ASSESSMENT OF MOBILE PHONE SERVICE QUALITY BY CUSTOMERS AND SERVICE PROVIDERS: THE CASE OF ST. AUGUSTINE AND MZUMBE UNIVERSITIES AND NETWORK PROVIDERS IN TANZANIA.

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DECLARATION

This Thesis is my original work and has not been presented in any other University for a degree or other academic credentials.

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DEDICATION

This work is dedicated to my beloved wife; Devota, my children; Loitiship, Neema and Nemburis, my father; late Ev. Gabriel, my mother; Nairopuaki and one of my supervisors who passed away few days before signing this document; late Prof. Jonathan M. Chege.

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TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

OPERATIONAL DEFINITION OF TERMS

Communication	The creation of common understanding through words, symbols or gestures
Competence	The degree of professionalism of delivering the service
Courtesy	The caring attitude to the customer
Credibility	The way customers believe in the competence of the service provider (loyalty)
Customer	A person or company who requires the service
Expectation	Mental framing of the level of quality to be received before the service is offered.
Management	Organizing the activities to achieve the goals effectively and efficiently
Marketing	Managerial and social process at which activities are coordinated to deliver value to the customers timely
Mobile Phone	The network for mobile telephone service from a Mobile telephone network company.
Perception	The process by which an individual selects, organizes and interprets information given by the service provider
Quality	The level at which primary characteristics of the product/service operates
Safety	The degree at which the service is free from risk
Satisfaction	A person's feelings of pleasure or disappointment

	resulting from comparing a product's perceived performance in relation to expectations (p – e)
Service	Any act or performance that one party can offer to another that is essentially intangible and does not result in the ownership of anything

ABSTRACT

This study is about the effects of service quality on customers' satisfaction in the mobile phone industry of Tanzania as assessed by customers and service providers. The research problem is that with different expectations and perceptions, customers and service providers might assess quality factors differently in predicting customers' satisfaction level. The main objective of this study is to find out to what extent service quality factors can be used to predict the level of satisfaction by customers compared to service providers. There were four specific objectives for this study. Firstly, to establish the quality factors that influence the assessment of mobile service quality by customers. Secondly, to determine how service providers assess themselves regarding customers' satisfaction. Thirdly, to compare the assessment mobile phones service quality by customers and service providers. Fourthly, to determine the effect of location on the assessment of quality factors by customers. The study was designed to be descriptive. The study population consisted of 10,990 university students from two selected universities. A sample of 468 university students was drawn to represent customers. Out of 468 questionnaires distributed, 420 were collected hence a response rate of 90 percent. A linear regression analysis model was used to determine the factors that are important in predicting satisfaction. A t-test was used to compare the results from customers' assessment with that of service providers. It was found that three quality factors (reliability, responsiveness and empathy) are important in determining the overall customers' satisfaction of the mobile phones network industry. It was further found that the important factors in predicting satisfaction are different from one location to another. The quality assessment by customers is found to be different from that of service providers. This is because the t-value obtained through a T-Test, was found to be statistically significant. It is therefore concluded that the factors of service quality affect the level of customers' satisfaction in the mobile phone industry differently. The results of this study can be used by service providers in the marketing management for mobile phone networks. The Service providers ought to focus their strategies on the three important factors in the mobile phone industry of Tanzania. It is recommended that service providers need to understand the assessment of their customers in order to eliminate the service quality gaps which emanate from variations in assessment of service quality of service providers compared to customers.

CHAPTER ONE

INTRODUCTION

This chapter discusses the background of the study, statement of the problem, significance of the study, objectives and research questions. The purpose of the study, scope, basic assumptions as well as conceptual framework also form part of this chapter.

1.1 Background to the Study

The focus of this study is the link between service quality factors and customers' satisfaction. The target group for this study consisted of university students (customers) who use the services of various service providers in the mobile phone network industry in Tanzania. Quality is considered to be made up of five major factors (Tangibility, Reliability, Responsiveness, Assurance and Empathy).

The scores for perception (p) were used to establish mean scores for quality in respect of each of the factors. The difference between perception (P) and expectation (E), is used to derive the score of the level of satisfaction (S) for each customer to each of the quality factors i.e (S = P - E). Customers have different perceptions about the factors of quality in determining the overall satisfaction level.

Like many countries in East Africa, Tanzania boasts of a small but thriving mobile phone industry. The five major operators Tigo, Vodacom, Zain, Tanzania Telecommunications Company Limited Mobile (TTCL) and Zantel are busy rolling out networks. The pressure to grow and provide greater national coverage has seen the companies begin to invest in

networks linking smaller regional towns and villages where most Tanzanians live. Customers differ when it comes to assessing the relationship between service quality and customers' satisfaction.

Moreover there is always a likelihood of differing appreciation of satisfaction by customers when compared to that of service providers (Varey, 2000). For this reason, all companies are working hard to strengthen their network across the country. According to the reports of Tanzania Communication Regulatory Authority (TCRA), there is an increasing growth of the mobile phone customers in Tanzania. The industry is about a decade old. As at September 30th 2007, the industry had already attracted more than 7.7 million users (Nkoma J.S, 2007).

Table 1.1 Market share of Mobile Phone Networks in Tanzania

S/N	NAME OF OPERATOR	NUMBER OF CUSTOMERS	MARKET SHARE (%)
1	VODACOM	3,693,062	47.8
2	ZAIN	2,250,828	29.1
3	TIGO	992,036	12.8
4	ZANTEL	553,975	7.3
5	TTCL MOBILE	233,890	3.0
	TOTAL	**7,723791**	**100**

Source: Nkoma J.s, 2007: TCRA annual Report)

According to TCRA a figure of 7.7 Million in the year 2007, was considered to be rather low for Tanzania which has a population of about 39 Million people (Government Census, 2002). It is projected that the total number of customers should increase to 15 Million by the year 2010 and to 25 Million by the year 2012. The bulk of this numbers of mobile phone users will include the youth living in urban areas and almost all university students (TCRA Report, 2007).

During the first quarter of the year 2009, about 840,000 customers had joined the mobile phone industry in Tanzania (Nkoma J.S in TCRA Annual Report, 2009). This figure translates to an average of 10,000 customers joining the mobile phone industry per day. Some of them might not be new but moving from one network to another. The dynamics of the switching intentions in the industry have not yet been studied hence there are no appropriate strategies to manage the perceptions and expectations of customers.

Most of the mobile companies are mainly focused on price and have not paid much attention to the relationship of quality to satisfaction. The industry has recorded phenomenal growth since cellular telephone services were launched in the country. It is reported that the total number of mobile phone users in 2009 was nearly 15 million, compared to 127,000 in 1999 which reflects a growth of more the 11,000 percent in 10 years. University students are considered to be among the most active segments of the customers whereby almost each student uses a mobile phone (Nkoma, 2009). This assessment validates the initial projections by TCRA in 2007 that anticipated a 15 million subscriber base by 2010.

1.2 Statement of the Problem

In the service industry, such as mobile phone networks, there are no physical goods to be seen. This often means that the service industry has to rely on the service delivery system in assessing the service quality. University students might assess satisfaction level on the mobile phone industry differently compared to the way service providers assess the level of customers' satisfaction they consider to be offering. This could be because of different backgrounds of the customers and also the interpretation of service providers on quality factors.

In most cases, service providers generalize the management factors of customers' satisfaction and this might lead to loss of focus for the providers. There is a need therefore to find out the significance of each factor on determining customers' satisfaction. There is also a need to determine how service providers assess the level of satisfaction they consider to be offering to their customers and compare this with the assessment of customers on perceived quality about the services provided to them. The mean score on customers' perception of service quality factors is used to express the level of perceived quality by the customer in relation to the quality factor.

1.3 Objectives of the Study

The main objective of the study was to find out the influence of quality factors in determining the level of customers' satisfaction in the mobile phones network industry.

The specific objectives are to:

(i) Establish the quality factors that influence the assessment of mobile phones' service quality by customers.

(ii) Determine how service providers assess themselves regarding customers' satisfaction

(iii) Compare the assessment of quality of mobile phone service by customers and service providers

(iv) Determine the effect of location on the assessment of quality factors by customers.

1.4 Research Questions

Research questions developed from the specific objectives are;

(i) What factors influence the assessment of mobile phone service quality by customers?

(ii) How do mobile phone service providers assess their quality of service provision?

(iii) How does the assessment of service quality satisfaction by customers differ from that of service providers?

(iv) What is the effect of location on the assessment of quality factors by customers?

1.5 Significance of the Study

The mean score for each factor will enable service providers to understand better which factors are important in predicting overall customer satisfaction. The comparison of the

quality assessment by customers and service providers will enable identification of gaps to be managed by the service providers. This will enable a more focused service design which is customer oriented.

In so doing, customers will be satisfied since their specific needs are met while on the other hand service providers will be more focused on improving service quality. The general information from the customers and that from the service providers helps to understand how the customers view the industry and why they are moving from one network to another while on the other hand service providers will identify the challenges they face in managing services.

1.6 Scope and Limitations of the Study

The study focused on the university students as customers of the mobile phone industry. Students are considered to be one of the major clusters of customers of the mobile phone companies. Since the standard tool used for data collection (SERVQUAL tool) needed a business knowledge base, it was deemed practical to administer it to university students of business studies who could easily understand the language of the tool. Students are also more active users of mobile phones. Two cities were covered (Dar es salaam and Mwanza). Dar es Salaam is the oldest City followed by Mwanza City (Strategic Plan, Dar Es Salaam City, 2010). In Dar es salaam students of a public university, Mzumbe university business school were sampled. In Mwanza city, the students from the largest private university in Tanzania, St. Augustine University of Tanzania (SAUT) were sampled.

As for service providers, seven members of management team from the 3 service providers were selected (not sampled) hence 21 members as representatives of service providers. The study had four specific objectives which included; to compare the assessment of quality factors by customers and service providers, to find out the significant quality factors in predicting the overall satisfaction, to compare the assessment of service quality gaps by customers and service providers and to determine the effect of location on the assessment of quality factors.

As for the limitations of the study, some respondents were reluctant to fill the questionnaires as they were not very sure what benefit they would get out of this. Since the tool used for colleting the responses for expectations and perceptions has specific questions for each quality factors, some respondents found some questions to be repetitive in words though not the same in terms of meaning. A few respondents in Mwanza could not differentiate the section for expectations and perceptions until clarifications were provided by the researcher. In the said tool the same questions are repeated for expectations (E) and for perceptions (P) so that from the difference (P – E) a value of satisfaction for each individual was developed.

1.7 Assumptions of the Study

In undertaking this study the following were the basic assumptions:

(i) The three selected companies have the same strength of network in the selected locations

(ii) The purchasing power of the customers in the selected locations is the same.

(iii) The understanding of the customers about the SERVQUAL tool is the same in the selected locations.

1.8 Organization of the Thesis Document

Chapter One is the Introduction which discusses the statement of the problem, significance of the study, objectives, research questions and scope of the study. Chapter Two presents the Literature Review. Chapter Three deals with Methodology**.** Chapter Four presents the Results and Discussion. In Chapter Five Conclusions and Policy Implications are given. The data collection instruments are given as Appendices.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This Chapter reviews the literature in relation to the subject matter. It begins with the general literature review on Service Quality, Expectations, Perceptions and satisfaction. This is followed by an empirical Literature Review. A discussion on various models related to satisfaction is also covered in this chapter. In particular, the GAPS model and its critiques formed part of this Chapter. A conceptual framework is also presented to map the perspective of the study.

2.2 Factors of Service Quality

According to Parasuraman, Zeithaml, and Berry (1995), there are different factors that determine or affect perceived Service Quality. In broad terms, there are ten major factors. These are: reliability, preparedness, competence, availability, courtesy, communication, credibility, safety, understanding and tangibility. Since the measurability of some factors is not feasible, they are further summarized to five major factors (tangibility, reliability, responsiveness, assurance and empathy).

A number of different instruments have been used to assess service quality, notable among these being the SERVQUAL diagnostic presented in 1988 and refined in 1991 by Parasuraman, Zeithaml and Berry, abbreviated as PZB. They conceptualized service

Satisfaction (S) of any quality factor as the difference between customers' perception (P) of services of a specific firm and their expectations (E) of the said service. The P –E gives the level of gap in quality management. The five major factors which lead to measurability of the service satisfaction are;

Tangibility – The appearance of physical facilities, equipment, personnel and communication materials. In the case of mobile phone industry, the various equipment used like computers, handsets, nice buildings for offices, office furniture, etc have an impact on how customers will determine or expect the quality of service. For example, if a customer visits an office to make an inquiry and finds an office is dusty, computers are old and off-line, the chairs are broken, etc, he will associate all these to the service quality.

Reliability - The ability to perform the promised service dependably and accurately (Joppe, 2000). It is important for the service providers to keep their promises. In most cases when a customer finds the service providers are not reliable he or she feels cheated and can easily switch to another service provider. Reliability determines the level of loyalty of a customer to the company (Oliver, 1997). Mobile phone customers for instance, would be looking out for such aspects as; how reliable the connectivity is, rates charged, among others.

Responsiveness - The willingness to help customers and provide prompt service. The time taken from the moment a customer enquires about something until the time an answer is given is very important (Gronroos, 2000). The shorter the time, the better. This

is also referred to as *lead time*. This depends on the way the employees are supportive to their customers.

Assurance **–** The knowledge, competence, and courtesy of employees of the service provider and their ability to convey trust and confidence. Normally, customers develop confidence depending on the ability of the employees to solve the problems or queries without guess work (Van der, 2007). Customers share information (word of mouth) and in most cases the trust is communicated to the prospective customers. In the service industry assurance is crucial and again it depends on the quality of the human resource employed to offer the service.

Empathy - The caring individualized attention provided to customers. Customers would like to observe that the service provider cares about the difficulties a customer is facing. For instance when a customer cannot check his balance through his handset he expects good support from the service provider.

2.2.1 Satisfaction (Perceptions vs Expectation)

Customer's satisfaction is the state of mind that customers have about a company when their expectations have been met or exceeded over the lifetime of the product or service (Tomaz, 2006). Since it is a state of mind, customers rank the level of satisfaction differently even with the same level of service quality. The achievement of customer satisfaction leads to company loyalty and product repurchase.

There are some key issues to note under this definition of customer satisfaction. Because customer satisfaction is a subjective, non-quantitative state, measurement will not be exact and will require sampling and statistical analysis. Customer satisfaction measurement must be undertaken with an understanding of the gap between customer expectations and attribute performance perceptions.

"Satisfaction" itself can refer to a number of different facts of the relationship with a customer. For example, it can refer to any or all of the following: Satisfaction with the quality of a particular product or service (e.g. mobile phone connectivity); Satisfaction with an ongoing business relationship; Satisfaction with the price-performance ratio of a product or service; Satisfaction because a product/service met or exceeded the customer's expectations.

Each industry (including mobile phones) could add to this list according to the nature of the business and the specific relationship with the customer. Customer satisfaction measurement variables will differ depending on what type of satisfaction is being researched. For example, manufacturers typically desire on-time delivery and adherence to specifications, so measures of satisfaction taken by suppliers should include these critical variables. On the other hand, the service industry might rank another parameter to be the most important one when considering the level of satisfaction.

Clearly defining and understanding customer satisfaction can help any company identify opportunities for product and service innovation and serve as the basis for performance appraisal and reward systems. It can also serve as the basis for a customer satisfaction

survey program that can ensure that quality improvement efforts properly focus on issues that are most important to the customer.

The problem companies face, however, is exactly how to do all of this and do it well. They need to understand how to quantify, measure and track customer satisfaction. Without a clear and accurate sense of what needs to be measured and how to collect, analyze and use the data as a strategic weapon to drive the business, no firm can be effective in this new business climate. Plans constructed using customer satisfaction research results, can be designed to target customers and processes that are most able to extend profits.

There were some motivation factors to that inspire the undertaking of this study in the mobile phone industry. Firstly, the fact that the mobile phone industry in Tanzania is fairly young as it started in 1996 but it is growing very fast. Secondly, university students have become a major segment for mobile phone users. With most companies focusing on price cuts with little effort at addressing service quality for satisfaction, the stage is set for some useful analysis of service factors within the selected target group.

2.3 Operationalization of Service Quality

Although researchers have studied the concept of service for several decades, there is no consensus on how to conceptualize service quality (Cronin & Taylor, 1992; Rust & Oliver, 1994), in part because different researchers have focused on different aspects of service quality. Reeves and Bednar (1994) noted that "there is no universal, parsimonious, or all-encompassing definition or model of quality" (p. 436). The most

common definition of service quality, nevertheless, is the traditional notion, in which quality is viewed as the customer's perception of service excellence.

That is to say, quality is defined by the customer's impression of the service provided (Parasuraman, Zeithaml & Berry, 1985; Parasuraman, Zeithaml, & Berry, 1988). This definition assumes that customers form a perception of service quality according to the service performance they experience and in light of prior experiences of service performance.

It is therefore the customer's perception that categorizes service quality. Bitner and Hubbert (1994) defined quality as "the consumer's overall impression of the relative inferiority/superiority of the organization and its services" (p. 77). But their definition of service quality differs from that of the traditional approach, which locates service quality perception within the contrast between consumer expectation and actual service performance (Gronroos, 1984; Lewis & Booms, 1983; Parasuraman et al., 1988; Parasuraman et al. , 1995).

Parasuraman et al. (1995) viewed quality as "the degree and direction of discrepancy between customers' service perception and expectations." According to this approach, services are different from goods because they are intangible and heterogeneous and are simultaneously produced and consumed. Additionally, according to the disconfirmation paradigm, service quality is a comparison between consumers' expectations and their perceptions of service actually received.

Based on the traditional definition of service quality, Parasuraman, et al. (1995) developed their gap model of perceived service quality. The model incorporates five gaps: (a) the gap between management's perceptions of consumer expectations and expected service, (b) the gap between management's perceptions of consumers' expectations and the translation of those perceptions into service-quality specification, (c) the gap between translation of perceptions of service-quality specification and service delivery, (d) the gap between service delivery and external communications to consumers, and (e) the gap between the level of service consumers expect and actual service performance.

This disconfirmation paradigm conceptualizes the perception of service quality as a difference between expected level of service and actual service performance. The developers of the gap model proposed 10 second-order dimensions consumers in a broad variety of service sectors use to assess service quality. These are tangibility, reliability, responsiveness, competence, courtesy, credibility, security, access, communication, and understanding (Parasuraman et al., 1995).

Using these 10 dimensions, Parasuraman et al. (1988) made the first effort to operationalize the concept of service quality. They developed an instrument to assess service quality that empirically relied on the difference in scores between expectations and perceived performance. Their instrument consisted of 22 items, divided along the 10 second-order dimensions, with a seven-point answer scale accompanying each statement to test the strength of relations. The 22 items were used to represent 5 factors, ultimately: reliability, responsiveness, tangibility, assurance and empathy.

2.4 Measuring and Managing Customer's Satisfaction

Companies now recognize that the new global economy has changed things tremendously. Increased competition, crowded markets with little product differentiation and years of continual sales growth followed by two decades of flattened sales curves have indicated to today's sharp competitors that their focus must change.

Competitors that are prospering in the new global economy recognize that measuring customer satisfaction is key. Only by doing so can they hold on to the customers they have and understand how to better attract new customers. The competitors who will be successful recognize that customer satisfaction is a critical strategic weapon that can bring increased market share and increased profits (Collier, 1994).

Too many companies rely on outdated and unreliable measures of customer satisfaction. They watch sales volumes (Gronroos, 2001). They listen to sales representatives describing their customers' states of mind. They track and count the frequency of complaints. They watch aging accounts receivable reports, recognizing that unhappy customers pay as late as possible, if at all they pay. While these approaches are not completely without value, they are no substitute for a valid, well-designed customer satisfaction surveying program.

To be successful in service management, companies need a customer satisfaction surveying system that meets the following criteria (Gronroos, 2000): The system must be relatively easy to design and understand; It must be credible enough that employees' performance and compensation can be attached to the final results; It must generate actionable reports for management. In this regard, service industries need to be careful

with how they manage their systems without ignoring the quality aspects (Gronroos, 2001).

2.5 Various Models for Service Management

There are various models which can be used to assess the quality. The major ones include; Service Performance, Importance-Performance Analysis, Kano's Two Factors Model, Gronroos Perceived Quality Model, Markelein Model and Service Quality Model. Each model has its strengths and weaknesses. A brief explanation of these measurement models is given in the next section.

2.5.1 Service Performance Model

This model relates service quality with the level of performance. However, it is relatively simplistic, measuring perceptions alone. When measuring perceptions only, the assumption is that what the customers think they received or expected is the level of satisfaction with the service, product and/or experience. Both Service Quality and Service Performance operationalizations relied on the conceptual definition that Service Quality is an attitude towards the service offered by a firm resulting from a comparison of expectations with performance (Parasuraman et al., 1995, 1988; Cronin and Taylor, 1992).

However, Service Quality directly measures both expectations and performance perceptions whereas Service Performance only measures performance perceptions. It uses only performance data because it assumes that respondents provide their ratings by automatically comparing performance perceptions with performance expectations. Thus,

Service Performance assumes that directly measuring performance expectations is unnecessary. Research comparing the predictive validity of Service Quality with Service Performance has been based in assessing which of the two measures is a better predictor of Overall Service Quality.

2.5.2 Importance – Performance Analysis (IPA) Model

This model was introduced by Martilla and James (1977). It aims to measure the relationship between perceptions and importance. It differs with Service Quality by measuring importance rather than expectations. Others who used this approach include Mengak and Dativio (1986). It is therefore not focusing on the relationship of Quality and satisfaction.

2.5.3 Gronroos Perceived Service Quality Model

In Grönroos' (2002) Perceived Service Quality model, expectations are a function of market communications, image, word of mouth, and consumer needs and learning, whereas experience is a product of a technical and functional quality that is filtered through the image. Therefore, though this model is addressing quality on one side, it does not directly link the assessment of customers and service providers.

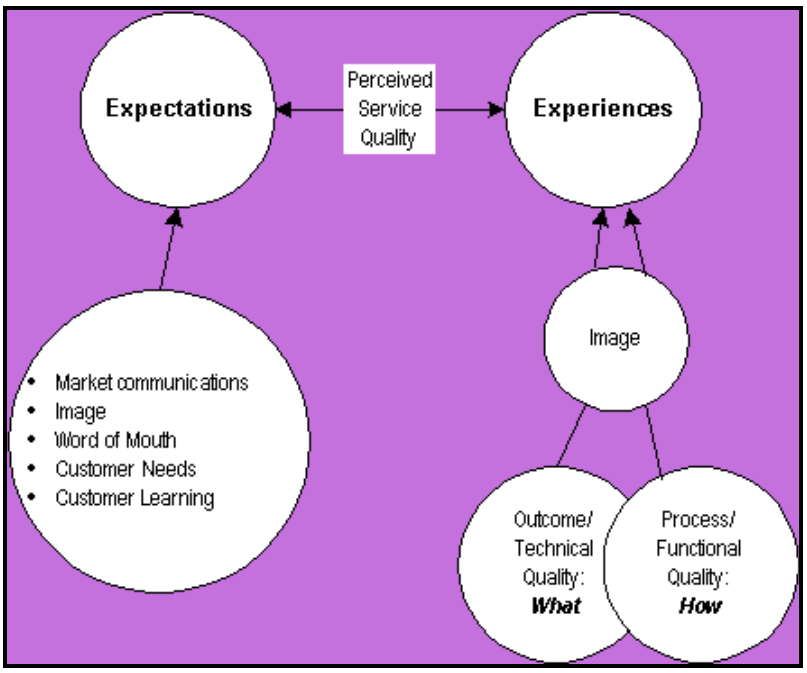

Fig. 2.1 Grönroos Perceived Service Quality Model: (Source: Grönroos, 2002)

Grönroos (2002) more clearly shows the existence of a perception gap, although there is no suggestion of "delighting" only of narrowing the gap. However, the model has more practical application as it shows factors that contribute to each side of the gap. It demonstrates that the supplier can affect both sides of the gap – most notably by managing customer expectations. In addition it illustrates that the customer experience is a product of the image of supplier quality, not just the actuality. Clearly, marketing, as well as process and technical quality has an effect on the perception gap. However, this model does not have a developed tool to quantify the said gaps.

2.5.4 The Service Quality Model

The Service Quality (SERVQUAL) model offers an integrated view of the consumer-company relationship (Parasuraman et al., 1995). It is also referred as Gaps' Model. In similarity with the Grönroos (2002) model, it shows the perception gap (Gap 5) and outlines contributory factors. In this case expected service is a function of word of mouth communication, personal need and past experience, and perceived service is a product of service delivery and external communications to consumers. It not only provides a more rigorous description of the contributory gaps, it lists key drivers for each gap and generic breakdown of each of these drivers. The details and relationship of the said parameters

are shown in figure 2.2.

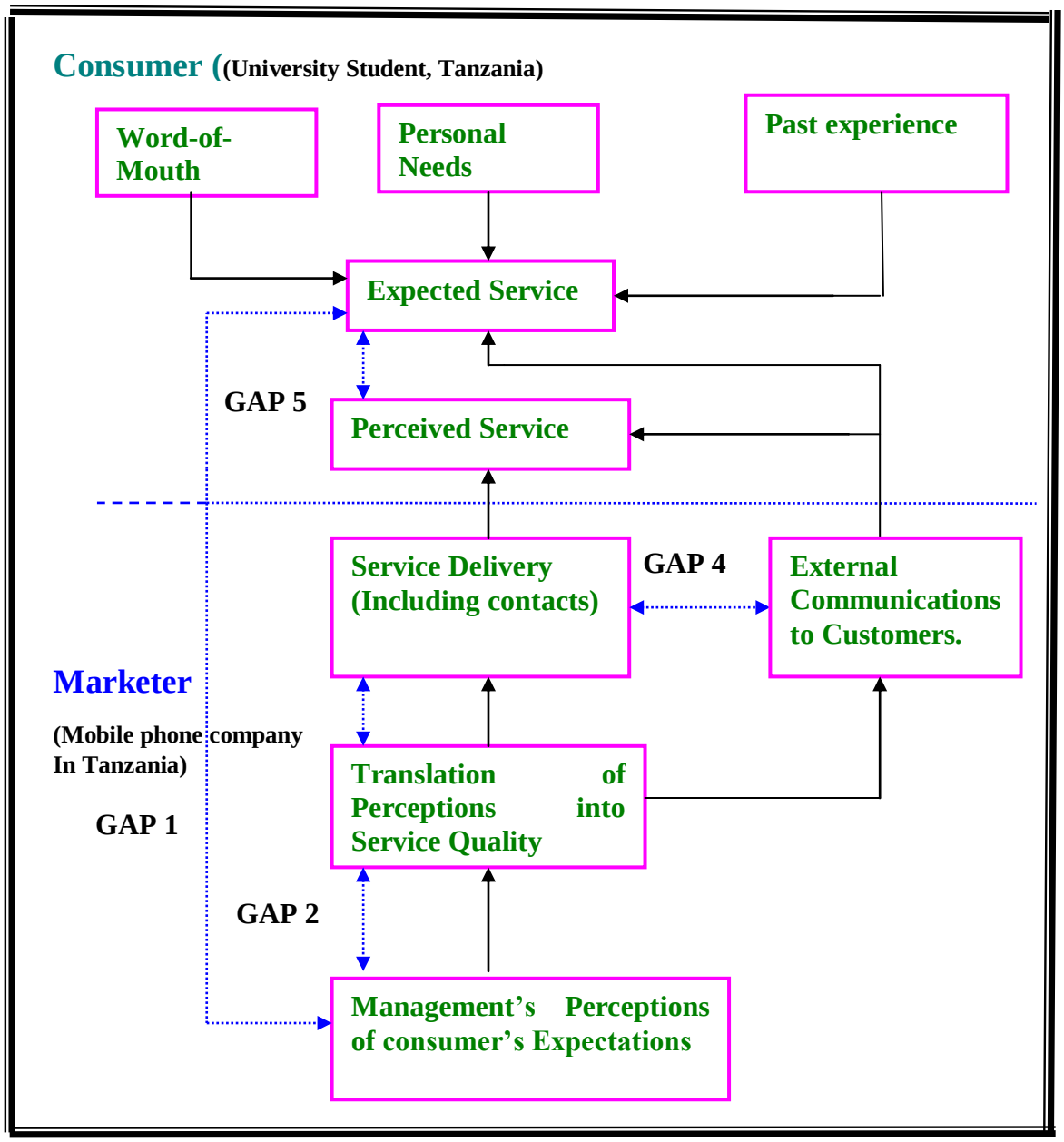

Figure 2.2 Model of Service Quality Gaps (Source: Parasuraman et al., 1995)

The unique advantage of this model is that a scientific tool for measurement of the parameters has been developed and used to measure the relationship of service quality on satisfaction. The five factors of quality service have been expanded to 22 elements so as

to determine perception vs. expectation. Parasuraman et al. (1995) gave the description of the gaps of the Service Quality Model as follows:

Gap 1:

Difference between consumer expectations and management perception of consumer expectations. In this study there is a need to find out how the service providers in the mobile phone industry interpret the expectations of the consumers.

Gap 2:

Difference between management perceptions of consumer expectations and service quality specifications.

Gap 3:

Difference between service delivery and service quality translated from consumers' perceptions.

Gap 4:

Difference between service delivery and what is communicated about the service to consumers.

Gap 5:

The gap between the consumer expectations and their perceptions, and it is influenced by the four preceding gaps.

These gaps need careful management in any business. The industry needs to manage these gaps in order to achieve their objectives timely. In order to reduce or eliminate the gaps there should be a co-creation of value as well as co-creation of meaning.

The traditional assessment of quality using SERVQUAL model is always from two extremes. These are from the customers' and management's point of view. The model expresses how customers evaluate the quality of services. When the service provider understands how the users will evaluate the services, it is then possible to identify how to manage these evaluations and how to influence them in a desired direction.

Critical Discussion on SERVQUAL Model

Some studies challenged the usefulness of the Service Quality scale as a measure of service quality (Babakus & Boller, 1992; Brown, Churchill, & Peter, 1993; Carmen, 1990; Cronin & Taylor, 1992). Carmen (1990) selected four service settings that were quite different from those in the original test and found that in some situations, Service Quality must be customized (items added or edited), despite its introduction as a generic instrument measuring service quality in any sector.

According to Finn and Lamb (1991), the Service Quality model is not appropriate in a retail setting since customers have various factors to assess different retailers of the same products. Furthermore, they argued that retailers and consumer researchers should not treat Service Quality model as an 'off the shelf' measure of perceived quality. Much refinement is needed for specific companies and industries".

Finally, Cronin and Taylor (1992) argued that the disconfirmation paradigm applied by Service Quality was inappropriate for measuring perceived service quality. The paradigm measures customer satisfaction, not service quality, and Cronin and Taylor's (1992) study

employing solely the performance scale showed Service Performance to outperform Service Quality model.

Service Quality model shortcomings result from the weakness of the traditional disconfirmatory definition of service quality which it incorporates. Yong (2000) notes several problems in this traditional definition of service quality. First, customers' needs are not always easy to identify, and incorrectly identified needs result in measuring conformance to a specification that is improper.

Oliver (1997) is another researcher who pointed out the traditional model's difficulty distinguishing service quality from satisfaction. While perception of quality may come from external mediation rather than experience of service, consumers must experience satisfaction in person. In addition, judgments and standards of quality are based on ideals or perceptions of excellence, while judgments concerning satisfaction involve predictive expectations, needs, product category norms, and even expectations of service quality.

Moreover, while judgments concerning quality are mainly cognitive, satisfaction is an affective experience (Bitner & Hubbert, 1994; Oliver, 1997). Service quality is influenced by very few variables (e.g, external cues like price, reputation, and various communication sources); satisfaction, in contrast, is vulnerable to cognitive and affective processes (equity, attribution, and emotion). Quality is primarily long-term, while satisfaction is primarily short-term.

Discussing various analyses in terms of their definitions of service quality, Yong (2000) pointed out that service quality should not be defined using a disconfirmation paradigm

(i.e., by comparing expectation and perceived quality). Indeed, since service quality may not necessarily involve customer experience and consumption, the disconfirmation paradigm does not clarify service quality (Yong, 2000). Furthermore, it is easier to measure service quality if judgment occurs primarily at the attribute-based cognitive level.

Yong (2000) stated as well that customer perception of quality to date has been the main focus of service-quality research; consumers' overall impressions determine service quality. Yong (2000) argues that what constitutes service changes from one service sector might not be the same to another, so each sector's consumers may perceive service quality differently, and that service quality is multidimensional or multifaceted. Finally, according to Yong (2000), service quality must be clearly differentiated from customer satisfaction.

Several researchers have approached service quality from perspectives quite different from that of Parasuraman et al. (1988). On the one hand, some scholars argue for multidimensional models of service quality. At first, Gronroos (1984) used a two-dimensional model to study service quality. Its first dimension was technical quality, meaning the outcome of service performance. Its second dimension was functional quality, meaning subjective perceptions of how service is delivered. Functional quality reflects consumers' perceptions of their interactions with service providers. Gronroos's model compares the two dimensions of service performance to customer expectation, and eventually each customer has an individual perception of service quality.

McDougall and Levesque (1994) later added to Gronroos's model a third dimension, physical environment, proposing their three-factor model of service quality. This later model consists of service outcome, service process (Gronroos, 1984), and physical environment. McDougall and Levesque (1994) tested the model with confirmatory factor analysis, using the dimensions of the Service Quality scale (which provided empirical support for the three-factor model). The three components from the above models, together with Rust and Oliver's (1994) service product, represent one important aspect of services. All of them contribute to consumers' perception of service quality (Yong, 2000).

2.6 Empirical Literature

According to Ganesh (2000), creating and maintaining customer loyalty has become a strategic mandate in today's service markets. Recent research suggests that customers differ in their value to a firm, and therefore customer retention and loyalty-building efforts should not necessarily be targeted to all customers of a firm. Given these sentiments, it is becoming increasingly necessary for firms to have a thorough understanding of their customer base. Yet current knowledge is limited in providing insight to firms regarding the differences within their customer base. The mobile phone industry is not an exception, hence a need for it to understand its customers with their dynamic behaviours which can also influence their level of satisfaction. As theory suggests and as is empirically validated, customers who have switched service providers

because of dissatisfaction seem to differ significantly from other customer groups in their satisfaction and loyalty behaviors.

Over the past decade, researchers have recognized that customer switching behavior can have serious effects on the profitability and viability of firms in today's marketplace. For example, statistics reveal that U.S. corporations lose half their customers in five years and that customer disloyalty at these rates stunts corporate performance by 25 percent to 50 percent (Reichheld and Teal, 1996).

However, researchers have also observed that with each additional year of a relationship between a company and a customer, the customer becomes less costly to serve because of learning effects and decreased servicing costs.

Over time, loyal customers build businesses by buying more, paying premium prices, and providing new referrals through positive word of mouth (Keaveney, 1995). The Word of Mouth (WoM) is one of the key factors in managing service quality gaps (Parasuraman et al. , 1995).

Given this evidence, it is no wonder that companies are rushing to implement retention and loyalty programs. However, for all the anticipated benefits of customer retention and loyalty, problems have become evident in some of these efforts (Dowling, 1997). Central to these concerns is researchers' and practitioners' realization that (1) not all customers should be targeted with retention and loyalty efforts and (2) some of the most satisfied and loyal customers might still switch for reasons beyond the control of the firm and at times even beyond the control of the customer.

Although it is encouraging to note the increasing awareness that not all customers are alike (Blattberg, 1996), little is known about how and why they differ. Simply put, if important attitudinal and behavioral differences can be identified among various customer groups, service providers can efficiently identify and target customers as part of a broader acquisition, value assessment, and retention strategy.

According to Van der (2007), the Dutch cellular subscription market for instance is an interesting market for marketers to investigate. Switching rate is very high in this type of market; the average telecom provider has to deal with approximately 20% loss of customers per annum. Van der (2007) conducted a research in the Netherlands mobile industry using a small sample. His research involved the aspects of Switch Intention, perceived Switching Costs, Consumer Satisfaction, perceived Value and the effect of gender on Switch Intention as a direct and moderating effect.

The study included 60 postgraduate students who all have a cellular subscription in the Dutch cellular subscription market. It was found that that the level of satisfaction of the customers is subjective phenomenon, which depends on how someone considers the essence of the parameters of service quality. The customers who switched from one network to another associated the switch with the level of service quality.

A study conducted by Palmer (1998) showed that 20 percent of the customers of the well known cellular services provider Orange (in the United Kingdom) switch cellular provider on a yearly basis. It costs Orange £256 to attract a new customer. With almost a

million customers worldwide, bringing back the 'churn' from 20 percent till 10 percent would save Orange about £25 million per annum. The 'churn' is a measure of the number of customers moving into or out of subscription over a specific period of time. This term is used widely but is adopted intensively in the cellular subscription market. When the 'churn' going out of business is high it gives signal of a high level of dissatisfaction.

According to Tomaz (2006: pp 20), "…despite there being little known on how customers evaluate the quality of call centres, some evidence on satisfaction with this interaction mode exists". Satisfaction with telephone services is found to be lower than with in-person interactions (Bennington, 2000). The Teleculture Report (1) showed that public teleservices in the UK are not satisfactory, but are improving. Feinberg (2000) used the Service Quality model to analyze 514 call centres in different industries and found that the average percentage of top-box marks for satisfaction is 53%, ranging from 30% (software industry) to 83% (government). According to Anton (2001), caller satisfaction indexes in call centres are between 46% (for high-tech products) and 65% (for catalogue orders), while the American Customer Satisfaction Index in 2004, for instance varied between 65% (for wireless telephone service) and 71% (for fixed line telephone service).

Samuel (2006) conducted a study on the customer satisfaction in the mobile telecommunication phone industry of Nigeria using a sample size of 400. He found that 57% of the respondents are satisfied, and 5% very satisfied with the mobile telecoms services. He therefore concluded from the results that customers are satisfied with their experiences of mobile services (services met expectations). This satisfaction measure

could also result from lack of viable competitors that the customers can compare services with and/or could be due to the fact that customers are kind of new to satisfaction measurements and may not be able to express their perceptions well. Thus, there is need for routine customer satisfaction measurements to better capture customers' perceptions.

Roshnee (2000) conducted a study on the impact of service quality of stockbrokers to satisfaction in Mauritius. They applied the Service Quality model and found that on a scale of 1 to 7 (low to high respectively), a mean of 5.42 was obtained. This suggests that the stockbrokers provided a rather high level of service quality (above the average of 3.5). In their study, they found that the 'tangibility' dimension did not apply to the stock broking industry. A significant relationship was found between overall measurement of service availability (msa), measurement of service superiority (mss) and satisfaction.

Several studies have shown that to manage the problem of switching of customers to other operators, it is better to have loyal customers. According to Dick and Basu (1994), loyal customers are less likely to search for alternatives and more often engage themselves in word-of-mouth communications with other people. The loyalty is mainly built on the level of satisfaction a customer gets. In the cellular subscription market, customer retention is an important aspect due to the fact that cellular service providers don't differentiate from each other.

They all deliver more or less the same service and competition is stiff. In fact switching, loyalty and retention are all constructs in the same area. Where loyalty is positive behaviour, switching can be characterised as negative behaviour. Satisfaction has proven

to be strongly related to loyalty (Hallowel, 1996). A recent study showed that especially in the cellular service market, satisfaction leads to loyalty (Lim, 2006). Another study about customer loyalty, conducted in Turkey (Aydin and Ozer, 2006) shows that switching costs and service quality are the most important factors for determining customer loyalty.

2.7 Choice of the Model Used in this Study

In this study, the Service Quality model was used. It is the model which connects succinctly the independent variable (service quality) with the dependent variable (satisfaction) as given on the title. This model was discussed in detail in order to understand its components and its limitations. The concepts and ideas about service quality management are aggregated and shown clearly in the model for monitoring service quality. In this model the possible gaps are shown when relating assessments of service quality from different points of view.

Despite the limitations given, the gaps model provides valuable insight into understanding challenges of delivering quality service and sheds light into the various quality gaps. Parasuraman et al. (1995), in response to a critique by Brown et al. (1993) of Service Quality difference score conceptualization, argue that the expectations component of Service Quality is a general measure and pertains to customers' normative standards (that is; the service level customers believe excellent companies should deliver). This serves as a yardstick against the services of a particular service provider (that the customers have experienced); so as to ascertain the latter's service quality. As

such, there is no conceptual reason for customers' general evaluation standards to be correlated with their assessment for a specific company.

Other relevant studies which applied Service Quality model include; Van der (2007) with a sample of 300 respondents in mobile phone industry in Netherlands, Sattari (2006), with a sample size of 2,500 with the mobile phone industry of Iran, Parasuraman et al (1995) with a sample size of 2,990 in the mobile phone industry of Singapore. Therefore, the Service Quality model will be used in this study as a tool to identify and manage the gaps of service quality. This conceptual model is also used to develop a conceptual framework for this study.

2.8 Conceptual Framework

This study is based on the Conceptual Model called Service Quality model, developed by Parasuraman et al., (1995). The customers of a mobile phone industry are influenced by the determinants which they conceptualize to identify the service quality. These determinants enable customers to set their expectations of the service. The service is then delivered hence perceived by the customers. It follows that after perceiving the service, a customer makes comparison of what was expected and what has actually been perceived.

If the level of perception (P) is higher than expectation (E), a customer will be satisfied and delighted (P-E > 0). In this case the service provider (mobile phone company) needs to maintain that service delivery system. In case the level of perceived quality (P) is lower than the expectations (E), there shall be 'quality gaps' (P-E < 0) and the company

needs to improve the service delivery system. When the perceived quality is equal to the expectation (P = E), customers will be satisfied but will not have any special preference to that service provider (a customer becomes indifferent). In this respect the company is also advised to improve the situation since the expectations of the customers are never static. When customers Customers' expectations are exceeded, a customer is delighted and this makes a customer more loyal to the service provider (Tomaz, 2006). The conceptual framework is shown in Figure 2.3.

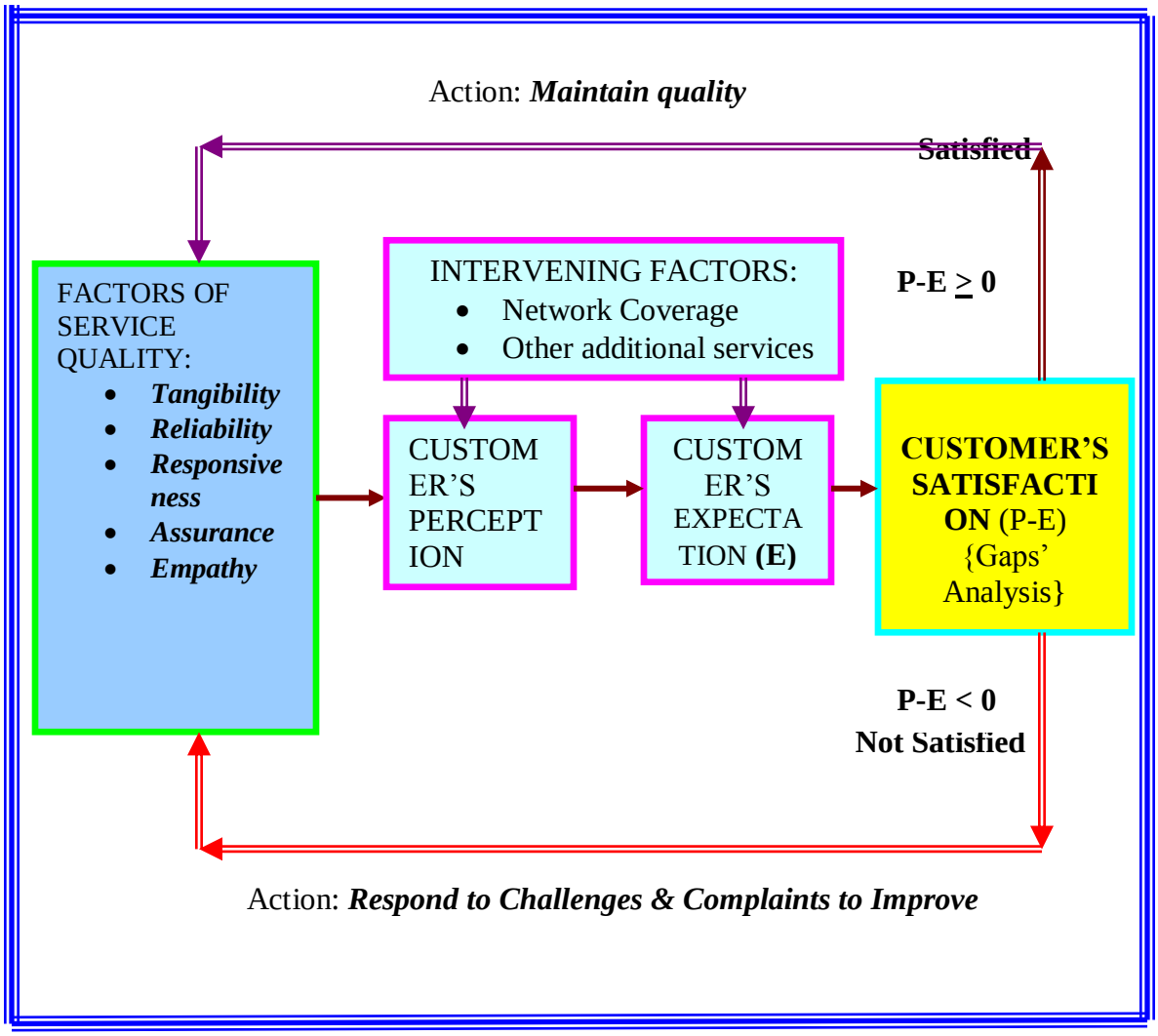

Figure 2.3 Conceptual Framework: Mobile Phone Service Delivery System (Source: Researcher, 2009)

The inner arrows from left to right indicate the way quality affects satisfaction. The outer arrows pointing from right to left show the needed action to be taken by service providers depending on the satisfaction level. The intervening variables can affect the situation without any special measurable trend (social, technology, telephone banking, M-pesa, internet connectivity, Tigo pesa and Airtel money).

2.9 Summary

In this chapter, various studies related to Service Quality and Satisfaction were presented indicating theoretical and empirical literature review. Various models for service management were discussed. The Service Quality Model has been chosen to be the most appropriate one as it links well the independent and dependent variables of the study. The conceptual framework, to indicate the logical framing of the study is given based on the factors of service quality in relation to Service Quality Model.

CHAPTER THREE

METHODOLOGY

3.1 Introduction

This chapter presents the description of the research design, variables of the study, location of the study, target population, sampling techniques, sample size, data collection instruments, data collection procedures and data analysis mapping.

3.2 Research Design and Variables

The present study adopted a descriptive study approach which enables the researcher to understand the relationship between service quality and customers satisfaction in the selected Universities in Tanzania. Descriptive research, also known as statistical research, describes data and characteristics about the population or phenomenon being studied. The independent variable in this study was service quality while the dependent variable was customer's satisfaction.

The five specific key factors for service quality, as given by Parasuraman et al (1995), and discussed in chapter two were used to reflect the service quality. As for the satisfaction level, a comparison was done between the expectations and perceptions of customers hence identifying the level of satisfaction for each ($s = p - e$). The level of perception is the one to be used to reflect the level of service quality. The assessment by

customers and service providers on how quality determines customers' satisfaction was the main focus of this study.

The description for this relationship was depicted using frequencies, averages and other statistical calculations. A study undertaken in Nigeria in the mobile phone industry using the same Service Quality tool applied also quantitative and qualitative (Triangulation) techniques (Samuel, 2006). Methodological triangulation is the approach of combining more than one method (qualitative and quantitative) in one study. It has merits and demerits but the merits are maximized while reducing the effect of demerits.

Advantages of Triangulation:

When triangulation is used it has several benefits including; reduced threat of validity reactivity, reduce the biasness of the researcher and reduce biasness of the respondents.

On the other hand, there are some disadvantages of triangulation. These include the possibility of discrepancies and disagreements among the different sources or methods. This is to say data collected from interviews could be contradicting with the sources or questionnaires.

Observers also (say in focus groups) may differ significantly in their views about the same phenomenon, while each will demand to dominate (Bloor, 1997). However, in this study these two approaches are applied to increase the rigor of analysis hence to give better output which will help to generate more useful recommendations. The Service Quality data collection standard tool was used in this study. This tool has the closed ended questions (22 for expectations and 22 for perceptions).

3.3. Location of the Study

This study was located in the two major cities of Tanzania. Tanzania has five cities (Dar Es Salaam, Mwanza, Tanga, Mbeya and Arusha). Dar Es Salaam is the largest City followed by Mwanza (Strategic Plan Report, Dar Es Salaam City, 2010). In particular the study focused on university students from the two selected universities, one in each city. For Dar Es Salaam City, Mzumbe University was selected as it has its Business School at the City centre. From Mwanza City, St. Augustine University has been selected being the University in Mwanza City with the faculty of Business Management in the city centre.

Furthermore, the researcher has a working relationship with these two universities hence easy access to students' information. The students in the City centres are considered to be more relevant to this study due to their dynamic nature in the use of mobile phones and also their knowledge on understanding the standard tool for service quality assessment. For the service providers, the key members of management teams of the mobile phone network companies were selected from the headquarters of the companies.

3.4 Target Population

The University students from the two selected universities formed the population of this study. The number of degree students at St. Augustine University was 6,672 and at Mzumbe University is 4,318 (Mchome, 2010 on TCU Annual Report). This made the total population for this study (N) to be 10,990 university students as shown in Table 3.1

Table 3.1 Distribution of Target Population

UNIVERSITY	No. of Students	% of Target Population
St. Augustine	6,672	61
Mzumbe University	4,318	39
TOTAL	**10,990**	**100**

Source: Mchome (2010) TCU Annual Report.

3.5 Sampling Procedure and Sample Size

3.5.1 Sampling Procedure

In this study, two selected Universities were used to obtain the sample of the study. One public university based in Dar Es Salaam, that is Mzumbe University, Business School, and one private university based in Mwanza City, St. Augustine University. The unit of enquiry therefore in this study is university student. Due to the nature of the Service Quality tool used in this study, students who are undertaking business studies were selected.

In this regard, stratified sampling was the technique used. As for the procedure, for each university, the dean of faculty was approached to facilitate the availability of the students register whereby the researcher used the register to identify the required number of respondents for each University for each network. As for the service providers seven members of management teams were selected (not sampled) with the following titles: Director of Marketing, Director of Human Resource, Marketing Manager, Human

Resource Manager, Product Development Manager, Distribution Manager and Finance Manager.

These have been selected as the main representative of the mobile phone network service providers. Three leading mobile phones network companies based on the ranking of the market share were selected (TCRA, 2007). Therefore, in terms of networks, the study comprised of three strata (Tigo, Vodacom & Zain).

3.5.2 The Sample Size

The sample size was obtained based on various parameters that included;

Population of students (N) = 10,990 students

Coefficient of variation (assumed) (c) = 22%

Sampling error (e) = 1%

The sample size (n) was obtained using the following relation;

$$n = \frac{NC^2}{C^2 + (N-1)\,e^2}$$

From this study, the values are assigned as follows;

N = 10,990 C = 0.22 and e = 0.01

$$n = \frac{10{,}990(0.22)^2}{(0.22)^2 + (10{,}990 - 1)\,(0.01)^2} = \frac{531.916}{0.0484 + 1.0989}$$

$$n = \frac{531.92}{1.1473} = 463.63$$

For better distribution of the questionnaires to the two locations with three networks each, the sample size used was 468 university students.

3.6 Data Collection Instrument

In this study, data were collected through a structured questionnaire which has three parts in each category of respondents. For customers, it is referenced as Appendix A while for service providers it is referenced as Appendix B. For each case, Part I dealt with the general information while part II dealt with the assessment of quality factors. Part III dealt with the assessment of quality gaps. Both part I and II of the instrument are adopted from a standard tool of Service Quality assessment as it was developed by Parasuraman, Zeithmal and Berry (1991). This is one of the best tools used in studying a relationship between quality and satisfaction (Gronroos, 2000).

3.6.1 Information from Customers (University students)

For general information, each respondent was ere asked to indicate their major mobile network, location and also the extent to which they agree that quality has an effect on the level of satisfaction. The information for the switching behavior as well as suggested strategies to improve the quality was requested. Customers were also requested to inform the researcher if they had another network they were using and if they were planning to switch from the current network and the reasons for switching.

The purpose of collecting the general information was to enable the researcher to get more details from the respondents in order to enrich the discussion. The general

information therefore is not intended to address specific objectives but will be incorporated in the discussion. This information from customers will also be compared with the general information which is collected from the service providers.

Based on the standard SERVQUAL tool, there are 22 elements which customers expect in relation to the service provided. These 22 elements are grouped in to five factors as follows; Tangibility (4), Reliability (5), Responsiveness (4), Assurance (4) and Empathy (5). Each element will be given a score by the respondent to express how essential the expected element is. The scale for the score is given as follows; (**1** = Not at all essential, **2**= Not essential, **3** = Somehow not essential, **4** = Neither essential nor not essential, **5** = Somehow essential, **6** = Essential, **7** = Absolutely essential).

Based on the same tool, the same 22 elements were scored by the same respondent indicating to what extent he agreed on the perceived quality of service provided by the service provider. The scale for the score is given as follows; (**1** = Strongly disagree, **2**= Disagree, **3** = Somehow disagree, **4** = Neither disagree nor agree, **5** = Somehow agree, **6** = Agree, **7** = Strongly agree). It is imperative to note that the mean score of quality for each quality factor was developed using the scores of perception from the respondents.

The score of the elements from the perception (P) dimension is compared to the expectation (E) dimension to obtain the level of satisfaction (S) of each respondent (Parasuraman et al. 1991). Therefore the score for satisfaction was derived as; S = P – E. The score for satisfaction is given on the scale; -6 (Absolutely not satisfied), -5 (Very strongly not satisfied), -4 (Strongly not satisfied), -3 (Not satisfied), -2 (Somehow not satisfied), -1 (Just not satisfied), 0 (Satisfied), 1 (Just delighted), 2 (Somehow delighted), 3 (Delighted), 4 (Strongly delighted), 5 (Very strongly delighted) and 6 (Absolutely delighted).

In service quality management, there are five standard gaps when comparing the assessment of customers to that of service providers (Parasuramana, 1991). The

expressions for the gaps are given for the respondent to score from the likert scale provided. The explanation of the scores of the scale were given as; **1** = very poor, **2** = Poor, **3** = Somehow poor, **4** = Neither poor nor good **5** = Somehow Good, **6** = Good and **7** = Very Good.

3.6.2 Information from Service Providers.

Service providers were also given a questionnaire to fill in order to provide the information in three parts.

For general information respondents were requested to indicate the name of their respective mobile network companies and the major challenges they are facing. They are also requested to indicate the major sources of complaints of customers on service delivery. The general information is not for specific objectives but helped the researcher to get a detailed understanding of the service providers on general issues related to their companies as well as the mobile phones network industry in Tanzania. This information also enabled the researcher to make some comparison from a general point of view on the understanding of customers compared to the service providers.

The five quality factors are given in a table format for the respondent to indicate how they assesses the way the company is performing in terms of quality for each factor. The factors assessed by service providers are the same as assessed by customers hence a possibility of comparing the results. The explanation of the scores of the likert score is given as; Scale (**1** = Very poor, **2** = Poor, **3** = Somehow poor, **4** = Neither poor nor Good, **5** = Somehow Good, **6** = Good, **7** = Very Good.

Respondents were requested to give their scores on the said five service quality gaps. The same questions were given to the customers hence a possibility of making comparison

during the analysis. The explanation of the likert scale used is given as: **1** = Very poor, **2** = Poor, **3** = Somehow poor, **4** = Neither poor nor Good, **5** = Somehow Good, **6** = Good, **7** = Very Good.

3.7 Data Collection Procedures and Rate of Response.

Questionnaires were distributed to the said sample of 468 students, which was preceded by a pilot study.

3.7.1 Pilot Study

A pre-test of the instrument was done through a pilot study before the actual use of the instrument. Ten students from each location (Mwanza City and Dar Es Salaam City) were given the instrument to fill and comment on its clarity. These 20 students were not part of the sample. The instrument was debugged after the pilot study to accommodate some issues raised by students to make the language of the tool clearer without changing its structure or original meaning.

This was to ensure validity of the tool. As for reliability, the Service Quality tool is adopted from Parasuraman (1991) and has been already used and recognized worldwide as one of the best tools to study service quality and satisfaction (Gronroos, 2000).

For service providers, the 21 selected representatives were given the questionnaire to fill. The information collected from the service providers enables the researcher to identify the gaps in understanding by service providers compared to customers. The information collected on part II of each instrument was used to develop comparative analysis.

3.7.2 Distribution of the Instrument and Responses

In order to have equal distribution of the sample size in the two locations (Mwanza and Dar Es Salaam), 234 questionnaires were distributed to each location. Since there are three networks in each location, 78 questionnaires were distributed to students for each network in each location. The researcher used the register to identify the respondents who are using the respective networks for distribution. The distribution of the sample size is given by showing the number of questionnaires distributed (dist.), the number of questionnaires collected (collct.) and the response percentage of collected to distributed (Res. %). The information about sampling grid is given in Table 3.2.

Table 3.2 Sample Distribution Grid

	Mwanza			**Dar Es Salaam**			**Sub Total**		
Network	Dist.	Collct.	Res.%	Dist.	Collct.	Res.%	Dist.	Collct.	Res.%
Tigo	78	70	89.7	78	75	96.15	156	145	92.95
Vodacom	78	68	87.18	78	73	93.58	156	141	90.38
Zain	78	64	82.05	78	70	89.74	156	134	85.9
Total	**234**	**202**	**86.3**	**234**	**218**	**93.2**	**468**	**420**	**90**

From Table 3.2, the response rate for Mwanza was 86.3% while that of Dar Es Salaam was 93.2%. The average overall response rate was 90% for all networks in the two cities. Within the specific networks, Tigo had a higher response rate (92.95%) followed by Vodacom (90.38%) and Zain with a response rate of 85.9%.

3.8 Operationalization of Variables

The two dimensions of variables are; independent (Quality) and dependent (Satisfaction). Parasuraman et al (1991) have worked out the 22 elements which can help to operationalize the way quality can affect the alignment between *expectations* and *perceptions.* The measurement used was based on the assessment tool of Service Quality model instrument (Appendix A – Part II, which applies a likert scale of 1 to 7). The 'wording' of the questions suggested by Parasuraman et al., (1991) have been adopted to personalize the tool to the respondent after the pilot study (instead of 'Company XYZ, this is replaced by ..'my mobile phone company….'). The details for the likert scale were given.

Respondents (customers and service providers) referred to their respective mobile phone networks (Tigo, Vodacom or Zain) when filling the questionnaire. Customers indicated first what they would expect to be the score in relation to each of the 22 elements using the said likert scale (1 to 7). This gave an indication of the expectation (e). Similarly the same respondent gave the details of the real experience/quality dimension (perception) in relation to each element.

The mean score of the perceptions from the customers perspective is the one considered as a score for quality. From these measurements, it became possible to establish the level of satisfaction of a respective quality element as well as quality factor. Furthermore in every mobile phone network company, the assessment on the five quality factors was

used to reflect the overall average satisfaction of the respective mobile company. The link of Quality and the Satisfaction (s = p-e) is presented using the Table 3.3.

Table 3.3 The Relationship of Quality and Satisfaction

P = Perception, E = Expectation, S = Satisfaction

QUALITY					**SATISFACTION**
FACTOR	**Elements**		**P**	**E**	**$S = P_i - E_i$**
TANGIBILITY (4 Elements)	1	Modern Equipment	P1	E1	S_1
	2	Visually appealing physical facilities	P2	E2	S_2
	3	Neat employees	P3	E3	S_3
	4	Visually appealing documentation	P4	E4	S_4
		Average (Tangibility)			
RELIABILITY (5 Elements)	5	Keeping promises	P5	E5	S_5
	6	Sincere interest in solving problems	P6	E6	S_6
	7	Performance is right from the first time	P7	E7	S_7
	8	Time sensitive	P8	E8	S_8
	9	Error free records	P9	E9	S_9
		Average (Reliability)			
RESPONSIVE NESS (4 Elements)	10	Tell exactly when customers get service	P10	E10	S_{10}
	11	Prompt Service to customers	P11	E11	S_{11}
	12	Willingness of employees to help	P12	E12	S_{12}
	13	Readiness of employees to	P13	E13	S_{13}

		help even when busy			
		Average. (Responsiveness)			
ASSURANCE (4 Elements)	14	Instill confidence to customers	P14	E14	S_{14}
	15	Safety of customers	P15	E15	S_{15}
	16	Consistent Courteousness of employees	P16	E16	S_{16}
	17	Knowledge of employees on answering questions of customers	P17	E17	S_{17}
		Average (Assurance)			
EMPATHY (5 Elements)	18	Individualized attention to customers as the culture of organisation	P18	E18	S_{18}
	19	Convenient operating hours	P19	E19	S_{19}
	20	Personal attention by employees	P20	E20	S_{20}
	21	Customers' interests at the heart of employees	P21	E21	S_{21}
	22	Understanding of specific needs of individual customers	P22	E22	S_{22}
		Average (Empathy)			
OVERALL INDIVIDUAL MEAN SCORE FOR ALL ELEMENTS			P_{iav}	E_{iav}	S_{iav}

Source: Adopted from Parasuraman (1991).

The overall individual mean scores were obtained for every respondent. These were used to analyze the data in line with the specific objectives of the study.

3.9 Methods for Data Analysis

Descriptive and estimations statistics were used to develop the discussion, aimed at addressing the research questions of the study. Two types of data were collected; quantitative and qualitative. SPSS was used to analyze the data. The mapping of the analysis of the data is given in Table 3.4.

Table 3.4 Data Analysis Mapping

S/N	Research Question	Analysis Technique
1	What factors influence the assessment of mobile phone quality by customers?	Frequencies, Percentages and Regression Analysis
2	How do mobile phone service providers assess their quality of mobile phone service provision?	Frequencies and Percentages
3	Is the assessment of service quality satisfaction by customers significantly different from that of service providers?	T – Test
4	Is the assessment of quality factors in Mwanza City significantly different from that of customers in Dar Es Salaam City?	T – Test

Source: Developed by the Researcher (2010)

The regression model used is based on this equation;

$Y = a + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + e$

Where;

a = constant
X_1 = Average Tangibility on quality, X_2 = Average Reliability on quality

X_3 = Average Responsiveness on quality, X_4 = Average Assurance on quality

X_5 = Average Empathy on quality,

β_1 to β_5 = Regression coefficients.

e = standard error of estimate

The above summary shows analysis methods used in responding to each research question hence addresses the specific objectives.

3.10 Legal and Ethical Considerations

Data was collected with the human factors and ethical values of the individuals and institutions in mind. The data collected has been used only for academic research purposes and this has been made clear also on the instrument used to collect data. Therefore ethical values were observed in data collection and also analysis. Detailed results and discussion are presented in Chapter Four.

CHAPTER FOUR

RESULTS AND DISCUSSION

4.1 Introduction

This chapter gives the results and discussion for the study. The study was conducted with the aim of assessing how service quality determines customers' satisfaction. The assessment of customers is to be compared to that of service providers. Qualitative and quantitative data was collected in this study. For the first research question; frequencies, percentages and regression analysis techniques were used to obtain results. For the second research question; frequencies and percentages were used to obtain the results. For the third and fourth research question T-Test technique was used. The results are based on the analysis of three types of information collected from the respondents (both customers and service providers). This included; General information, Assessment of service quality factors and Assessment of quality gaps.

The results from the study show the percentages of the details of the responses of the respondents, comparative analysis and significance of the factors in predicting overall satisfaction. The information is collected using Appendix A for 420 customers who responded and Appendix B for 21 selected representatives of service providers.

4.2 Results and Discussion on Information from Customers

The customers gave their responses using the questionnaire (Appendix A). In part I of the questionnaire general information was collected and in part II, scores on the quality factors which were used to develop the level of satisfaction. In part III of the questionnaire, customers provided information on their assessment of standard quality gaps in relation to their mobile phones networks providers.

4.2.1 General Responses from Customers

Customers indicated their preference on various variables given in the questionnaire. A summary of the descriptive statistics for what was observed in the preferences of 420 respondents is given in Table 4.1.

Table 4.1 Results on General Information of Customers

Variable	Details	Frequency	Percentages
Reason for choosing the current main network	Quality	169	40.2
	Price	180	42.9
	Technology	62	14.8
	Others	09	2.1
Using more than one network?	Yes	253	60.2
	No	167	39.8
Apart from the main network, mention your alternative network(s), if any.	Tigo	132	31.4
	Vodacom	91	21.7
	Zain	71	16.9
	Others	34	8.1
	Not Applicable	167	39.8
If you have been using another network before, mention it.	Tigo	66	15.7
	Vodacom	52	12.4
	Zain	56	13.3
	Others	104	24.8
	Not Applicable	142	33.8
Reason of switching from previous network to the current one.	Poor Service Quality	34	8.1
	Price	114	27.1
	Social Factors	109	26.0

	Change in Technology	21	5.0
	Not Applicable	142	33.8
Are you planning to switch to other networks?	Yes	163	38.8
	No	257	61.2
What is the main reason for switching to other network(s)	Poor Service Quality	25	6.0
	Price	66	15.7
	Social Factors	52	12.4
	Change in Technology	20	4.8
	Not Applicable	257	61.2
Which network are you intending to switch to	Tigo	42	10.0
	Vodacom	17	4.0
	Zain	29	6.9
	Others	75	17.9
	Not Applicable	257	61.2

From Table 4.1, the main reason making customers to choose their current network is found to be the price (42.9%) compared to other factors. This is closely followed by quality with 40.2% of customers. This implies that most of the customers are price sensitive to an extent that they can even forego some quality issues provided that the service is affordable. The growth of the mobile phone industry in Tanzania has been phenomenal and this has been attributed to the increase of customers joining networks with lower rates, keeping their other networks (Nkoma, 2009).

In 2007, there were 7.7 Million customers in the mobile phone industry of Tanzania. It was projected that the customer base will reach 15 million by the end of the year 2010. However, when the mobile phone companies were competing by lowering their prices, the target was realized at the end of 2009 (Nkoma, 2009). This also gives reasons why customers have services from more than one network. It is reported that on average 10,000 customers join the industry every day (Nkoma, 2009).

It was observed that 60.2% of the customers are using more than one network. From multiple responses, Tigo network is the leading one having more customers who are using it as an alternative network (31.4%), followed by Vodacom 21.7% while Zain has 16.9%. Tigo has lower prices compared to its competitors and this has encouraged many people to have Tigo as an alternative network as well. When customers are price sensitive, they are ready to forego quality (Gronroos, 2001; Lim, 2006).

Some customers had been using other networks before joining their current network. They switched to their current networks due to various reasons. The leading network which has been used previously is Tigo (15.7%) followed by Zain (13.3%) and Vodacom (12.4%). The main reason given by customers is price (27.1%) followed closely by social factors (26.0%). From the results, social factors have been considered more influential than service quality. Poor service quality has 8.1%. This implies that, switching behavior of customers from previous networks is highly influenced by the price which was also the case for the main reason for choosing a particular network.

Switching is now a common phenomenon in the mobile phone industry in the free market era. The results in this study show that 38.8% of the customers are planning to switch to other networks from their current networks.

The main reason given by those who had switched is again price (15.7%) followed by social factors (12.4%) and poor service quality (6%). The order of weight magnitude of the switching from previous networks and switching from the current network to other networks also has the same pattern (price, social factors then service quality). From the

38.8% of the switchers, those who are switching to one of the three networks (Tigo, Vodacom and Zain) are 20.9% of which 10% have indicated to be switching to Tigo network. This indicates that Tigo is still the most preferred network by switchers. One of the main reasons is that Tigo offers a relatively lower price compared to others and from the results, this is what attracts most of the customers.

The impact of price to switching behavior is to be considered subjectively as it depends on the buying behaviour (not necessarily buying power) of the customers. Van Der (2007) conducted a similar study in the mobile phone industry of the Netherlands, using a sample of 60 postgraduate university Students. From the results of his study, 20% of customers switch to other networks annually but the leading factor that leads to switching is service quality and not price as it is the case in Tanzania.

Therefore, it is possible that when the system in the future works in such a way that the rate charged by the companies is the same across the networks, the factor of price will no longer count and hence social factors and quality will be the driving forces for switching in the Tanzanian mobile phone industry. Furthermore, since social factors (friends, family members, social groups, etc) are not controlled by the service providers, ultimately the decisive controllable factor for choosing service providers is their service quality. This is evidenced by the order of preference of customers in terms of switching as given in the discussion of the results of preferences of customers.

4.2.2 Assessment of Quality Factors by Customers

Based on the Service Quality Instrument the values for scores of expectations (E) are given as: 1 = Not at all essential, 2 = Not essential, 3 = Somehow essential, 4 = Neither essential nor not essential, 5 = Somehow essential, 6 = Essential and 7 = Absolutely essential. For perceptions (P), customers are supposed to indicate to what extent they agree that the company is offering good quality on the said parameter of service quality determinant.

Values are assigned as; 1 = Strongly not agree, 2 = Not agree, 3 = Somehow not Agree, 4 = Neither not agree nor agree, 5 = Somehow agree, 6 = Agree, 7 = Strongly agree. Perception is also used to determine the expression of customers on perceived quality (Parasuraman et al., 1991). Therefore the minimum value is 1 and maximum is 7 for the scores of expectations and perception. There are 22 factors used to assess the levels of expectations (E_1 to E_{22}) and perceptions (P_1 to P_{22}). The scores and also the description of elements of each factor are as given in the Service Quality instrument with a little improvement to serve the intended target population.

The scores for satisfaction, S-score ($S = P - E$), ranges from -6 to +6. The values assigned are as follow; -6 (Absolutely not satisfied), -5 (Very strongly not satisfied), -4 (Strongly not satisfied), -3 (Not satisfied), -2 (Somehow not satisfied), -1 (Just not satisfied), 0 (Just Satisfied), 1 (Just delighted), 2 (Somehow delighted), 3 (Delighted), 4 (Strongly delighted), 5 (Very strongly delighted) and 6 (Absolutely delighted). The two major categories are given as; If $S \geq 0$, it implies satisfaction of the customer and when $S < 0$, it implies that a customer is not satisfied. This had been also described in the

conceptual framework of this study. The trends in expectations, perceptions and satisfaction of customers are summarized in Table 4.2.

Table 4.2 Mean Scores on Expectations, Perceptions and Satisfaction of Customers

Item	EXPECTATIONS		PERCEPTIONS		SATISFACTION	
Factors with Elements	Code	Mean	Code	Mean	Code	Mean Score
Tangibility						
Modern equipment	E1	5.53	P1	5.10	S1	-0.43
Appealing facilities	E2	4.99	P2	4.99	S2	0
Neat employees	E3	5.2	P3	4.94	S3	-0.26
Appealing documents	E4	5.54	P4	5.16	S4	-0.38
Average Tangibility	*Tan.exp*	*5.32*	*Tan. Qual*	*5.05*	*Tan. Sat.*	*-0.27*
Reliability						
Keep promises	E5	5.93	P5	5.07	S5	-0.86
Sincere interest	E6	6.06	P6	5.09	S6	-0.97
Perform first time	E7	5.31	P7	4.81	S7	-0.5
Serve timely	E8	5.85	P8	5.02	S8	-0.83
Error free records	E9	5.39	P9	4.59	S9	-0.8
Average Reliability	*Rel. exp*	*5.71*	*Rel. qual*	*4.92*	*Rel. Sat.*	*-0.79*
Responsiveness						
Update customers	E10	5.74	P10	4.93	S10	-0.81
Prompt services	E11	5.82	P11	4.97	S11	-0.85
Willingness to help	E12	6.03	P12	5.12	S12	-0.91
Never too busy to respond	E13	5.46	P13	4.45	S13	-1.01
Average Responsiveness	*Res.exp*	*5.76*	*Resp. qual*	*4.87*	*Res. Sat.*	*-0.90*
Assurance						
Instill confidence	E14	5.75	P14	5.15	S14	-0.6
Safe transactions	E15	5.73	P15	5.15	S15	-0.58

Consistently courteous	E16	5.71	P16	4.94	S16	-0.77
Knowledge on products	E17	6.04	P17	5.18	S17	-0.86
Average Assurance	*Ass.exp*	*5.81*	*Ass.qual*	*5.11*	*Ass. Sat.*	*-0.70*
Empathy						
Individual attention	E18	5.59	P18	4.75	S18	-0.84
Convenient operating hrs	E19	5.69	P19	5.01	S19	-0.68
Empathetic employees	E20	5.50	P20	4.72	S20	-0.78
Customer's interest at heart	E21	5.51	P21	4.85	S21	-0.66
Understand specific needs	E22	5.88	P22	4.67	S22	-1.21
Average Empathy	*Emp.exp*	*5.63*	*Emp.qual*	*4.80*	*Emp. Sat.*	*-0.83*
Overall Mean	***E***	***5.65***	***P***	***4.94***	**S**	**-0.71**

The results in Table 4.2 show that when considering the 22 factors used to assess expectations, the factor with the minimum mean score is; 'appealing facilities' (average $E_2 = 4.99$). This is under the tangibility factor. This implies that customers can easily be satisfied on this factor since they have minimum expectations.

The industry is fairly young and also the knowledge of customers on modern facilities is low and they cannot have very high levels of expectation. The factor with the maximum expectation is; 'sincere interest' (average $E_6 = 6.06$). This is under reliability factor of service quality. This implies that customers expect the employees of mobile phone companies to be always consistent on the way they provide their service.

On the other hand, since the level of expectation is high on this factor, service providers might find it difficult to satisfy customers on it. This is because customers have a feeling

that service providers will always be honest when providing the service (Ganesh, 2000). However, the interpretation of expectations of customers by service providers might not be symmetrical to what is expected hence differing appreciation of meaning (Varey, 2002). Therefore, service providers need to pay special attention to this factor in order to satisfy their customers.

For the perceptions, the factor with the minimum mean score is; 'never too busy to respond (average $P_{13} = 4.45$)' which is under the responsiveness factor. Since perception is a measure of perceived quality, this implies that this is the factor with the minimum perceived quality by customers.

This is because it is the key factor which can easily be observed by customers during the service encounter (Dowling, 1997). On the other hand, the factor with the highest value of mean perception is; 'knowledge on products (average $P_{17} = 5.18$)'. This is under assurance factor of service quality. This implies that customers expect the service providers of the mobile phone industry to be knowledgeable on the products they are offering. The trust of technical know-how of employees is found to be at the best level compared to other factors.

According to Tomaz (2006), the level of satisfaction (S) is found by taking the difference between perception (P) and expectation (E). The highest factor which is found to have a higher mean score for satisfaction is; 'appealing facilities (mean S2 = 0). This is under tangibility factor.

This implies that when the level of expectation is low then the level of satisfaction can be attained more easily. This is the case for this factor which has also the lowest mean expectation (E2 = 4.99). Since the level of satisfaction is an outcome of two scores, it does not necessarily mean that the service providers are doing a good job to achieve this satisfaction; it can also be as a result of low expectations of customers due to historical information (Parasuraman et al., 1995). In this case, it is clear that it is only a result of lower expectations as this is not the element having the highest level of perception.

The element with the lowest level of satisfaction is; 'understand specific needs (S_{22} = -1.21)'. This factor is under empathy determinant of service quality. This implies that when customers are having specific needs, service providers do not consider properly the specifications given by customers. Customers always differ in their needs, hence customers are different and their differences are not the same (Gabriel, 2006). Therefore service providers need to divide their customers whenever there are specific needs to be addressed.

Comparing the means of factors, the factor with minimum average expectation is tangibility (Tan.exp = 5.32). Based on the same logic that when the expectation is minimum, one is likely to be easily satisfied, it is also the factor with the highest mean score for satisfaction (Tan.sat = -0.27). Customers can easily be satisfied through the tangible things than imaginary ones (Hallowell, 1996). Therefore the tangible part of the service is so important to making customers easily satisfied. Assurance factor has the highest mean score of expectation (Ass.exp = 5.81). This implies that customers were given lots of promises to assure them of good service.

This also creates a challenge to satisfy them but in this study, the results indicate that it is the same determinant which has the highest average score on perception (Ass. qual = 5.11). The satisfaction score for this factor is found to be -0.7, a score which is very close to the mean score on the overall mean satisfaction. This factor has the highest score because all advertising campaigns are focusing on raising the level of trust of customers in the network. The minimum mean score on satisfaction is found to be on responsiveness (Res.sat = -0.90). This implies that comparatively, mobile phone companies are poor on the issues related to responsiveness.

The lower level of customers' satisfaction in this factor is because customers are always sensitive to the way their service providers respond to their problems (Roshnee, 2000). This is one of the quality factors which accommodates the social and cultural values of customers, hence a complex one. Therefore, service providers need to give this factor special attention as it can also contribute to switching of customers from one network to another due to a low level of satisfaction.

The overall average expectation of the customers is 5.65 while the overall average perception is 4.94. This implies that overall; the expectations are higher than the perception. Therefore, the overall mean score on satisfaction is below zero. This is because the value of the mean score for overall satisfaction is -0.71. Since the score of satisfaction is less than zero, on average the customers of the mobile phone industry of Tanzania are not satisfied.

4.2.2.1 Expectations, Perceptions and Satisfaction for Each Specific Network

The definitions of how the results were collected are the same as discussed in section 4.2.2. Table 4.3 gives the results of the distribution of mean for each factor in each network.

Table 4.3 Mean Scores for Factors in Specific Networks

Tigo Network	**Expectations (E)**	**Perceptions (P)**	**Satisfaction (S = P – E)**
Tangibility	5.55	5.36	-0.19
Reliability	5.75	4.92	-0.83
Responsiveness	5.81	5.01	-0.80
Assurance	5.91	5.36	-0.55
Empathy	5.72	4.99	-0.73
Mean for Tigo	*5.75*	*5.13*	*-0.62*
Vodacom Network			
Tangibility	5.54	4.84	-0.70
Reliability	5.84	4.72	-1.12
Responsiveness	6.02	4.64	-1.38
Assurance	6.01	4.85	-1.16
Empathy	5.85	4.48	-1.37
Meanfor Vodacom	*5.85*	*4.71*	*-1.14*
Zain Network			
Tangibility	5.21	5.33	0.12
Reliability	5.71	5.09	-0.62
Responsiveness	5.83	5.23	-0.60
Assurance	5.80	5.46	-0.34
Empathy	5.41	4.92	-0.49
Mean for Zain	*5.59*	*5.2*	*-0.39*
Overall Mean	***5.72***	***5.01***	***-0.71***

For Tigo network, the factor in which customers have highest expectations is assurance (Mean E = 5.91) while the factor in which customers had the lowest expectation is tangibility (mean E = 5.55). The mean for expectations in Tigo is found to be 5.75. This implies that it is relatively easy for the service providers of Tigo to satisfy customers on

issues related to tangible items like physical facilities than is the case for issues related to assurance such as safe transactions.

This is because once the level of expectation is high it becomes more challenging to the service providers to deliver the service to satisfaction (Rust and Oliver, 1994). On perceptions, the highest level is on tangibility and assurance (mean P = 5.36) while the minimum perception is on reliability (mean P = 4.92). This implies that customers are more impressed with the quality they perceived in relation to tangibility and assurance compared to reliability.

The highest level of satisfaction is found on tangibility (mean S = -0.19) and it is this factor which also had the lowest mean score on expectations. As suggested by Rust and Oliver (1994), when the level of expectation is low there is a higher possibility of attaining maximum satisfaction. The minimum score of satisfaction for Tigo network is on reliability (mean S = -0.83) and it is on this factor where perception is lower (mean P = 4.92). Therefore service providers of Tigo network need to be more aggressive in dealing with issues related to promises, sincere interest, delivering right service from the first time and ensure that their documentation is error free.

Customers of Vodacom network have indicated the highest level of expectation on responsiveness (mean E = 6.02) while the minimum is on tangibility (mean E = 5.54). These results show that there is a high chance for customers to be easily satisfied on tangibility issues and more difficult to satisfy on responsiveness depending on the available level of perception on quality.

The results show that the level of perception is higher on assurance (mean P = 4.85) and lower on empathy (mean P = 4.48). This implies a lower service quality level on issues like; individual attention of employees, convenient operating hours and understanding of specific needs of the customers. It is important for employees to have the specific needs of customers at heart. Results also indicate that the lowest level of satisfaction for Vodacom customers is on responsiveness (mean S = -1.38). This is the lowest level of satisfaction within the industry.

The highest level of satisfaction within Vodacom is found to be on tangibility (mean S = -0.70). This implies that Vodacom service providers are comparatively doing better on factors related to tangibility, such as modern equipment and neat employees. However, there is a challenge to be addressed on issues related to responsiveness. This is also the factor with the highest level of expectation as discussed earlier.

Therefore employees should be willing to assist customers and also give prompt service to customers as and when needed. The mean score for expectations for Vodacom network is found to be 5.85 and with mean perception of 4.71. This implies that the level of perception is lower than expectations hence having a mean score of satisfaction of -1.14. Therefore in overall assessment, customers of Vodacom are not satisfied since the average mean score for satisfaction is less than zero.

The results show that for Zain network, customers have the highest level of expectation on responsiveness (mean E = 5.83) and minimum on tangibility (mean E = 5.21). This is

the same scenario as in the Vodacom network. Assurance is found to be a determinant which is perceived to have a higher level of perception (mean P= 5.46) while empathy has the lowest mean score on perception (mean P = 4.92). This again is the same scenario as that found and discussed for Vodacom network.

The results show that the mean score for satisfaction for Zain customers is higher on tangibility (mean S = 0.12). This is the highest satisfaction level and the only factor with a satisfaction that is greater than zero. This is not only in Zain but also for the other two networks. The minimum mean score for satisfaction in Zain is found in reliability (mean S = -0.62).

This implies that the mean expectation of customers of Zain in terms of tangibility has been exceeded by mean perception ($p - e > 0$). This implies that service providers of Zain need to manage the elements related to reliability more closely in order to improve the level of satisfaction. These are to include; keeping promises of what they inform customers, sincere interest in addressing the needs of customers and give services timely.

This is because customers always need to be sure of the consistency of the service (Palmer, 1998). They do not like to feel that they are being used as an experiment, hence a need to provide the service right from the first time. The mean score for Zain network is found to be 5.59 for expectation and 5.20 for perception. This leads to an average mean score on satisfaction of -0.39. Therefore the customers of Zain in general are not satisfied since the mean score for satisfaction is less than zero. Zain service providers need to

concentrate on areas which need improvement so as to achieve the required level of satisfaction and if possible, to exceed it.

Across networks, the results show that Vodacom network is having a higher average mean score of expectation (Average mean E = 5.85) followed by Tigo (5.75) and Zain (5.59). This implies that customers of Vodacom have been given so many promises which have increased their level of expectations compared to others. This also suggests that Vodacom needs to work harder to be able to satisfy their customers as compared to the other networks.

The average mean perception is observed to be higher on Zain network (average mean P = 5.2) followed by Tigo (5.13) and Vodacom (4.71). Perception reflects perceived quality so the results show that the perceived quality of Vodacom is low compared to the other two networks. Vodacom is the same network whose customers have a higher level of expectations compared to the others. The mean satisfaction is found to be high with customers of Zain network (average mean satisfaction = -0.39) followed by Tigo (-0.62) and Vodacom (-1.14) (Table 4.3).

This implies that Vodacom has the minimum average mean score for satisfaction and is the one with the highest mean score on expectation. Comparing the order of satisfaction of customers with the order of the market share, it is found that it is not necessarily the case that the network with the highest market share has the highest level of customers' satisfaction. This is because the order of the market share for the leading networks brands as given in Table 1.1, is Vodacom (47.8%), Zain (29.1%) and Tigo (12.8%) (Nkoma,

2007). But according to the results on the mean score on customers' satisfaction (Table 4.3), the order of best satisfier is Zain, Tigo then Vodacom. Therefore Vodacom is the least satisfier while it is the network with the highest market share compared to the other networks.

The overall mean results developed from the individual networks (Table 4.3) show that for expectations, the overall mean is 5.72 while for perceptions it is 5.01. This implies that the overall mean score for satisfaction is -0.71. These results are similar to those given on Table 4.2. The results of individual networks show that customers of the mobile phone industry of Tanzania are generally not satisfied.

The expectations of customers are higher than the reality of the service quality they are getting. Service providers need to appreciate that customers are not paying just for services but value (Gabriel, 2006). This requires every network to assess its service delivery system by studying carefully its value chain in order to meet the expectations of its customers.

4.2.3 Results of Gaps Scores' by Customers

There are five known gaps in analyzing the service quality in order to compare customers and service providers' knowledge on the service delivered (Parasuraman et al., 1995). The values of the scores are; 1 = Very poor, 2 = Poor, 3 = Somehow Poor, 4 = Neither poor nor Good, 5 = Somehow Good, 6 = Good and 7 = Very Good. The results obtained are given in Table 4.4.

Table 4.4 Mean Gaps' Score (GS) by Customers

Gap in relation to;	Code	Mean Score
Perception of expectations	GS_1	4.88
Interpretation of specifications	GS_2	4.77
Translation of perceptions	GS_3	4.87
Deliver what promised	GS_4	4.93
Meeting all expectations	GS_5	4.63
Mean Gap Score	***MGS***	***4.82***

Results from Table 4.4 show that the minimum mean score for gaps is on how to meet all expectations (GS_5 = 4.63). The maximum mean score is on 'delivering the promises' (GS_4 = 4.93). This implies that customers are ranking the service providers high on the way they keep their promises compared to other gaps factors. However, from the given likert scale to measure the gap's score, with the maximum scale score being 7, the actual maximum is still lower than the level of 'somehow good (with the score of 5 in the scale).

Therefore service providers need to put in more effort on 'meeting all expectations' but even also on the gap score which is comparatively considered the highest, an improvement is still needed. The overall mean gap score by customers is 4.82 which is still below level 5 of 'somehow good'. This implies there is a need for improvement of overall performance of the service providers. This is because having the overall mean score of 4.82, if this is converted to percentage using the scale, it translates to 68.9% which leaves a gap that needs to be filled to ensure good service delivery. This mean score is also low compared to the results of the study done in Mauritius by Roshnee

(2000) applying the same Service Quality tool to the stockbrokers where he found the mean score to be 5.42 (77.7%) on the same scale of 1 (very Low) to 7 (very high).

4.2.3.1 Gaps Scores by Customers of Specific Networks

Customers scored the gaps differently in each network. The results of the scores of customers from specific networks are given in Table 4.5.

Table 4.5 Mean Gaps' Score (GS) by Customers of each Network

Narration		Network			Overall Mean
	Code	Tigo	Vodacom	Zain	
Perception of expectations	GS_1	5.16	4.16	5.34	4.89
Interpretation of specifications	GS_2	5.24	4.07	4.99	4.77
Translation of perceptions	GS_3	5.29	4.17	5.14	4.53
Deliver what promised	GS_4	5.30	4.34	5.14	4.93
Meeting all expectations	GS_5	4.97	4.13	4.79	4.63
Mean Gap Score	***MGS***	***5.19***	***4.17***	***5.08***	***4.82***

The results given in Table 4.5 show that customers of Tigo network scored highest on 'delivery of promises' with mean GS_4 = 5.30 (75.7%) and the minimum score is on 'meeting all expectations' with mean GS_5 = 4.97 (71%). This implies that service providers on Tigo network need to improve the way they manage their analysis of the expectations of customers. This is because when customers are given so much information through promotion, they create very high levels of expectations which become a challenge to deliver. The mean gap score was found to be 5.19 (74.1%) which

is slightly higher than the 'somehow good' (when GS = 5). Therefore the overall performance of service providers of Tigo, according to customers, in managing the service gaps is somehow good (at a performance level of 74.1%). The service providers of Tigo need to improve their overall performance in managing the gaps. Customers ought to feel that they are better managed compared to elsewhere in order to be retained (Reichheld and Teal, 1996).

The results show that customers of Vodacom network have scored highest on keeping what is promised with a mean $GS_4 = 4.34$ (62%). The mean score is less than the lowest mean score of the other two networks for its determinants (Tigo $GS_5 = 4.97$, Zain $GS_5 = 4.79$). The minimum score for Vodacom is on interpretation of specifications (mean $GS_2 = 4.07$). The overall mean score for Vodacom network is 4.17 (59.6%) which when mapped on the said likert scale it is just slightly 'neither good nor not good (when GS = 4). This implies that on average, Vodacom network is performing only up to 59.6% in terms of managing its service quality gaps. Therefore service providers need to ensure that there is no differing appreciation of service quality between service providers and their customers (Varey, 2002).

For Zain network, the highest mean score is on perceptions of expectations ($GS_1 = 5.34$) while the minimum is on interpretation of specifications ($GS_5 = 4.79$). This implies that service providers need to engage customers on how they are interpreting the specifications presented to them by customers. Though the highest mean score is 5.34, this is still approximately the score of 'somehow good (when GS = 5). So even at a higher level of their performance they still need to improve especially with the era of

competition. This is because the average mean score for gap analysis in Zain network is found to be 5.08 which is about 72.6% of performance on gaps management.

Comparing assessment of gaps across networks, it was found that the highest overall mean score is on delivering the promises (Overall mean GS4 = 4.93) while the minimum is on the translation of perceptions (overall mean GS3 = 4.53). This implies that all companies need to give special attention to how the perceptions of customers are to be translated. This is because perceptions are subjective and they can mean different things to the same people (Yong, 2000). Comparing the means across networks, for all the gaps, the results indicate that the leading company in managing the gaps is Tigo with mean GS = 5.19 (74.1%) followed by Zain with mean GS = 5.08 (72.6%) and Vodacom 4.17 (59.6%).

This means that, service providers of Vodacom Network in general are comparatively performing poorly in terms of gaps management. They need to enhance the knowledge of gaps management to its employees. This is because, if they keep underestimating the power of gaps, their competitors might use this weakness to convince customers to switch from the Vodacom network. The overall mean of the gap score of the industry (for the three networks) is found to be 4.82 (68.9%) which from the likert scale used translates to below ‘somehow good’ (when GS = 5).

Therefore within the mobile phone industry of Tanzania, customers have ranked the gaps management to be below ‘somehow good’. Therefore each mobile network ought to assess its performance of gaps management and address the weak areas as identified in

the previous discussion. This is because; the performance of the industry depends entirely on the performance of each individual company (Rundle and Bennet, 2001). The success of this will depend on how service providers will study carefully the perceptions and specifications of their customers.

4.2.4 Quality Factors that Determine Customers' Satisfaction.

The dependent variable was 'overall customers' satisfaction' to be regressed against service quality factors. In this respect, the perception components were used to have the mean service quality score. A regression model was used to find out the service quality factors which are important in predicting the overall customers' satisfaction for the mobile phone industry as well as for the specific networks.

The results for the regression analysis for the overall industry are shown in Table 4.6

Table 4.6 Regression Results for Overall Customers' Satisfaction

Predictor (*Quality Determinant)*	**β**	**T**	**p-value**
Constant	*-4.00*	*-14.40*	*0.000*
Tangibility (X_1)	0.07	1.21	0.225
Reliability (X_2)	0.16	3.03**	0.003
Responsiveness (X_3)	0.15	2.16*	0.031
Assurance (X_4)	0.1	1.50	0.133
Empathy (X_5)	0.19	3.11**	0.002

*Significant at 5%, ** Significant at 1%

The results in Table 4.6 show that two factors (Reliability and Empathy) are significant at 1% with t-value of 3.03 and 3.11 respectively. It was further found that one factor

(Responsiveness) is significant at 5% with t-value of 2.16. This makes three factors (Reliability, Empathy and Responsiveness) to be vital in determining the overall satisfaction of the mobile phone networks industry. The remaining two factors (Tangibility and Assurance) were found not to be statistically significant in predicting the overall satisfaction.

This implies that service providers ought to pay a special attention to the three significant factors (reliability, responsiveness and empathy). This is because reliability takes care of the other two factors (tangibility and assurance). The other two significant factors (responsiveness and empathy) take care of the human value of the staff. In the service industry the human element is crucial (Gronroos, 2002). The significance of the coefficients by specific networks is given in Table 4.7.

Table 4.7 Regression Results by Specific Networks

Predictor	**Network**								
	Tigo			Vodacom			Zain		
	β	**t**	**p**	**β**	**T**	**p**	**β**	**T**	**p**
Constant	*-3.34*	*-7.08*	*0.000*	*-4.12*	*-8.56*	*0.000*	*-3.31*	*-7.38*	*0.000*
Tang.	0.04	0.43	0.67	-0.01	-0.12	0.90	0.18	1.94	0.054
Rel.	0.20	2.27*	0.025	0.10	0.98	0.33	0.21	2.04*	0.043
Resp.	0.22	1.92	0.057	0.06	0.48	0.63	0.10	0.83	0.408
Ass.	-0.07	-0.63	0.53	0.30	2.42*	0.02	-0.07	-0.63	0.529
Emp.	0.25	2.34*	0.021	0.19	1.67	0.10	0.23	2.06*	0.041

* significant at 5%

The results from Table 4.7 show that two factors (Reliability and Empathy) are significant in predicting satisfaction for Tigo and Zain networks. For Vodacom network, it was found that the significant factor is only Assurance with a t-value of 2.42, being

significant at 5%. This implies that the factors which are significant in determining the overall satisfaction (Reliability, Responsiveness and Empathy) might not necessarily be the same for individual networks. The results show that in the case of Vodacom network, a significant factor is different from the three which were observed to be statistically significant for determining overall satisfaction.

4.3 Results and Discussion on Information from Service Providers

The information was collected using the questionnaire (Appendix B). The representatives of service providers of mobile phones networks gave their responses using the questionnaires distributed to them. In part I of the questionnaire general information was collected and in part II, scores on the quality factors. In part III of the questionnaire, respondents provided information on their own assessment on standard quality gaps (Parasuraman et al., 1991).

4.3.1 Results and Discussion on General Information of Service Providers.

Respondents provided information on challenges and key sources of complaints. The results of percentages are given in Table 4.8.

Table 4.8 Results on General Information by Service Providers

Variable	Details	Percentage %
Challenges to Service Quality Management	Customer Service	71.4
	Knowledge of Customers to products	28.6
	Quality of Network	42.9
	Operating Cost	76.2
	Speed of Change of Technology	33.3
	Other Factors	71.4
Key Sources of Complaints frequently reported by customers to service providers	Level of Customer Service	57.1
	Product Design	33.3
	Quality of Network	61.9
	Poor knowledge of customers	14.3
	Price of products	42.9
	Other Factors	61.9

The results in Table 4.8 show that, apart from other factors, the three leading specific challenges facing service providers are; operating costs (76.2%), customer Service (71.4%) and quality of network (42.9%). This implies that cost management is a critical concern of many service providers and thus service providers need to make proper pricing strategies in order to operate profitably. Customers are not to be given just cheap prices but competitive prices (Gronroos, 1984).

Once customers are assured of good value through quality service, they can always be ready to pay for premium prices. As shown from the results, quality is considered the third with only 42.9% recognizing that this is also a challenge. Quality for most service providers is considered as a necessary evil (Dick, 1994). This is because it requires a cost to make it happen but accountants do not observe its direct proportional effect to the revenue. It is also not possible to do business without offering quality service. Therefore, it is important for service providers to appreciate that quality is an equally important challenge which needs to be managed. The results have shown that customers have perceived low quality of service with an overall mean of 4.94 out of 7 which translates to 70.6%.

It was also found that the three leading sources of complaints from customers are; quality of Network (61.9%), customer Service (57.1%) and price of the Products (42.9%). The order of the sources of complaints is the opposite of the ranking of challenges. This implies a mismatch of prioritization of the expectations of customers as presented earlier in Table 4.4.

This is because the mean score (GS_5 = 4.63) was found to be of the least performance which is about the way in which service providers are meeting all expectations of customers. Therefore service providers ought to change the prioritization of their challenges to cope with the order of sources of complaints which are customers' driven. They have to focus more on network quality and then customer service, price then other factors.

4.3.2 Assessment of Quality Factors by Service Providers

This is an assessment of service providers on how they can score on their own delivery of service for each quality factor. The scores were assigned as follows: 1 = Strongly Disagree, 2 = Disagree, 3 = Somehow Disagree, 4 = Neither Disagree nor Agree, 5 = Somehow Agree, 6 = Agree, 7 = Strongly Agree. The mean scores are given in Table 4.9.

Table 4.9 Mean Scores of Quality Determinants by Service Providers

Quality Factor	Mean Score out of 7 and (%)
Tangibility	5.86 (83.71%)
Reliability	5.67 (81%)
Responsiveness	5.29 (76.14%)
Assurance	5.33 (76.14%)
Empathy	5.19 (74.14%)
Mean Score for Quality	**5.47 (78.14%)**

The results in Table 4.9 show that service providers have been offering a higher level of service on tangibility (mean score = 5.86) compared to other factors. The factor which is ranked lowest by the service providers is Empathy (mean score = 5.19). Even with the highest mean obtained on tangibility (mean score = 5.86), the results indicate that service providers are below the level of 'agree (when score = 6)'.

There is a need to involve customers in understanding well what is to be done to improve the service delivery (Dowling, 1997). This is because when customers are involved in solving their problems, it becomes easy to meet their expectations (Keavney, 1995). The overall mean score for quality is found to be 5.47.

This implies that in general, service providers somehow agree that they are offering good service to customers. This is because the mean score is slightly higher than the score of 5 (somehow agree). It is useful to understand how each network ranked itself in reference to service quality.

4.3.2.1 Assessment of Service Providers on Quality for Specific Networks

The assessment of service providers is different from one network to another in relation to the service quality they are giving to the customers. The results in Table 4.10 show the way service providers of each network agree on the provision of good service quality.

Table 4.10 Assessment on Quality for each Network by Service Providers

Factor	Network			Overall Mean
	Tigo	Vodacom	Zain	
Tangibility	5.71 (81.6%)	5.57 (79.6%)	6.29 (90%)	5.86 (83.7%)
Reliability	5.57 (79.6%)	6.00 (85.7%)	5.43 (77.6%)	5.67 (81%)
Responsiveness	5.57 (79.6%)	4.86 (69.4%)	5.43 (77.6%)	5.29 (75.6)
Assurance	5.57 (79.6%)	5.43 (77.6%)	5.00 (71.4%)	5.33 (76.1%)
Empathy	6.00 (85.7%)	4.71 (67.3%)	4.86 (69.4%)	5.19 (74.1%)
Mean Score for Quality	**5.71 (81.6%)**	**5.14 (73.4%)**	**5.29 (75.6%)**	**5.47 (78.1%)**

The results in Table 4.10 show that Zain network has a relatively higher score on tangibility (mean score = 6.29) compared to other networks. For other factors, the highest score is found to be; Reliability (Vodacom, score = 6.00), Responsiveness (Tigo, score = 5.57), Assurance (Tigo, score = 5.57), Empathy (Tigo, score = 6.00).

By comparing the results across networks, the overall mean score for quality for all factors is found to be highest on Tigo network (mean score = 5.71) followed by Zain (5.29) then Vodacom (5.14). Comparatively, Tigo seems to be close to the level of 'agree' because it has higher scores in most of the factors compared to other networks. This implies a relatively better service for Tigo network as far as their assessment is concerned.

4.3.3 Results of Quality Gaps' Scores by Service Providers

The values of the score are; 1 = Very poor, 2 = Poor, 3 = Somehow Poor, 4 = Neither poor nor Good, 5 = Somehow Good, 6 = Good and 7 = Very Good. The results obtained are given in Table 4.11.

Table 4.11 Mean Gaps' Score (GS) by Service Providers

Narration	Code	Mean Score
Perception of expectations	GS_1	5.29 (75.6%)
Interpretation of specifications	GS_2	5.38 (76.9%)
Translation of perceptions	GS_3	5.43 (77.6%)
Deliver what promised	GS_4	5.29 (75.6%)
Meeting all expectations	GS_5	5.38 (76.9%)
Mean Gap Score	***MGS***	***5.35 (76.4%)***

The results in Table 4.11 show that the lowest mean score for gaps is on perception of expectations and delivery of promises (GS_1 and GS_4 = 5.29). The highest mean score is on 'translation of perceptions of customers' (GS_3 = 5.43). This implies that service providers consider themselves to be performing relatively better on aspects related to

translation of perceptions of customers compared to other service quality gaps. The overall mean gap score was found to be 5.35 out of a maximum score 7. Based on the likert scale, this was close to an average score of '5' which implies 'somehow good'. In terms of percentages this translates to a mean performance of 76.4% based on self assessment of the service providers. Therefore there is room of about 23.6% of improvement of the service from the way service providers assess themselves. They also realize that they have some shortfalls in some areas.

4.3.3.1 Gaps Scores by Service Providers of Specific Networks

Service providers are found to have scored the gaps differently in each network. The results of the scores of service providers from specific networks are given in Table 4.12.

Table 4.12 Mean Gaps' Score (GS) by Service Providers of each Network

Gap Description		**Network**			**Overall Mean**
	Code	**Tigo**	**Vodacom**	**Zain**	
Perception of expectations	GS_1	5.29 (75.6%)	5.57 (79.6%)	5.00 (71.4%)	5.29 (75.6%)
Interpretation of specifications	GS_2	5.43 (77.6%)	5.43 (77.6%)	5.29 (75.6%)	5.38 (76.9%)
Translation of perceptions	GS_3	5.71 (81.6%)	5.29 (75.6%)	5.29 (75.6%)	5.43 (77.6%)
Deliver what promised	GS_4	5.43 (77.6%)	5.71 (81%)	5.71 (81%)	5.62 (80.3%)
Meeting all expectations	GS_5	5.57 (79.6%)	5.29 (75.6%)	5.29 (75.6%)	5.38 (75.6%)
Mean Gap Score	***Mean. GS***	***5.43(77.6%)***	***5.43(77.6%)***	***5.29 (75.6%)***	***5.38(75.6%)***

The results in Table 4.12 show that service providers of Tigo and Vodacom have the highest overall mean gaps score with overall mean score = 5.43 (77.6%) while those of

Zain indicate an overall mean score of 5.29 (75.6%). This implies that service providers of Tigo and Vodacom have assessed themselves at the same level in terms of their assessment on gaps. Based on the results of each network, the lowest mean score for each network in found to be; Tigo (perception of expectations, GS_1 = 5.29), Vodacom (meeting all expectations, GS_5 = 5.29), Zain (perceptions of expectations, GS_1 = 5.00). This implies that most of the service providers are aware that they are comparatively not strong on perceiving the expectations of customers.

When service providers are not capable of understanding the expectations of customers, it is not easy to satisfy the needs of the customers (Palmer, 1998). The results also indicate that across the networks, the lowest mean score is on 'perceptions of expectations' (GS_1 = 5.29) while the highest overall mean score is found on 'delivering the promises' (GS_4 = 5.62). This implies that according to service providers, special efforts will be needed in studying the expectations of customers in order to be able to satisfy them.

Without a clear understanding of the expectations of customers, there will always be a mismatch in service delivery system (Varey, 2002). This is because service providers will not be dealing with what is expected by customers but what they expect of themselves.

4.4 Comparison of Assessment by Customers and Service Providers

Customers and service providers were given the same set of questions so that the responses could be compared. The parameters of interest for comparison were on quality factors and quality gaps. The quality gaps are the standard ones as indentified by

Parasuraman et al (1995) and used for assessment of service management (Gronroos, 2002).

4.4.1 Assessment of Service Quality Factors by Customers and Service Providers

Comparative results on the assessment are given in Table 4.13.

Table 4.13 Assessment of Quality Factors by Customers and Service Providers

Quality Factor	**Mean Score on Quality**		**Variance (Customers – Providers**
	Customers	Service Providers	
Tangibility	5.05	5.86	-0.81
Reliability	4.92	5.67	-0.75
Responsiveness	4.87	5.29	-0.42
Assurance	5.11	5.33	-0.22
Empathy	4.8	5.19	-0.39
Mean Score	**4.94**	**5.47**	**-0.53**

The results in Table 4.13 show that for every determinant, service providers have considered themselves to be performing better than the way customers have assessed them. The greater variance is found in tangibility where customers have a mean score of 5.05 while the service providers mean score is 5.86.

The difference is also evident in the overall mean score. This is because, customers had a mean score of 4.94 while service providers assessed overall service quality to a mean

score of 5.47. This implies a variance of -0.53 which indicates a variation in assessment of service providers compared to the customers. According to Roshnee (2000), when service providers assume that they are performing better than the actual assessment by customers, they become complacent hence take a longer time to improve the service quality.

Furthermore, a T-Test was undertaken to ascertain if the variance observed is statistically significant. Results from the T –Test show that when the two samples are compared for independence, the t – value (-2) has a p – value of 0.056. From the results, the two samples are not independent. This implies that the mean score for customers (4.94 out of 7) is not statistically significantly different from that of that of service providers (5.47 out of 7). Therefore customers and service providers have the same assessment of quality factors in the mobile phone network industry.

4.4.2 Assessment of Service Quality Gaps by Customers and Service Providers

Customer and service providers were found to have assessed the quality gaps differently. The results for the assessment are given in Table 4.14.

Table 4.14 Assessment of Gaps' Scores by Customers and Service Providers

Narration		Mean Gap Score		Variance
	Code	**Customers**	**Providers**	**(Customers - providers**
Perception of expectations	GS_1	4.88	5.29	-0.41
Interpretation of specifications	GS_2	4.77	5.38	-0.61
Translation of perceptions	GS_3	4.87	5.43	-0.56
Deliver what promised	GS_4	4.93	5.29	-0.36
Meeting all expectations	GS_5	4.63	5.38	-0.75
Mean Gap Score	***MGS***	***4.82***	***5.35***	***-0.53***

The results in Table 4.14 show that in all gaps, service providers have ranked themselves higher in gaps' scores compared to the assessment by customers. The greater variation is found to be on 'meeting all expectations' (GS_5 = 4.63 for customers and 5.38 for providers hence a variation of -0.75). From the results, the mean gap score for customers is found to be 4.82 while for service providers is 5.35 hence a variation of -0.53.

This implies that, as it was in the case of service quality determinants, service providers consider themselves to be performing better than the actual assessment given by customers. This mismatch of assessment requires service providers to re-align their assessment to that of the customers. Satisfaction should be determined by customers' results and not service providers (Tomaz, 2006). This is because the focus of any business is to meet the expectations of the customer and not the service provider (Gronroos, 2001).

To ascertain the statistical significance of the difference of the assessment, a t-test of two samples is undertaken to compare the means of the customers to that of the service providers as far as 'gaps scores'. The results of the T-Test are given in the Table 4.15.

Table 4.15. T-Test for Customers and Service Providers on Gaps' Scores

Respondents	**Mean**
Customers	4.82
Service Providers	5.35
t-value	3.63**

** Significant at 1%

With the t – value of 3.63 at p-value of 0.01 it implies that the means of the two samples are statistically significantly different. This implies that the assessment of five service quality gaps by customers is statistically significantly different from the assessment of service providers. The mean gap score for customers is 4.82 while for service providers is 5.35. Service providers consider themselves to be offering high level of service quality compared to the way customers perceive them. This is what has been considered as 'differing appreciation' between service providers and customers (Varey, 2002).

4.5 Effect of Location on the Assessment of Quality

A comparison of quality assessment for customers in Dar es Salaam and Mwanza was done. This was to find out if the assessment of customers is statistically significantly different in these locations. The results show that the overall mean of quality for customers in Mwanza was 4.8 and in Dar es Salaam, the mean was 5.1. A t-test value of

2.66 was found to be significant at 1%. This implies that the assessment of the two groups of customers (Dar es Salaam and Mwanza) is statistically significantly different. This implies that service providers ought to be sensitive also to managing their services by taking care of different location than generalizing the service delivery.

The results across networks are presented so as to understand the effect of location on the assessment of quality in the three networks. Table 4.16 gives a summary of the results across networks.

Table 4.16 Mean Score of Quality by Location with Specific Networks

	Location	**Tigo**	**Vodacom**	**Zain**	**Average**
Mean	Mwanza	4.76	4.47	5.21	4.81
	Dar	5.33	4.87	5.13	5.11
t-test		-3.33**	-2.01*	0.44	2.66**

*Significant at 5%, **Significant at 1%

The results in Table 4.16 show that the assessment of the quality by customers is different from one network to another when compared in the two locations. The difference is found to be significant for Tigo and Vodacom. However, the difference is not found to be statistically significant for Zain network. This implies that the assessment of quality for the customers of Zain is similar for Mwanza and Dar es Salaam.

Therefore for the customers of Tigo and Vodacom, service providers need to be sensitive to the location as it has an impact on quality assessment. When different segments of customers indicate different assessment of quality determinants, they need different

strategies on service delivery (Gronroos, 2002). Thus for specific networks, Tigo and Vodacom have the same assessment as that of the industry while Zain customers have the same assessment in the two locations.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND POLICY IMPLICATIONS

5.1 Introduction

This chapter gives the summary of the findings with conclusions based on the objectives of the study. Policy implications are also given which are derived from the conclusions. The conclusions and policy implications form the contribution of this study to the body of knowledge in the area of service quality management for satisfaction.

5.2 Summary of the Findings

The results have been discussed after analyzing the information from the two categories of respondents (customers and service providers). Price is found to be a major factor in leading customers to choose the network to join. About forty two percent (42%) of respondents indicated to have chosen the network they are using because of price. The results have also shown that 38.8% of customers are intending to switch from their current network and 10% intend to switch to Tigo.

The overall mean score for expectation of customers was found to be 5.65 out of 7 while overall mean score for perception was found to be 4.94 out of 7. This translates to an overall mean satisfaction level of -0.71. This implies that in general, customers of the

mobile phone industry are not satisfied. The assessment of quality factors by customers and service providers is found to be the same. Three quality factors (reliability, responsiveness and empathy) are found to be statistically significant in predicting the overall satisfaction of the mobile phones network industry. It was further found that the assessment of quality gaps by customers is not the same as that of service providers. It was also found that the assessment of quality factors by location is statistically significantly different.

5.3 Conclusions

In this study, customers indicate an existence of dynamics of the switching intensions from the previous networks as well as the factors contributing to their intention to switch from the current network. Based on results in table 4.1, price is the leading factor which made 41% of customers to switch from their previous network and 40.5% switching from their current networks. It is followed closely by 'social factors' (39.2%) for switching from previous network and (31.9%) from current network. There is evidence of the dynamism of customers being affected by various stimuli.

Having the five major quality factors (tangibility, reliability, responsiveness, assurance and empathy), the assessment of service delivery ought to be done by customers and service providers. In most cases, service providers have a greater score compared to their customers. From the data collected it was found that the mean score of customers was 4.94 out of 7 while the service providers assessed themselves to a mean score of 5.47. By using a T-Test technique, it was confirmed that the two means score are not statistically

significantly different. This is because the results indicate a t-value with a p-value of 056. Since the p-value is not less than 0. 05, the two samples are not different.

Having the five factors of quality which have been identified to be relevant on determining customers' satisfaction by Parasuraman et al., (1991), not all of them are important. The nature of the industry and the type of the customers can affect the way these factors contribute to the prediction of the overall satisfaction. For the case of the mobile phone industry in Tanzania, using the three leading brands, with 420 respondents from University students, coefficients of three factors are found to be statistically significant.

The said coefficients correspond to the following quality factors; reliability, responsiveness and empathy. Under normal circumstances, it is not easy to think of satisfaction in isolation of tangibility and assurance. However, from this study, particularly with the two selected Universities, the two factors (tangibility and assurance) are not important in predicting the overall satisfaction of the industry because their regression coefficients are found to be not statistically significant.

There are five standard gaps in service quality management as identified by Parasuraman et al., (1991). These gaps are linked with the Gaps Model which is the key model in this study. It is found that the way customers assessed the service quality is different when compared to the assessment of service providers.

In most cases service providers can be naïve to ignore the effect of the location of the customer in assessing the quality factors. From the results in this study it is found that location has an effect on the assessment of quality factors. This is because the assessment of respondents based in Mwanza is different from that of respondents based in Dar Es Salaam.

5.4 Policy Implications

Service providers need to develop strategies to satisfy and retain customers. Customers also suggested some strategies which can be useful in the service design of the mobile phone industry of Tanzania. The influence of friends, family members, social groups, etc can still make a reasonable impact to switching intentions (Keaveney, 1995). It is therefore recommended that TCRA should harmonize prices across networks. This will create a level ground for customers to assess quality more objectively, using the quality determinants.

It will be more appropriate for the service providers to use the assessment of customers. This is because the ultimate goal is to satisfy the customer (not the service provider). Therefore the indicators given by the customers are crucial and need to be used and implemented as much as possible to reduce the difference in quality assessment. From this study, the assessment of the service providers indicated a higher performance while customers indicated a relatively lower performance in terms of quality factors scores. The companies therefore, need to strategize their service delivery to reduce or eliminate the

difference on assessment of factors of quality which will affect the level of customers' satisfaction.

The service providers of the respective networks need to be more focused on the identified quality factors in order to enhance customers' satisfaction. In determining the overall customers' satisfaction, it was found that three quality factors (reliability, responsiveness and empathy) are statistically significant in determining customers' satisfaction.

Service providers need to give a special attention to these factors. Specifically, each network ought to be sensitive to the specific factors which are significant to its network. The networks with their specific significant factors are found to be; Tigo (Reliability and Empathy), Vodacom (Assurance) and Zain (Reliability and Empathy). For Tigo and Zain, they have the same factors being important.

Service providers need to be focused on the assessment of the customers and also interact with them to in order to understand why the gaps exist and how customers suggest the gaps to be managed. The assessment of quality gaps by customers and service providers is found to be different. The existence of gaps can affect loyalty of customers and the differing appreciation of the gaps can make service providers to be complacent (Varey, 2002).

Location has an effect on the assessment of service quality. This suggests that customers can behave differently on the assessment of quality based on their location. Service

providers therefore ought to use a strategy called 'Segmentation, Targeting and Positioning' (STP). Customers of the mobile phone industry are different in terms of expectations and perceptions hence satisfaction. It is important to study their needs and whenever necessary, these customers have to be segmented. It is found from this study that customers of different locations assessed service quality differently. This is evidenced by the results through comparing the assessment of customers in Dar Es Salaam and Mwanza. By the use of STP strategy, services can be modified to meet the expectations of customers with respect to their specific characteristics (Gannesh, 2002).

5.4 Basis for Further Research

There are various gaps identified after the analysis of the findings. It is evident that even when the overall satisfaction is affected by quality, in some specific networks this is not the case. There is also clear evidence of service providers overstating their performance hence a need to align with the assessment of customers. This study has provided a good basis and more pointers for further research in the dynamics of quality and customer satisfaction in the mobile phone industry in Tanzania.

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APPENDICES

APPENDIX I

QUESTIONNAIRE FOR CUSTOMERS OF MOBILE PHONE NETWORK COMPANIES: {University Students in Tanzania}

Dear respondent,

My name is Elisante Ole Gabriel, a Lecturer at Mzumbe University. I am doing a study on the relationship between service quality and customer satisfaction in the mobile phone industry of Tanzania. Your response to a few questions below will make this study a success. Your information will be treated with confidentially and will be used for research purpose only.

PART I: General Information from the Customer (University Student)

1. (a) Mention one main mobile phone Network you are using out of these (Tigo, Vodacom, Zain) . (b) Tick your Location between these two; Mwanza [ ], Dar Es Salaam [ ]

2. What makes you loyal to your main mobile phone service provider? (Tick one)

(a) Quality…… (b) Lower rates they are charging…… (c) Technology used ……..**..**

3. (a) Do you use alternative networks than the main one you have ? No [ ] Yes [ ]

(b) If Yes Specify Alternative Networks you are using apart from the main one you have;

Tigo [ ], Voda [ ], Zain [ ], Others [ ]

4. Which was your mobile phone network before joining the current one? ……

5. What was the main reason for you to switch from the previous mobile network? (Tick one)

(a) Poor service quality [ ] (b) Price of service [ ] (c) Social factors (eg. friends, family members, etc) [ ] (d) Change in Technology [ ]

6 (a) Are you planning to switch to another mobile phone network? YES [ ] , NO [ ]

(b) If yes, what is the main reason? Tick one

Poor service quality [ ] Price of service [ ]

Social factors (eg. friends, family members, etc) [ ] Change in Technology [ ]

(c) Which network are you intending to join? Tigo [ ], Voda [ ], Zain [ ], Others [ ]

7. Service quality determines your level of satisfaction?: Choose from 1 – 7;

{1 = strongly disagree to, 7 = strongly agree}. Score [1…2…3…4…5…6….7….]

8. Suggest any strategy (strategies) to your service provider to improve their service quality

PART II: STANDARD SERVICE QUALITY INSTRUMENT

(Adopted from Parasuraman, 1991: in connection to Gaps Model)

Expectations Section

Based on your experience as a customer of mobile telephone services, please think about the kind of features a telephone company would possess (the feature described by each statement).

DIRECTIONS: Express your true feelings of your expectations to rate each element about an excellent mobile phone company from a scale of '1' (Not essential) to '7' (Absolutely essential).

(Give a score out of 7 for every element)

Scale: (**1** = Not at all essential, **2**= Not essential, **3** = Somehow not essential, **4** = Neither essential nor not essential, **5** = Somehow essential, **6** = Essential, **7** = Absolutely essential).

E1. *I expect*, Excellent telephone companies to have modern-looking equipment:

Score ….. *out of 7*

E2. *I expect*, Physical facilities at excellent telephone companies to be visually appealing.

Score ….…*out of 7*

E3. *I expect*, Employees of excellent telephone companies to be neat-appearing.

Score ….. *out of 7*

E4. *I expect*, Materials associated with the service (such as pamphlets or statements) to be visually appealing in an excellent telephone company. ***Score …..*** *out of 7*

E5. *I expect*, excellent telephone companies to keep their promises

. ***Score …..*** *out of 7*

E6. *I expect*, excellent telephone companies to show sincere interest to solving customer problems ***Score …..*** *out of 7*

E7. *I expect*, Excellent telephone companies to perform the first time. ***Score …..*** *out of 7*

E8. *I expect*, Excellent telephone companies to provide their services at the time they promise to do so. ***Score …..*** *out of 7*

E9. *I expect*, Excellent telephone companies to insist on error-free records. ***Score …****out of 7*

E10. *I expect*, Employees of excellent telephone companies to tell customers exactly when services will be performed. ***Score …..*** *out of 7*

E11. *I expect*, Employees of excellent telephone companies to give prompt service to customers. ***Score …..*** *out of 7*

E12. *I expect*, Employees of excellent telephone companies to always be willing to help customer. ***Score …..*** *out of 7*

E13. *I expect*, Employees of excellent telephone companies to have time to respond to customer requests. ***Score …..*** *out of 7*

E14. *I expect*, The behavior of employees of excellent telephone companies to instill the companies' confidence in customers. ***Score …..*** *out of 7*

E15. *I expect*, Customers of excellent telephone companies to feel safe in their transactions. ***Score …..*** *out of 7*

E16. *I expect*, Employees of excellent telephone companies to be consistently courteous with customers. ***Score …..*** *out of 7*

E17. *I expect*, Employees of excellent telephone companies to have the knowledge to answer customer questions. ***Score …..*** *out of 7*

E18. *I expect*, Excellent telephone companies to give customer's individual attention. ***Score …..*** *out of 7*

E19. *I expect*, Excellent telephone companies to have operating hours convenient to all their customers. ***Score …..*** *out of 7*

E20. *I expect*, Excellent telephone companies to have employees who give customers personal attention. ***Score …..*** *out of 7*

E21. *I expect*, Excellent telephone companies to have the customers' best interests at heart. ***Score …..*** *out of 7*

E22. *I expect*, The employees of excellent telephone companies to understand the specific needs of their customers. ***Score …..*** *out of 7*

Perception Section – *Give a score to each Perception out of 7 points*

The following set statements relate to your feelings about your mobile phone network provider. For each statement, please show the extent to which you believe your company has the feature described by the statement.

DIRECTIONS: Indicate your true feeling about the actual experience (perception) by choosing a score from '1' strongly disagree to '7' strongly agree..

Scale: (**1** = Strongly disagree, **2**= Disagree, **3** = Somehow disagree, **4** = Neither disagree nor agree, **5** = Somehow agree, **6** = Agree, **7** = Strongly agree).

Choose one score from '1' to '7'

P1. My Mobile phone company, has modern-looking equipment. ***Score …..*** *out of 7*

P2. My Mobile phone company's physical facilities are visually appealing. ***Score …..****out of 7*

P3. My Mobile phone company's employees are neat-appearing. ***Score …..*** *out of 7*

P4. Materials associated with the service (such as pamphlets or statements) are visually appealing at my Mobile phone company. ***Score …..*** *out of 7*

P5. When My Mobile phone company, promises to do something by a certain time, it does so. ***Score …..*** *out of 7*

P6. When I have a problem, My Mobile phone company shows a sincere interest in solving it. ***Score …..*** *out of 7*

P7. My Mobile phone company, performs the service right the first time. ***Score …..*** *out of 7*

P8. My Mobile phone company, provides its services at the time it promises to do so. ***Score ..***

P9. My Mobile phone company, insists on error-free records. ***Score …..*** *out of 7*

P10. Employees of My Mobile phone company, tell me exactly when services will be performed, ***Score …..*** *out of 7*

P11. Employees of my Mobile phone company, give me prompt service. ***Score …..*** *out of 7*

P12. Employees of My Mobile phone company, are always willing to help you. ***Score …..*** *out of 7*

P13. Employees of My Mobile Phone Company, are never too busy to respond to my requests. ***Score …..*** *out of 7*

P14. The behavior of employees of My Mobile phone company, instills confidence in customers. ***Score …..*** *out of 7*

P15. I feel safe in my transactions with My Mobile phone company, ***Score …..*** *out of 7*

P16. Employees of My Mobile phone company, are consistently courteous with me. ***Score …..*** *out of 7*

P17. Employees of My Mobile phone company, have the knowledge to answer my questions. ***Score …..*** *out of 7*

P18. My Mobile phone company, gives me individual attention. ***Score …..*** *out of 7*

P19. My Mobile phone company, has operating hours convenient to all its customers. ***Score …..*** *out of 7*

P20. My Mobile phone company, has employees who give personal attention. ***Score …*** *out of 7*

P21. My Mobile phone company, has my best interests at heart. ***Score …..*** *out of 7*

P22. Employees of My Mobile phone company, understand my specific needs. ***Score ..****out of 7*

PART III: SERVICE QUALITY GAPS ANALYSIS

From a scale of **1** = very poor, **2** = Poor, **3** = Somehow poor, **4** = Neither poor nor good **5** = Somehow Good, **6** = Good and **7** = Very Good; give the score to the following;

1. Basing on your practical experience, does your mobile phone company perceive your expectations correctly? **: Gap Score ..... out of 7**

2. Does the company interpret the quality specifications correctly ? Gap **Score ..... out of 7**

3 Is the company correctly translating your perceptions to improve the service delivery to meet your expectations? Gap **Score ..... out of 7**

4. From your own experience, do you think the company is always delivering what it has communicated to you? Gap **Score ..... out of 7**

5. Is the company meeting all your expectations? Gap **Score ..... out of 7**

Thank you for your esteemed cooperation

APPENDIX II

QUESTIONNARE FOR MEMBERS OF MANAGEMENT TEAM OF THE MOBILE PHONE NETWORK COMPANIES (Service Providers)

NAME OF THE MOBILE PHONE COMPANY ……..……

POSITION OF THE RESPONDENT: ..……..……

Dear respondent,

My name is Elisante Ole Gabriel. I am doing a study on the relationship between service quality and customer satisfaction in the mobile phone industry of Tanzania. Your response to a few questions below will make this study a success. All information you will provide shall be treated with confidentiality and will be used for research purpose only.

PART I: General Information.

1. Mention any three major challenges which you think the organization is facing in terms of relation to quality Management:

(i)

……

……

……

……

(ii)

……

……..……

……..……

……

(iii)

……

……

……

2. From your experience, what are the major complaints of the customers about your organization which might be affecting their total satisfaction?

(i)

……

(ii)

……

…

(iii)

……

..

PART II: Score on Quality Factors

3. Using the Table below, please give a score on service quality of your organisation to its customers in respect of each service quality factor: (Tick the correct answer)

Scale (**1** = Very poor, **2** = Poor, **3** = Somehow poor, **4** = Neither poor nor Good, **5** = Somehow Good, **6** = Good, **7** = Very Good. Choose only one score

	SCORE						
PARAMETERS	1	2	3	4	5	6	7
Tangibility							
Reliability							
Responsiveness							
Assurance							
Empathy							

PART III: Score on Gaps Analysis (Standard Gaps adopted from Parasuraman, 1991) Scale (**1** = Very poor, **2** = Poor, **3** = Somehow poor, **4** = Neither poor nor Good, **5** = Somehow Good, **6** = Good, **7** = Very Good. Choose only one score

1. Basing on your practical experience to what extent do you think the company perceives the expectations of customers correctly? **Score ..... out of 7**

2. To what extent does the company interpret the quality specifications from the customers correctly? **Score ..... out of 7**

3. Do you think that the company is correctly translating the perceptions of customer to service delivery to meet their expectations? **Score ..... out of 7**

4. From your own experience, to what extent do you think the company is always delivering what it has communicated to the customers? **Score..... out of 7**

5. In general, to what extent do you think the company is meeting all the expectations of customers? **Score ..... out of 7**

Thank you for your esteemed cooperation!