it would not have been possible to carry out the research

I thank all my friends, some of whom I met during my MBA course, who have provided me with valuable encourage and motivation.

I finally wish to thank my family for providing me with encouragement throughout the period I was conducting this research.

ABSTRACT

Quality, in the today's business environment has been recognized as a sustainable source of competitive environment. Due to the competitive nature of the telecommunication industry in Kenya, it has become paramount that the network providers consider service quality as a means of gaining and retaining market share. This research project sought to find out what is the level of service quality delivery in the industry and what dimensions of quality do the customers consider as most important and thus establish the focus that the providers should take. The research was carried out through a descriptive research design. The population of the study comprised of the mobile phone users in Kenya. Information was gathered from the customers because this study's aim was investigating on the service quality from external customers' perspectives. The rank order of service dimensions indicated that network quality is the most preferred dimension by customers in the industry, followed by responsiveness, reliability, assurance, empathy and tangibles in that order. The order of priority does not mean that providers can focus only on some dimensions; all the dimensions have to be provided. But provider's first and best efforts should follow in the order. The study further revealed that Essar Telecom (Yu), the smallest network provider by market share, is ranked the top by its customers in service quality delivery as compared to the other networks. It is closely followed by Safaricom Ltd, Airtel networks and Telkom Kenya (Orange) in that order.

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LIST OF ABBREVIATIONS

GDP	Gross Domestic Product
KWS	Kenya Wildlife service
CEO	Chief Executive Officer
CCK	Communication Commission of Kenya
KPI	Key Performance indicators
ICT	Information and communications technology
SMS	Short Message System
KES	Kenya shilling
SPSS	Statistical Package of Social Scientist

CHAPTER ONE: INTRODUCTION

1.1 Background

In today's business environment, the attention paid to service quality issues, and the increasing number of academic publications concerning service quality (Leung, 2006) apparently shows the drive for quality in products and services. Service quality has been recognized as having the potential to deliver strategic benefits, such as improved customer retention rates, whilst also enhancing operational efficiency and profitability (Ombati,2007), and many organizations have realised that managing and delivering quality is the way of managing the future (Oakland, 2000).

Service quality has become an important factor for growth, survival and success (Juneja et al., 2011). Its adherents claim that it has steered to improved products and services, reduced costs, more satisfied customers and employees, and improved bottom line - financial performance. In Kenya, a few service organizations have emphasised and began managing quality. Kenya wildlife service (KWS), one of the successful institutions in the country continues to deliver excellent services as measured by the SERVQUAL dimensions of quality scale (Rosslyne, 2011).

There has been increased acceptance, and emphasis on service quality as a tool to gain a competitive edge in the last decade. For service providers, customers care most about service quality (Arlen, 2008). The manner in which quality has developed into the most important competitive weapon cannot thus be ignored, and many organizations have realised that managing quality is the way of managing the future (Oakland, 2000).

1.1.1 Service Quality

Service quality can be seen as the extent to which a service meets customer's needs and expectations (Ombati, 2007). Service quality can thus be defined as the difference between customer expectations of service and perceived service. If expectations are greater than performance, then perceived quality is less than satisfactory and hence customer dissatisfaction occurs (Parasuraman et al., 1985). The best performing and the most competitive service organizations in the world like Qatar airways, Virgin Atlantic, Google Inc, Mac Donald's seem to focus on one thing; service quality (www.prenhall.com).

McDonald's has a reputation for high-quality service. Its food preparation process up to how a meal is served to the customers to how courteous employees are to the customers (www.mcdonalds.com) to promptly and quickly attending to the customers clearly indicates a commitment to quality. This commitment has been attributed to MacDonald's continued success in terms of profitability and market growth. (www.prenhall.com). Restaurant managers meet with customer groups on a regular basis and use questionnaires to identify quality "defects" in its operation. It monitors all phases of its process continuously from purchasing to restrooms to restaurant decor and maintenance in a total quality approach. It empowers all employees to make spot decisions to dispose of unfresh food or to speed service (www.prenhall.com). The McDonald's work force is flexible so that changes in customer traffic and demand can be met promptly by moving employees to different tasks. Food is sampled regularly for taste and freshness. Extensive use is made of information technology for scheduling, cash register operation, food inventory, cooking procedures, and food assembly processes-all with the objective of faster service.

Qatar airways, which has consistently been ranked number one in the global airline industry in the prestigious Skytrax industry audit (www.qatarairways.com) is synonymous for 5star airline experience. The airline focuses on offering unmatched levels of service excellence and delighting the customer.

1.1.2 Determinants of Service Quality in Telecommunication Industry

There are several instruments of measuring service quality with the SERVQUAL scale being the widely used instrument for measuring service quality. The scale as developed by Parasuraman (1985) identifies five widely accepted service quality dimensions; Reliability, Responsiveness, Assurance, Empathy, Tangibles that define service quality (Tanomsakyut,2010). In this study, six service quality dimensions Reliability, Responsiveness, Assurance, Empathy, Tangibles and Network Quality will be used. These dimensions were identified by Leung (2006) for mobile telecommunication industry on a study carried out in Hong Kong by modifying the popular SERVQUAL scale of service quality for mobile telecommunication industry (Leung, 2006). The study established that network quality is another important quality-related factor that drives customer perceived service quality in mobile network services industry.

In order to improve the service quality more successfully, it is necessary to understand the components of service quality. Quality dimensions are the fundamental and essential basis of theoretical and empirical studies concerning service quality. Using the appropriate service quality dimensions is the best way to study and improve the service quality of a specific industry (Leung, 2006).

1.1.2 Kenya's Mobile Telecommunication Industry

The mobile telecommunication industry in Kenya is comprised of four firms; Safaricom Limited, Airtel Networks Kenya, Essar Telecom Kenya (Yu) and Telkom Kenya Ltd (Orange). These firms offer a wide range of services which include voice, data, cloud computing, mobile money transfer and mobile money banking. Safaricom Kenya Limited has the largest market share in an intensively competitive market of 64.5% as at December 2012. The 2nd largest operator by market share is Airtel at 16.9%. This is followed closely by Essar (Yu) and Orange at 10.5% and 8.1% respectively (www.cck.go.ke).

The contribution of the mobile sector to the Kenyan economy represents over 5.6% of GDP and up to a further 1.9% from Intangibles (Deloitte LLP, 2011). In 2011, the mobile communications industry contributed over KES 300billion and up to a further KES 100billion from intangible benefits to consumers. Additionally, these estimates indicate that in 2011 the mobile communication industry as a whole employed almost 250,000 people in Kenya. The industry thus contributes significantly to the Kenyan economy.

The mobile telecommunication industry emerged in Kenya in 2000, when two operators, Safaricom Ltd and Kencell (now Airtel Networks Kenya) entered the Kenyan market. Since then competition has increased with the entry of two additional Mobile Network Operators in 2008; Essar Telecom Kenya (Yu) and Telkom Kenya Ltd (Orange). Competition among the mobile network operators in Kenya is fierce. The four industry players are known to fight fiercely, through marketing strategies to gain or defend their market shares. On August 18, 2010 Zain (now Airtel Networks Kenya) shocked the local telecoms industry by cutting its calling rates by 75 per cent, in what has turned into a two-year bloody and intensive price war that reverberated across the country (Okuttah, 2011) A day later, Yu, a mobile brand owned by Essar — a conglomerate from India — followed the trend and cut its tariffs by 75 per cent too. The price cut was heavily advertised in both print and broadcast media

The industry continues to attract investors from around the globe. Thus the existing mobile operators are prone to competing with global firms who may invest in the country. Already a 5th global firm has expressed interest in setting up operations in the country. Viettel Group, a state-owned mobile network operator headquartered in Hanoi, Vietnam, now targets Kenya as its next investment destination, something expected to stir up competition in the country's mobile industry already occupied by four mobile operators (Ndone, 2012). With the Konza Techno city business process outsourcing project, which has been envisioned to be a world class technology hub by the government of Kenya, more entrants in the industry are expected.

In a quality report published by the industry regulator the Communication Commission of Kenya (CCK) on 15th December 2012, it was reported that the two leading mobile operators, Safaricom and Airtel had failed to meet their customers' expectations for high quality services, according to the CCK's assessment (www.cck.go.ke). Indeed in July 2013, CCK had threatened not to renew the license of the leading mobile telecommunication provider, Safaricom after its 10 year license issued in 1999, expired on concerns of the operator's consistent failure to meet the quality standards (Okuttah, 2013). With a larger number of mobile network operators, more choice is available in the mobile telecommunication market; Mobile telecommunication service providers looking to maintain or grow their position in the marketplace must provide high-quality service with ever-increasing efficiency. Kenyan mobile telecommunication sector, being the most competitive, managers in these firms should consider quality as a means to gain competitive advantage both locally and globally. By knowing which attributes of service quality leads to customer satisfaction and perception of quality, then customer retention can be maximized and market share can be maximized.

1.2 Statement of the Problem

In today's competitive environment, quality has become the most important and sustainable driver of competitive environment (Oakland, 2000). Indeed (Powell, 1995) concluded that quality has become as pervasive a part of business thinking as quarterly financial results. The best performing service organizations in terms of profitability and market share like Qatar airways, Mac Donald's are synonymous for the excellent quality of their services.

As is outlined in this research, the mobile telecommunication industry in Kenya is fiercely competitive. Yet the mobile operators by and large are not delivering quality services to their customers. In a report published by the industry regulator the CCK on 15th December 2012, it was reported that the two leading operators Safaricom Ltd and Airtel networks had failed to meet their customers' expectations for high quality services

according to CCK's assessment (www.cck.go.ke). Undoubtedly, due to the intense competition among the companies in the industry, a more focused approach to building up a company's strengths and unique competitive edge is indispensable for survival in the market.

A number of studies have been done on service quality in telecommunication sector in other parts of the world. Leung (2006) conducted a study on service quality and behavioral intentions in Hong Kong where he concluded that network quality as a dimension of quality is important to customers in evaluating service quality along with the established five SERVQUAL dimensions. Tanomsakyut (2010) on a study on mobile telecommunication in Thailand established that concept development process for new service quality measurement system for mobile telecom industry in Thailand are a critical factor on service delivery.

In Kenya several studies have been done on service quality in other industries. Ombati (2007) in a study on service quality in the Kenyan Banking industry concluded that technology is a key determinant on service quality delivered by Kenyan banks.

Manani (2012) in a study on service quality at Kenya airways established that Empathy and reliability are the most crucial dimensions of quality that lead to customer satisfaction in the airline industry. Yator (2012) in a study on service quality in the hospitality industry established that in the case of Lake Bogoria spa, the spa was rated highly on tangibility and reliability dimensions.

However since the emergence of the telecommunication industry in Kenya in 2000, no study has been done on the service quality delivered by the industry. This study aims at expanding the research stream specifically into the mobile telecommunication industry in Kenya by investigating the service quality delivered by the four mobile network operators in Kenya and establishing the dimensions of service quality that the mobile operators need to improve on.

And as a result answer the questions: What is the level of service quality delivered by the telecommunication industry in Kenya? What are the critical dimensions of service quality that are important to mobile telephone users?

1.3 Research Objectives

1. To determine the level of service quality delivered by the telecommunication industry in Kenya using the six dimensions of quality.
2. To determine service quality ranking of the mobile service providers
3. To establish the determinants of quality that are important to customers in mobile telecommunication industry.

1.4 Value of the Study

This study will fill the knowledge gap occasioned by there being no study investigating on service quality delivery in the telecommunication industry in Kenya and the importance of the service quality dimensions to the customers. Scholars and future researchers will therefore use the findings to enhance relevant arguments using the findings of this paper concerning service quality.

The findings from this study can provide decision makers in the four mobile telecommunication providers in Kenya with valuable insights on ways of enhancing service quality to induce greater customer satisfaction which contributes to customer loyalty and increased market share thus profitability. It will be important for proactive managers in these firms to understand the key dimensions on quality that the customers use to rate quality and how they perform on each of the dimensions so as to determine the dimensions to improve on in order to gain a competitive advantage in the market on the basis on the basis of quality. To an extent, the study will also be useful to the general service providers in Kenya to improve service delivery on the basis of the service quality dimensions.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

This chapter reviews the literature on the key aspects of this research, which are service quality and mobile telecommunications industry in Kenya. The concept of services is also reviewed to establish the uniqueness of services as compared to goods.

2.2 Services

Services can be defined as the activities, benefits and satisfactions, which are offered for sale or are provided in connection with the sale of goods. Services include all economic activities whose output is not a physical product or construction, is generally consumed at the time it is produced, and provides added value in forms (such as convenience, amusement, timeliness, comfort or health) that are essentially intangible concerns of its first purchaser (Wolak et al, 1998). Conceptual characteristics have been used by scholars to differentiate between products and services thus to the characteristics of services describe the concept of services.

2.2.1 Characteristics of Services

Services are defined as intangible and not easily duplicated (Khatibi et al., 2002).

The difference between goods and services makes the quality of services more complicated to be conceptualized. (Leung, 2006) also stated that it is more difficult for consumers to evaluate service quality than goods quality. The four characteristics of services (Williams & Buswell, 2003), intangibility, inseparability, heterogeneity, and perishability, must be acknowledged in order to fully understand service quality.

Intangibility refers to the non-physical nature of services, which cannot be directly seen, tasted, felt, or touched in the same way that goods often can (Leung, 2006). It is hard for a customer to evaluate services without tangible clues. Therefore, it is important for managers to present the intangibles as tangible as possible in order to give clues to

service quality, which can help customers assess the quality of the experience prior to the visit and reduce risk (Tanomsakyut, 2010).

Heterogeneity of services is due to the fact that most service delivery processes involve high labor content; therefore, spontaneity from front-line employees is possible (Leung, 2006). This results in inconsistency of service production and quality control (Surechchandar et al., 2001).

Unlike tangible goods, the production and consumption of services are usually inseparable. The inseparability of customers from production leads to two concepts. Firstly, service delivery becomes a series of acts and takes the form of performance (Normann, 2000). Second, customers are present in most of the production processes of services (Leung, 2006). Service quality is, thus, harder to control because customers are involved in the delivery process. Consumers have a great impact on the quality of services delivered.

Perishable-One of the main differences between goods and services is that it is impossible to store, resell, return, save, or transport a service (Normann, 2000). It is necessary to accurately assess customer demand for a particular service (Williams & Buswell, 2003). Management becomes difficult, especially when purpose-built facilities are involved, because customer demand varies rapidly at different time. For example, in peak seasons planes are generally at full capacity, but in low seasons seats are not fully filled and the vacant seats cannot be kept and sold in future. Due to the characteristics of services, service quality is more difficult for consumers to evaluate than goods quality. On top of this, service quality is not evaluated solely based on the service outcome, but also based on the process of service delivery (Surechchandar et al., 2001), which makes the evaluation more complicated.

2.3 Service Quality Dimensions

In order to improve the service quality more successfully, it is necessary to understand the components of service quality. Quality dimensions are the fundamental and essential basis of theoretical and empirical studies concerning service quality. Using the appropriate service quality dimensions is the best way to study and improve the service quality of a specific industry (Leung, 2006).

2.3.1 Evolution of Service Quality Dimensions

The evolution of service quality dimensions as a means of measuring service quality began with Lehtinen and Lehtinen in 1982 when they suggested that service quality consists of “interaction”, “physical” and “corporate” quality (Juneja et al., 2011). Interaction quality derives from the interactions between contact personnel and customers as well as between customers themselves. Physical quality includes the tangible aspects associated with service, such as facilities and appearance of contact personnel. Corporate quality includes the image, profile, and reputation of the service provider (Leung, 2006). Besides, Lehtinen and Lehtinen (1982) further stated that service quality can be measured with the outcome of services and the process of service delivery. The two dimensions, Lehtinen and Lehtinen urged, can be judged by the customers separately at different times. While process quality is evaluated during the service delivery process, outcome quality is evaluated after the service is performed and consumed (Juneja et al., 2011)

In 1985 Parasuraman, Zetham and Berry proposed ten dimensions of service quality, viz., reliability, responsiveness, competence, access, courtesy, credibility, security, understanding customers and tangibles (Tanomsakyut, 2011). This was named as the SERVQUAL model. These dimensions were later reduced to five, namely tangible, reliability, responsiveness, assurance and empathy (Juneja et al., 2011)

Much of the earlier work accepted the content measured by the SERVQUAL instrument. Following criticism of this model on the basis that SERVQUAL only reflects the service delivery process (Kang & James 2004), another model of measuring service quality (i.e.

Gronroos' model) was developed suggesting that service quality consists of three dimensions, technical, functional and image, and that image functions as a filter in service quality perception (Juneja et al., 2011)

Technical quality is what the customer gets in the service delivery process, which is similar to the physical quality developed by Lehtinen and Lehtinen. Functional quality corresponds to the expressive performance of a service (Leung, 2006). It is about how the customer gets the technical quality, which is similar to the interactive quality developed by Lehtinen and Lehtinen. As a matter of fact, the functional dimension is perceived in a subjective way while the technical dimensions can be perceived more objectively. Moreover, Gronroos (1984) suggested that functional quality is more important to the perceived service than the technical quality because technical quality is difficult to differentiate.

Corporate image is the result of how the consumers perceive the firm. As the most important part of a firm, which its customers see and perceive, is its services and the expectations of the consumers are influenced by the company image, Gronroos (1984) concluded that the corporate image can be expected to be built up mainly by the technical quality and the functional quality (Juneja et al., 2011).

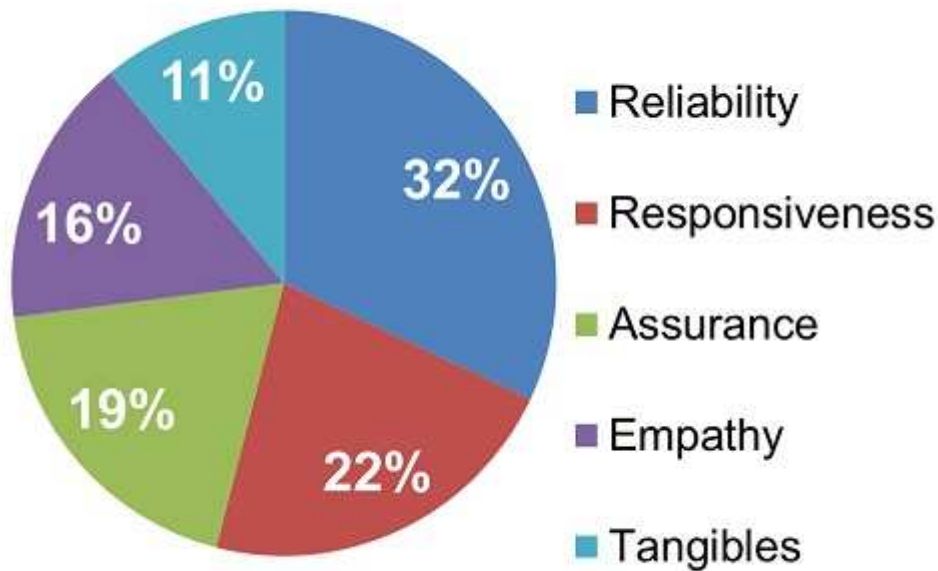
2.3.2 SERVQUAL Quality Dimensions

The 5 dimensions of quality as per SERVQUAL model have varying importance to the customers (Arlen, 2008). Service providers need to know which dimensions to focus on to avoid majoring in the less important ones (Tanomsakyut, 2011). At the same time they can't focus on only one dimension and let the others suffer. SERVQUAL research by (Arlen, 2008) showed dimensions' importance to each other by asking customers to assign 100 points across all five dimensions.

Reliability refers to the ability to perform the promised service dependably and accurately (Leung, 2006). Do what you say you're going to do when you said you were going to do

it. Customers want to count on their providers. They value that reliability. Reliability is the most important of the service dimensions (Arlen, 2008).

Fig 2.1 SERVQUAL dimensions and their importance to customers



Adapted from www.serviceperformance.com

Tangible refers to appearance of physical facilities, equipment, personnel and communication materials (Tanomsakyut, 2011). Even though this is the least important dimension, appearance matters. Just not as much as the other dimensions (Arlen, 2008). Service providers will still want to make certain their employees appearance, uniforms, equipment, and work areas on-site (closets, service offices, etc.) look good. Qatar airways, a service provider articulate in excellent service is known for tangibility (www.qatarairways.com). The airline crew is meticulously trained on appearance which is expected to be perfect at all times.

Responsiveness refers to willingness to help customers and provide prompt service (Leung, 2006). Respond quickly, promptly, rapidly, immediately, instantly. As shown in

the chart above, responsiveness is more than 1/5th of their service quality assessment. Its important customers feel providers are responsive to their requests. Not just emergencies, but everyday responses to dimensions (Arlen, 2008).

Assurance refers to knowledge and courtesy of employees and their ability to convey trust and confidence (Tanomsakyut, 2011). Service providers are expected to be the experts of the service they're delivering. It's a given. SERVQUAL research showed it's important to communicate that expertise to customers (Arlen, 2008).

If a service provider is highly skilled, but customers don't see that, their confidence in that provider will be lower. And their assessment of that provider's service quality will be lower (Leung, 2006). (Arlen, 2008) suggests that assurance can be achieved by raising customer awareness of organization's competencies. He notes that service providers must communicate their expertise and competencies to the customers. This can be done in many ways that are repeatedly seen by customers, such as: Display industry certifications on patches, badges or buttons worn by employees, Include certification logos on emails, letters & reports, Put certifications into posters, newsletters & handouts. By communicating competencies, providers can help manage customer expectations. And influence their service quality assessment in advance (www.serviceperformance.com).

Empathy refers to caring and individualized attention an organization provides to its customers (Tanomsakyut, 2011). Services can be performed completely to specifications. Yet customers may not feel provider employees care about them during delivery. And this hurts customers' assessments of providers' service quality (Arlen, 2008).

2.4 Network Quality as a Service Quality Dimension

In 2006, a study carried out by Leung developed a service quality dimension for the mobile network services industry in Hong Kong (Leung, 2006). The study investigated the service quality of the six networks operators in Hong Kong and determined the determinants of service quality in the industry.

The study concluded that in addition to the five popular SERVQUAL dimensions; a sixth dimension of Network Quality was an important quality-related factor that drives

customer perceived service quality in mobile network services industry. Network Quality is salient in determining both overall service quality and customer satisfaction (Leung, 2006). It is sensible because transmission is the core services provided by network operators and the main reason for consumers using mobile phones.

The CCK is mandated by Section 23 of the Kenya Information and Communication Act Cap to ensure provision of good quality services by licensed telecommunication operators and service providers (www.cck.go.ke). In compliance the CCK provides yearly reports on the network quality of the mobile operators. The assessment on network quality is based on 8 Key Performance Indicators (KPIs) that were adopted in 2008/09 after an elaborate and exhaustive consultative process which came up with the parameters indicated below;

No.	KPI
1.	Call Set Up Success Rate (CSSR)
2.	Completed Calls
3.	Call Drop Rate
4.	Call Block Rate
5.	Speech Quality
6.	Call Set Up Time
7.	Handover Success Rate
8.	Rx Lev

Adopted from www.cck.go.ke

2.5 Service Quality and Competitiveness

Whatever type of organizations that exist, competition is rife. Many researchers remain convinced that of all the competitive elements of quality, delivery and price, quality has become strategically the most important competitive weapon (Oakland, 2000). Delivering quality service is now considered an essential strategy for success and survival in today's competitive environment (Leung, 2006). The considerable interest in service quality by

practitioners results from the belief that this has a beneficial effect on the performance for the firm. Service quality is even more significant in the service sector because it works as an antecedent of customer satisfaction (Rahaman et al., 2011) and customer satisfaction finally contributes to the profit and other financial outcomes of the organizations (Leung, 2006).

(Tanomsakyut, 2010) suggested that a firm cannot gain the competitive advantage in today's business environment without delivering high quality service. In his study on service quality measurement for mobile telecoms in Thailand, he concluded that all organizations needed to focus on service encounter because it is the critical element in overall performance and evaluation of service experience of customers.

The importance of quality as a competitive weapon in today's business environment is apparent. The most successful service organizations in the world are synonymous for the excellent quality of their services. Indeed it appears apparent that quality is their competitive weapon. Fly emirates a world 5 star airline carrier is synonymous for quality service. The airline formed in 1985, states that their goal is quality, not quantity (www.flyemirates.com). The airline has recorded an annual profit in every year since its third in operation and it attributes this to continually striving to provide the best service in the industry (www.flyemirates.com).

2.6 Growth of Mobile telecommunication in Kenya

The industry emerged in 2000, when two operators, Safaricom and Kencell (now Airtel) entered the Kenyan market (Okuttah, 2011). In 2004, Kencell was bought by Sudanese Mo Ibrahim, who changed its name to Celtel (Africa Business, 2011). Kuwait's Zain Telecom later bought out the Celtel Group and a new name came in – Zain. Around this time the other two players, Yu and orange entered the market. In 2010, Indian telecoms giant Bharti Airtel bought out Zain for \$8.3billion and rebranded it to Airtel (Okuttah, 2011). According to www.kenyarep-jp.com in 2000, about 180,000 Kenyans had access to a mobile phone. By the end of 2006 that figure had grown to 7.3 million people - an increase of more than 4,000 percent. At the end of Quarter 2 of the 2012/13 financial

year, a total of 30.7 million subscribers were registered on the mobile network representing a marginal growth of 1.0 percent from the previous quarter (www.cck.go.ke).

Mobile subscriptions per operator

Name of operator	No. of subscribers as of December 2012	%
Safaricom Limited	19,814,245	64.5%
Airtel Networks Kenya	5,205,279	16.9%
Essar Telecom Kenya (Yu)	3,227,272	10.5%
Telkom Kenya Ltd (Orange)	2,484,958	8.1%
Total	30,731,754	100%

Adapted from www.cck.go.ke

Safaricom Kenya Limited continues to have the largest market share of 64.5% as at December 2012. The 2nd largest operator by market share is Airtel at 16.9%. This is followed closely by Essar (Yu) and Orange at 10.5% and 8.1% respectively (www.cck.go.ke).

The fast-growing mobile sector is characterized by competition between two operators: Safaricom, a 60/40 percent joint venture between the government and its people and Britain's Vodafone; and Airtel, a subsidiary of Bharti Airtel (Okuttah, 2011). Kenya's internet sector has managed to grow considerably over 10 years with what started as a handful of dial-up modems in 1995 evolving into a dynamic industry with numerous internet hosts, nearly 100 licensed internet service providers (ISPs) and roughly 2.7 million Internet users in the country. The mobile telecommunication providers also provide internet services to customers (www.cck.go.ke).

Kenya is the innovator of mobile money transfer. The mobile product was launched in April 2007, following a student software development project from Kenya (Jack et al., 2010). Safaricom launched a new mobile phone based payment and money transfer service, known as M-Pesa (www.safaricom.co.ke). The service allows users to deposit

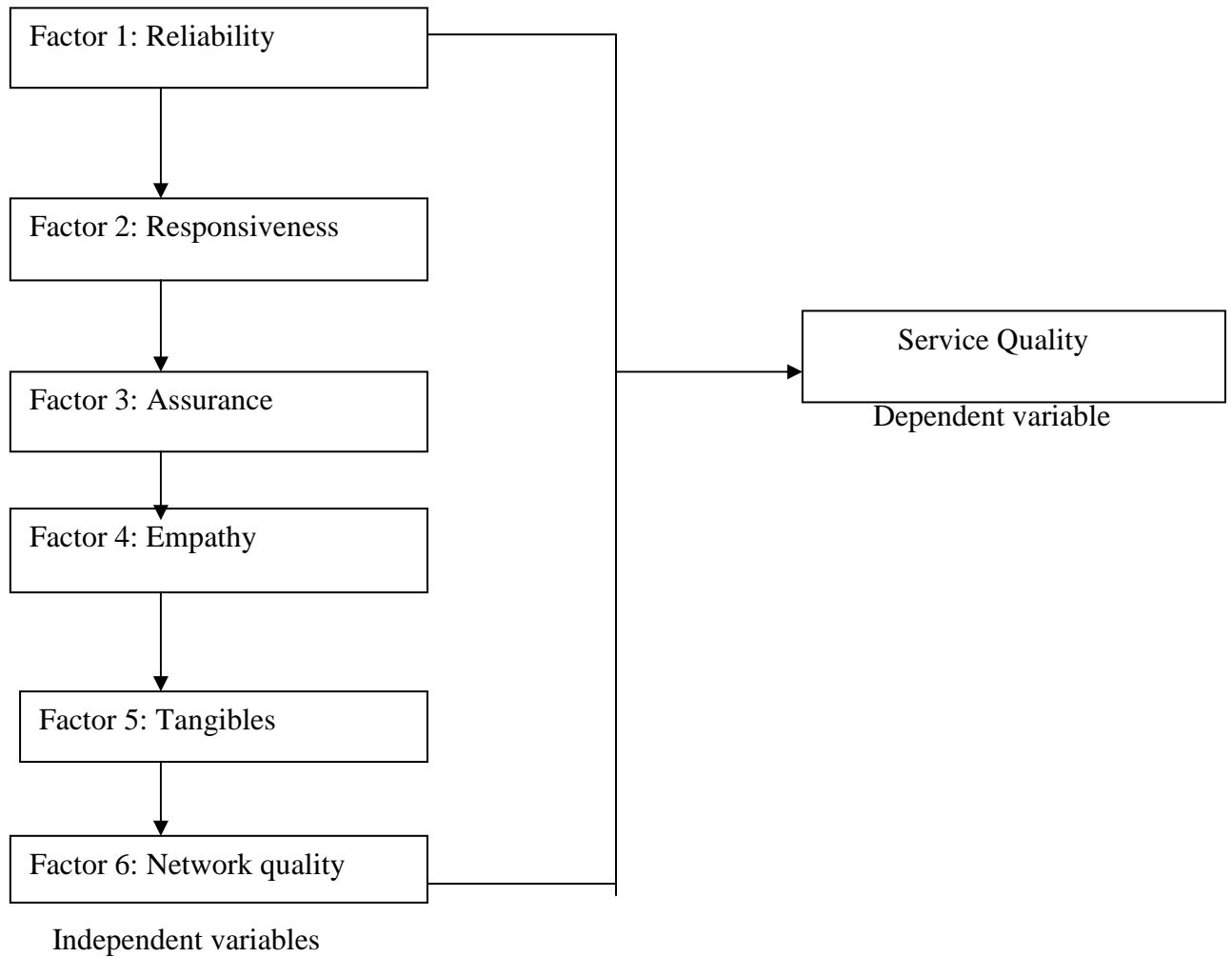
money into an account stored on their cell phones, to send balances using SMS technology to other users (including sellers of goods and services), and to redeem deposits for regular money. Users are charged a small fee for sending and withdrawing money using the service. M-Pesa has spread quickly, and has become the most successful mobile phone based financial service in the developing world (Jack, et al., 2010). Since this innovation by Safaricom, the other network operators in the country have developed a similar product which allows their customers to send and receive money using their mobile phones. Airtel's has named its product Airtel money with Yu's being known as Yu cash and Orange's being known as Orange money. By December 2012, a stock of about 21 million people had subscribed to mobile money transfer (www.cck.go.ke).

2.7 Summary of literature

The literature review has provided clarity into the nature of services and service quality dimensions which are the components of service quality. The literature has explained the SERVQUAL quality dimensions and their importance to customers and has reviewed that in the telecommunication sector, network quality is a dimension salient in determining service quality. Further the literature reviewed affirms that service quality is a significant source of competitive advantage. In addition the literature describes the growth of the telecommunication industry in Kenya since its emergence in 2000. However the literature does not provide the state of service quality delivery in the competitive telecommunication sector in Kenya.

2.8 Conceptual Framework

In this study, the service quality dimensions: Reliability, Responsiveness, Assurance, Empathy, Tangibles and network quality (Leung, 2006) are identified as the independent variable. Service quality is the dependent variable.



The independent variables represent the six service quality dimensions that consumers use to rate service quality in the telecommunication sector. The dependent variable, service quality is dependent on the performance of the firms in industry on each of the independent variables subject to customers' perception.

CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Research Design

This study is a descriptive study. The descriptive study design is chosen where the research will require description of an object or phenomena. Descriptive study involves collection of data in order to test hypothesis or answering research questions concerning the status of the subject in the study. The intention of the study was to investigate on the service quality delivered by the four mobile network operators in Kenya as measured using six service quality dimensions: Reliability, Responsiveness, Assurance, Empathy, Tangibles and Network Quality. This method is appropriate for establishing the service quality for each of the four mobile operators using the six service quality dimensions. Similar studies that have successfully used this research design are; Leung (2006), and Ombati (2007).

3.2 Population

This study targeted the mobile telecommunication industry in Kenya. For the purpose of this study, the population of interest was the 30.7 million mobile phone users in Kenya. Information was gathered from the customers because this study's aim was investigating on the service quality from external customers' perspectives.

3.3 Sample Design

The sample design used in this study was the stratified random sampling method. The population was categorized into four strata; Safaricom, Airtel, Yu and Orange. After categorization, random sampling under each category was done. The focus on respondents was the mobile phone users within Nairobi's CBD with a keen focus on the customer service centers of the firms for ease of accessibility. The choice of Nairobi CDB was due to presence of high number of people that are likely to be using the services (Voice, data, cloud) of the four mobile operators compared to other areas, and thus captures the viewpoints of a broad cross section of mobile phone users. Due to time and resource constraints, the specific sample size chosen is 100 mobile phone users and

therefore 100 questionnaires were administered stratified in proportional to the total subscriber base as follows;

Network	Number	%
Safaricom	64	64%
Airtel	17	17%
Yu	11	11%
Orange	8	8%
Total	100	100%

3.4 Data Collection

Primary data was collected using structured, closed ended questionnaires (see Appendix 1) were administered. Closed ended Questionnaires provide consistency in the way survey is conducted (Hague et al., 2004). The use of a standardized questionnaire means that the responses from a large number of individuals can be handled with considerable ease, as there is no need for further interpretation and analysis (Leung, 2006). The questionnaire consisted of two parts. Part one dealt with general information on the participants. Part two sought information on the service quality dimensions of the telecommunication network operators as perceived by the customers. For each of the quality dimension, comprehensive listings on service quality attributes were developed based on the literature in the past. The questions were presented in the form of statements on a five point likert scale (1-5) for respondents to rank statements that describe the service quality delivered by their telecommunications network provider on the six dimensions of quality used.

3.5 Data Analysis

After the data was collected, it was analysed using SPSS and by descriptive statistics such as means, median and standard deviations and presented in tables. The analysis captured the dimensions of quality per network operator. Factor analysis was used to determine the relative importance of the factors viewed as most important to customers in the telecommunication industry.

CHAPTER FOUR: DATA ANALYSIS, RESULTS AND INTERPRETATIONS

4.1 Introduction

This chapter presents the results of data analysis. The response rate was 100% in all the strata. The data was analyzed using SPSS and the results are presented as follows; Section 4.2 presents performance of service quality of each mobile telecommunication sector on each of the six dimensions; Reliability, Assurance, Empathy, Tangibles, Network Quality; Section 4.3 represents the rankings of the mobile telecommunication providers as measured .Section 4.4 represents the determinants of quality that most important as ranked by the customers. Section 4.5 discusses the findings.

4.2 Service Quality in the telecommunication industry

The respondents were asked to rate their mobile network operator on each of the dimensions on a scale of 1-5 with several variables of each dimension. The data collected for individual mobile operators was analysed further using each of the quality dimensions index to obtain the aggregate performance of all the operators in the industry. The results are shown in the table below;

Table 1: Service quality delivery in the telecommunication industry

	Reliability	Responsiveness	Assurance	Empathy	Tangibles	Network Quality	Service Quality Level	%
SAFARICOM	3.3846	3.0068	3.9942	3.4865	4.0238	3.1420	3.506317	70%
AIRTEL	3.4000	3.3203	3.6875	3.2429	3.7708	3.1563	3.429633	69%
Yu	3.2083	3.3750	3.7083	3.7143	3.7917	3.4167	3.535717	71%
Orange	3.6944	3.1750	3.5556	3.0500	2.9444	3.1667	3.264350	65%
Average Performance	3.421825	3.219275	3.7364	3.373425	3.632675	3.220425	3.434004	69%
%	68%	64%	75%	67%	73%	64%		

The level of service quality in the telecommunication sector was 69%. The highest service quality dimension being on assurance and tangibles at 75% and 73% respectively. Lower service quality levels were on network quality (64%), responsiveness (64%), empathy (67%), and reliability (68%).

4.3 Service Quality rankings of mobile service providers

The respondents were asked to rate their mobile network operator on each of the dimensions on a scale of 1-5 with several variables of each dimension. The results are summarized in table 1 above;

According to the study, Yu emerges the leading service quality provider at 71%. The provider is rated to perform well on the dimension of tangibles described to be very good with a mean of 3.4167. The operator is rated lowly in the dimension of reliability at an overall mean of 3.2083. On reliability, the networks timeliness in acting on their promises to the customers is rated lowly at a mean score of 3.0000.

Safaricom falls in at second place in terms of service quality delivery rated at 70%. Safaricom is perceived to be performing well on tangibles and assurance. Specifically on the dimension of tangibles, respondents were of the opinion that premises are generally appealing and well organized rated at a mean score of 4.1786. It was established that materials associated with the mobile service (e.g. scratch cards, statements pamphlets, etc.) are visually appealing being rated at a mean score of 4.1250. However, the network is rated at average on the quality dimension of responsiveness. In responsiveness, the variable of customers being instantaneously connected to customer care scored the lowest of an average score of 2.2456. Another lower rated variable is the network provider improves the service according to customers' opinion/complaint which scored an average of 2.8947.

Airtel is rated third at 69%. The provider is perceived by their customers to perform well in the dimensions of tangibles and assurance. On tangibles, respondents were of the opinion that premises are generally appealing and well organized rated at a mean score of 3.9375 being rated at very good. Like Safaricom, that materials associated with the mobile service (e.g. scratch cards, statements pamphlets, etc.) are visually appealing

being rated at a mean score of 3.7500. On assurance, the variable of employees being consistently polite was rated highly at a mean score of 4.0000. However as compared to the other dimensions, empathy and responsiveness are rated lowly. With the variables of locations of the branches being convenient to and the network provider having many branches that can easily be found scoring lowest at means scores of 2.4375 and 2.8667 respectively

At fourth place is Orange at 65%. The provider is rated highly on the dimensions of Reliability at a mean score of 3.6944. Respondents rated the networks ability to deliver services as promised and at the promised time at a mean of 4.0000 and, keeping of customers' information and records accurately at 4.0000. However the network is rated very lowly in the dimension of tangibles being rated at 2.9444 with employees' appearance and dressing being rated lowly at 2.5000.

4.4 Factor Rankings

Factor analysis was further used to determine the importance of each of the service quality dimensions for telecommunication customers in Kenya on a scale of 1-5. The principle component factor analysis with was employed on 37 items. Six factors resulted. They are Empathy, Responsiveness, Network Quality, Reliability, Assurance, and Tangibles. The respondents were asked rate the factors to the degree to which they perceive them to be the most important. The factors were analyzed for each of the mobile operators as they had been rated by the customers to obtain an overall score. The overall scores were analyzed further for the percentage weights and then the factors were ranked.

Table 2: Dimensions rankings

	Reliability	Responsiveness	Assurance	Empathy	Tangibles	Network Quality
SAFARICOM	3.9123	4.1228	3.7018	3.6364	3.4821	4.3860
AIRTEL	3.8750	4.1250	3.8750	3.8125	3.8750	4.1250
YU	4.0000	4.1250	3.7500	3.3750	3.6250	3.8750
Telkom Kenya	4.0000	4.1667	3.3333	3.6000	2.8333	4.6667
Overall Factor Score	3.9468	4.1349	3.6650	3.6060	3.4539	4.2632

FACTOR	Overall Score	WEIGHTS	Importance Ranking
Network Quality	4.2632	18.48%	1
Responsiveness	4.1349	17.92%	2
Reliability	3.9468	17.11%	3
Assurance	3.6650	15.89%	4
Empathy	3.6060	15.63%	5
Tangibles	3.4539	14.97%	6
	23.0697	100.00%	

After the overall factor score was established, then percentage weights were established and then ranked in order. Respondents ranked network quality as the most important dimension of quality in the Kenyan telecommunication sector with a percentage weight of 18.48%. Responsiveness was ranked second followed by Reliability, Assurance, Empathy and tangibles at third, fourth fifth and sixth respectively.

4.5 Summary and interpretation of findings

This study revealed that the overall service quality delivery in the telecom sector in Kenya is at an average level of 69%.

According to the study, Yu emerges the first in terms of the service quality delivery as measured by the six dimensions used for this study. This is in agreement with the publication by CCK (2012) which reported that the two leading mobile operators, Safaricom and Airtel had failed to meet their customers' expectations for high quality services, according to the CCK's assessment.

This study revealed from descriptive statistics that Network quality is the most important dimension of quality for mobile telecommunication customers in Kenya weighted at 18.48%. The finding is similar to the findings of Leung (2006) who found that Network quality is the most important dimension for mobile customers in Hong Kong.

This means that the mobile telecommunication sector needs to major on strengthening their network in terms of indoor and outdoor coverage throughout the country.

It matters to the customers how responsive the network provider is to the customers needs with the factor coming in second at a weight 17.92%. Customers want the providers to respond quickly, promptly, rapidly, immediately, instantly. Specifically; the customers seem to value instantaneous connection to customer care representatives, prompt and efficient services, and fast moving queues at the providers' branches.

The third most important dimension is reliability with an overall score of 17.11%. Customers want the providers to do what they say they're going to do when they said they were going to do it. They want the bill on service usage to be always accurate. It matters to them that the service provider delivers its services at the time it promises to do so and that when you have a problem, the network provider shows a sincere interest in solving it.

Customers fourthly value assurance with an overall scale of 15.89%. The customers expecting the providers to be the experts of the service they're delivering. Customers are keen to have employees of the providers instill confidence in customers, employees to have the knowledge to answer all the customers' questions and employees are consistently polite.

At fifth place, customers care about empathy at an average score of 15.63%. The customers are keen to feel that employees always understand their specific needs, they need to be given personal attention and most important, they need to have the location of branches to be convenient for their access.

At the sixth place, is tangibles at 14.97%. Though this doesn't mean that tangibility can be ignored. Customers would like the materials associated with the mobile service (e.g. scratch cards, statements pamphlets, etc.) to be visually appealing, the premises of the provider to be generally appealing and organized and employees are well dressed and neat in appearance.

CHAPTER FIVE:

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter represents the summary of the study in section 5.2, Conclusion in 5.3, recommendation for further research in section 5.4 Limitation of the study in section 5.5 and suggestions for further research in section 5.6

5.2 Summary of findings

This study sought to determine the level of service quality delivered by the telecommunication industry in Kenya using six dimensions of quality and establish the determinants of quality that are important to customers in mobile telecommunication industry. The industry comprised of the four providers in the country; Safaricom Limited, Airtel Networks Kenya, Essar Telecom Kenya (Yu) and Telkom Kenya Ltd (Orange). The customers of the four providers formed the population of the study. A sample of 100 respondents was drawn. The sample was then stratified to strata of the four providers based on the market share. Primary data was collected using structured, closed ended questionnaires. Data was analyzed using SPSS descriptive statistics model.

The study found out that the service quality delivered by the telecommunication sector in Kenya is average. The study also found that Yu mobile, the smallest network by market share tops in terms of service quality delivery in the industry. This was measured by aggregating the six dimensions used for this study. Safaricom came in second in terms of service quality delivery, followed closely by Airtel and Orange comes in at fourth.

The study found out that for the mobile telecommunication users in Kenya, Network Quality is the most important factor to the customers out of the six quality dimensions used for this study. Responsiveness, Reliability, Assurance, Empathy and Tangibles follow in that order. The order of priority does not mean that providers can focus only on some dimensions; all the dimensions have to be provided. But provider's first and best efforts should follow in the order.

5.3 Conclusion

This study makes a number of conclusions. First, the mobile telephony industry in Kenya despite being the most developed and innovative overall provides average quality to customers as opposed to providing excellent service quality that is synonymous with the world's leading service providers.

Lastly, the leading service provider according to market share Safaricom, performs outstandingly in tangibles but averagely at responsiveness which is the second most preferred dimension by customers. Airtel, the second largest by market share performs well on tangibles like Safaricom but lowly on empathy. Orange Kenya performs well on reliability but dismally in tangibles whereas Yu performs well in tangibles but lower in reliability. According to the study, the providers seem to provide average quality as opposed to excellent quality as no provider on any of the variables scored the maximum score of 5 points.

Secondly, all dimensions are important to customers, but some more than others. Service providers need to know which are more important to avoid majoring in minors. At the same time they can't focus on only one dimension and let the others suffer. Customers' assessments include expectations and perceptions across all six dimensions. Network Quality, Responsiveness, Reliability, Assurance, Empathy and Tangibles in that order. Service providers need to work on all six, but emphasize them in order of importance.

5.4 Recommendations

Based on the findings of this study, this study recommends that the mobile telephony industry in Kenya strives to provide excellent quality services to their customers. Customers use the quality dimensions when evaluating service quality. If the providers get these dimensions right, then customers will have received service excellence. For providers seeking to improve on responsiveness, customers wish them to respond quickly, promptly, rapidly, immediately, instantly. Waiting a day to return a call or email doesn't make it. Establishing standards on responding to every customer's needs and

evaluating the extent of compliance to set standards may help the operators achieve responsiveness.

For service providers seeking to improve on reliability customers want to see providers do what they promise. Customers want to count on their providers. They need among other things their billings to be accurate. On assurance, Service providers must communicate their expertise and competencies. This can be done by displaying industry certifications on patches, badges or buttons worn by employees and having competent employees who will display knowledge and instill confidence in customers

Services can be performed completely to specifications. Yet customers may not feel provider employees care about them during delivery. And this hurts customers' assessments of providers' service quality. Empathy is an important dimension in service quality delivery and may be improved through training employees on how to interact with customers and their end-users. Even though tangibility is the least important dimension, appearance matters. Just not as much as the other dimensions. Service providers will still want to make certain their employees' appearance, uniforms, equipment, and work areas on-site look good.

5.5 Limitations of the study

The study sample was 100 respondents and the sample was drawn on customers within the Nairobi CBD and this limited sample may affect the statistical results of this study. There is a possibility that a larger sample, distributed throughout the country may yield different results.

5.6 Suggestions for further research

The study should be replicated in other service industry in order to test their level of service delivery. The study further recommends a detailed research to establish the correlation between tangibility dimension and other dimensions to find out whether by focusing on tangibility, other dimensions are ignored.

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QUESTIONNAIRE

Kindly answer the following questions by filling the spaces provided.

PART A: DEMOGRAPHIC DATA

DETAILS OF RESPONDENT

1. Which of the following age groups do you belong to
 - a) 17-24
 - b) 25-34
 - c) 35-44
 - d) 45-54
 - e) 55+
2. Gender

Male Female
3. Which of the following mobile operators are you subscribed to (Please tick)
 - a) Safaricom Limited
 - b) Airtel Networks Kenya
 - c) Essar Telecom Kenya (Yu)
 - d) Telkom Kenya (Orange)

PART B: SERVICE QUALITY DIMENSIONS

Factor 1: Reliability

How do you rate your mobile network operator on the dimension of reliability on a scale of 1-5 as shown below; please tick ()

	Reliability	1	2	3	4	5
		Poor	Fair	Good	Very Good	Excellent
1.	When the network provider promises to do something by a certain time, it does so					
2.	When you have a problem, the network provider shows a sincere interest in solving it					
3.	The service provider delivers its services at the time it promises to do so					

4.	The bill on service usage is always accurate					
5.	The network provider keeps customers' information and records accurately					
6.	Employees give professional consultation and advice					

Factor 2: Responsiveness

How do you rate your mobile network operator on the dimension of responsiveness on a scale of 1-5 as shown below; please tick (√)

	Responsiveness	1	2	3	4	5
		Poor	Fair	Good	Very Good	Excellent
7.	When you dial, the customer care, you are instantaneously connected					
8.	Employees give prompt and efficient service					
9.	Employees are always willing to help customers					
10.	Employees are never too busy to respond to your requests					
11.	Employees tell you exactly when services will be performed					
12.	The amount of time spent in line at the branches is always reasonable					
13.	The network provider will improve the service according to your opinion/complaint					
14.	The network provider handles complaints/opinions seriously and promptly					

Factor 3: Assurance

How do you rate your mobile network operator on the dimension of assurance on a scale of 1-5 as shown below; please tick (√)

	Assurance	1	2	3	4	5
		Poor	Fair	Good	Very Good	Excellent
15.	Employees instill confidence in customers					
16.	Employees have the knowledge to answer all your questions					
17.	Employees are consistently polite					

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Factor 4: Empathy

How do you rate your mobile network operator on the dimension of empathy on a scale of 1-5 as shown below; please tick (√)

	Empathy	1	2	3	4	5
		Poor	Fair	Good	Very Good	Excellent
18.	Employees always understand your specific needs					
19.	The network operator has employees who give you personal attention					

20.	The network provider has many branches that you can always find one easily					
21.	The locations of the branches are convenient to you					
22.	The branches have operating hours convenient to you					
23.	The network provider gives you individual attention					
24.	The network provider has customers' best interest at heart					
25.	The payment methods provided by the network provider are convenient to you					
26.	The network provider provides enough communication channels to let you know all the latest news and services they provide					
27.	You have enough channels (e.g. branches, company website, hotline, etc) to seek for advice or help when you have inquiries					

Factor 5: Tangibles

How do you rate your mobile network operator on the dimension of tangibles on a scale of 1-5 as shown below; please tick (√)

	Tangibles	1 Poor	2 Fair	3 Good	4 Very Good	5 Excellent
28.	Employees are well dressed and neat in Appearance					
29.	Materials associated with the mobile service (e.g. scratch cards, statements)					

	pamphlets, etc.) are visually appealing					
30.	The premises of the provider are generally appealing and organized					

Factor 6: Network Quality

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How do you rate your mobile network operator on the dimension of Network Quality on a scale of 1-5 as shown below; please tick (√)

	Network Quality	1	2	3	4	5
		Poor	Fair	Good	Very Good	Excellent
31.	The network indoor coverage is satisfactorily Wide					
32.	The network outdoor coverage is satisfactorily Wide					
33.	The network transmission quality is always good					
34.	The speech quality is always good and clear.					
36.	Calls made are instantaneously connected					
37.	Frequency of transmission suspension is low					

PART C: IMPORTANCE OF THE SERVICE QUALITY DIMENSIONS

To what degree are the dimensions above important to you on a scale of 1-5 as shown below; please tick (√). 1. Not important, 2. Fairly important, 3. Important, 4. Very important, 5. Extremely important

		1	2	3	4	5
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	Reliability					
	Responsiveness					
	Assurance					
	Empathy					
	Tangibles					
	Network Quality					

*****Thank you for participating and for your responses*****