QUALITY DIMENSIONS AND CUSTOMER SATISFACTION: A CASE OF MOBILE HANDSET MANUFACTURERS IN KENYA

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DECLARATION

This research project is my original work and has not been presented for award in any other University.

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This research project has been submitted for presentation with my approval as University supervisor.

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DEDICATION

This research project is dedicated to my loving parents Mr. Sammy and Mrs. Millicent Lukale for their continuous support, encouragement and prayers during my entire course.

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ABSTRACT

The study focused on quality dimensions and customer satisfaction: a case of mobile handsets manufacturers in Kenya. The specific objectives were to establish the quality dimensions demanded by mobile phone buyers in Kenya, the quality dimensions pursued by mobile handset manufacturers and to determine the relationship between quality dimensions and customer satisfaction. Data collected was purely quantitative and was analyzed by descriptive statistics. The population of study was mobile handsets manufacturers and their customers; Safaricom, Airtel, Orange Kenya, dealers and distributors and customers who makes use of these brands-the ultimate consumer. For the manufacturers census of 15 was done in Nairobi while a sample of 115 customers who were identified through simple random sampling participated in the study. Of the 120 respondents' questionnaires were administered and the feedback was a success rate of 91.66% which implies that majority of the population were interested in the study. The study found that service quality dimensions and customer satisfaction is crucial for both the manufacturers and their customers. The ranking of SERVEQUAL dimensions was in the following order; Tangible first, reliability second, assurance third, responsiveness fourth, perceived quality fifth and empathy last. Customers were fully satisfied with only 2 dimensions of the SERVEQUAL model, tangibility and reliability of the mobile handset manufacturers while expressed dissatisfaction on assurance, responsiveness, empathy and perceived network quality. Quality dimensions are generally important for a firm to achieve high levels of customer satisfaction; however, there is need for improvement as customers are not satisfied in most areas. A lot can be done to ensure customer receive more than the perceived value on all service quality dimensions which includes empathy, assurance, perceived quality, responsiveness, tangibles and reliability. To maintain high performance level a firm should improve the network quality of the mobile handsets, ensure that they put in place mechanisms to detect and address counterfeit products, ensure they manufacture phones with long lasting battery life, increase the internal storage capacity of the phones and ensure the phone has an android operating system which is mostly preferred by clients. Firms that will focus on those parameters of quality dimensions stand a good chance to maintain high market share.

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ABREVIATIONS AND ACRONYMS

CEO	CHIEF EXECUTIVE OFFICER
ITU	INTERNATIONAL TELECOMMUNICATION UNION
ISO	INTERNATIONAL STANDARD ORGANIZATION
OS	OPERATING SYSTEM
PDA	PERSONAL DIGITAL ASSISTANT
TQM	TOTAL QUALITY MANAGEMENT
US	UNITED STATES
SPSS	STATISTICAL PACKAGE FOR SOCIAL SCIENCE
ANOVA	ANALYSIS OF VARIANCE

CHAPTER ONE: INTRODUCTION

1.1 Background to the Study

Quality is one of the key variables that organizations have considered important in realizing both short and long-haul objectives and targets. Studies have shown that a relationship exists between quality management and competitive advantage in the sense that desired results can only be achieved with effective implementation of quality management practices. Quality management programs must be actualized extensively to enhance competitive advantage (Douglas and Judge, 2001). Quality gurus like, Juran, Blanton & Edward (2001) argues that Quality is how best a product or service satisfies the customer needs, Crosby (1995) posits that Quality means the products or service meets the requirements of the client. Garvin (1987) proposed eight basic measurements of quality that can be used by organizations to achieve operational excellence and this includes performance, features, reliability, conformance, durability, serviceability, aesthetics and perceived quality. He further asserts that a product or service can be highly ranked on one of the quality dimensions and low on another for instance a product with high performance sometimes may be expensive to service, managers should therefore make prudent decisions on the various product quality dimensions.

Zeithmal and Berry (2004) assert that what the market expects and perceives as value may differ thus leaving a gap, the Servequal quality model or the GAP model highlights the main requisites for ensuring a high quality. They further posit that to achieve service quality certain parameters have to be taken into account to avoid unsuccessful distribution and this includes understanding, access, courtesy, reliability, competence, credibility, security, the customer, responsiveness and tangibles. Reichheld and Teal (2001) argues that delivering high quality to clients enhances loyalty and facilitates organizational growth which can be reflected through firm's profitability index. They also contend that at a point when an organization establishes quality and loyalty programme through its client benefit strategies, it picks up a level of reliability from the client that drives and builds the capacity to boost income. Whitney & Lind (1998) asserts that the most critical viewpoint in quality assurance is that organizations regularly neglect to consider two fundamental arrangements of inquiries, meanings of value from client point of view, and why are they abruptly requesting higher quality than in the past? Innovation is one of the key operation strategies that enable organizations to

produce high quality products. According to Panda (2003) good relationship with clients defines the effectiveness of an organization and this can be denoted by client's fulfillment and reliability.

A firm that has put emphasis on quality will carry out quality assurance tests, they need to provide product or service information and respond to clients' queries. Quality and costs are key factors that firms need to put in place in settling decisions concerning the market, Ewan (2007). Experts and scholars concentrate more on bundling and repackaging old stuff as opposed to proceeding with the development wave that renewed quality management in the 1980s. A detriment to quality has featured where organizations no longer focus on new methodologies of achieving high value for instance continuous improvement practices; many methodologies are out of date because the experts had limited perspectives of total quality management, Tito (2010). Managementstudyguide (2008) argues that quality plays a vital role in the organizations success and failure. Underrating a crucial aspect like quality will hinder the long run survival of the firm. They further contend that organizations that use six sigma stands to enjoy superior quality products as the process removes the defects thereby enhancing the entire system and process hence high levels of perfection.

1.1.1 Quality Dimensions

Quality management is a critical aspect that an organization relies on in determination and implementation of quality policy through approaches such as quality planning, quality assurance and quality improvement, Kaoru (1990). Quality management systems assists firms in reducing the number of defects, relationship management, client's satisfaction, growth in market share, new markets and opportunities and global image. He also posits that successfully implementation of quality management system will contribute to minimal expenditures on costs of quality and errors, high quality products and waste reduction, Gotzamani (2010). A firm has to invest in management systems such as quality composed of standard practices which include ISO 9000, series for management of quality which will assist in ensuring customer satisfaction and address complaints as well as meeting the expectations of the stakeholders, Paranitharan, Ramesh,Pal and Jeyathilagar (2004).

For a firm to achieve a satisfactory level of quality competence employees need to be well vast in production experience and this involves educating them on quality management practices. In addition, they posit that quality knowledge is necessary to assess quality improvement solutions

regularly to sustain quality performance, Agrawal and Muthulingam (2015). Rachel (2017) alludes that quality control software gives a product best chance of success, the software should be user friendly and avails to inspectors the information they need to detect, correct and ensure conformity through technology. She further posits that investment in quality software gives rise to more effective inspection, well trained employees who ensures response plans are more efficient than never. Motwani (1995) cites that academic institutions have started to succumb to pressure for quality management and reform. Furthermore, there is an axiom that institutions that takes time to adopt total quality management miss the opportunity to be the market leaders and runs a risk of becoming irrelevant to the competitive business world.

Intrinsic and extrinsic values to a large extent are relied upon by firms to measure quality. Perceived quality is the consumers experience about the superiority and overall excellence of a product Zeithaml (1988). He further posits that clients perceive the overall service quality by examining the five dimensions, the service provider needs to demonstrate excellence on all dimensions of service quality which includes responsiveness, reliability, assurance, empathy and tangibles in order to achieve high rankings. Garvin (1984) argues that firms need to compete on the following quality dimensions; performance, features, reliability, conformance, durability, serviceability, aesthetics and perceived quality. Service quality is very important and industry players should enhance their service quality to gain competitive edge, client's satisfaction and customer loyalty. In addition, dissatisfied clients spread their experiences to more than three other people hence damaging a firm's reputation, Sweeney (1997).

1.1.2 Mobile Handsets Manufacturers in Kenya

With changing trends in the business environment, the need to invent cell phones became a major concern. The fast penetration of this low-cost innovation has prodded an advancement agenda addressing how cell phones can be tapped adequately for socio-economic improvement in developing economies according to Gartner (2016). The cell phone industry standout amongst the most powerful commercial centers globally. However, while Apple and Samsung still manage the business there are other key players as well, having the capacity to compete effectively and become the market leaders, Gartner (2016). Kotler (2011) contends that the competitive preferred standpoint is leverage over rivalry picked up by offering customer more prominent incentive than contenders do, the mobile industry therefore is perfectly competitive, the manufacturers work tirelessly to

improve the quality of the products and services to meet customer specifications. Quy (2015) argues that in spite being the pioneers of innovation in the mobile industry, Nokia could not sail through the market because of aging staff and technology which could not match the new standards set by players in the industry, the firm had reached the peak of its innovative work cycles and was overtaken by unpredictable development in business. Nokia adhered to windows as it were. Nokia fortunes fell 40%, Nokia benefits fell 95%, Nokia bit of the general business collapsed mobile phones from 34% shockingly assessment ratings went from AAA to junk, Nokia's offer cost dropped 60%. He further contends that Sony Erickson was not able to recover the initial investment in the U.S where it held a 1% bit of the piece of the market share.

As per the Gartner research a year back ago he did make the analysis on how the mobile handsets performed in the first quarter of 2016 as follows, Gartner (2016). Samsung is a South Korean cell phone major market leader. Samsung keeps on dominating the cell phone market with 76,743,500 units sold in the first quarter of 2016 which represents 23.2% of the market share and this was a decline of 24.1% a similar quarter a year ago. As per Gartner's examination executive Anshul Gupta (2016), "Samsung's Galaxy S7 arrangement telephones restored portfolio situated it as a solid rival in the cell phone market, the firm performance was also exemplary in developing markets where they have been facing cut throat competition from the local manufacturers especially in the African continent. They have distributors across the world estimated to be 6980 as well as service centers to deal with costs of quality such as repair, defective products and warranty costs.

While Apple figured out how to hold its second position in the worldwide cell phone market, the organization encountered a decrease over time, with iPhone deals around 14% of the market share with sales amounting to 44,395,000 units. The firm has 6 distribution centers, 36 service centers and 45 training centers to allow value chain fluid capability transfer worldwide and 16 research and development centers. Oppo saw strong advancement in China, assuming control from various players such as Samsung, Lenovo and Yulong, the firm’s PDA bargains in the Asian continent increased by 199%, with 16,112,600 units sold in the midst of the quarter, Gartner (2016). Huawei is seeing solid development and appeal in Africa, Europe and United States. The firm’s turnover at the beginning of 2016 amounted to 28,861,000 units, according to Gartner (2016). The firm’s market share during the quarter stood at 8.3%. Techno a Chinese mobile manufacturer has a market share of below 10% worldwide as their focus was mainly towards the African market as they shut down

business operations in Asia. The Kenyan market has seen an immense improvement in the number of mobile phone merchants to 22 from 15 some years back. Currently Nokia, Samsung and Techno control 75% of the Kenyan cell phone market with brands, for example, Infinix, Innjoo and Wiko penetrating the market with low end and middle-class phones, Jumia (2017).

The Kenyan cell phone market is extreme, focused and unforgiving global players have entered into the Kenyan market due to its high ranking since the Kenya market have been advantageous to their business because of the internet uptake, Chenze (2015). Start Counter Global Stats. (2016) states that Samsung has a market share of 23.75%, Infinix 8.66%, Huawei with 6.95%, Nokia 4.43%, Techno 3.66%, Apple 0.45%, Lenovo 0.86%, Oppo 0.18%, HTC 1.03%, Vodafone 2.24% and others taking 42.6% of the Kenyan market. Start Counter Global Stats. (2017) asserts that the market share of this companies were as follows Samsung 18.1%, Tecno 13.61%, Infinix 9.16%, Huawei 7.65%, Nokia 5.71%, and others at 45.77%.

1.2 Research Problem

When cell phones came into being a number of buyers had their taste and preferences on the real merits of cell phones, for instance battery life and multiple Sims because of their financial status, their buying behaviour was geared towards the basic features of the phone, however with increase in income levels in the 21st century mobile phones were more considered as working and entertainment gadgets, the consumer buying behaviour ended up noticeably enthuastic and initiative, Yuchan (2015). Competitors in the industry focused more on product performance, reliability, serviceability, durability and features which includes high resolution camera, accessories such as headsets and blue tooth, Sim card which stores information on phonebooks that can be transferred from one cell phone to another, Facebook, email and whatsapp features, operating system such as android which makes it easier for users to download content, speaker phone and video recording, Selom (2016).The android Google developer gives users confidence in making use of gadgets since Google is a trusted service provider. Android has multitasking capabilities which allows users to manage several applications at the same time and view many android notifications, Puri (2016). Nokia and others used the Symbian operating system in all its phones.

The android showcase began developing and eating into their market share which saw the firm's revenue fell. Efforts to restore the lost glory through launching the windows phone bear no results as

a significant number of clients had already adopted the android system. With increased customer awareness on product and service quality, firms have put in place quality policy and statements to guide the organization and at some point conduct quality assurance tests. The mobile telephone industry is dynamic hence the players are challenged to establish ways to ascertain that their products and service meets the customer specification. Customer satisfaction is key to long term survival in business. To perform well and gain market share service providers need to outperform their competitors through offering superior quality products and service, (Saghier & Nathan, 2013). According to Hansenmaek & Albinsson (2004), customer satisfaction and retention become an important factor for an organization since they tends to give a big advantage for companies.

Nokia and others did not conduct proper test on quality because the top management and leadership lacked accountability and leadership to align and direct company through destructive times as quoted in the Memo 'Burning Platform' by new CEO Stephen Elop according to Monaghan.(2013), the products they released to the market were ground breaking but not promising enough due to failure to redefine the smartphone and attracting developers. Antony and Pamela (2013) assert that the price of mobile phones should match with their quality such that there is a component of durability in the cell phones to decrease the disposal rate; the low cost mobile phones exhibit a high disposal rate. They further allude that access to resources is dependent on the government's willingness to give quality infrastructure to cell phone merchants to enable them have many branches where the old phones can be kept to accommodate the latest brands thereby reducing the rate of environmental degradation through disposals.

The problem that Nokia had also is that as leader in the market they fell behind in releasing new technology in the market when the technology is already obsolete and taken by the competitors such as Apple all these leads to slow product development and issue of quality since the phone manufacturing industry is so dynamic. This study therefore seeks to address the quality dimensions that drive the mobile business. It seeks to increase the body of knowledge on the subject, 'The relationship between quality management and competitive advantage and enlighten the existing firms on the various quality dimensions'.

1.3 Objectives of the study

General Objective.

The general objective of the study was to identify the quality dimensions pursued by mobile handset manufacturing firms to ensure customer satisfaction.

The Specific objectives of the study are;

I. To establish the quality dimensions demanded by mobile phone buyers in Kenya
II. To identify the quality dimensions pursued by mobile handsets manufacturers.
III. To establish the relationship between Quality Dimensions and Customer satisfaction.

1.4 Value of the Study

The essential inspiration driving this study was to identify the quality dimensions that mobile handset manufacturing firms compete on to achieve operational excellence. Servequal model and Garvin model of product quality is of great importance to firms that seeks to maximize the market share through enhanced product and service quality. Operational Managers will craft strategies that syncs the manufacturing and marketing departments taking into consideration quality from the client's perspective. This study will be relied upon to raise alert to organization on quality management; customer focus, cooperation, fundamental initiative, and organization expert. The management will appreciate that quality is free; the organization of Nokia, Motorola and Sony Erickson Limited would have embraced continuous improvement approaches from a quality perspective.

The academic world: This study tends to focus on organizations that prioritizes quality dimensions; this learning causes academicians to gain best organization quality management practices. This increases the body of knowledge as they are set up to be quality executives.

The government needs this information to give supportive work environment to investors in the mobile market, positive evaluation methodologies and whether they can have a stake in these remote firms.

The public needs this information to enable them make purchasing decisions and to appreciate to what degree their dedication is to survival of firms, they have an oversight part.

CHAPTER TWO: LITERATURE REVIEW

2.1: Introduction

This chapter highlights previous studies done by scholars and researchers on dimensions or perspectives of quality that firms compete on; this is with the intention of providing readers with adequate knowledge and skills on quality dimensions and competitive advantage relative to their strengths and weaknesses and how they make a significant impact to organizational fortunes. The chapter will focus on the theoretical and empirical literature of the subject under study.

2.2 Foundation of the Study

Theories concerning competitive advantage and quality dimensions have been put across by various scholars since the inception of quality management by quality gurus Dr Joseph Juran, Dr Edward Deming and Dr Philip Crosby. Theories that have been associated with this study includes Systems of profound knowledge, the theory of competitive advantage, Servequal model and Garvin Model of product quality and are discussed below.

2.2.1 Systems of Profound Knowledge

Systems of profound knowledge which takes into account, appreciation of a system, Knowledge about variation, Theory of knowledge, and Knowledge of psychology is crucial for organizations to gain competitive edge. In this current age organizational competitiveness is enhanced by intangible resources. Knowledge is one of the key resources that firms consider essential for its employees growth (King and Zeithmal, 2003; Wu and Wang, 2006; Hwang *et al.*, 2008; Šajeva, 2010). Knowledge management is a step by step process that puts into perspective disciplines that facilitate advancement of knowledge and enhance value for firms, Gupta,Iyer & Aronson (2000). If knowledge management is put into practice then firms can experience a high turn around in their operational and financial performance. Systems of profound knowledge theory recognizes the processes and procedures used by organizations in executing their operations for example quality planning ,quality control and quality improvement process, what systems the organizations use in ensuring high quality standards, the theory further emphasizes that managers should have knowledge about variation since occurrence of variation is a common phenomenon in the organization and this may be between input, output ,people ,service ,product, capability of systems and Uncertainty in

statistical data. When competing on quality therefore it's imperative for the firm to have a proper knowledge of variations this can be done through quality assurance tests to ensure the actual conforms the planned.

Reliable information gives rise to prudent decisions but this information is normally not within the policy makers. The major task for managers is to ascertain how to make use of this knowledge to improve organizational efficiency. The knowledge of employees, suppliers, customers and shareholders is the most important virtue of an organization as opposed to traditional factors of production which includes; land, labour and capital (Drucker, 1994). Firms that invest in knowledge management have consistently enjoyed great financial performance as employees work towards achieving the organizations goals and objectives. The focus of a firm is to ensure that their products and services conforms with customer specifications and to achieve the managers apply research and development to identify which quality dimensions will give the firm a competitive edge. Investing in knowledge management is therefore a critical success factor, Fernandez and Sabherwal, (2010). Chong (2006) asserts that if the activities of the firm requires employees with extensive knowledge, for other employees to gain, teamwork needs to be encouraged with strong leadership skills in empowering individuals in taking decisions'.

Anantamula and Kanungo (2010) asserts that support from senior management is key to establishing a successfully knowledge management as it emphasize on strategic focus. Knowledge management takes into account all employees within an organization hence people driven initiative and therefore of essence in promoting social enablers. This theory is an eye opener to managers on continuous improvement strategies in the sense that emphasis has been put to management to look at processes with certainty and not fixes, managers should be sure of the approach and techniques they use in their day to day management style. To pull off effective quality managers should have the knowledge on psychology, how to motivate employees, how to resolve conflicts? How to respond to increase in price? How to address the changes in consumer behavior? How to respond to competitors? Firms that invest in knowledge management based on them being their strength stand better chances to achieve competitive advantage.

2.2.2 Theory of Competitive Advantage

Chu-HuaKuei (2003) asserts that competitiveness can only be achieved when firm focuses on quality and environment. Zeithaml *et al*. (1990) argues that the most critical dimension is reliability; these were the findings on an extensive survey over four service sectors. Firms whose services are reliable stand a good chance to dominate the market. Reliability could involve availability of products and services at the right time and place (time and place utility), zero defects on the product for example no short packs or damages, providing immediate solutions and feedbacks to customers 'queries, high performance of the product. Due to tremendous changes in the industry product manufacturers started designing based on certain customers' specifications as a result of competition there was need to respond to the voice of the customer, (House of Commons, 1995). To improve performance, it is necessary for organizations to benchmark with other successfully retail organizations who deploy the same staff in the same role and have excellent customer relationship management, Clutter &Wayne (1993) The competitive advantage theory holds the view that organizations success can only be achieved through implementation of strategies; a unique strategy reverses organizational dwindling fortunes and gives it a sustainable and distinctive edge.

Competition revolves around the willingness and ability of a firm to offer quality products and services. John (1998) posits that the customer service journey in any company is a continuous process and firms continue to face competition and new challenge on a daily basis. When at least two firms compete in a similar market, one firm has an upper hand over its competitors when it wins diligently higher rates of benefits, Grant (2005). To accomplish any preferred standpoint in business, a firm needs to look profoundly and deliberately into what it has, what it knows, what it does and what it can get keeping in mind the end goal to give preferable incentive to its clients over its competitors. For example, advantages may incorporate additional product or service characteristics, excellent customer care; after sales service (Shirin and Puth, 2011) and improved quality.

2.3 Quality Dimensions

Service providers need to ensure high quality standards particularly in the core business segment; this will keep them in competition and improve the level of perception on service quality and customer satisfaction (Parasuraman *et al.*, 1985). Network quality entails the errors experienced by clients, the speed within which downloads and uploads can be executed and the time taken by the

system to respond, (Vlachos and Vrechopoulos, 2008). Zeithamal and Berry (1985) contends that to deliver high quality service a firm should constantly focus on; reliability, responsiveness, competence, access, courtesy, communication, credibility, security, understanding/knowing the customer tangibles. They further posit that reliability, assurance, tangibles, empathy and responsiveness plays a significant role in delivering the desired quality. Emmanouil & Christos (2009) contends that security and protection issues have major effects on the service quality of mobile phone, regardless of the advances in the technology with regards to network and devices quality. They further alluded that steady network and user friendliness of a gadget contributes to e-crime activities such as cyber-crime.

Jahanzeb, Fatima, & Khan (2011) asserts that assessing the quality of the service to determine whether they conform to client's specification is one of the key factors that firm has to consider if it has to compete effectively and break even. They further posit that players in the mobile industry should concentrate on other quality perspectives of responsiveness, empathy, tangible because these dimensions affects the customers perception of service quality to a large extent and the cell phone service providers should be aware in order to address customers concerns and innovate value added services to withstand the competitive business environment. Surveying customers within these dimensions is one of the approaches that businesses can use to determine their service quality. When the customers' expectations exceeds the perception of the received value, the service is not satisfactory. Mobile manufacturing firms have focused in some of these dimensions to gain competitive advantage, reliability, assurance; tangibles empathy and responsiveness have seen firms grow their customer base to significant numbers.

According to Wang, Lee, Pipino & Strong (1998) data and information quality needs to be taken into account if a firm is to achieve excellence. Khanna, Song, & Lee (2011) assert that Samsung adoption of the hybrid management system which is the combination of the Japanese-style system with Western-style has impacted positively on the firm's performance in the global market. They further assert that for a firm to increase its efficiency and capability delivering quality should be its primary objective. Focus on product and service quality has been put on emphasis over the years. Wan & Chongman (2015) argues that to improve quality of products and service and achieve greater profitability Samsung has applied diverse concepts.

Garvin (1987) assert that the US consumers put pressure on firms to improve the quality of their products. He further argues that with high quality as a competitive edge firms needs to penetrate the market and increase the turnover. He further asserts that for a firm to compete effectively it has to capitalize on the following; Performance, features, reliability, conformance, durability, serviceability, aesthetics, and perceived quality.

At the point when clients are happy with a specialist organization they tend to be committed and loyal in light of what the organization has accomplished for them. (Cater and Zabkar, 2009). Therefore, a company that can deliver high level of overall service quality will be more likely to have higher customer commitment.GSM Arena (2010) argues that the weight, Slimness and display size of high and low end phones has changed over the years. The researcher further posits that the mobile handset market in the last five years have significantly reduced the size of the same phone with the same features. Keijzers (2008) contends that the features, performance and add on applications in smart phones are determined by the operating systems. Oliver (2017) posits that Nokia is back with vengeance by reviving its classic Nokia 3310 whose battery performance is the most attractive feature since it lasts 22 hours of talk time and 31 days standby.

2.3.1 Quality Dimensions from Consumers Perspective

Past research demonstrates that firm's turnover enhances as the number of loyal customers increases (Jahanzeb *et al.*, 2011). Recruiting new clients additionally can't ensure long term accomplishment for an organization particularly when that organization can't hold its clients (Wang and Wu, 2012). In fact, a 2 per cent increase in the customer retention rate is equal to a 10 per cent decrease in the cost of customer acquisition in the mobile phone service industry in China (Han *et al.*, 2012). Hence, keeping a dedicated client is more beneficial over the long term in contrast with securing new clients (Wang and Wu, 2012).

Limited decision making is a purchasing behaviour shown by buyers when obtaining valued commodities that are not purchased habitually as a result they require more time to collect data necessary before making the purchase decision, Furahiji &Wawrzyniak (2012). Customers' exhibit extended decision making when they purchase expensive products that are not frequently bought for instance television and cell phones. In this case they take a while longer to gather information from

their family and friends. They will also use a variety of channels to gather information about the product performance, features, reliability, flexibility, durability and serviceability to ensure the product would serve them well Furaiji,L.&Wawrzyniak.(2012).

To build effective attachment with clients' service quality measures which includes responsiveness and reliability needs to be considered as possible measures of performance which a firm needs to evaluate over time (Fullerton, 2005). Akhter and Uddin (2012) alleges that the quality of service and affordable pricing improved the perception of customers in view of value of mobile phone service manufacturers. Perceived value to a large extent influenced customers satisfaction level therefore perceived value is what firms should focus on as it cuts across fair price, service quality and clients fulfillment. Customer loyalty is built based on the period of time a customer interacts with the firm, the longer the period of time the customer has engaged with the firm the less inclined the customers are to break that relationship, Bügel,Buunk,&Verhoef (2010). Christopher (2005) argues that warranty period and maintenance of a product is one of the service a customer needs, the repair coverage ranges from 1-3 years. He further argues customer can base their need on extended warranty period.

2.4 Quality Dimensions and Customer Satisfaction

Technical quality is what customers receive in their relations with the service provider. Further to this technical quality is also part of the core service quality that takes into account the form in which product and service are delivered to the customers, McDougall and Levesque (2000). Functional quality highlights the mode of service delivery to the end user. These dimensions include a broad range of service delivery items such as the perception of the customers towards customer care services and the efficiency and effectiveness of service delivery, Adelman, Mara, Aaron & Cathy 2000). Peter (2004) asserts that clients awards higher marks to a service provider who ensures better coverage, offer after sales services and focus on quality. He further argues that consumers were disappointed with the costs incurred in cancelling services and poor network coverage. Pezeshki,Moosavi & Grant (2009) argues that the quality of service and stability in network are the key drivers of customer satisfaction, alongside the quality of service, organizations can make significant increase in their revenues and outstanding performance than other contenders by providing clients with certain competitive advantage, (Johnson and Sirikit, 2002). Tung (2010)

asserts that perceived value, quality, image and usability are the most vital factors to ensure customer satisfaction with regards to mobile phone services.

Abdulrahman & Muhammad (2011) alludes that mobile companies in Saudi Arabia concentrate more on better quality services; organizations must implement processes to improve the overall structure of service quality. They further assert that firms can achieve high level of service quality through intensive training programs for its employees and hiring robust personnel managers to address critical issues like poor responsiveness and reliability. Philip (2012) suggests that customer satisfaction is key in ensuring that organizations increase their customer base, get more revenue and high profits. Because a satisfied client narrate their good experience about the firms products and services thereby influencing other potential and prospective customers to buy the same brand. He further alludes that smartphone buyers are not price sensitive but they seek quality. Further to this the researcher posits that quality is the backborne of business organization. A firm can affirm its existence in the market through offering quality because consumers purchase decisions is initiated by their perception of quality, (Fornell, 1992). Sultana & Chowdhury (2017) asserts that aesthetic is one of the quality dimensions that clients rely on when repurchasing a smartphone. They further state that customers' priorities are on looks, feels and sound when purchasing a smartphone because they are young and smart.

2.5 Empirical Literature Review

Sime & Shawnee (2000) contends that the quality of the product and excellent customer relationship management gives rise to high returns on investment. They further allude that product quality increases return on assets while relationship management enhance the market share performance. In their study of' Quality-related Action Programs: Their Impact on Quality Performance and Firm Performance' they attributed the success of a firm to efficient customer relationship, strong management team, cross functional quality teams and empowerment of employees which constitute to quality management. Danny, Vincent, & Heloisa (1999) argues that the correlation analysis on evaluations obtained from two distinct respondents from a similar organization demonstrates that for quality to be achieved then employee relations in an organization is necessary, firms need to invest in training of its employees in product design, supplier quality management and quality data reporting. The study depicts that knowledge management in an organization has direct effects on

quality performance which translates to satisfaction of clients. To promote effective total quality management implementation, stakeholders are advised to develop an enabling environment.

Wanyoike (2016) in a study that sought to establish the relationship between quality management practices and firms performance asserts that quality management practices generated excellent results in manufacturing firms in Kenya. She further alludes that the senior management of a firm needs to formulate the vision, mission and goals that enhance quality culture and implement the core values resulting to outstanding performance. The research established that the operating environment has a moderating effect on the relationship between quality management practices and performance of manufacturing firms in Kenya. The US General Accounting Office (1989), a New York business research group, carried out a study on quality practices of conglomerates in U.S. Out of 800 surveys 149 responded, of the 149,111 (74.5%) were of the view that quality initiatives were considered critical by firms in the U.S. Over 30% were of the opinion that total quality management had enhanced their execution, with only 1% ascertaining decline in performance as a result of total quality management.

Young (1992) argued that if existing employees prefer working under maximum supervision, do not accept change management through training, lack synergy and lack cultural and demographic homogeneity and are not accustomed to linkages between remuneration and organizational performance then such organizations are not likely to adopt quality practices. Soko insight (2016) carried out research which established that 85% of respondents have at least 5 apps on their phones while 30% of respondents were of the opinion that app availability is one of the most important features of their mobile devices, a significant number were not interested with local platforms. In general, the respondents ranked local apps “average” in terms of content, quality and price, and for developers, this figure should raise eyebrows as 43% of users didn’t know any locally-made apps. Gitangu (2015) studied total quality management and competitive advantage of small and medium enterprises in Nairobi City County; the findings confirm that viable total quality management enhances consumer loyalty. She further posits that implementation of total quality management enhances the customer satisfaction level. From the findings most organizations seemed to concentrate on client’s fulfillment through efficient and effective service delivery. Kemibaro (2016) alludes that social media, search engines, email and video are the most popular activities by smartphone users in Kenya.

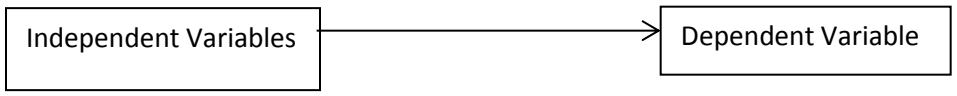
He further posits that social media dominates with 58%, search engine follows with 39%, emailing at 30 % and video 25%. The research further highlights that Kenyans watch more video than Nigerians in a ratio of 4 to 1 and therefore most smartphone users are Kenyan. This implies that clients changed their purchasing behaviour to the new models with several exclusive features. Lewis, Pun, & Lalla (2006) inspected TQM factors in the criteria of ISO 9001:2000 accreditation, in a study, results gathered from 12 nations depicted that there are certain practices that play a vital role in implementation of TQM. Those practices include providing quality information, customers' loyalty, utilization of human resources, process control, preparing and instruction, change management, authority, quality dimensions, communication with partners.

2.6 Summary

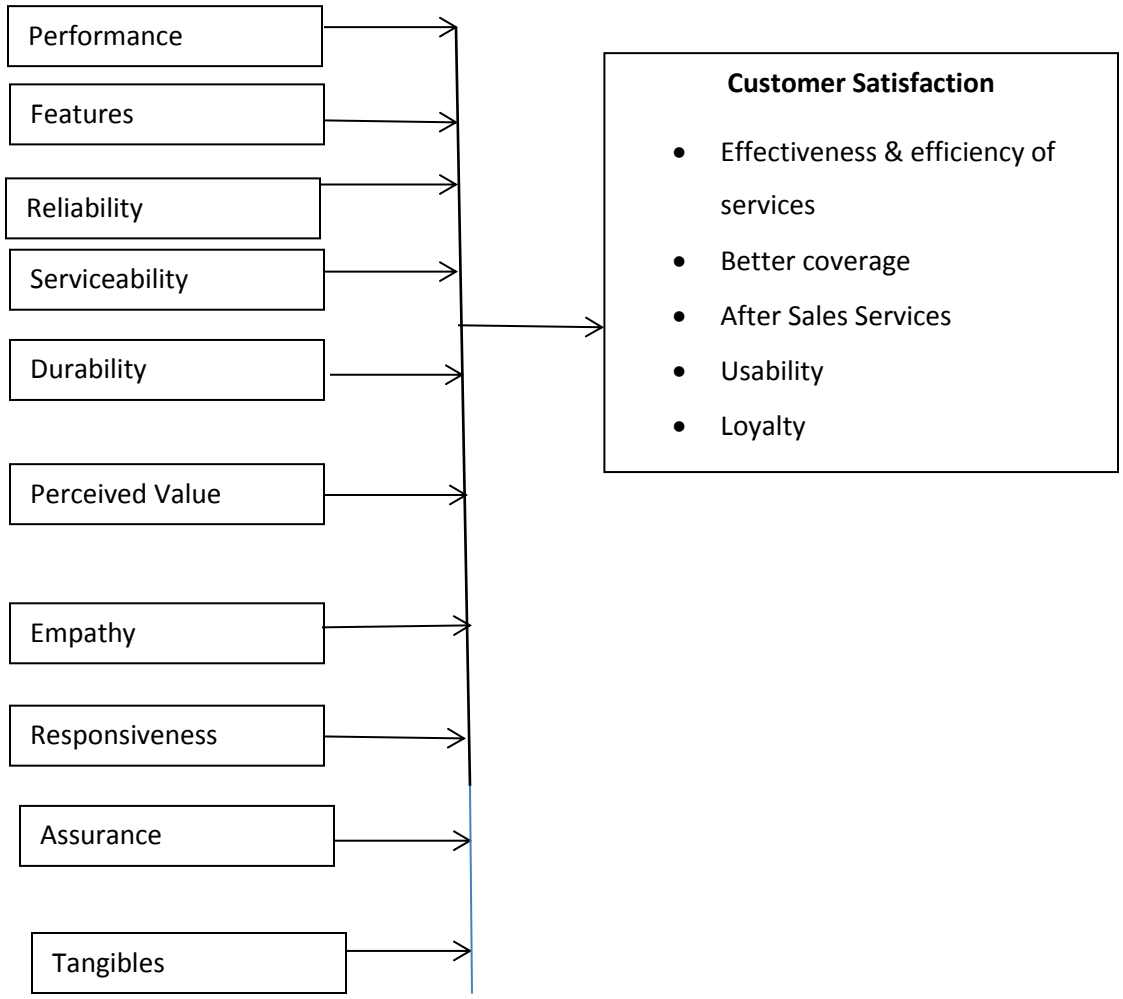
Servqual and Garvin model of product quality are instruments well known in evaluating the product and service quality for organizations with Mobile handset manufacturing firms as one of the firms. Servequal includes the dimensions considered by the firm and the customer in evaluating the service quality in any service sector while the Garvin model assists firms and customers in evaluating the product quality. In this study, these models have been used extensively to explain the quality dimensions pursued by both manufacturers and customers. This will form the conceptual framework for this study.

2.7 Conceptual framework:

Figure 1.1Conceptual Framework



Product and Service Quality Dimension/Perspectives



Source: Researcher (2017)

CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Introduction

According to Kothari (2003) research methodology entails detailed procedures and approaches used in conducting the study. This chapter therefore seeks to explain the research design, the target population, sample collection techniques, the nature of data to be used, the sources of data, data collection instruments and finally data analysis methods.

3.2 Research Design

This study was a descriptive one that aimed at evaluating the quality dimensions/perspectives that firms use to gain competitive advantage. The research described how the quality dimensions had a direct relationship to organizational performance. According to Manuel and Medel (2014) descriptive research includes the depiction, recording, analysis and translation of the present nature, composition and procedures of phenomena.

3.3 The Population

The population of study was mobile handsets manufacturers and their customers; Safaricom, Airtel, Orange Kenya, dealers and distributors and customers who makes use of these brands-the ultimate consumer. For the manufacturers a census of 15 was done in Nairobi while a sample of 115 ultimate consumers and dealers were identified through simple random sampling participated in the study.

3.4 Data Collection Method

The study used both primary and secondary data. Questionnaires were designed with both open and closed ended questions to facilitate data collection. The guide consisted of three sections. Section I critically highlighted on the general background of the organization. Section II responds to the first objective of the study which was to establish the quality dimensions demanded by mobile handsets buyers. Section III sought to identify the quality dimensions pursued by mobile handsets manufacturers. Section IV sought to establish whether quality dimensions had a direct relationship with customer satisfaction. The secondary data was used to capture historic data that respondents' seldoms remember. The sources of such data were any documents obtained from a reliable source. The primary and secondary data were utilized concurrently to ensure that no information relevant to the study was left out. Questionnaires were administered to respondents of different categories

among them managers and customers. The managers were tasked to give relevant case studies in their individual capacities as managers in the day to day management of operations, the challenges they encountered and how a product is rendered obsolete as result of poor quality standards. The nature of the data collected was both quantitative and qualitative. The quantitative aspect focused on variables of measurement. Aliaga and Gunderson (2006) posits that quantitative method is an investigation into a social issue, clarify facts using numerical data analyzed using scientifically based techniques for instance particular statistics. The questionnaires were distributed as follows

Respondents	**Target Population -120 Respondents**
Manufacturers	15
Dealers and distributors	30
Ultimate Consumer	75
Total Population of Interest	120

3.5 Data Analysis

The completed questionnaires were thoroughly edited to ensure consistency and completeness before processing the responses. The respondents' data was grouped into various categories. Quantitative data was collected and descriptive analysis was used to carry out analysis. Descriptive statistics such as frequency, mean, standard deviation range and standard error of mean and sum was used to analyze the data. Tables were used to summarize responses for further analysis and facilitate comparison. Inferential statistics i.e. Correlation and ANOVA were used to analyze relationships among variables. Analysis was aided by Statistical Package for Social Sciences (SPSS).

CHAPTER 4: DATA PRESENTATION AND ANALYSIS

4.1 Introduction

This chapter contains the detailed findings on the quality dimensions pursued by the mobile manufacturers resulting to customer satisfaction. The analysis of the primary data collected and the interpretation was done using Statistical Package for Social Science (SPSS) V17 as a statistical data analysis tool. Both descriptive statistics and the inferential statistics were carried out. Based on the study objectives the following findings were established.

The response rate of the respondent

Figure 4.1 Response Rate Return

Respondent's Category	No of questionnaires issued	No of questionnaires duly filled	Respondent rate
Manufacturers	15	13	86.67 %
Dealers	30	25	83.33 %
Ultimate Consumers	75	72	96 %
TOTAL	120	110	91.67 %

Source: Research Data (2017)

The questionnaires were used to collect data from 120 respondents. The respondents were categorized as manufacturers, dealers and ultimate consumers. From the Table 4.1, the response rate was as follows; out of the expected 15 manufacturers there was 13 response representing 86.67%, dealers response was 25 out of the expected 30 resulting to 83.33% and on the ultimate customers section the study received 72 out of the expected 75 representing a rate of 96%. The study was able to get a response from 110 respondents in total out of 120 questionnaires distributed representing a general response rate of 91.67%.

4.2 Descriptive Analysis

This is the part that presents the demographic data collected from the respondents; it included the gender of the respondent, their age, education level, occupation, their income, type of phone used/selling, how long and the reasons of using/selling the phone.

4.2.1 Gender of the respondents

The study found the gender of respondent as in table 4.2 below.

Table 4.2 Gender of the Respondent

		Frequency	Percent	Cumulative Percent
	Male	68	61.8	61.8
	Female	42	38.2	100.0
	Total	110	100.0	

Source: Research Data (2017)

According to the frequency table 4.2 above, the study findings showed that majority of the respondents from the data collected were male representing 61.8% of the total respondent and female accounting to 38.2% of the total respondents.

4.2.2 Age of the respondents

The study established the age of the respondents from the data collected and the results are presented in table 4.3.

Table 4.3 Age of Respondents

	Years	Frequency	Percent	Cumulative Percent
Valid	20-30	59	53.6	59.0
	30-40	25	22.7	84.0
	40-50	13	11.8	97.0
	Above 50	3	2.7	100.0
	Total	100	90.9	
Missing	77	10	9.1	
Total		110	100.0	

Source: Research Data (2017)

The study further sought to know the age bracket of respondent. It found out that majority of the respondents were of the ages of 20-30 years with a percentage 53.6%, followed by a range of (30-40) which accounted for 22.7%, (40-50) representing 11.8% and above 50 years accounted for 2.7%. Finally, there were 10 respondents who failed to indicate their age bracket corresponding to 9.1%.

4.2.3 Educational background of the respondents

The respondents were requested to indicate their educational background, and the results obtained were as presented as in the table 4.4

Table 4.4 The Educational Background of the Respondents

	Education Level	Frequency	Percent	Cumulative Percent
	High School	13	11.8	12.1
	Intermediate	20	18.2	30.8
	Graduate	62	56.4	88.8
	Post Graduate	8	7.3	96.3
	Others	4	3.6	100.0
	Total	107	97.3	
Missing	77	3	2.7	
Total		110	100.0	

Source: Research Data (2017)

Respondents were asked about their educational background and the study found out that the majority of the respondents were graduates with 56.4%, followed by intermediate 18.2%, high school 11.8%, post graduate 7.3% and others 3.6%. There was missing value of 3 respondents who failed to disclose their education representing 2.7%.

4.2.4. Respondents Occupation

Table 4.5 The occupation of the respondent

	Occupation	Frequency	Percent	Cumulative Percent
Valid	Service	9	8.2	8.3
	Professional	47	42.7	51.4
	Business	53	48.2	100.0
	Total	109	99.1	
Missing	77	1	.9	
Total		110	100.0	

Source: Research Data (2017)

From table 4.5 above, the occupation of most of the respondents was business with 48.2%, followed by professional 42.7% and finally service posted 8.2%. Further, 0.9% of the total respondents did not indicate their occupation.

4.2.5. Respondents Level of Income

Table 4.6 The Income Level of the Respondents

	Income Levels	Frequency	Percent	Cumulative Percent
	Less than 15,000	6	5.5	5.6
	15,001 - 25,000	18	16.4	22.4
	25,001- 35,000	21	19.1	42.1
	35,001 & Above	62	56.4	100.0
	Total	107	97.3	
Missing	77	3	2.7	
Total		110	100.0	

Source: Research Data (2017)

From table 4.6 the study found that 56.4 % of the respondents earned high incomes of 35,001 & above followed by 25,001 – 35,000 (19.1%), 15,001 – 25,000 (16.4%) while those earned less than 15,000 accounted to 5.5%. The missing value showed those who failed to disclose their income range was 2.7%. The high level of income is attributed to the high percentage of the respondents being either on professional and business occupation.

4.2.6. Respondents Type of Phone used

Table 4.7 Type of the phone used/sold by the Respondent

Phone Type	Frequency	Percent	Cumulative Percent
Nokia	10	10.3	10.3
Samsung	27	27.8	38.1
Apple	1	1.0	39.2
Tecno	25	25.8	64.9
Oppo	1	1.0	66.0
IPhone	5	5.2	71.1
Huawei	10	10.3	81.4
Others	16	16.5	97.9
All of the above	2	2.1	100.0
Total	97	100.0	

Source: Research Data (2017)

The research findings found out that Samsung and Tecno had the majority of the users with 27.8% and 25.8% respectively of the total ultimate consumers and dealers. They were followed by Nokia and Huawei phone which represented 10.3% each. The Oppo and Apple reported lowest number of users with 1% of the total ultimate consumers and dealers each.

4.2.7. Frequency in which the respondents change/import their phone.

Table 4.8 Frequency in which the respondents change/import their phones

	Frequency	Percent	Cumulative Percent
Less than 1 Year	28	28.9	28.9
1-2 Years	47	48.5	77.3
2-4 years	18	18.6	95.9
Above 4 Years	4	4.1	100.0
Total	97	100.0	

Source: Research Data (2017)

The study showed that majority of the respondents change their phones after 1-2 years of use representing 48.5% of the total respondents, 28.9% stated that they changed their mobile in less than 1 year of use. Further, 4.1% of the respondents stay longer with their phone before acquiring new ones.

4.2.8. The cost that respondents are willing to incur for a mobile phone

Table 4.9: The cost that respondents are willing to incur for a phone

	Frequency	Percent	Cumulative Percent
Less than 10,000	21	21.6	21.6
10,000-20,000	69	71.2	92.8
20,000-40,000	7	7.2	100.0
Total	97	100.0	

Source: Research Data (2017)

Table 4.9 shows the cost willingness of the respondents towards acquiring a new mobile phone. The study found out that 71.2% of both ultimate consumers and the dealers were willing to pay 10,000 – 20,000, for a phone this majority of the respondents are clearly attributed with the extent to which customers tastes and preferences towards high end phones has increased due to the service quality offered for instance exclusive features; Facebook, WhatsApp and internet. Those willing to pay less than 10,000 accounted for 21.6% while 20,000 -40,000 reported 7.2%.

4.2.9. Type of brand offered by the manufacturer

Table 4.10 The type of brand offered by the manufacturer

Brand	Frequency	Percent	Cumulative Percent
Nokia	2	15.4	15.4
Samsung	2	15.4	30.8
Apple	1	7.7	38.5
Tecno	3	23.1	61.5
Oppo	1	7.7	69.2
Huawei	1	7.7	76.9
Others	3	23.1	100.0
Total	13	100.0	

Source: Research Data (2017)

From 110 total respondents 13 manufacturers were involved in the study and it was found out that Tecno brand and category of others which included Infinix and HTC represented high percentage of the total respondents 23.1% respectively. Samsung and Nokia posted the same percentage of 15.4% and lastly Apple, Oppo and Huawei had the least 7.7%.

4.2.10. Research and Development For Conformance

Table 4.11 Survey of non-performing products in the market by the manufacturer

		Frequency	Percent	Cumulative Percent
	Once a year	5	38.5	41.7
	Twice a year	4	30.8	75.0
	Five times a year	1	7.7	83.3
	Others	2	15.4	100.0
	Total	12	92.3	
Missing	77	1	7.7	
Total		13	100.0	

Source: Research Data (2017)

The study sought to find out how often the mobile handset manufacturers conduct research/survey about the non-performing products in the market. Table 4.11 indicates that majority of the manufacturers 38.5% of the total manufacturer's segment conduct research once a year then followed by those conducted research twice a year 30.8%. There is need for manufacturers to increase the frequency in which they conduct research on non-performing products annually so that they clearly understand the changes on the needs of customers in the market.

4.3 Reliability analysis.

To test the reliability of the variables used in the questionnaire, reliability analysis was conducted.

Table 4.12 Cronbach's Alpha Coefficient

Variables	No of items	Cronbach's Alpha coefficient
Tangibles	4	0.893
Reliability	4	0.887
Responsiveness	3	0.898
Assurance	4	0.852
Empathy	4	0.939
Perceived network quality	6	0.910
All quality dimensions	25	0.897

Source: Research Data (2017)

Reliability test for all quality dimensions used in the study was conducted. The results of Cronbach's alpha obtained from the SPSS output showed that the coefficient values varied from 0.852 for assurance dimension to 0.939 for empathy dimension as illustrated in table 4.12 above. The value for the entire Cronbach's alpha for all quality dimensions was 0.897 which exceeded the minimum, Parguel, Delécolle, & Valette-Florence (2016) accepted level of 0.70. Therefore, the entire quality dimensions used in the study were reliable with high internal consistency.

4.4 Comparative statistics

The comparative statistics was carried out to explore customer perception on quality dimensions pursued by the service provider as well as manufacturer's perception on the quality dimensions they pursue to enhance customer satisfaction.

4.4.1 Establishing the respondent's perception on quality dimensions

This section analyzed comparative means of the data collected on scale basis. It is concerned with the respondent's perception concerning the quality dimensions. This section also established the quality dimensions demanded by the mobile phone buyers in Kenya. The quality dimensions were measured on likert scale with minimum scale of 1 and a maximum scale of 7, scale 1 being highly dissatisfied while scale 7 highly satisfied. The mean score of below 5.50 was ranked moderately satisfied, between 5.50 and 6.50 was ranked satisfied with the quality dimensions pursued by manufacturers while between 6.50 and 7.00 was highly satisfied. The standard deviations was also obtained, it indicated the variation from the mean. A standard deviation greater than 1 showed significant variation from the mean as compared to that of less than 1 which implied no significant variation from the mean.

Table 4.13 Customers perception on quality dimensions pursued by manufacturers

Tangibles

	Valid	Missing	Mean	Std deviation
Branches are located in convenient places	97	0	6.12	1.053
Physical facilities are visually appealing	96	1	6.06	1.195
The service provider has up-to date equipment	97	0	5.97	1.194
Employees are well dressed and neat in Appearance	97	0	5.95	1.202

Source: Research Data (2017)

Reliability

	Valid	Missing	Mean	Std. deviation
The service provider does whatever it promises	97	0	5.57	1.406
Manufacturers solving customers problems	97	0	5.97	1.113
Manufactures provides services at the time it promises	96	1	5.54	1.337
The service charges are accurate	95	2	5.62	1.169

Source: Research Data (2017)

Responsiveness

	Valid	Missing	Mean	Std. deviation
Employees gives prompt service	97	0	5.57	1.406
Employees always willing to help	97	0	6.20	1.113
Employees respond to customer request when busy	97	0	5.44	1.337

Source: Research Data (2017)

Assurance

	Valid	Missing	Mean	Std. deviation
The employees can be trusted	96	1	6.17	1.279
Customers feels safe doing business with provider	97	0	5.79	1.322
Provider protects customer confidentiality	97	0	6.09	1.267
Employees are consistently courteous with customer	97	0	6.22	1.301

Source: Research Data (2017)

Empathy

	Valid	Missing	Mean	Std. deviation
The employees provide individual attention	97	0	5.57	1.406
The employees know the customer needs	96	0	5.97	1.113
Provider has operating hours convenient to all	97	1	5.54	1.337
The employees have best of interest of customers	97	2	5.62	1.169

Source: Research Data (2017)

Perceived Network Quality

	Valid	Missing	Mean	Std. deviation
Call quality of network is good competitive advantages	97	0	6.29	.1.266
Provider has more competitive prices than its competitors	97	0	6.26	1.387
Provider has wider range of products and services	97	0	6.37	.870
Provider has better service quality than its competitors	97	0	5.85	1.453
Service provider offers better products and services	97	0	6.07	.893

Source: Research Data (2017)

Customer satisfaction

	Valid	Missing	Mean	Std. deviation
Using the product has been a good experience	97	0	5.63	1.431
Products and services are of quality	97	0	5.44	1.291
Products and services fully meet customers' needs	97	0	5.60	1.344

Source: Research Data (2017)

As shown in table 4.13, customer's opinions were slightly above moderate. Tangible service quality have a general mean value of 6.03, where customers were satisfied with the provider having branches located in convenient places as well as physical facilities being visually appealing. Reliability service quality posted a mean of 5.68 in general, which was the lowest as compared with other quality dimension. Customers showed fairly satisfaction on the services provider towards solving their problems. Further, they were somewhat satisfied concerning the service charges being accurate. Responsiveness service quality had a value mean of 5.74, under this quality dimension, customers were satisfied with the willingness of the employees to help them, but showed a slightly average opinion concerning employee's willingness to respond to their requests when they are busy.

Assurance service quality yielded a mean value of 6.07. The courteousness and trustworthy of the employees and the fact that they maintained confidentiality of the customer's information recorded high mean showing that the customers were satisfied. Further, customers indicated a moderate satisfaction on the safety of doing business with the provider. Empathy quality dimension yielded value mean of 5.90. The study found out that employees had best interest of the customers at their heart and that they were aware of the need of customer. Generally, empathy service quality received a moderate opinion. Perceived network quality had the highest mean value 6.25 amongst the six quality dimensions. Customers were highly satisfied by the strong and wide range network, satisfied

by the call quality of the network, competitive nature of prices, wider range of product and services and that the provider offers better products and services.

In summary, customers were satisfied with the perceived network quality, assurance and tangible of service quality, which yielded highest mean value of above 6.00. Customers were not satisfied enough with reliability, empathy, and responsiveness of service quality which had a low value of mean. Furthermore, customer satisfaction had a moderate mean 5.56, which means that customer satisfaction may have strong relation with the three dimensions of service quality (reliability, empathy and responsiveness).

4.4.2 Ranking of the quality dimensions

Table 4.14 Ranking of quality dimensions

Quality Dimensions	Mean	Standard Deviation
Perceived Network	6.25	1.119
Assurance	6.07	1.292
Tangible	6.03	1.161
Empathy	5.90	1.312
Responsiveness	5.74	1.500
Reliability	5.68	1.256
Average	5.95	1.273

Source: Research Data (2017)

The summary of the descriptive statistics of the quality dimensions is given in the table 4.14 above. The results indicated that the perceived network quality yielded the highest value of mean (6.25) while reliability the lowest value of mean (5.68). Since the value of the mean ranges between 5.68 and 6.25, it resulted to a general mean value of 5.95 with a standard deviation of 1.273. Therefore, it can be concluded that the customers are having slightly above average opinion on all the quality dimensions pursued by the manufacturer.

4.4.3 Perception of mobile handset manufacturers on quality dimensions

Table 4.15 Perception of mobile handset manufacturers

	Valid	Missing	Mean	Std. deviation	Min	Max
Does the firm offer after sales services (Tangible	13	0	1.08	.277	1	2
Does Products and services fully meet customers' needs	13	0	1.00	.000	1	1
Does the firm give offers to the clients (Empathy	13	0	1.08	.277	1	2
Does the firm give offers to the client's (Empathy)	13	0	1.23	.439	1	. 2
Does the product released clearly articulate market needs (Performance)	13	0	1.00	. .000	1	1

Source: Research Data (2017)

A comparative statistic of the perception of mobile handset manufacturers concerning quality dimensions was carried out in order to determine the means scores. The quality measures had a minimum scale of 1 which corresponded to a yes and maximum scale of 2 which implied a no. From the study both serviceability and performance posted a lower mean with a standard deviation of .000 each, where all the manufacturers had the services centers in the region together with the enhanced product articulation in the market. This implied effective serviceability and improved performance in the market. Collecting customer feedback posted a higher mean value of 1.23 with a standard deviation of 0.439; this implied a moderate conformance to the customer's complaints and queries and that the service provider should improve on its formal policy of collecting customer feedback to incorporate into product development process.

4.5 Correlation Analysis

Pearson correlation analysis was further used to describe the relationship between the dependent variable customer satisfaction (C.S) and the independent variables; tangible (T.QD), reliability (R.QD), responsiveness (W.QD), assurance (A.QD), empathy (E.QD) and network quality (N.QD). A correlation coefficient that is greater than 0.8, reveals a high and strong correlation among the variables that would lead to multicollinearity and would not be regressed.

4.5.1 Relationship between dependent variable (customer satisfaction) and independent variables (quality dimensions)

Table 4.16 Correlation Matrix

		C.S	T.QD	R.QD	W.QD	A.QD	E.QD	N.QD
C.S	Pearson Correlation	1						
T.QD	Pearson Correlation	.476**	1					
R.QD	Pearson Correlation	.576**	.316**	1				
W.QD	Pearson Correlation	.506**	.129	-.022	1			
A.QD	Pearson Correlation	.142	.176	.088	-.077	1		
E.QD	Pearson Correlation	.496**	.212*	.147	.107	.098	1	
N.QD	Pearson Correlation	.127	.098	-.047	.058	.154	.054	1

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

Based on the Pearson correlation analysis finding in the table 4.16, there was a positive correlation between the dependent variable and independent variables with the highest correlation being on reliability, responsiveness and empathy. On the other hand, there was a positive correlation among several quality dimensions of independent variables. However, the results from the correlation matrix above revealed Pearson (r) < 0.8; this necessitated the need for conducting regression analysis to further understand the impact of quality dimensions on customer satisfaction.

4.6 Regression Analysis

Having passed the above test, linear regression analysis was conducted to determine which quality dimensions of independent variable (network, tangible, responsiveness, reliability, assurance and empathy) explained the variability in dependent variable (Customer Satisfaction).

Table 4.17 Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.807[a]	.651	.627	.964

a. Predictors: (Constant), Network, Tangible, Responsiveness, Reliability, Assurance, Empathy

Table 4.18 ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	152.730	6	25.455	27.364	.000[a]
	Residual	81.860	88	.930		
	Total	234.589	94			

a. Predictors: (Constant), Network, Tangible, Responsiveness, Reliability, Assurance, Empathy

b. Dependent Variable: Customer Satisfaction

Table 4.17 of the model summary above indicated the strength of the relationship between customer satisfaction and the quality dimension. The overall regression model as estimated by the Adjusted R Square implied a good fit. The model was significant with R Square = 0.651, Adjusted R Square = 0.627 and F value = 27.364 as illustrated in table 4.17 and 4.18 above. Thus, 62.70% of variability in the customer satisfaction would be explained by the quality service dimensions (network, tangible, responsiveness, reliability, assurance and empathy) with statistical significance.

Table 4.19 Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients			95.0% Confidence Interval for B	
		B	Std. Error	Beta	t	Sig.	Lower Bound	Upper Bound
1	(Constant)	.799	.407		1.961	.053	-.011	1.609
	Tangible	.353	.066	.434	5.369	.000	.223	.484
	Reliability	.346	.093	.339	3.711	.000	.160	.531
	Responsiveness	.042	.079	.048	.535	.594	-.114	.198
	Assurance	.159	.106	.151	1.491	.140	-.053	.370
	Empathy	.033	.124	.033	.264	.792	-.213	.278
	Network	.034	.086	.035	.381	.704	-.203	.138

a. Dependent Variable: Customer satisfaction

Linear regression model recorded the coefficients of independent variables (network, tangible, responsiveness, reliability, assurance and empathy) as illustrated in the table 4.19. Based on table 4.19 two of the quality dimension proved to be significant; reliability service quality and tangible service quality. This implied that reliability and tangible service quality had greater influence on customer satisfaction variability contributing largely to the Adjusted R square of 62.7%. The coefficients of (network, responsiveness, assurance and empathy) proved not significant, implying that the service provider needs to work more on the network quality, responsiveness, assurance and empathy to ensure customers are fully satisfied by their entire pursued quality dimensions.

4.7 Results finding

4.7.1 Establishing the quality dimensions demanded by mobile phone buyers.

The first objective of the study was to establish quality dimensions demanded by mobile phone buyers in Kenya. To ascertain the quality dimensions, a comparative statistics was conducted and from the table 4.14 ranking of quality dimensions as perceived by the customers and dealers,

perceived network quality, assurance and tangible came top with highest means. They were followed by empathy, responsiveness and finally reliability in that order. However, upon conducting regression analysis, as from table 4.19 model coefficients, it was ascertained that tangible and reliability would significantly influence the variability of customer satisfaction, though responsiveness, assurance, empathy and network quality recorded positive coefficients.

4.7.2 The relationship between quality dimension and customer satisfaction.

The third objective of the study was to establish the relationship between the quality dimensions pursued by the mobile handset manufacturers and the customer satisfaction. To achieve this objective, customer satisfaction was regressed against the quality dimensions (network, tangible, responsiveness, reliability, assurance and empathy) and from the regression output coefficient results in the table 4.19, all quality dimensions posted a positive relationship between them and the customer satisfaction, which concurred with the correlation analysis. Two of the quality dimension proved to be significant; reliability service quality and tangible service quality. While on the other hand, the coefficients of (network, responsiveness, assurance and empathy) proved not significant but had a positive relationship with the customer satisfaction Sureshchandar, Rajendran, & Anantharaman. (2002). Therefore it is clear that, there is a statistically significant relationship between customer satisfaction and the quality dimensions, as from the model summary table 4.17 and ANOVA table 4.18, 62.7% of the variability in customer satisfaction is significantly explained by the quality dimensions under study.

CHAPTER FIVE: SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

The specific objectives of this study were to determine the quality dimensions demanded by mobile handsets customers, to determine the quality dimensions pursued by mobile handset manufacturers and to establish the relationship between quality dimensions and customer satisfaction. The data collated resulted to the following discussions, conclusions and recommendations on these objectives.

5.2 Summary

Findings from the first objective which was to establish the quality dimensions demanded by mobile handset customers depicts that Samsung had taken a lead in the number of users of its products since it has the highest percentage, followed by Techno, Nokia,Huawei and others. It was also established that the maximum period of time that customers used mobile phones was between 1 to 2 years and majority of customers were willing to purchase a phone at a cost of between Ksh10,000 to Ksh20,000. This implies that customers perception towards mobile handsets has changed drastically over the years, the customers no longer view mobile phones as communication gadgets for calling and texting but rather working and entertainment gadgets due to the technological advancement and therefore attention shifts to the quality dimensions demanded by the mobile phone buyers.

Majority of the customers were satisfied with the tangibility in the sense that the branches were located in convenient locations, the physical facilities were visually appealing, the service providers had up to date equipment and employees were neatly dressed. The customers further argued that the manufacturers fulfilled what they promised especially when complains arise they were resolved in good time for instance warranties were issued to the clients in the appropriate time, the service centers ensured all clients are served at affordable costs and to a large extent reliability of the mobile handset manufacturers was considered of high standards by the ultimate consumer and dealers. However the customers held dissenting opinion on assurance ,perceived quality ,empathy and responsiveness ,a number of clients were not satisfied with trust levels of the employees ,they did not feel safe doing business with the firms ,they were afraid of the confidentiality of their information and were not also happy with the customer care ,this could be attributed to the fact that today many firms sell counterfeit goods ,they stated that getting an original phone in the market had been

difficult and thus the manufacturers need to work on plan to ensure that the products and services are authentic. The customers were not satisfied with the level of empathy that the service provider offers especially on the operating hours, most manufacturers run their businesses for close to nine hours per day, however the customers are of the opinion that if the firms had their interest at heart then they should extend the operating hours.

The clients were of the opinion that network quality needs to be improved by majority of manufacturers, they stated that their phones lose network in many occasions and the manufacturer has to take into account certain measures to eliminate such experiences , they also noted that they pay a high price to get a mobile phone with a high quality and exclusive features, however a few consumers were not happy with the range of products and service offered ,customers owning iPhone complained of lack of phone accessories such as chargers and service centers. The clients expressed dissatisfaction on the responsiveness level of the manufacturers such that they have failed to respond to the question of durability of the mobile phones. They assert that concerns have been raised regularly on the battery life of the phone, why smartphone battery have short lifespan and employees have not been in a position to give prompt feedbacks however the energy saving mode has been of help but this means that they have to close a number of applications such as What Sapp, video, Bluetooth and Facebook. They also attribute failure in network to lack of sufficient internal storage memory.

The ranking of SERVEQUAL dimensions was in the following order Tangible first, reliability second, assurance third, responsiveness fourth, perceived quality fifth and empathy last. Linear regression model recorded the coefficients of independent variables (network, tangible, responsiveness, reliability, assurance and empathy) Of the quality dimensions, reliability and tangible service quality had greater influence on customer satisfaction variability. The co- efficient of network, responsiveness, assurance and empathy proved not significant and the manufacturers need to concentrate more on them to ensure customer satisfaction.

On the second objective to establish the quality dimensions pursued by mobile handset manufacturers findings revealed that manufacturers focused on tangibles and reliability where they located branches in convenient locations for ease of accessibility by customers ,they had ensured that the physical facilities are visually appealing such that the products are well displayed in shelves with good packaging ,they have also capitalized on up to date equipment for instance the gadgets had

apps installed that enables customers to contact the customer care and service centers where the device has a breakdown. The firms have also adopted a strong management team where employees have specific dress codes; they dress according to the products offered to make it easier for customers to identify with the products and services offered (branded shirts). It was established that the manufacturers compete on price where some manufacturers try as much as possible to release phones with high exclusive features at low cost for instance Infinix Limited. Collecting customer feedback posted a higher mean value of 1.23 with a standard deviation of 0.439; this implied a moderate conformance to the customer's complaints and queries and that the service provider should improve on its formal policy of collecting customer feedback to incorporate into product development process. However, they need to focus on the responsiveness, perceived network quality, empathy and assurance whose standard deviation was high implying that the customers were not satisfied with those quality dimensions.

The third objective was to establish the relationship between quality dimensions and customer satisfaction, regression findings revealed that a relationship exist between quality dimensions and customer satisfaction such that if the manufacturers do not pursue all the quality dimensions in equal measure variability with regards to customer satisfaction is evident. Further analysis indicated that the relationship was not proportionate as indicated in the disparities in the correlation coefficient on each quality dimension.

5.3 Conclusions

The study sought to assess the quality dimensions and customer satisfaction: a case of mobile handset manufacturers in Kenya. The findings indicated that manufacturers have concentrated on tangibles and reliability in their quest to satisfy customer wants in the mobile industry. The customers were however not satisfied with the extent to which empathy, responsiveness, assurance and perceived network quality were administered by the mobile handsets manufacturers. Customer satisfaction levels are positively linked to service quality but not proportionately.

5.4 Recommendations

Quality dimensions is generally important for a firm to achieve high levels of customer satisfaction, however there is need for improvement as customers are not satisfied in most areas. A lot can be done to ensure customer receive more than the perceived value on all service quality dimensions for

instance empathy, assurance, perceived quality, responsiveness, tangibles and reliability. To maintain high performance level a firm should improve the network quality of the mobile handsets, ensure that they put in place mechanisms to detect and address counterfeit products, ensure they manufacture phones with long lasting battery life, increase the internal storage capacity of the phones and ensure the phone has an android operating system which is mostly preferred by clients. Firms that will focus on those parameters of quality dimensions stand a good chance to maintain high market share and win confidence of the clients.

5.5 Limitations of the Study

There was a delayed response and researcher had to increase the number of questionnaires distributed to increase the response rate. Some respondents were reluctant to participate in the research and had to be convinced that it was an academic exercise. Some respondents were asking too many questions on the study and did not end up filling the questionnaires this was time wasted for the researcher. The duration of the study was short to reach out to majority of the respondents.

5.6 Suggestions for further study

There is need for researchers to further carry out studies on the same subject of 'Quality dimensions and customer satisfaction: a case of mobile handset manufacturers in Kenya', there are number of concerns that customers raise on day to day life for instance most smartphone clients complain of battery life in the sense that they have to charge their smartphones at least thrice a day ,durability is one of the quality dimensions that future researchers need to focus on especially studying the importance of battery life of a mobile phone to a consumer and how the manufacturers stands to gain competitive edge on successfully implementation of a smartphone with long battery life.

REFERENCES

Abdulrahman, A.& Muhammad, A.K.(2011). Measuring the Service Quality of Mobile Phone Companies in Saudi Arabia. *Administrative Science*,22(2),43-45.

Adelman, Mara B., Aaron,A.& Cathy,G.(2000).*Beyond Smiling," in Service Quality: New Directions in Theory and Practice* New York: Sage,

Agrawal, and Muthulingam,(2015). Does Organizational Forgetting Affect Vendor Quality Performance? An Empirical Investigation" .*Manufacturing & Service Operations Management* .Department of Business Administration, University of Illinois. 17(3), 350– 367

Akhter,B. &Uddin, M.B.(2012). Customer Satisfaction in Mobile Phone Services in Bangladesh: *A Survey research management and marketing journal*,1, 20-36

Aliaga and Gunderson (2006). A Survey of Latest Performance, *Development and Measurement Issues of Smart Phones Design Interactive Statistics* .Upper Saddle River NJ; Pearson Prentice Hall

Anantamula,V.S.&Kanungo, S. (2010). Modeling enablers for successful KM implementation", *Journal of Knowledge Management*, 14 (1),100-113.

Antony, S.and Pamela,A.O. (2013).Cell phone disposal and strategic evaluation of electronic waste management in Kenya, a case of mobile phone dealers in Kisumu county. *European Journal of Business and Innovation Research* 1(4),1-8, Published by European Centre for Research, Training and Development UK (www.ea-journals.org)

Bügel, M. ,Buunk, A. & Verhoef, P. (2010).A comparison of customer commitment in five sectors using the psychological investment model", *Journal of Relationship Marketing* , 9(1), 2-29.

Cater, B. & Zabkar, V. (2009).Antecedents and consequences of commitment in marketing research services: the client's perspective", *Industrial Marketing Management*, 38(7), 785-797.

Chong, S.C. (2006).KM critical success factors: a comparison of perceived importance versus implementation in Malaysian ICT companies", *The Learning Organization*,13(3), 230-256.

Chu-HuaKuei.(2003).Competing on Quality and Environment", *International Journal of Quality & Reliability Management*, 20 (8)980-990,

Clutter buck d. & Wynne B. (1993).Mentoring and coaching', in A. Mumford (ed.) *Handbook of Management Development*.Aldershot, Gower

Crosby (1995) *Quality Is Free: The Art of Making Quality Certain* ,M.C. Graw-Hill, 1995

Danny,C.,Vincent,G.,&Heloisa,M.(1999) An empirical analysis of effective TQM implementation in the Hong Kong electronics manufacturing industries. *Human factors & Ergonomics in manufacturing and service industries*, 9 (1),1-25.

, Massachusetts Institute of Technology, Cambridge, MA.

Douglas,T.J. & Judge,W.Q. (2001).Total quality management implementation and competitive advantage: the role of structural control and exploration", *The Academy of Management Journal*, 44(1),158-169.

Drucker, P. (1994),The age of social transformation, *The Atlantic Monthly*, 174(5),53-80.

Emmanouil, S.,&Christos, K. (2009).*A model to identify the dimensions of mobile service quality*, Georgiadis university of Macedonia Thessaloniki, Greece

Ewan, S. (2007).*The regulation of the quality of service in mobile networks.*University of Witwatersrand, LINK Centre

Fernandez, I.B. & Sabherwal, R. (2010). *Knowledge Management–Systems and Processes*, PHI Learning Private Limited, New Delhi.

Fornell, C. (1992). A national customer satisfaction Barometer: *The Swedish Experience. Journal of Marketing*, 56 (1), 6-21.

Fullerton, G. (2005), "How commitment both enables and undermines marketing relationships", *European Journal of Marketing*,39(11) 1372-1388.

Furahiji & Wawrzyniak. (2012).An empirical study of the factors influencing consumer behaviour in the electric alliances market. *Contemporary Economics*, 6(3), 76-86.

Gartner (June 2016).Analysis on Worldwide Smartphone's Sales. Gartner Press Released. Retrieved from *http://www.gartner.com/newsroom/id/3339019.*

Garvin, D. (1987).*Competing on the Eight Dimensions of Quality*. Harvard Business Review, 87, 101-109.

Garvin, D. (1984), "What does product quality really mean?", *Sloan Management Review*, 26(1),25-43.

Gitangu, I. (2015). *Total quality management and competitive advantage of small and medium enterprises in Nairobi city*, unpublished MBA research paper. University of Nairobi, school of business.

Gotzamani, K. (2010).Results of an empirical investigation on the anticipated improvement areas of the ISO 9001:2000 standard", *Total Quality Management*,21 (6),687-704.

Grant, M. (2005) *Contemporary Strategic Analysis* 5th edition United Kingdom; Blackwell Publishing Limited.

GSM Arena (2010) Story of Shapes & Sizes: Mobile Phone Evolution ,*GSMArena.com*

Gupta, B., Iyer, L.S. & Aronson, J.E. (2000).*Knowledge management: practices and challenges*", *Industrial Management & Data Systems*, 100 (1),17-21.

House of Commons (1995), *The Consequences of Deregulation*, Transport Committee Report, November.

Hansemark O.C.and Albinsson M.(2004), Customer satisfaction and Retention; the experience of individual employees, managing service quality, 14(1);40-57

Jahanzeb, S. ,Fatima, T. & Khan, M. (2011).An empirical analysis of customer loyalty in Pakistan's telecommunication industry", *Journal of Database Marketing & Customer Strategy Management* , 18(1),5-15.

John,D.(1998).Competing through quality in transport services, *Managing Service Quality*: An International Journal, 8 (2),112-118.

Johnson, William,C. & Sirikit, A. (2002).Service Quality in the Thai Telecommunication Industry: A Tool for Achieving a Sustainable Competitive Advantage." Management Decision, 40(7), 693-701

Jumia Business Intelligence & GSMA Mobiles (2017). *Report on Smartphone Penetration.* Retrieved from *http://www.modernmom.co.ke/2017/04/white-paper-2017-trends-from-kenyan.html*

Juran,J., Blanton,G & Edward,F.(2001) *Quality in Customer Service*, McGraw-Hill Tokyo.

Kaoru,I.(1990).*Introduction to Quality Control* ,3A Corporation Tokyo Japan.

Kothari, C.R. (2004). Research methodology: Methods and techniques. (2nd ed.). New Delhi: New Age international ltd.

Keijzers.(2008). Usability benchmark study of commercially available smart phones: *cell phone type platform*, PDA type platform and PC type Conference Paper.

Kemibaro,M.(2016).SocialMediaWeekIndependent:*https://www.kenyamoja.com/content/moses-kemibaro-social-media-week-independent-nairobi-2016-almost-here/*

Khanna, T. ,Song, J. & Lee, K. (2011).The paradox of Samsung's rise, *Harvard Business Review* , 89 (7), 142-147.

King, A.W. and Zeithaml, C.P. (2003), *"Measuring organizational knowledge: A conceptual and methodological framework"*, *Strategic Management Journal*, 24 (8),763-772

Kotler,P. (2011) .Competition protection and Philip Kotler's strategic recommendations

Lewis, W. G., Pun, K. F., & Lalla, T. R. M. (2006). Exploring soft versus hard factors for TQM implementation in small and medium-sized enterprises. *International Journal of Productivity and Performance Management*, 55(7), 539 - 554.

Managementstudyguide. (2008) Six Sigma and Quality Management: *Comparison of Six Sigma and Total Quality Management:ManagementStudyGuide.com*

McDougall G., & Levesque T., (2000), "Customer Satisfaction with Services: putting perceived value into the equation", Journal of Services Marketing,14 (4/5)392-410.

Monaghan, A. (2013). Nokia: the rise and fall of a mobile phone giant. *The Guardian,Pg 87.*

Motwani, J. (1995), Implementing TQM in education: current efforts and future research directions",*Journal of Education for Business*, 71 (2), 60-3.

Nimit C. & Monika P. (2007) .Prioritizing service quality dimensions. *Managing Service Quality*, 17 (5), 493-509

Oliver, D. (2017). Simple mobile phones and feature handsets put to the test: *Assessment of basic mobile phones for usability, capability, performance, style and value for money.* Wired UK.

Panda, T.K (2003).Creating customer lifetime value through effective CRM in financial services industry. *Journal of Services Research*, 2(2), 157-171.

Paranitharan K.P, Ramesh Babu T, Pal Pandi A & Jeyathilagar D(2004). An empirical validation of integrated manufacturing business excellence model *The International Journal of Advanced Manufacturing Technology* 24(9),1-25.

Parguel, B., Delécolle, T., & Valette-Florence, P. (2016). How price display influences consumer luxury perceptions. *Journal of Business Research*, *69*(1), 341-348.

Peter,J.H.(2004).*Verizon Customers Put It At Top In Wireless Service Satisfaction Survey. Knight Ridder*!Tribune Business News, 1-5.

Pezeshki,V.Moosavi,A.&Grant,S.(2009).Importance-Performance Analysis of Service Attributes and Its Impact on Decision Making In The Mobile Telecommunication Industry." *Measuring Business Excellence*, 13(I), 82-92.

Philip, K. L. (2012). *Marketing Management- A south Asian Perspective*. Delhi, Chenni: Pearson

Puri,(2016).Capabilities of Android operating system. Retrieved from *https://jagannath-puri.droidinformer.org/*

Quy, H. & Timo,V.(2015) Who Killed Nokia? Nokia Did-Aalto, INSEAD Knowledge *The Business School For The World*

Rachel.S(2017).How Quality Inspection Software Can Improve Product Manufacturing: *Edition of Quality*,Quality Magazine

Reichheld, Fredrick F., & W. Earl Sasser (2001), "Zero Defections: *Quality Comes to Services*," Harvard Business Review, 68,105–111.

Selom,K.(2016).*The Impact Of Branding On Consumer Decision Making In The Ghanaian Telecommunication Industry*; A Case Of Expresso Central Institute Of Technology.

Shirin, A. & Puth, G. (2011), "Customer satisfaction, brand trust and variety seeking as determinants of brand loyalty", *African Journal of Business Management*, 5(30),11899- 11915

Sime, C. & Shawnee, V.(2000).Quality-related Action Programs: *Their Impact on Quality Performance and Firm Performance.*

Saghier N. E. and Nathan, D. (2013). Service Quality Dimensions and Customers‟Satisfactions of Banks in Egypt. International Business Research Conference Paper.

Soko Insight (2016).Building Mobile Apps That Impact African Consumers. *Management & Marketing Journal*. 2012,10(1),20-36.

Stat Counter Global Stats.(2017) Market Share of Mobile Phones in Kenya *http://gs.statcounter.com/vendor-market-share/mobile/kenya*

Sultana, R. &Chowdhury.(2017) *International Journal of Scientific & Engineering Research*, 8(2),1-10,*http://www.ijser.org*, Measuring the Relationship Between Product Quality Dimensions & Repurchase Intention of Smart Phone: A Case study On Chittagong City.

Sureshchandar, G. S., Rajendran, C., & Anantharaman, R. N. (2002). The relationship between service quality and customer satisfaction–a factor specific approach. *Journal of services marketing*, *16*(4), 363-379.

Sweeney, J. (1997).Retail service quality and perceived value: A comparison of two models. *Journal of Retailing and Consumer Services*,4 (1), 39-48

Tito, C. (2010).Systems thinking in quality management", *The TQM Journal*,22 (4),352-368.

Tung,F.(2010).Exploring Customer Satisfaction, Perceived Quality and Image: An Empirical Study in the Mobile Services Industry

U.S. General Accounting Qffice(1991).Management Practices:*U.S.Companies Improve Performance through Quality Efforts*. U.S. General Accounting Qffice, Gaithersburg, MD.

Vlachos, A. & Vrechopoulos, P. (2008).Determinants of behavioral intentions in the mobile internet services market", *Journal of Services Marketing*,22(4) ,280-291

Wan,S.S., & Chongman,K. (2015).Samsung's journey to excellence in quality", *International Journal of Quality and Service Sciences*, 7(2/3),312-320.

Wang, C. & Wu, L. (2012).Customer loyalty and the role of relationship length", *Managing Service Quality* ,22(1),58-74.

Wang, R.Y., Lee, Y.W., Pipino, L.L. & Strong, D.M. (1998), "*Manage your information as a product*", *Sloan Management Review*, 39 (4),95-105

Wanyoike,R.(2016).*Quality management practices and firm performance among manufacturing firms In Kenya*, Unpublished Ph.D research paper. Kenyatta University.

Whitney, C.W. &Lind, B.K. (1998) *Quality assurance and quality control in longitudinal studies*.20(1):71-80. Department of Biostatistics, School of Public Health, University of Washington, Seattle 98195, USA

Wu, J.-H. and Wang, Y.-M. (2006).Measuring KMS success: a re-specification of the Delone and McLean's model", *Information and Management*,43,728-739

Young, M. (1992). "A framework for the successful adoption of Japanese manufacturing techniques in the United States", *Academy of Management Review*, 17(4), 677-700.

Yuchan (2015) Analysis of Nokias Decline from Marketing Perspective, Open Journal of Business and Management, 2015, 3, 446-452

Zeithaml, V.A (1988). Consumer perceptions of price, quality and value: A means-end model and synthesis of evidence. *Journal of Marketing*, 52 (3), 2-22.

Zeithaml, V.A., Parasuraman, A. and Berry, L.L (2004).Service Quality (Marketing Science Institute (MSI) *Relevant knowledge Series*.

Zeithaml, V.A., Parasuraman, A. and Berry, L.L. (1990), *Delivering Quality Service*, The Free Press.

APPENDICES

APPENDIX 1: Questionnaire
Dear Sir/Madam,

Dear respondent, I'm conducting a research study on quality dimensions pursued by mobile handset manufacturers. The questionnaire items are about the study and you are kindly requested to participate in responding to the questions below. All information provided in this questionnaire will be treated with the utmost level of confidentiality. The information will be utilized only for academic purposes and will be safeguarded from unauthorized access.

Instructions

1. Tick appropriately in the box or fill in space provided.

2. Feel free to give further relevant information for research

3. The first section will be responded by manufacturers, the ultimate consumer, dealers and corporates, the second section will be responded by the customers only, the third section will be responded by the manufacturers only while the fourth section will be responded by the manufacturers only.

Section I: Background Information

1. Name/Organization……

2. (a) Age:

(b) Gender

□ Male □Female

3. Occupation

Service □

Professional □

Business □

Others Specify……

4. Income Level (per month)

Less than 15,000 □

15,001 – 25,000 □

25,001 – 35,000 □

35,001 & above □

5. Educational Background

High School □

Intermediate □

Graduate □

Post Graduate □

□If Other Specify……..

Section II: Quality Dimensions from Consumers Perspective (Customers)

6. Which mobile phone are you using/Selling? (Tick more than one if applicable)

A) Nokia □

B) Samsung □

C) Apple □

D) Tecno □

E) Oppo □

F) IPhone □

G) Huawei □

H) Others □

Specify

Please write the model of your phone Example: Nokia 1100, Ericsonk800i, etc.)

7. How long have you been using/selling the mobile phone?

Less than 1 year □

1 – 2 years □

2 – 4 years □

Above 4 years □

8. What are the reasons for selling/using the above mentioned model?

A) Internet □

B) Just to talk on it □

C) Use GPRS function □

D) Receive Email & SMS □

E) Down Load Files □

F) Others (Specify □

9. How often do you change/import your mobile phone?

□ Less than 1 year

□ 1 – 2 years

□ 2 – 4 years

□ Above 4 years

10.What phone Accessories do you have? (Tick more than One if applicable)

A) Handsfree □

B) Bloothooth Head Set □

C) USB Data Cable □

D) Memory Card (SD Card) □

E) Others (Specify ……..

11. Latest Mobile facilities which you are aware of:-

(Can tick multiple boxes of the facilities you know.)

A) Operating system i.eAndroid, Windows, Symbian □

B) Internet □

C) MMS □

D) BLOOTOOTH □

E) WHATSSAP □

F) VIDEO CALL □

G) OTHER FACILITIES (Specify) □

12. What would you be willing to pay for a mobile phone?

Less than 10,000 □

10,001 to 20,000 □

20,001 to 40,000 □

13. Please, show the extent to which you think the Mobile Company which you are utilizing its products and services possess the following features. We are interested in knowing your expectation levels with the quality of service offered by Mobile Handsets Manufacturing Firms. Circle the

number that most accurately reflects how much you agree or disagree with the statement based on your experience, according to the following scale 1 Highly Dissatisfied 2 Dissatisfied 3 Somewhat Dissatisfied 4 Undecided 5 Somewhat satisfied 6 Satisfied 7 Highly Satisfied **Choose one option**

Tangibles	1	2	3	4	5	6	7
The customer service branches of the company are located in convenient places							
The physical facilities are visually appealing							
The service provider has up-to-date equipment							
The employees are well dressed and neat in appearance							

Reliability	1	2	3	4	5	6	7
When the service provider promises to do something, it does so							
The service provider shows a sincere interest in solving customer problems							
The service provider provides services at the time it promises							
The service charges are accurate							

Responsiveness	1	2	3	4	5	6	7
Help line is easily accessible RS2 Employees give prompt service							
Employees are always willing to help							

The employees respond to customer requests even if busy							

Assurance	1	2	3	4	5	6	7
The employees can be trusted							
Customers feel safe doing business with the service provider							
The service provider protects the confidentiality of customer information							
The employees are consistently courteous with customers							

Empathy	1	2	3	4	5	6	7
The employees provide individual attention							
The employees know the customer needs							
The service provider has operating hours convenient to all							
The employee have the best interests of the customers at heart							

Network Quality	1	2	3	4	5	6	7
The service provider has a strong and wide range network							
The call quality of the specific chosen network is							

always good Competitive Advantages							
The service provider has more competitive prices than its competitors							
The service provider has a wider range of products and services than its competitors							
The service provider has better service quality than its competitors							
The service provider offers better products and services							

14. Are there any general comments you would make about what you like/dislike about mobile phones? (This could be pricing, location of sales, reception, colour, memory, or anything else, Quality)

Section III: Quality Dimensions Pursued by Mobile Handset Manufacturers (Manufacturers Only)

15.What brands does the organization offer? (Tick more than one if applicable)

A) Nokia □

B) Samsung □

C) Apple □

D) Tecno □

E) Oppo □

F) IPhone □

G) Huawei □

H) Others Specify

Specify……..

16. In a scale of 1-5 where 1-Highly Unsatisfactory 2-Unsatisfactory 3-Neutral 4-Satisfactory 5-Highly Satisfactory, rate the extent which the following contribute to service and product quality improvement in the organization.

	1	2	3	4	5
Seminars and Conferences	□	□	□	□	□
Strategic Meetings	□	□	□	□	□
Employees Training	□	□	□	□	□
Market Visits	□	□	□	□	□
Compliance with ISO	□	□	□	□	□
Employee Motivation	□	□	□	□	□

Customer Complaints □ □ □ □ □

17. How often do you carry out research /surveys about a non performing products in the market?

Once a year □

Twice a year □

Five times a year's □

If other please specify □

18. How do you respond to customer complaints especially on defective products that falls within the warranty period?

19. Does the firm offer after sales services

Yes □

No □

If yes please specify which one……

20. How often do you release new models to the market?.....

21. Rate the extent to which the firm carries out quality trilogy which consists of quality planning, quality control and quality improvement, In a scale of 1-5 where 1-Highly Unsatisfactory 2-Unsatisfactory 3-Neutral 4-Satisfactory 5-Highly Satisfactory, rate the extent which the following contribute to service and product quality improvement in the organization.

	1	2	3	4	5
Quality Planning	□	□	□	□	□
Quality Control	□	□	□	□	□
Quality Improvement	□	□	□	□	□

22. Are there instances where the firm has run out of stocks due to large volume of sales?

Yes □

No □

If yes state what measures were undertaken……

23. In a scale of 1-5 with 1- Very low extent 2-low extent 3-high extent 4-Very High extent 5-Very Very High extent

To what extent does client's feedbacks contribute to the firm's decision making with regards to the following.

	1	2	3	4	5
Design of the product	□	□	□	□	□
Customer Relationship management	□	□	□	□	□
Continuous Improvement	□	□	□	□	□

24.Are the Mobile Phones manufactured having the capability of software upgrade e.g android 6 to 7 or android 4.2 to android 5.

Yes □

No □

25. Does the firm outsource some of its key infrastructure used in manufacturing of products and if so are there any limitations to this?

Yes □

No □

If yes state the limitation and how the firm resolves it on occurrence …….

26. How long does the firm support the phone models before it becomes obsolete?

6 months □

1 year □

2 years □

7 years □

27. How ergonomically friendly is the phone especially in this era of sustainable development goals?

28. Are there any health safety measures/guidelines given to the customer on the effects of the phone on excessive usage?

Yes □

No □

If Yes please state one ……

29. Do you have service centres in the region?

Yes □\

No □

If yes please state how many ……..

30. How do you target all the market segments without compromising on the quality standards of the phone?

31. Does the firm give offers to the clients i.e. reducing the cost of a cell phone at a certain period of time?

Yes □

No □

32. Does the firm encounter any challenges when venturing into new markets?

Yes □

No □

If Yes what are the response mechanisms ……

Section IV: To establish the relationship between quality dimension and customer satisfaction (Manufacturers Only)

33. Are the customers satisfied with the operating hours?

Yes □

No □

If yes please state minimum number of hours allocated for customer service per day……

34. What is the frequency of purchase for specific models per month for example Nokia 1110- 20,000 times per month……

35. Are the customers happy with the price of the products?

Yes □

No □

If yes how many repeat orders from customers does the firm get per month ……..

36. Does the firm provide formal educational training on quality concepts to all employees?

Yes □

No □

37. Does the firm's supply chain fully intergrated to ensure all customers receive variety of goods in large quantities at the appropriate place and time?

Yes □

No □

If yes describe please describe the nature of supply chain ……

38. Does the products released clearly articulate the very needs of each market segment?

Yes □

No □

39. Does the organization have a formal policy of collecting customer feedback to incorporate into development process?

Yes □

No □

40. Does the firm have service centers in major towns?

Yes □

No □

41. Does the products have exclusive features factored in the production process to ensure that the products meet customer specifications?

Yes □

No □

If yes please state briefly some of these features that results to customer satisfaction ……

42. Does the firm conduct performance appraisal and recognize employees who have offered exemplary customer care services based on feedbacks from the clients?

Yes □

No □

If yes how many employees or branches are rewarded as a result of such effort yearly……

43. Are there any general comments you would make to the firm on quality dimensions and customer satisfaction based on your experience as an employee.

Thank you for your participation.