IBN HALDUN UNIVERSITY
SCHOOL OF GRADUATE STUDIES
DEPARTMENT OF MANAGEMENT

MASTER THESIS

INVESTIGATING THE IMPACT OF MOBILE TELECOM SERVICE CHARACTERISTICS ON CONSUMER SATISFACTION IN URBAN UGANDA

MANYAGA FAWZ

MASTER THESIS

PROF. ÜMİT HACIOĞLU

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by

MANYAGA FAWZ

A thesis submitted to the School of Graduate Studies in partial fulfilment of the requirements for the degree of Master of Arts in Management

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APPROVAL PAGE

This is to certify that we have read this thesis and that in our opinion it is fully adequate, in scope and quality, as a thesis for the degree of Master of Arts in Management

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This is to confirm that this thesis complies with all the standards set by the School of Graduate Studies of Ibn Haldun University.

Date of Submission Seal/Signature

ACADEMIC HONESTY ATTESTATION

I hereby declare that all information in this document has been obtained and presented in accordance with academic rules and ethical conduct. I also declare that, as required by these rules and conduct, I have fully cited and referenced all material and results that are not original to this work.

Name Surname:

Signature:

ÖZ

KENTSEL UGANDA'DA MOBİL TELEKOM HİZMET ÖZELLİKLERİNİN TÜKETİCİ MEMNUNİYETİ ÜZERİNDEKİ ETKİSİNİN ARAŞTIRILMASI

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Servqual literatürü, yürütülmesi gereken bağlamsal bir çalışmaya ihtiyaç duyulana kadar akademisyenlerin arasında yer aldı. Bağlamsal bir araştırmaya duyulan ihtiyaç, akademi alanındaki çeşitli çalışmalar tarafından ele alınmayan ülkeye özgü fenomenleri ele almaktır.

Telekom şirketleri, insanların farklı coğrafi konumlarda bile iletişim kurmasını sağlayan uzun zamandır varlığını sürdürmektedir. Bununla birlikte, bazı nedenlerden dolayı bu sektördeki gelişimde ve abonelik sayılarında büyük bir dalgalanma olmuştur. Bu çalışmanın Uganda bağlamına yönelik olduğu düşünüldüğünde, ülkeye giren ve çıkan birçok telekom şirketi olduğu açıktır. Müşteri memnuniyeti, bu şirketleri duvara asan olasılıklardan biridir ve birçok kişiyi ya gelişmeye ya da daha doğrusu bir çıkışa hazırlanmaya zorlar.

Bu tür nedenlerden dolayı, bu çalışmanın amacı, tüketici satın alma davranışına ilişkin mevcut uygulamaları ve araştırmaları analiz etmek ve Uganda'daki mobil telekom hizmetleri müşterilerinin Servqual modelini bir değerlendirme aracı olarak kullanarak memnun olup olmadığını ortaya çıkarmaktır.

Çalışma, Uganda'dan 511 katılımcıdan oluşan bir örneklemle nicel anket kullandı. Bu çalışmanın verileri çevrimiçi anket yöntemi kullanılarak toplanmış ve SPSS sürüm 21 ile analiz edilmiştir. Veriler daha sonra modeli test etmek için regresyon modelleme tekniği kullanılarak ampirik olarak test edilmiştir. Analizden elde edilen sonuçlar, Servqual modelinin Uganda kenti bağlamında müşteri memnuniyetini olumlu etkilediğini göstermektedir.

Çalışma aynı zamanda güvenilirlik, duyarlılık ve empatinin Uganda kentinde yaşayanlar tarafından üst sıralarda yer aldığını öne sürüyor.

Anahtar Kelimeler: Hizmet kalitesi, Müşteri memnuniyeti, telekomünikasyon, telekom hizmetleri

ABSTRACT

INVESTIGATING THE IMPACT OF MOBILE TELECOM SERVICE CHARACTERISTICS ON CONSUMER SATISFACTION IN URBAN UGANDA

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The Servqual literature has been present in academics for a while, however, the need to use this literature for a contextual study to address country specific phenomena was not perceived by earlier studies. The need for a contextual study is to address country specific phenomenon's that have not been addressed by various studies in academia.

Telecom companies have been in existence for a long-time enabling people to communicate even within different geographical locations. However, there has been a wide swing in the development and within subscription numbers in this sector for various reasons. Given that this study is driven towards the context of Uganda, it is evident that there have been many telecom companies entering and leaving the country. Customer satisfaction is one of the factors that have placed these companies risk forcing many to either improve or rather prepare for an exit.

For such reasons, the objective of this study is to analyse current practices and research regarding consumer buying behaviour, and to find out whether customers of mobile telecom services in Uganda are satisfied using Servqual model as an assessment tool.

The study used quantitative survey with a sample of 511 respondents from Uganda. Data of this study was collected using an online survey method and analysed with SPSS version

21. Data was then empirically tested using regression modelling technique to test the model. The results from the analysis suggest that Servqual model positively influences customer satisfaction within the context of urban Uganda.

The study also suggests that reliability, responsiveness, and empathy are highly ranked by those living in urban Uganda.

Keywords: Service quality, Customer satisfaction, Telecommunication, Telecom services

DEDICATION

I dedicate this thesis to my beloved family, friends, classmates, supervisor, and all faculty staff who have worked so hard for me to accomplish my studies at Ibn Haldun University. I would also like to dedicate this thesis to my future wife and to my future kids.

ACKNOWLEGEMENT

I would like to first thank my supervisor for his continuous guidance, support, and encouragement during my thesis writing. I would also like to thank my friends who helped me during data collection because without their help, finishing this thesis on time would have been convoluted.

Manyaga Fawz

ISTANBUL, 2021

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CHAPTER I

INTRODUCTION

Over the last decade, Telecom companies have predominantly been accepted as Information Technology grows. The emergence of this Technology has reliably contributed to a proliferated access of communication services edging off costs in many geographical places of the world. With simply the help of a phone, users are now able to circulate and receive short message services (SMS), download data, access internet (Ibrahim et al., 2014), and make a video conference without any hindrances. Mobile telecommunication service providers currently continue to invest large sums of capital and make extensive research to improve infrastructure and the quality of their service provision (Grigoriou et al., 2018).

Today, mobile telecom companies have changed their ways of operations; working closely with mobile phone developers to come up with devices that suit customers' needs. As the two operate together within the same market, there has been a great increase in penetration of mobile devices (Özer et al., 2013). The ability to study consumers' ways of buying products has given telecommunication companies a chance to understand what to offer to markets. However, organizations are required to hire experts to study human behaviour; a tool that companies have extensively used as a key to achieve success. It is indisputable to say that competition is the major reason for increasing number of studies made in relation to consumer behaviour by mobile telecommunication companies.

Since the paradigm of marketing has shifted from conventional ways of marketing to digital shopping, online purchasing decisions by consumers have forced various companies to tailor services more than previously, with a goal of retaining their customers (Vatamanescu et al., 2017). Moreover, not only has telecommunication industries

transformed, but the trend has also attracted other sectors in the market. The contemporary issue within online marketing as criticised by tech giants is security and authentication problems. For years, consumers that are vulnerable to security threats have been compelled to file several lawsuits against major companies in the telecommunication industry. It is profoundly known that customers react to service failures that is, if a company fails to critically think about how to address customer complaints (Smith et al., 1999). To contain this, many telecom companies have come up with strategies to combat security fugitives. But even if this is the case, there are still less efforts done to stop the ongoing crimes as the matter increases day by day.

Customer satisfaction in marketing schools is termed as the measure of how services and products served meet or even surpass customers' expectations. A customer gets satisfied as an outcome of interaction with companies' products and services. For a long time, measuring satisfaction has been a recurring practice carried out by companies trying to evaluate how their customers respond to services. There is no doubt that satisfaction and quality go hand in hand as far as the service sector is concerned. Besides flooding the market with more services and products that do not necessarily meet targeted customers, the nature of quality is another factor for companies to think about. In marketing, when a customer is satisfied, the level of loyalty to the company increases as well as assurance to re-purchase a service and product.

Today, the most important firm in utility is telecommunication. The role of telecommunication in different economies of the world is astounding. It has enabled business transactions to operate daily through banks engaging directly with business customers. This has played a paramount role by reversing the role of middlemen who were costly at the time of making transactions before the existence of telecom companies. The services have saved time when carrying out transactions such as the electronic fund system (EFT) which combined with mobile telecom services to enable bank account owners to simultaneously pay for taxes and other bills in a much timelier manner.

Companies now face a juggle of competition from both sides namely customers and their goals. The late Steve Jobs of Apple once said that innovations come with a lot of mistakes and that it is best to admit them quickly in an effort to improve the wrongs in innovation. With the goal of becoming the best, the focal point of all mobile telecom giants currently is to build a system that can enable them to analyse what competitors in the market serve, while finding out what consumers in the market need and want.

The importance of this chapter is to introduce the topic, provide an overview of the thesis as well as to give the justification of clearly understanding this study. This chapter also provides the background relating to the nature of telecommunication companies in Uganda. Nevertheless, the chapter also outlines the objectives as well as pointing out relevant research questions that need to be addressed. The chapter will further explain the significance of the research.

1.1. Statement of the Problem

Intensive competition has raised an alarm to telecommunication firms in Uganda to improve on service delivery as well as corporate performance in terms of the number of subscribers known as “tele density”. Firms have been concerned with quality variations of service conveyance to customers within different metropolitan areas.

Telecommunication players in Uganda have been criticised on the grounds of not fulfilling their promises to customers. It should be noted that critiques are attributed to poor service delivery and high costs of plans that keep on accumulating periodically. The population of Uganda has also blamed firms for not expanding their capacity while also stating problems of interconnectivity within remote regions of Kampala district. While the development of technology has facilitated competition within the telecommunication sector, the level to which competition effectively operates largely depends on regulation and control by government institutions in a country.

Uganda communications commission (UCC) was setup by the government of Uganda in 2013 to regulate, facilitate and promote sustainability growth of Uganda's communication sector that consists of telecommunication companies as well as media houses. Even though the regulatory bodies were put in place, there seems to be little regulatory framework to supervise the works done. Moreover, some telecommunication giants use the opportunity of connection they have with UCC staff, controlling tariffs charged on services making it hard for new entrants to penetrate the market easily. The population thus has strongly blamed the government for failure to regulate telecommunication firms efficiently and effectively.

It is not clear whether telecommunication firms in Uganda understand the market they serve. Ugandan customers are characterised by switching from one network to another when users' needs are not significantly met. This, in the past, has led to the extreme growth of new entrants like Warid Telecom which by the time changed its name to Airtel Uganda, had grown its market share by 30%, surpassing MTN Uganda. The reason for this gradual market growth was because Warid telecom had a strategy that benefited almost every poor or middle-class Ugandan. By deploying a new strategy of providing services by simply charging low tariffs on internal calls and internet, this strategy remarkably earned a lot of customers to the then Warid telecom.

Following the above scenarios and problems faced by the overall mobile telecommunication sector in Uganda, there are a lot of questions that need to be answered as far as consumers' buying behaviour is concerned. Thus, this study seeks to answer these questions.

1.2. Overall Aim of the Study

This research will seek to investigate how service quality dimensions influence customer satisfaction in the Ugandan mobile telecommunication sector.

1.3. Objective of the Study

In reference to the above problem statement, this paper seeks the following,

To analyse current practices and research regarding consumer buying behaviour of mobile telecom services in Uganda.

To find out whether customers are satisfied with the services delivered to them by telecommunication companies in Uganda.

To provide a comprehensive review of service characteristics typically found within mobile telecom sector of urban Uganda.

1.4. Research Question

How can SERVQUAL dimensions significantly affect customer satisfaction in the mobile telecom sector of urban Uganda?

1.5. Significance of the Study

This study presents an equitable discussion on different service quality dimensions and consumer buying behaviour (satisfaction) of mobile subscribers as well as emphasizing the role of other stakeholders in Uganda's telecommunication sector. This study will help all stake holders in the field, and more specifically the government and other regulatory bodies, to understand key issues that affect both the people of Uganda and service providers.

This study will also act as a basis for private entities to work together with the government to implement justified policies with a goal of protecting customers within the telecom service sector. It is therefore a contribution to advice to the government to restructure its available policies in an attempt of creating harmony between customers and telecom companies. Furthermore, the government holds all the powers to regulate companies with an aim of protecting consumers from excessive burden of tariffs charged by telecom

companies. By enforcing proper regulations, customers can enjoy quality and affordable services, information, and new technologies.

To the management of telecommunication companies of Uganda, this study will provide reliable scientific results and findings on how service quality affects consumers. This study will give an insight on how the market of urban Uganda operates and informing them how customers respond to the different marketing strategies employed. The study will further identify challenges faced by telecommunication companies, weaknesses and strengths as well illustrating how these factors strongly affect consumer buying behaviour in Uganda. On the other side, this study will give telecommunication companies a broad picture to understand what customers prefer.

Since the researcher is more interested in finding out whether consumers are satisfied or not, the study will explain the importance of SERVQUAL dimensions. Customers will then determine whether telecom companies provide services that satisfy their interests. The study will also contribute to the knowledge (suggestions) of customer satisfaction to companies as far as Uganda's telecommunication industry is concerned. The management of telecom companies can use customer suggestion, provided by this study, .as an opportunity to position themselves in the market and to tailor satisfying services that can give the company a competitive advantage.

In the end, the study will also contribute to a wide range of literature and scholarly related works as far as mobile telecommunication sector in Uganda is concerned. Currently, there is less literature to support arguments made by some studies-concerning telecommunication industry in Uganda. This study therefore sets a stage for more empirical studies to be conducted into the telecommunication industry in Uganda.

1.6. Scope of the Study

For the thesis to be clear, a scope must be given. This paper seeks to focus on telecom network service characteristics and customers satisfaction. The study will only include

present mobile network operators and subscribers as a basis of the study. However, previous network operators will be reviewed in the second chapter.

This study is interested in examining whether customers consuming telecom services in urban Uganda are satisfied or not. The study specifically focused on the population living in urban city areas because the sample has experience associated with the consumption of mobile telecommunication services. The people of Uganda living in rural areas do not frequently use telecom mobile service. Likewise, the sample also fits with the primary focus of the study which is to examine mobile network service characteristics on consumer satisfaction in urban areas of Uganda.

1.7. Outline of the Thesis

The section below provides a summary of each chapter of the thesis.

1.7.1. Introduction

The major aim of this chapter is to introduce the topic or main area of study to the reader. It also explains more broadly what is focused on the study. Furthermore, the researcher identifies the missing research gap and thereby constructs objectives, aims, and research questions of the study. The research questions are then answered in the analysis section. By answering the questions raised above, the researcher can attain pre-determined objectives as well as finding out which SERVQUAL dimensions significantly affect consumers. The chapter also addresses the major findings, conclusions, and recommendations of the study.

1.7.2. Context of the Study

This chapter will provide more information on the history of telecommunication industry in Uganda, its background, how it started and its status of performance. This will include

the number of players in the market, identifying who is the market leader and the overall performance over the years.

1.7.3. Literature Review

This chapter presents a wide range of literature associated with the main study. This chapter will also uncover various concepts such as customer satisfaction, service, quality, service quality, customers' expectations, and perceptions. In addition, theoretical and empirical analysis of various studies will be presented in the study. Models measuring service quality and customer satisfaction will be discussed as well as pointing out various dimensions of the SERVQUAL model. After analysing the existing models, the researcher will associate the relationship of SERVQUAL dimensions with customer satisfaction. The researcher will then try to identify missing research gaps in the present literature and lastly develop a conceptual framework.

1.7.4. Research Methodology

This chapter sheds light on the methods used for the study. In this chapter, the researcher mainly discusses how he carried out the study emphasizing on how constructs were measured. The researcher will also present how data was collected and how it was coded. Furthermore, this chapter will also discuss the arguments for the choice of research design adopted and how it impacts the whole study.

1.7.5. Empirical Results and Analysis

Data collected in the field will be analysed in this chapter. The data collected will be entered in a statistical package SPSS to analyse information from respondents. This chapter entails descriptive analysis including the study population, age and so forth. General expectations and perceptions of consumers in urban Uganda are also to be presented.

1.7.6. Conclusions

This chapter outlines the summary of findings from the analysis thereby reaching to a goal of answering research questions raised. Similarly, theoretical, managerial connotations and finally possible recommendations to all stakeholders in the telecommunication sector from findings of the study will be provided. Additionally, the limitation of the present research as well as suggestions for further research on the topic of telecommunication are mentioned within this chapter.

CHAPTER II

CONTEXT OF THE STUDY

This chapter reviews different magazines, articles, as well as other publications on Ugandan telecommunication industry. The chapter begins by explaining the background of telecommunication in the world. It also continues to lay a foundation of development and formation of telecommunication, number of companies as well as their subscriber base. The study will also evaluate the regulation framework in Uganda.

2.1. Global History and Background of Telecommunication

Telecommunication is the sending of signals over long distances. For centuries, there have been distinctive ways of communication and conveying messages. Early telecommunication systems included the use of smoke, and drums as signals. Africans predominantly used drums while smoke was widely used by natives of North America and other parts of China. It was not until 1838 that a telegraph was invented. The telegraphs were invented by Sir William Cooke Fothergill and Sir Wheatstone Charles who wisely had obtained a patent on a telegraph system that categorically employed six wires at that time (Clare D, 2020).

The telegraph came into existence when it was demonstrated to the directors of Birmingham Railway in London. The two viewed their invention as a great improvement to the existing electromagnetic telegraph created by Francis Ronalds in 1816 (Ronalds, 2016). Six years later, Samuel Morse and Alfred Vail developed a telegraph that could record messages to a paper tape. A demonstration covering a distance of five kilometres in 1838 as well as 64 kilometres was successfully done between Baltimore and Washington, D.C in 1844. In fact, this conception became famous in America covering a

distance of 32,000 kilometres (J. B. Calvert, 2000). The next component was an electric telephone invented by Graham Bell in 1870's which was primarily based on earlier works of telegraphs. Graham Bell held master patent rights including for all other devices and features for the telephone (Brown, 1994). There are lots of criticisms about who was the first inventor of electric telephone.

Inventions were started by pioneers who carried out several experiments of which further improvements were done. However, it is fair to note that the key inventors were the then Graham Bell as well as Hubbard Greene Gardiner who were the earliest creators of the first telephone enterprise which was named the "Bell Telephone Company" which was founded in the United States of America. The enterprise through American Telephone and Telegraph (ATandT) became the world's biggest monopoly phone enterprise. In 1891, the first telephone link between London and Paris was established. It had been difficult for a human voice to be transmitted over the years. The first human voice to be transmitted over a wireless medium was made by Reginald Fessenden through radio waves.

In 1924, Kenjiro Takayanagi a Japanese engineer started research on the electronic television. He later developed a cathode ray tube television using a thermal electron emission (Milestones, 1924-1941). The first demonstration had a 40-line resolution which required enhancement. The resolution was then increased to one hundred lines in 1927. Nevertheless, he made a remarkable landmark when he became the earliest person to conduct human faces in half-tones on television (Forrester, 2011).

This landmark was unrivalled until 1931. At this stage, all televisions were using cathode ray tubes which were invented by Karl Brain. A crude silhouette image was demonstrated by Farnsworth Philo to his family. He gave his first public demonstration in Philadelphia's Franklin Institute as well as opening his own broadcasting station in 1934 (Karwatka, 1996) and after this period, the circulation of coaxial cable together with microwave radio relays helped and improved networks to disseminate between different countries.

Project “SCORE” became the first satellite of the United States of America to relay communications across different regions in 1958. With just a tape recorder, it was simple to store as well as forward voice messages over networks. At that time, they were used to send Christmas greetings from the president of the United States. The first satellite was installed through a partnership between NASA, Bell Telephone Laboratories the British Post Office, as well as the French National PTT. Application of communication satellites was used in intercontinental long-distance telephony. Telephone network relays and telephone calls were switched by fixed public right from land line telephones to an earth station.

Telecom communication was communicated through a satellite via geostationary satellite in the earth orbit. Commercialization of long-range telephone services were undertaken via satellites and an anchor of other commercial telecommunications was adopted to analogous satellites including television, internet access, phones, and satellite-radio.

In the 1950s’ data was easily transmitted through telegrams and satellites as well as computers. Despite these developments, data took so long to receive computerised results given that it was passing through a centralized mainframe. It was the latter in 1960 that researchers began to think about new technologies that could carry large sets of data to various computer networks. In 1969, a four-node network was created between the university of Utah, Los Angles, California, and Stanford Research Institute. By 1981, this network would become the Advanced Research Projects Agency Network (Hafner and Lyon, 1998). By 1969, centred around the request for comment, the Advanced Research Projects Agency Network (ARPANET's) was founded.

ARPANET's forced different networks to combine to come up with internet, a short term for internet working (Maloberti and Davies, 2016). which the world uses today. In addition, the first broadcasting protocol is believed to have been written by Sunshine Carl, Dalal Yogen, and Vinton Cerf in 1974. Internet protocol was later established in 1981 as

well as an email protocol in 1982. The establishment of an email protocol influenced the introduction of Hypertext Transfer Protocol **(**HTTP) in 1996.

Metal oxide semiconductor technology helped to increase rapid pulse code modulation digital technology. This technology became dominated by Bell simply because it wasn't practical for telephone applications, for example, for analogs (Maloberti and Davies, 2016). Gray together with Hodges in 1974 worked closely with Suarez to invent metal oxide semiconductor switched capacitor circuit technology. This technology inspired them to instead invent another digital to analog convertor. In 1975, the analog to digital convertor chip was later developed by McCreary and Gray himself.

The metal oxide semiconductor short circuits had led to the innovation pf pulse coded modulation codec filter chips. The contemporary chip innovated by Black as well as Hodges within the 1980's has been seen with the sector for digital telephony. The networks for example public switched telephone network which has been extensively digitized with extensive scale integration circuit metal oxide semi-conductor pulse coded modulation codec fields. This is also used in transmitting applications and switching systems for telephone exchanges by the 1990s. Moreover, the use of coaxial cable in the telecommunications was introduced and because of this, hundreds of calls can be made over pairs of cables. A large wide area network (WAN) which was developed by ARPANET in 1960's influenced the use of internet all over the world. The number of users can be seen increasing every day.

2.2. Historical Evolution of Mobile Telecommunication Sector in Uganda

By 1997, the operation of telecommunication network in East Africa was collectively managed by the three Governments of Tanzania, Uganda, and Kenya. The journey of liberalising Uganda's telecom sector started in 1977 when the government of Uganda established Uganda posts and Telecommunications Corporation (UPTC) that provided fixed telephone connectivity and other services. Services provided by UPTC in 1977 were characterised by poor service quality, poor management, and little innovation.

Failures of UPTC started to roll out in 1993 when the telecom giant dramatically decided to cut off all subscribers that were deemed to be dormant. The operation resulted into many subscribers to complain citing that they were never informed through messages. Operating revenues were lesser than operating expenditures during 1990's. The financial status of UPTC was even much worser than the numbers suggested in figure 5.

In addition, UPTC's balance sheet was also influenced by foreign debts from donors and international bureaus, contributing to the reasons as to why the government was not collecting enough revenues (Shirley, 2002). The other reason as why UPTC failed is that it failed to cover the whole market that it served. In 1989, world bank and other agencies created a rehabilitation project to improve external cable network in Kampala, Jinja and parts of Entebbe. Although such a huge project was funded, the quality of services remained below its main target. By 1993, only 25% of local calls and international calls were completed on average (the target goal was 60%).

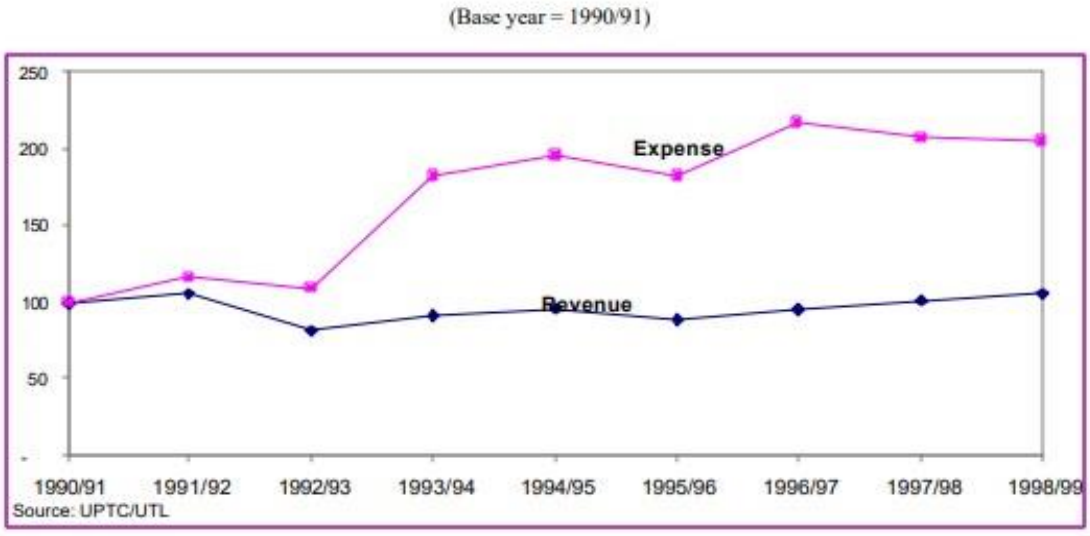

Figure 2.1: UTL Real operating Revenues and Operating Expenses Index

Source: UPTC/ UTL (1990–1997)

After years of failure, the government of Uganda decided to liberate the service market by awarding Celtel Uganda a licence- becoming the first company other than UPTC to offer

telecommunication services. The contract awarded to Celtel was only cellular and was established with a target of only fifteen years. The deal was later signed by Minister of works, housing, and communications in Uganda. The company was to start operating in 1995 starting with providing services to customers located in urban areas of Jinja, Kampala, and parts of Entebbe. The type of technology used in this era was Global system for mobile communications (GSM) technology.

The coming of Celtel was significant to the development of Ugandan telecommunication sector. Celtel was not to become a challenge to UPTC- rather it was to remain as a private company to extend services. UPTC was to maintain its status of monopoly as the provider of fixed line solutions. Within three years, Celtel encountered some deficiencies. However, the fact that the government had liberalised the market, about 5000 customers had switched to Celtel highlighting permanent problems of UPTC. The later intrigued the government to prepare a telecommunication policy which was drafted in 1996. The policy addressed the following:

- Uganda telecom was to be privatized.
- The telecommunication sector to be liberalized.
- Creation of Uganda Telecommunication Telecom (UTL)
- Creation of Uganda Post Limited and,
- Creation of an agency that would regulate telecom sector

One of the reasons for the change in policies was to provide affordable and accessible services for all. The other reason is to promote privatization after the government realised that there is need for broader objectives of social economic development and poverty alienation. The government declared a new act which included some of the following:

- The Uganda Communications Commission was established to act as regulator of telecommunication sector whereas Uganda communications tribunal to resolve disputes.
- The act also paved way for competition through providing licencing of a second national operator.

- It nevertheless established a separate fund which was meant for rural communication development which was to be monitored by UCC.
- To pave way for privatization and incorporation of UTL.

A newly incorporated national act smoothly paved way for UCC to take over regulatory responsibilities with the immediate effect. The act also required UTL to be privatized- to create space for the new SNO. With the help of World Bank's International Development Association, the process of privatization was formulated, and it was later handed over to the Ministry of state for privatization. With the hope of privatizing UTL, an international tender was organised within 1997 and the international overall winner was Mobile telecommunication Networks (MTN). MTN started its operations in the later year. One of the advantages of having a monopoly and the advantages of having many service providers as shown in table 1.

Table 2.1:Monopoly vs Competition

MONOPOLY	COMPETITION
Enjoy economies of scale	There is organisational efficiency
Objectives of public interest	Always there are new services
Technical efficiency in operations	Pressure on prices
Low costs in terms of interconnections	Innovativeness

Source: Falch, (1997)

Privatization came with many flaws. The established agency (privatization unit) was helpless to gather conspicuous, payments of firms that were sold on a delayed payment basis, and yet questions on how public funds were being used had already been raised. Consequently, a new detriment procedure manual, which sought to build up transparency in the reform process, was introduced in May 1999, later amended in 2000 (Wakabi, 2009).

Privatization of UTL's 51% stake happened in 3 tries. The 1st try in 1998 by four prequalified consortiums which yielded only a single bid. The second bidder was organised and implement quickly without giving bidders space to carry out a feasibility study. All these efforts were put in place by bid organizers who had hope that private investors could be found to quickly help UTL to go over MTN which at that time had started to take over the market. Five consortiums out of many prequalified but it was only 1 bid that was received, the bid was from World Tel for $US23 million in addition to delayed payments in the future. However, this consortium did not last long as it got disbanded prior to the closure of the deal.

The third follow up occurred in 1999 at the time MTN was the leader in the market. Two bids one Mahanagar Telecom with US$21.15 million as well as Detecon/Telecel with US$33.52 million. Nevertheless, majority of the shares were completed in 2000. This time around the third attempt became successful. UCC was formally held as the regulator of the industry, while the privatization unit at that time was playing as a central role in regulating the sector. There are several reasons why privatization unit was still operating as listed below:

- The unit was arbitrated to convert chances to advance the cause of competition and privatization process.
- UCC being a new organisation was still learning authority as well as its credibility.
- The new SNO licence which was the result of tendering process characterised by competition and run by the privatization department not only incorporated usual language authenticating processes as well as platforms for ongoing regulation. Nevertheless, significant chunks of industry policies within the framework of local content.

Bidders were then required to present in their expansion plans with proposed prices for service. Therefore, MTN was since given a target of providing telephone services to various counties within the country through 2005, 2000 pay phone across the country, as well as 89000 subscriber lines by 2003. Besides MTN, UTL's licence issued by UCC was also to meet a given target of 100000 subscriber and 3000 payphones by 2005. In addition,

the licences given however did not specify the nature of services to be provided. Policy makers had hope that MTN would directly compete with UTL for the catering of inexpensive services, but the reality became diverse.

Table 2.2: Network Roll-Out Obligations for MTN and UTL

Region	**SNO subscriber lines**	**Public pay phones**	**UTL subscriber lines**	**Of which pay phones**
Kampala region	48702	643	10000	1000
Central	13885	437	5000	500
Eastern	16122	495	6000	600
Northern	3962	129	3000	300
Western	6934	296	6000	600
Total Restricted Obligations	89605	2000	30000	3000
Unregistered obligations	0	0	70000	0
TOTAL	89605	2000	100000	3000

Source: SNO from MTN license, Annex 3. UTL from IFC. Information Memorandum. Sale of UTL.1997.

While UTL was focussing on fixed line services, MTN largely focused to compete with Celtel which had become active in providing GSM service. MTN later became a dominant player in Uganda with over 220000 telecom customers.

The expansion of GSM services surpassed people's expectations to the extent that UTL that had only been known for fixed line services, was seen aggressively adopting to GSM. Other than this, GSM was known for business and cost perspective. It was mainly located within town centres and a few rural areas and parts of central parts of Uganda. The government of Uganda had a bad perspective towards GSM- it saw deficiency in its operations of not providing a strong foundation as that of fixed line services for supporting additional ICT.

MTN and UTL became the only providers of telephone services to 2005. Services administered prior to the SNO license were signed and named as Celtel's mobile service was grandfathered in the sector. This equal exchange quality of policy development was expanded to Celtel. Celtel's license was only refreshened to allow for more choices for enrooting its foreign cellular traffic in exchange for rollout commitments. All expansion policies were meant to increase access to telephone services to remote areas.

That said, the penetration of telecommunication services in Uganda has and is still facing a huge difficulty. The increased commitment of expanding rural communication development in Uganda was easily contained by the rural communications development policy of 2001.

Rural communications development fund which was formed by UCC with the intention of financing service parts of the identified country operations as not viable on merely monetary terms. The RCDF came with a goal of developing impressive telephony as well as widening the use of ICT in both urban as well as rural areas. With the combination of coffee café that were not suing ICT to accept payments, the government responded by outlining strategic policies such as the National information and communication technology policy framework for Uganda.

2.3. The Communications Act -1997

Communications act came under way in 1997 when liberalisation was undertaking in Uganda. The act was established to broadly improve coverage and affordability of telecommunication services by:

- Augmenting national broadcasting of communications services and products in Uganda.
- Broadening communication services in Uganda.
- Reducing powers of the government as an operator.
- Encouraging private venture capitalists in the development of the sector.
- Encouraging and enabling competition in the sector. This was enhanced by licencing different companies to operate in Uganda.
- Reducing direct and indirect allocations paid by government to communications sector.

Two companies were given license to operate in Uganda. MTN a subsidiary of South Africa and UTL. These two companies were licenced to provide mobile and fixed services. However, before this happening, a similar company Celtel was given a licence to operate in Uganda in 1995. It should be noted that Uganda was the first African country to come up with a policy on universal access to new communications. With their rural communications development fund in 2001, it enabled private sector growth in Uganda through governments sponsorship such as grants and subsidies that acted as incentives.

However, there were criticisms that impacted RCDF. It was subjected to offering subsidies for establishment of services at district levels which were semi urban thus neglecting the needs of urban areas (Wakabi, 2009).

2.4. Structure of Telecommunication Service Providers in Uganda

While MTN, CELTEL and UTL enjoyed dominance up to 2005, there is still no other service provider which is persistent and consistent in providing services like these listed

companies. with exclusive provisions, UTL, MTN became the only service providers and the later Celtel whose services were grandfathered.

The general structure of telecommunication market in Uganda till 2005 was characterized by duopoly. Three firms including CELTEL had taken over the market within stiff competition. Prices were set by them, and demand could not affect the three firms. Nevertheless, privatization of the sector played a big role that saw new players such as K2 telecom.

The goal of this chapter is to provide an understanding or background of cellular services providers as well telecommunication companies in Uganda. This study will focus on the three major players of mobile telecommunication namely, MTN, Airtel and Africell. All categories and descriptions of telecommunication service providers in Uganda are listed in appendix.

2.5 Data and Voice Network Providers

2.5.1. Uganda Telecommunications Limited (UTL)

The company was officiated as a state-owned issuer of telecommunications service in 1998 after unbundled from the UPTC. The company was later privatized in 2000. Privatization happened when the government decided to divest 51% of its shares to Orascom telecommunication Holding from Egypt, Telecel International from Switzerland, and UCOM which was an association by Detecon in Germany. In addition, the Ugandan Government decided to remain with 41% (Odeu and Steven., 2001).

UTL is organised within three main divisions which it provides as listed below:

i. Fixed voice (fixed GSM, copper, CMDA)
ii. Mobile voice and mobile data services
iii. Dedicated circuits for internet and data (FTTx, xDSL, leased lines)
iv. Broadband services (3G, WiMAX, xDSL, FTTx, CDMA, Wi-Fi)

v. Data centres (backup, housing, hosting, and failover)

UTL Telecel was a brand-new venture initiative that started providing mobile services under its umbrella name "mango". The business to people (B2P) helped many agribusinesses through enabling them to access mobile money services (Okeleke, 2019). The network offers a limited post-paid service for credit. This service was provided to corporate customers- meaning that a majority of its customers depend on prepaid services. A supplementary service mobile wallet called "M-SENTE" was launched in 2009 by UTL using a purchased software from Redknee Solutions Inc. This made the telecom to become the first provider of solar powered mobile phones that were hand-held (Mugabe, 2011).

Lap Green's 60% shareholding in the company was seized in 2011 because of the sanctions slapped against the government of Gaddafi (Mugabe, 2011). However, after the Libyan war, shares were returned to Lap Green in 2012, (HIS, 2012) and consequently certainty of the telecom was restored.

It should be noted that UTL became a joint venture after losing most of its market share. It prompted them to partner with Taleology Holdings GIB Limited in 2018 from Nigeria that owned 67%, whereas the remaining (33%) belonged to the government of Uganda (Tabu, and Misiari., 2018; Mwesigwa, 2014). UTL now provides value added services like caller ID, voice mail, call waiting and international calls. An increase in the number of users of internet has been seen resulting from its international gateway and access to a large establishment of fibre optic links. Figure 2 shows Uganda Telecom Limited's mobile coverage as of 2021. Check Appendix for Uganda Telecom's network coverage in Uganda.

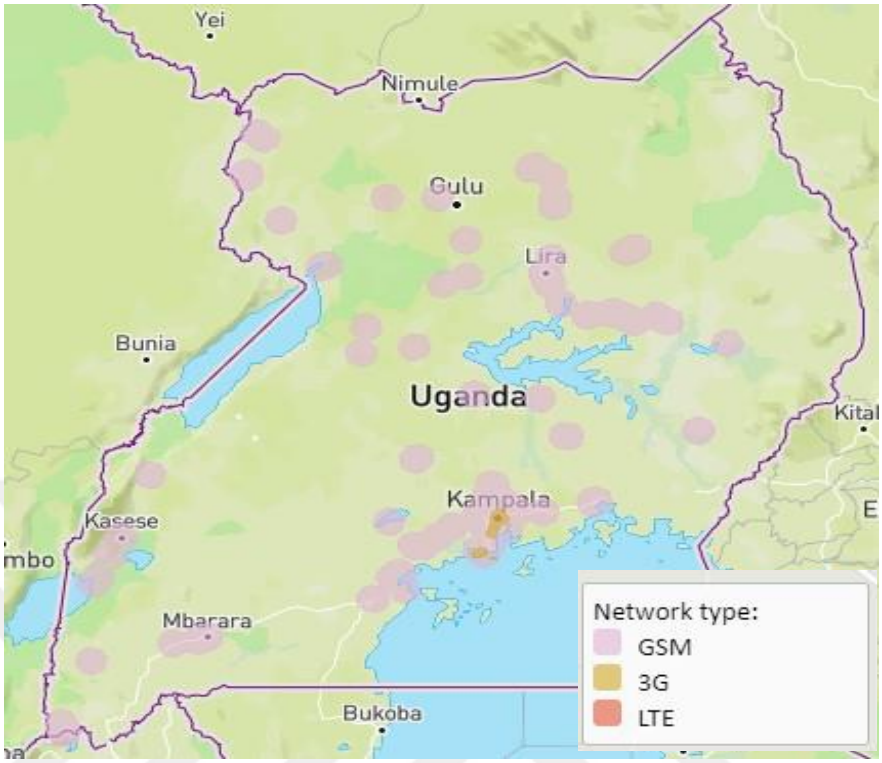

Figure 2.2: Uganda Telecom Limited's network coverage map in Uganda

Source: GSMA network coverage worlds website

2.5.2. MTN

MTN Uganda was licensed as the country's 2nd national operator in April 1998. The parent company is MTN South Africa, having its other units in Uganda, Swaziland, Cameroon, Rwanda, and, recently, Nigeria.

The company officiated commercial activities in 1998 providing mobile, payphone as well as data services. MTN Uganda is a subsidiary belonging to MTN Group also an international telecommunication group channelling 257 people (in millions) within different countries including the continent of Africa and that of Middle East (Othman, 2016). The company invested in technology to come up with mobile banking products that were to work on phone in 2009.

Data services and Telephone of the firms are administered with GSM cellular technology (see figure 7 for GSM, LTE, and 3G network coverage). Post-paid and pre-paid services were made available for payment options. The pre-paid method of payment system was undeniably the most common choice. Value-added services included SMS, voicemail, and newly sophisticated launched SMS Info, a system where users could access data such as prices of commodities, weather, and exchange rates. MTN is known for its extensive advertising among all telecommunication companies in Uganda as of 2021.

MTN currently boasts with approximately 13,196,000 as of 4th quarter 2020 (see figure 8) customers making it the prominent service provider in the country. In 2015, the network blocked 3.7 million of its 11.5 million subscribers who had failed to comply with the UCC's requirements of SIM card registration.

Together with Commercial Bank of Africa, MTN came up with a new product allowing its customers to save money and access to micro-loan products. All this was mediated or enabled by the use of a mobile phone. In addition, invention did not only stop with loans, but a new product also called "Mokash" became available for personal and small sized enterprises in 2016 (Mark, 2016).

The company in 2018 planned to be listed on Uganda Securities Exchange (USE) (Wakabi, 2018); to allocate shares to the nationals of East African countries (Reuters, 2020). Check Appendix for MTN's network coverage in Uganda.

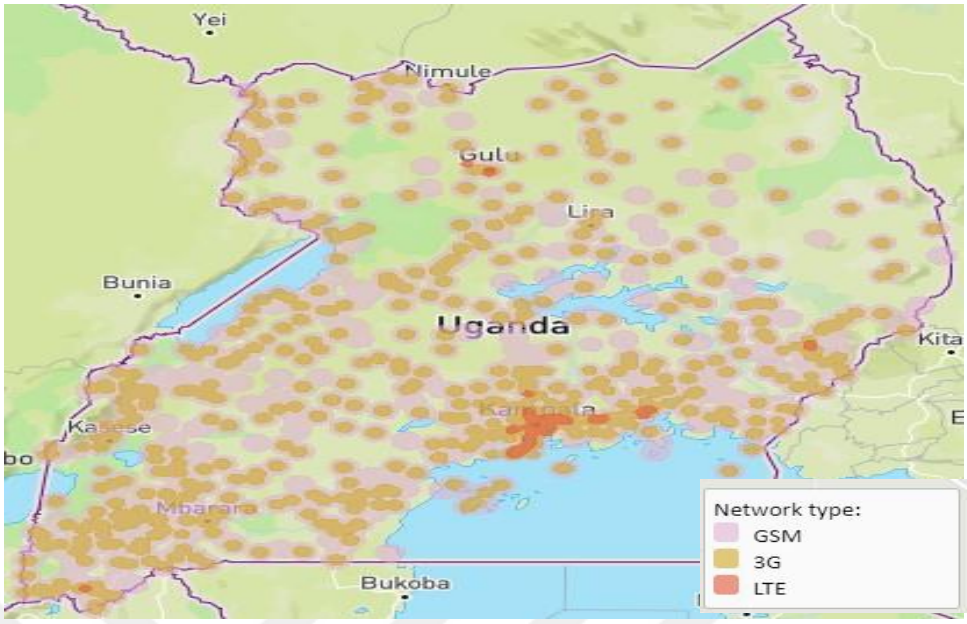

Figure 2.3: MTN'S Network Coverage Map in Uganda

Source: GSMA network coverage worlds website

Subscribers Including WIMAX ('000)					
Country	1Q 19	2Q 19	3Q 19	4Q 19	1Q 20
South Africa	**30 010**	**29 248**	**28 948**	**28 890**	**28 966**
Postpaid	5 866	5 899	5 979	6 086	**6 270**
Prepaid	24 144	23 349	22 969	22 804	**22 696**
Nigeria	**60 265**	**61 498**	**61 633**	**64 310**	**68 489**
SEAGHA	**45 044**	**45 992**	**47 008**	**48 489**	**49 995**
Ghana	18 595	18 874	19 181	19 777	**20 674**
Uganda	11 713	11 937	12 124	12 642	**13 196**
Rwanda	4 600	4 677	4 906	5 203	**5 205**
Zambia	6 381	6 751	7 004	6 989	**6 941**
South Sudan	1 103	1 129	1 155	1 232	**1 314**
Botswana (joint venture)	1 703	1 676	1 684	1 709	**1 709**
eSwatini (joint venture)	948	948	954	937	**957**
WECA	**32 361**	**33 762**	**34 595**	**36 203**	**36 641**
Ivory Coast	11 357	11 742	12 007	12 408	**12 220**
Cameroon	8 742	9 360	9 199	10 170	**10 182**
Benin	5 114	5 238	5 462	5 494	**5 624**
Guinea-Conakry	2 932	3 140	3 411	3 362	**3 563**
Congo-Brazzaville	2 419	2 463	2 518	2 625	**2 808**
Liberia	1 033	1 026	1 184	1 297	**1 380**
Guinea-Bissau	763	793	814	847	**863**
MENA	**68 921**	**69 713**	**71 480**	**72 927**	**73 237**
Iran (joint venture)	44 783	44 665	45 634	46 849	**47 112**
Syria	5 412	5 738	6 001	5 866	**5 726**
Sudan	8 212	8 408	8 804	9 136	**9 447**
Yemen	4 251	4 357	4 458	4 344	**4 313**
Afghanistan	6 263	6 545	6 583	6 733	**6 638**
Total subscribers	**236 601**	**240 212**	**243 664**	**250 819**	**257 327**

Figure 2.4: MTN UGANDA Subscribers 2020

Source: MTN Group Limited quarterly update for March 2020

2.5.3. Airtel

This is the second provider of telecommunication and information technology service in Uganda. Airtel entered Ugandan market in 2010 after Bharti acquired 16 operations of Zain in Africa. Zain acquired Celtel's rights in 2005 with a sale of $3.4 billion breaking the ice of a company that had over operations in 13 African countries.

Zain later accepted an offer for the sale in 2010 to Bharti Airtel Limited for a sum of $10.7 billion (James, 2010). The company in 2013 took over Warid Telecom in Uganda becoming the earliest acquisition in the country. The telecom company became the 2nd biggest operator after MTN Uganda. The company in 2018 reached a landmark of a combination of 10 million and thus having a portion of division in the market which was 39%, confirming its depth as the second biggest mobile network in Uganda (Kulabako, 2016; Reporter, 2020).

Airtel Uganda is also considered for being one of the top tax compliants and taxpayer in Uganda. To promote financial inclusion within the population of Uganda, it premiered its mobile platform later 2012. This mobile commerce feature helped a lot of Ugandans to send money person to person- enabling them to make businesses in time. However, there is still inefficiencies of its network coverage in Uganda. Tadewo (2020) in reported that Airtel has until 2025 to extend its network coverage for both data and voice to as minimum 90%. Check Appendix for Airtel's network coverage in Uganda.

2.5.4. Africell

Africell is the 3rd biggest mobile operator in Uganda. The telecom/ mobile company is largely known for its cheap and reliable internet more so in the urban centres found in Uganda. It is believed to be the dominant supplier of internet in Kampala district. Africell was established in 2014 when it acquired the majority of stake from Orange a French Telecom company that was operating in Uganda (Ismail, 2014; Administrator, 2014). The company entered Uganda market with 1,000,000 subscribers a number that was belonging to Orange Uganda.

The company's number of subscribers has been increasing gradually. In 2013, the number was stack to 625,000, increasing to 1000000 in 2014. In 2018, the company secured a loan to expand operations in Uganda and in the republic of Congo. As of 2020, the number had risen to 3,000,000. See appendix A.1. to locate Africell network coverage in Uganda.

2.6. Policy and Regulatory Framework for Telecommunication Sector in Uganda

The Uganda Communications Commission (UCC) was created under the Communications Act of 1997. The main reasons why this agency was created was the following:

To ensure service quality and set national telecommunication standards.

To ensure equal distribution of telecom services throughout Uganda.

To Promote competition as well as establishing tariff systems that were to protect Ugandans.

To provide licensing and monitoring communication services

There were some fundamental responsibilities that UCC was not performing well at. There was no methodology of exercising tariffs (other than utilizing prices proposed in winning privatization tenders as caps), interconnection standards and procedures have not yet been specified. Nevertheless, monitoring and enforcement was also low. There are two licences provided by UCC. There are two types of licencing (major and minor) and UCC plays a role in decisions regarding the two types of licenses:

UCC provides licences including those of national and international fixed-line as well as those of mobile telephony, trunk capacity release services, satellite, and third-party network. It gives a recommendation to Ministry of Works, Transport, and Communications which retains formal authority.

For minor licenses UCC maintains the authority of providing licences. The licence covers telex services, public Internet cafés, Internet access, couriers, fax and lease and

maintenance of subscriber premise wiring. There are other minor licenses issued by the commission which are the following:

- Seventeen internet service providers
- Nineteenth public payphone operators
- Eight VSAT providers.

Nevertheless, the fees charged by UCC are presented in Appendix B.

UCC had different ways of being financed, for example:

- Through Ministry of Finance, Planning and Economic Development (MoFPED)
- License fees
- Through income that accrues from leasing communications house, a building that belongs to UCC.

CHAPTER III

LITERATURE REVIEW

Mobile telecommunication networks have played a tremendous role in removing barriers to communication among and within large groups of people, individuals, co-operate organisations, and government entities. Heggde (2011) elaborated that telecom services have become important elements in the socio-economic development of different countries. Moreover, despite a small population characterised by high urbanization, the mobile telecom sector still plays a key role in the Ugandan economy; even if it is performing below the expected grids (Bakhit, 2016).

Backed by an increase in mobile subscribers within the country, industry stalwarts predict that the presence of service providers will be higher by far than projected. Even when today's world seems to be having physical boarders, intensive research and development carried out by telecom companies have proved the world to be one and barrier free. Companies currently enjoy doing businesses over the phone- something that has demonstrated to be a competitive advantage.

This chapter reviews the available literature to find out the relevant concepts that are important to the study. The chapter will begin by giving a short introduction of service concept, customer satisfaction, service quality, and association of service quality and the customer satisfaction. The chapter will also explore the research gap and giving a conceptual framework.

3.1. Quality

Quality is said to be pivotal to firm performance and customer satisfaction. Manufacturing firms always examine quality of products or services before they are passed onto

customers. Besides, Quality also has a great influence on consumer behaviour, thanks to academics and researchers who have coined various definitions of quality in different angles. In most cases, quality is classified as value which is a wrong perspective.

Quality can be defined as the superiority and excellence (Zeithaml, 1988), of an organisations goods and services. Superiority of products derives from the companies' knowledge to identify which products to offer. Moreover, this offer should not merely mean an offer. It should be (1) of quality and (2) be able to accommodate customers problems. The definition of Zeithaml can be difficult for managers to fulfil. The question of how one can determine the excellence or quality of a product might not be answered. In addition, the question of who determines the excellence of a product also becomes a contemporary issue in finding the reliability of Zeithaml's definition to quality.

One simple way of understanding the quality of an organisation is by looking at its image. The image is said to be one of the dimensions of quality. Gronroos (1984) asserts that technical quality and functional quality of services are embraced by companies to strengthen their corporate image. In this case, technical quality is the "what" and functional quality is the conformance of "how". In fact, technical quality was described by Grönroos as the developments of the production process or what customers receive post service delivery. He also proposed that functional quality is the way technical quality is transferred to customers.

Garvin (1984) synthesized five different approaches of defining quality. (1) Manufacturing-based approach of operations management (2) Value based approaches (3) User based approach of economics, operations management, and marketing (4) Product-based approach of economics (5) The transcendental approach of philosophy

1. Manufacturing-based approach of operations management

It is emphasized that manufacturing-based approach focuses more on the supply side of the market, having its primary objective/concerns with engineering and manufacturing practices. Moreover, Garvin equated excellence to meeting specifications of product

designs, an attribute of measuring quality. For any product to meet customers specifications, it must conform to specific specifications that are directed within the direction of the consumers. Therefore, quality is thus defined in a manner that makes engineering and production control simple.

2. Value-based approach

This approach views quality as a product with a lower price having an acceptable performance. In short, the value-based approach delineates quality in terms of prices and costs. This definition, is however, invalid according to Leffler's (1982) definition of quality. There is no quality gained at low costs, Quality represents attributes for the case of products-these attributes are said to be expensive to achieve. Garvin's approach asserts that firms should offer services and products at acceptable prices "affordable excellence" which is hard to practically apply. It is not advisable for firms to use resources to make cheap/ affordable goods that nevertheless sacrifice customer satisfaction.

3. User based approach of economics, operations management, and marketing.

While the manufacturing approach is concerned with engineering as well as manufacturing practices, a user-based approach looks at determinants of demand in general that eventually bring us to satisfaction. Garvin analysed two problems available in the market literature. The first problem is how to cluster the individual preferences of different consumers to make a meaningful definition of quality. The second is how to separate product attributes that imply quality from those that maximise consumer satisfaction. He also noted that the common solution to these problems is assuming that high quality products are the ones that satisfy customers' wants and needs.

In addition, Garvin also asserted that user-based approach is associated with a problem of maximum satisfaction. Products that maximise satisfaction are preferable to others. In urban Uganda, consumers prefer to use MTN to Airtel simply because it has a good network connectivity compared to Airtel- but this doesn't mean that Airtel isn't seen as a brand of quality.

4. Product-based approach of economics

Product-based approach views quality as a measurable variable. Goods are at times measured in terms of attributes that they hold. A 1000 voucher card of MTN may have more data bundles than of Airtel. This is what instigates customers to go for its products. Nevertheless, quality was focused on durability because it was easily quantifiable into quantity. Similarly, quality was attributed to cost; the more costly the product, the more quality it became. Quality is also a built-in feature of goods rather than something assigned to them. Because quality contemplates the availability or absence of quantifiable product attributes, it can be evaluated objectively, and is based on more than preferences alone. This is because customers' preferences continuously change over time (Bowie and Bottle., 2004).

5. The transcendent approach of philosophy

Customers measure quality through experiences they have with associated goods and services. This view holds a personal and subjective concept. The transcendent approach views quality as something globally recognizable/ acceptable, a high achievement. Furthermore, advocates of this view assert that quality is an unanalysed property. They claim that quality is only recognizable according to the time one spends consuming a specific product. This arguably means that a customer of MTN cannot conclude with a single satisfying conclusion- that his operator is the best -if he has only consumed it within a single day.

In conclusion, Garvin noted that marketing departments recognise user-based approach because to them, quality means better performance and enhanced features. Contrary to what marketing departments recognize, manufacturing departments assume that quality requires conformance to specifications. Since manufacturing looks more to avoiding mistakes in the processing plants over several periods, manufacturing philosophers expect cost reductions arising from quality improvements.

Failure of researchers to come up with a single definition of quality has made it flexible for everybody to coin different definitions. Quality was described in 1988 as superiority or excellence (Zeithaml, 1988) exceeding or meeting customers' expectations (Zeithaml et al., 1990) value added by productive endeavours (Pyzdek and Keller., 2003) conformance to specifications (Shewhart, 1931). So, it can be seen that a universally accepted definition of quality doesn't exist. Quality takes time achieve. In fact, if created, quality does pay. However, creating quality involves a lot of research, investment in technology, improving workers by training them and so forth; activities like these require time to be mastered.

Customers always desire services they can rely on. Products that give them pleasure, solve their existing and future problems. Before customers buy products, they make a comparison between their expectations and perceptions they have on products. For producers to track customer preferences, (Zeithaml et al., 1990) noted that companies deploy SERVQUAL instrument which they quantify to study gaps between customer expectations as well as perceptions. This means that, this instrument is a true indicator for companies to understand which attributes are important to consumers.

In the telecom sector, customers differentiate quality in terms of speed (internet), reliability (everywhere) and price. In some sectors, a high price by default would mean low quality and the vice versa. However, mobile telecom companies that charge high fares for relative data plans than what competitors charge- risk losing customers. These few attributes serve as strong signals for customers to get attracted to quality services. Nevertheless, SERQUAL is not always reliable. Customer's expectation and perceptions can't be measured using only attributes. Services that are of quality might be perceived as of low quality to one customer because of its price. If a company decides to distribute services at low cost, it can easily promote intrigue switching between companies. It is thus always not necessary to lower prices of products and services.

Nevertheless, the ISO 9000:2005- defines quality as the degree to which a set of built-in features meets a need or expectation (UNI EN ISO 9000., 2005). David noted that

"degree" in this definition means that quantity is not an absolute but rather a variable (Hoyle, 2009). Products and services are said to fulfil needs when customers' problems are solved. A product might be of quality to the eyes of a manufacturer, but it might be of poor quality to a customer. Conformity of services is arduous to express. Some needs of customers are difficult to describe, thus- by not conforming, it doesn't mean that products or services are unsatisfactory to a customer. Likewise, some products that comply with conformance might be inappropriate to use.

Nonconformances can't be genetically generated in a company, they are caused. It can take place within the production process or during delivery when products are damaged. Anything caused can be prevented. Crosby (1984) proposed an idea that a company can be vaccinated against nonconformance. Crosby emphasized that managerial actions could support companies having services that do not conform to standards. To administer a vaccination, for example there are three actions management needs to emphasize, "Determination, education, and implementation". Most organisations start with implementing-forgetting how education helps employees to have a common language of quality. To improve quality, a company is responsible for changing its operating culture and improve on communication.

3.2. Service Concept

As known by many, a service is something invisible or intangible in nature. In most cases, a service is not distinguished from a product. However, services are broadly categorized as part of the production process. Johns (1999) expresses services as being as outputs activities instead of tangible objects. In addition, Johns further elaborated those services may at times not be different from products because they contain substantial tangible components citing examples of restaurants and clinics. Just like Johns example, telecom companies are organisations that offer services for the needs of customers.

These services come with value that is contained within products like airtime vouchers used as credit, customer care assistants, and computers. All the afore mentioned tangible

components are used in assessing the performance of services offered by different companies in Uganda.

Christian Grönroos wanted to find out how goods are different from services. He suggested that firms should plan to find out whether they are developing services or goods. To understand this, (Grönroos, 1978) used three characteristics of services namely, intangibility, production, lack of ownership and transfer of ownership to define service quality. When it comes to intangibility, customers can not feel, taste, or smell services but rather carry out evaluation of services to understand what they are about to buy. Production/consumption interaction is involved in most businesses. Services cannot be separated from a producer, and in the market perspective, customers can be the same as producers.

In fact, services are consumed as they are produced. It is likely that a customer is involved as co-producer in the production stage and services are created in and during the process. Lack of ownership and transfer of ownership; data services in Uganda are not owned, they are consumed upon purchase. Ownership is only attributable to symbols such as coupons, certificates to agents, and airtime vouchers. In summary, it seems obvious that services differ from goods, and that customers prefer to buy value. It is therefore the ability of a marketer to solve this problem in situ.

Fynes and Lally (2008) defined the service concept as an essential component of the strategic benefit seeking processes of service innovation, service design, and service development. Their study analysed various existing literature and found out that the service concept rotates around value. Moreover, the service concept is well known by many as a means for service providers to identify value given to customers as well as what value customers expect from organisations. For a service concept to be developed, there are activities that need to be stressed. Managers must be willing to identify strategic positions, generate new ideas, and lastly do a refinement of the concept.

Edvarsdsson et al., (2005) carried out an analysis on 57 articles to find out the right definition of a service concept. The study identified three key words including the

following activities, interactions, and solutions to customers. To learn more about services, they carried out a survey on 11 experts in the field of services. The survey included features of services including intangibility, heterogeneity, inseparability, and perishability (IHIP). According to 6 of 11 experts, it was concluded that IHIP characteristics captured some of the basics of services and serve as an important description, but not as universal as originally posited.

However, 5 out of 11 concluded that services aren't directly detectable, are experimental in nature, and are typically unforeseeable in their outcomes to the buyers. Their study stressed that services should be used as a perspective. Furthermore, they also suggested that research about services is no longer on differentiating goods and services- it is instead on how producers would want to portray value creation with customers where customers' perspective is much accentuated.

The available literature defines service concept as a process. However, it does not provide how service concept can be used in organisations. Goldstein et al. (2002) define the service concept and describe how it can be integrated into systems to enhance a variety of service design processes. They assume that in designing a new or existing service, managers and designers are required to take decisions on every component of a service. They also stress that decision making must be undertaken by all levels in organisations. However, they also identified one existing challenge for service organisations. The challenge of decisions to be consistent at each level focusing more on delivering services to target customers. Thus, delivered services should work seamlessly for customers to perceive it correctly.

3.3. Understanding Service Quality

There has been a lot of emphasis in academic investigation to understand service quality. It is contemplated to be a critical determination of competitive advantage. It is also notable that all firms compete in service offerings-where offerings act as a communication link between them and customers. Just like quality, there is no general definition of service quality. At a time when service quality was in its infancy, it was described as the measure

between customers expected and perceived quality (Lewis and Booms, 1983; Grönroos, 1982; Lehtinen and Lehtinen 1991) perception and trust. Previous studies all rotate around customer expectation and perceived quality.

Products are measured easily by their dimensions of size, colour, texture and so forth. In contrast, it is difficult to measure quality associated by services. This is because customers desires transform day by day with respect to new information, time, competitors. In addition, having extensive knowledge that can't be applied in product quality is inconsistent in measuring service quality. Customer expectation and perception has contributed to a great debate among researchers to consider the best tool for evaluating service quality. It is assumed that managers in manufacturing plants are less likely to perform in service sectors. However, this assumption was re-iterated by (Ghobadian et al., 1994) stating that manufacturing industries consider service quality than product quality. The question arising in literature is whether consumer perception or expectation directly influence service quality.

Cronin and Taylor (1994) agree with the contemporary argument that perceptions affect service quality. In addition, (Page and Spreng, 2002) in his study also found out that desires which in this case are termed as preference/perceptions directly affected service quality/satisfaction. Perceptions govern buying behaviours of people. Once a customer is not convinced by elements of a product, it is relatively difficult for one to make to make a purchase in future.

Roest and Pieters (1997) defined service quality as a relativistic (not absolute), cognitive evaluation of product performance and experience in a post purchase stage. Using an example of law firms, it is irrelevant for a customer to hire a low-rated over an over-rated firm. However, since performance of the low-rated firm is less, customers' perceptions will not be satisfied.

Using the same example of law firms, it is identifiable that in this case, service quality can only be realised when a case is won. Therefore, service quality becomes difficult to prove

(Yap and Kew, 2007); if organisations cannot understand customers' problems. Since it is not simply quantifiable, measurement becomes difficult. Consequently, concurrent measurements of experiences and perceptions of service quality are important. Nevertheless, it is not advisable to compare performance of services based on "public ratings". Customers are treated to be first but might not always be fair. Companies have always been shifted by customer ratings -forcing many to restructure or adopt new ways of conducting business. Regardless of all circumstances, a full diagnostic approach for measuring customer satisfaction is necessary than relying on public ratings if desired service quality is to be attained.

Services that add no value to customers' eye are most likely to remain on shelves or stalls. It is in the goodwill of firms to offer quality services. However, it is common that there are always a 60% of work that adds no value to them. Michael George once a CEO at Fortune 500 authored a book titled "lean six sigma". With a mixture of two principles lean and Six Sigma, manufacturing firms had the ability to speed up their work, reduce on overall costs of production and increasing service reliability. Service quality can be achieved by easily applying the two nodes in manufacturing sector.

Lean focuses on maximizing speed, eliminating costs as well as separating value from non-value work in the process cycle. The Six Sigma in contrast, emphasizes more on focusing on what customers prefer most, recognizing how variation inhibits the reliability of delivering services as well as providing an infrastructure for obtaining service quality (George, 2003). Nevertheless, research also further suggests that services are perceived to be of quality if they are traded with gifts (Darke and Chung, 2005). For example, if a hotel offers its customers with free spa services, those customers will discern it as special and quality.

The revenue growth pressure that stems from competition might overshadow the ability of firms to benefit from cost reduction. Cost reduction can only be met if organisations can use available technology to gather potential information on market demands (Nitin et al., 2005); develop products and services that subdue competition as well as maintaining

service quality. Competition pressures organizations to overreact for available demand and market size. Competition not only forces organizations to focus on process formulation but also on how service delivery is made thereafter. In other words, with the help of these two (lean and Six Sigma), it is easy to realise returns on invested capital vis-à-vis service quality.

3.4. Customer Satisfaction

Customer satisfaction has for a long time been expounded by business press, consultants, as well as scholars in different bodies. Interest in research on customer satisfaction has invigorated many different interpretations and approaches on what causes satisfactions. Customer satisfaction for a long time has been a major concept in modern marketing practice and thought, emphasizing much on delivering satisfaction (Yi, 1990), and gaining returns at the end of the process. Satisfaction as a concept not only covers customers, it also perhaps attracts producers as well. Nevertheless, it is of benefit to consider service quality as an influencing factor towards achieving overall satisfaction.

Customer satisfaction is a preceding of service quality in operations management and service sectors. This argument was however overturned by Cronin and Taylor (1992) whose empirical results in their study produced the opposite. Recent research indicates that satisfaction is the difference between customers' experience post purchase comparing it with what was expected (Oliver, 1977,1980; Parasuraman et al, 1985). Specifically, expectations provide a frame of regards on which customers make comparative judgments (Oliver, 1980). Outcomes that score less than expected are rated low whereas those with better scores are rated high.

Many believe that customer satisfaction is largely influenced by how customers' experience with services varies with expectations. In several literature, service quality might be the only easiest way for measuring satisfaction, however, there are no easiest means of measuring quality. Research focusing on satisfaction rotates around expectancy-disconfirmation. These two will be discussed depth in the study. Oliver and DeSarbo

(1988) found out that disconfirmation and perceived quality had a strong impact on satisfaction than expectations. Hence there is a reason to accept that quality has a direct role in determining satisfaction (Eugene and Mary, 1993).

Consequently, satisfaction and service quality are not only measured but statistically related to market share and customer retention (Rust et al, 1995). Although satisfaction is always subjected to products (tangible goods), its emphasis in this study is shifted towards service because the study is examining telecom sector. In fact, Iacobucci et al. (1995) in assessing the distinction between customer satisfaction and service quality, it was held that satisfaction deliberates customers' experiences with that of service.

Another definition by (Davis and Maggard, 1990) viewed customer satisfaction as a more suitable measure of the cost of having a customer wait as compared to waiting time in a sense that satisfaction or dissatisfaction as it might be the case directly has impacts on profits on the firm. Operations that take longer hours cause dissatisfaction. Consequently, customers of service sector such as hotels, banks, retail, telecom, often require less processing times to be satisfied. Processing hours usually start at the time one enters a que to time when a customer places an order to a cashier. In their study, Davis conducted a linear regression analysis which proved how significantly satisfaction was inversely related to waiting time.

Their findings concluded that satisfaction is affected at the time customers wait prior to entering services (placing orders) than when customers are in the process itself (cashier finishes taking orders). Shorter waiting times had a higher correlation with customer satisfaction. Given this sequel, managers should always regulate how dissatisfaction with queuing will influence customers' perceptions of the service experience (Hensley and Sulek, 2007).

User experience varies with how consumers consume products and services. These variations are caused by either demographic or societal factors such as age, gender and so forth. However, there is no general conclusion on how customers get satisfied. It is rather

a cognitive behaviour embedded within customers. Nevertheless, satisfaction can also be an outcome of customers' learning that a particular brand can satisfy their needs (Tuominen, 1999).

Satisfaction is affected by innumerable contextual variables (Giese and Cote, 2000). Fornell et al (1996) defined customer satisfaction as the overall evaluation over time grounded on total purchase and the overall experience of consumers. This definition supports the argument in the study carried out by Giese and Cote who identifies consumption experience as a component of defining customer satisfaction. Moreover, satisfaction is not only cognitive but includes affective components. Studies of affective phenomenon are covered in (West brook and Oliver, 1991; Westbrook, 1987). This study argues that affect is an antecedent to customer satisfaction as well as acknowledging how satisfaction is an outcome from evaluating the effect derived from a consumption experience (Coghlan and Pearce, 2009).

In a marketing perspective, a brand is only said to be strong if customers can remember its name by default. Affect traces- play an important role in customer satisfaction evaluation. Emotions during consumption produce high equivocal implications such as memories that individuals may use to infer their overall attitude to products and services. This happens if customers are satisfied; therefore, affect is another component of post purchase expression that feeds positively into satisfaction assessments (Szymanski and Henard, 2001). However, affect has several setbacks because it considers and deals with basic emotions. It is always worth noting that customers' emotions are indecisive in making rankings, hence customer satisfaction can be poorly evaluated if an idiosyncratic approach is used by customers.

Satisfaction is defined as beliefs and feelings customers hold about their experiences within an organisation (Hill et al., 2007; Anderson et al.,1994; Fornell, 1992). Attitudes normally carried by customers have towards an organisation determines the future relationship. It is fantastic to think that organisations do have a special delight way of making customers to become attached to its products. Firstly, through recognising what

they want/prefer. Secondly, through monitoring customer satisfaction with reliable tools to identify gaps that need to be stressed. Attitudes create customer loyalty.

Loyalty is a susceptibility to repurchase from an organisation again and again (Edvardsson et al, 2000). Customer loyalty creates a significant relationship between organisations and customers. Nevertheless, enormous benefits of customer loyalty lie within a range of retaining existing customers, corporate profitability, increase in sales, increasing positive word of mouth and market share. In addition, it is worth to consider how loyal customers are less costly to serve than new customers (Heskett, 2002). Since loyalty is a contributing factor to financial profitability, organisations are argued to focus all their resources on building customer loyalty. Therefore, satisfaction greatly has an impact on profits and growth of the firm and indirectly the same applies to loyalty.

Although satisfaction appeals to both intangible and tangible goods, it becomes difficult to be easily assessed. This study however recommends that customer satisfaction can also be understood with expectancy-disconfirmation paradigm that was modelled by Oliver (Oliver, 1977,1980). Efforts to rationalize satisfaction and dissatisfaction involves consumers' expectations and perceptions of product performance. Nevertheless, ISO 9000 defines satisfaction as the perception of customer to which stated or implied needs or expectations of customers have been fulfilled (Hoyle, 2009). As affirmed in Bearden and Teel (1983), expectations perform functions of adaptation levels defining generally accepted standards at which performance is judged.

Expectations create frames of references on which one makes a comparative judgment (Oliver, 1980), about satisfaction. This view is of no difference to Bearden and Teel (1983). Contrary to expectations, disconfirmation has been categorized into two, negative and positive disconfirmation. Negative disconfirmation arises if the product negatively performs than expected, confirmed if the performance is as expected as well as positively disconfirmed if performance is better than predicted (Oliver and DeSarbo, 1988; Oliver, 1977, 1980, 1981; Yi, 1990; Churchill and Surprenant., 1982). Thus, performance above expectations may not have a bigger impact on the profitability and customer satisfaction

levels. Nevertheless, performance below expectations may be catastrophic (Anderson and Mittal, 2000).

There is a mix in literature as to whether or not service quality, expectations, and disconfirmation significantly affect customer satisfaction. There are mixed corroboration conclusions on this subject matter. In a study carried out by Eugene and Mary (1993) disclosed that satisfaction was positively influenced by perceived quality than expectations. Their study significantly remarked that negative disconfirmation lowered satisfaction. Another study by Churchill and Surprenant (1982) also found that perceived quality preferably than expectations directly influence satisfaction for durables.

3.5. Customer Expectations as Compared to Perceptions.

Service delivery involves a village of processes and stages. It is difficult to make one's interests at different levels satisfied. Since this study is carried out in the fourth industrial generation, it sometimes becomes irrelevant to base most judgements on outdated studies. However, the author has no objection or rejection for the great contribution "those" studies have impacted to the current literature. Nevertheless, the study also intends to exploit previous studies for directional motives. Customer expectations and perceptions have become one of the recent contemporary studies in marketing literature. Expectations are the base assumptions that customers make towards organisations products and services. While, on the other hand, perceptions are realities of how consumers think about products or services.

Besides, expectation and perception are largely considered by customers while examining service quality (Parasuraman et al., 1990). Perceptions are psychological; they have concerns on beliefs about delivered services (Teas, 1993). Various literature assumes that customer perception is important than expectations. However, this is contradictory to Garretson and Clow's (1999) idea that purchase intentions are largely influenced by expectations. Expectations are subjected to pre-purchase of services than perceptions that

only if not, do exist in post-purchase stage. In addition, expectations are also influenced by many factors.

These factors range from environmental to personal. For example, service quality expectations from customers across Africa; are mainly influenced by the factor of tangibility (Bebko, 2000). And because intangibility also affects expectations, service invariability and inseparability might collectively as well impact the evaluation of measuring quality. Expectation is also the probability that the service or product has attributes or leads to a particular event or outcome (Olson and Dover, 1976). The definition of Olson and Dover does not provide a strong basis for understanding expectations.

Any product can possess characteristics but to differentiate it from other products should be the main question. Rather, this definition can be backed when evaluating service quality performance. Customer's expectations are always met if their perceptions are exceeded (Parasuraman et al., 1988); and vice versa. Thus, customer expectations are always the better factor in measuring service quality.

In contrast, many researchers in the field of service quality believe that perceptions are better than expectations in determining service quality. Perceptions are driven by human sensations. In fact, perception is individual. These sensory organs are usually eyes, nose, mouth and so forth. It is these that strew or perplex human brains to make hedonic judgements of purchasing. Perception is defined by Simon et al (2012) as the process by which sensations (senses) are selected organised and interpreted. Perception focuses on what the brain can store and retrieve, together with assigning meanings to them. A good example is an advertisement from company X in Uganda promoting cheap double bundles for its internet users.

Because customers of this network aren't as rich as of other networks, customers from the expensive (premium) side will easily identify that the products are tailored to be affordable for the (majority) disadvantaged groups. Risk is one of the elements that refrain customers from purchasing companies' products. Since telecommunication companies engage or

rather use online services, it is deemed that there are higher perceived risks. However, companies that are customer friendly are found of building confidence in their customers through encountering them with increased experiences (Miyazaki and Fernandez, 2001) reducing perceived risk.

Apple was one of the companies that saved lots of Americans from "music fraud" by inventing Apple iTunes in 2001. This release broke the seal when privacy was the main deal. Unlawful downloads of music had become severe and a deal of a century was worth calling. Nevertheless, Apple saw this as its opportunity. They created iTunes and eventually, its revenues shoot up, like a miracle. Successful companies are those that invoke their customers' trust and lower perceived risk (Corbitt et al., 2003); through technology improvements.

Customer perception is also attributable to price unfairness. The phenomenon is non-discriminant on how firms and customers perceive it. Despite the significance of price fairness perceived, research on this topic has remained scanty. Perceived price fairness is defined by Bolton et al (2003) as to the extent to which outcomes are deemed reasonable and just. This definition means that pre-determined prices should be within the scale of both the customer and the company. Price judgements are subjective, occur on the customer side; and are usually made within a consumers' evoked set (Zeithaml, 1988). Consumers always prefer to protect themselves financially and through compensation if perceptions for unfair prices occur (Xia et al., 2004).

Consequently, consumers' perceptions towards purchase intentions become high when prices are separated or partitioned. Studies have found that if prices are separated, purchase intentions increase (Morwitz et al., 1998; Lee and Han, 2002; Xia, and Monroe, 2004). However, this statement was disregarded in a study by Burman and Biswas (2007) who noticed that customers willingness to pay for services shrinks if prices are found to be unreasonable. In addition, it largely depends on how each individual consumer reacts to partitioned prices. Conversely, there are also situations where buyers have negative attitudes towards prices charged by companies. One of the consequences for practices of

unfair pricing is negative word of mouth, low purchase intentions and several complaints from customers (Campbell, 1999; Xia and Monroe, 2004).

3.6. Associating Service Quality and Customer Satisfaction

It is difficult to preserve a repeat customer profile for a long time. This is partly because of competition between a plethora of organisations. However, there is only one single way of containing this phenomenon; maintaining quality so as customers become satisfied. The focus of many studies trying to assess the existing relationship between customer satisfaction and quality by simply examining the difference between expectations and perceptions - are enormous. In fact, many have suggested for expectation-perception (disconfirmation based-approach) as the best apparatus for scaling

quality and satisfaction (Parasuraman et al., 1990, 1994, 1985, 1988; Bolton and Drew, 1991). This step is going to extract studies that have linkages to customer satisfaction and service quality.

With the objective of investigating the domination of technical and financial service quality on consumer contentment, Keyser and Lariviere (2014) found out that these two dimensions had a positive relationship on consumer happiness. However, it was stated in their study that this depends on the dimension deployed by organisation. The study considered 5 customer segments which were differentiated by a single (internet, telephone, and catalogue) and multiple (catalogue/telephone, internet /telephone) channels. It was therefore concluded that managers always need insights into specific and unique effects of various forms of service delivery in every single channel.

Consumers' behavioural intentions are said to be directly influenced by service quality and satisfactions. Cronin et al. (2000), in their study of assessing value, quality and customer satisfaction on consumer behavioural intentions, they found out that the three had a positive relationship to consumers change in purchase volumes. Furthermore, the study also discovered that service quality and value lead to customer satisfaction. The

authors also emphasized the notion that changes, or affection can only be reached at if the three variables are collectively considered.

The findings of Cronin were also analogous to those of (Anderson and Sullivan, 1993) who found out that when quality falls short of expectations, it means that there is a significant impact onto satisfaction than quality that exceeds human expectations. At times, satisfaction is also influenced by elasticity of buyers. However, this is industrial and firm specific. The more buyers become unconscious of offerings made by a company, the likeliness of them to become less attractive to buy are many. Systematically, all firms experience this wave and at times there is no immediate solution to solve a problem but to stick to the default plan while studying the market trends.

The type of association between service quality and satisfaction is relatively used to study customers' purchase intentions. In a study conducted by Taylor and Baker (1994) to assess the relationship between service quality and satisfaction with the intention of forming of consumers' buying intentions. The empirical analysis provided evidence that customer satisfaction was a moderator to service quality/purchase intention relationship. Their study argues that a positive effect of service quality on purchase intentions is higher when satisfaction relatively becomes more. To paraphrase this sentence, the intention of a customer to buy a product or service exists if satisfaction and quality of a service are high.

Nevertheless, their study extends with a suggestion that models of consumer behaviour that integrate the dealings of satisfaction and service quality yields a clear picture of understanding consumer purchase intentions more than mere models that only encompasses the influence of satisfaction and service quality. Their study further suggested for marketers to practice enough communication as well as to measure service encounter-particular levels of consumer satisfaction, short-term, and longer-term service quality outlook.

Carlson and O'Cass (2010) carried out an online survey to develop a model that would easily assess the relationship among attitudes towards the web site, e-service quality,

consumer satisfaction, and behavioural intentions within the context of websites that are content-driven. partial least squares (PLS) structural equation modelling technique was used to assess the model. The findings suggested that positive e-service quality affects consumer satisfaction within specific service contexts. The study also concluded with a suggestion of satisfaction being high whenever there is a positive evaluation of sufficient quality of the delivered product.

However, there were limitations of considering only content-centric websites and thus not considering pure retailing websites which specifically focus on selling goods and services. Their study focused on consumers in the sport sector within Australia. Thus, generalisation of their findings was based on one sector and a single country. Other sectors should be considered to make better judgements.

In the quest of examining the relationship between customer satisfaction, service quality, and store loyalty. Sivadas and Baker-Prewitt (2000), carried out a national random sample of consumers from a store to examine the association between customer satisfaction, service quality, and store loyalty. Their study concluded with remarks that service quality affects satisfaction with retail stores. It is also assumed that customers always recommend departments when they are satisfied than those that are not satisfied. Their findings were also equitable to several results from researchers who content that service quality is a critical influencer of customer satisfaction (c.f. Rust and Oliver, 1994, Carlson and O'Cass, 2010).

Service sectors always loose more when there are higher levels of dissatisfaction. There are many things that keep customers happy. These are, knowledgeable employees, helpful employees, accuracy when billing, and quick services. Muhammad et al (2011) carried out a study to examine service quality and its relationship with customer satisfaction among the customers of conventional banks and Islamic banks in Pakistan. The study employed Analytical hierarchy process to analyse the data as well as using SERQUAL scale to construct a questionnaire. Findings from their analysis of the relationships between multidimensional service quality dimensions and unidimensional customer

satisfaction factors authenticate the importance of service quality aspects for behavioural intensions for customers.

Nevertheless, the relationship between customer satisfaction and service quality has also attracted several interests in understanding loyalty in business. In a quest to assess how strategies employed by private banks in India affect customer satisfaction, Ravichandran et al (2010) collected primary data through structured questionnaires administered from 300 respondents to gain an insight of consumers' perceived service quality with respect to SERQUAL scale. Results from their analysis proved that an increase in service quality of banks had greater impacts on customer satisfaction.

3.7. Serqual And Servperf Models

3.7.1. Serqual

Service quality has become a significant factor in Telecommunication industry and SERVQUAL model delivers a technique for assessing and managing service quality. The validity of this model has had numerous studies in many countries, but it has not been widely examined in the Ugandan Telecommunication sector. Customer satisfaction is difficult to measure- and if it is - managers are faced with problems of delivering products and services that surpass purchasers' expectations. SERVQUAL model is currently the most popular model of quality research used in marketing and business departments as well as in economic departments. This study intends to employ SERVQUAL dimension to assess how service quality influences customer satisfaction.

SERVQUAL is a multi-dimensional research tool which is designed to get consumer expectations as well as perceptions. The process of capturing the difference between consumer expectations and perceptions is done with the help of five dimensions that are believed to designate service quality. In short, SERQUAL model was built on expectancy-disconfirmation case which profiles consumers' pre-consumption expectations of quality and the actual perception of a service when experienced. The model was first conceptualised and proposed by Parasuraman et al. (1985) to measure quality in the

services sector. The instrument was later developed from 1983 (Parasuraman et al., 1990), tested, pretested, and refined to reach its final stage.

The original SERVQUAL instrument proposed by Parasuraman et al. (1985) identified ten components of service quality as shown in figure 5. It resulted into 97 items of which each dimension had approximately 10 items. The researchers then carried out various trials because results from their factor loadings suggested for a reassignment of items. Their research was followed by a sequence of computing alphas and item-to-total correlations, which was lastly followed by deletion of items resulted to 54, latter to 34 items representing seven dimensions. However, the 34-item scale was not satisfactory which deemed for further purification.

Parasuraman et al. (1990) refined SERVQUAL model in 1990 that consisted of 22 matched paired questions split between two sections with five variables namely- tangibles comprising 4 items, responsiveness comprising 4 items, assurance comprising 4 items, empathy comprising 5 items, and reliability comprising 5 items, see table 3.

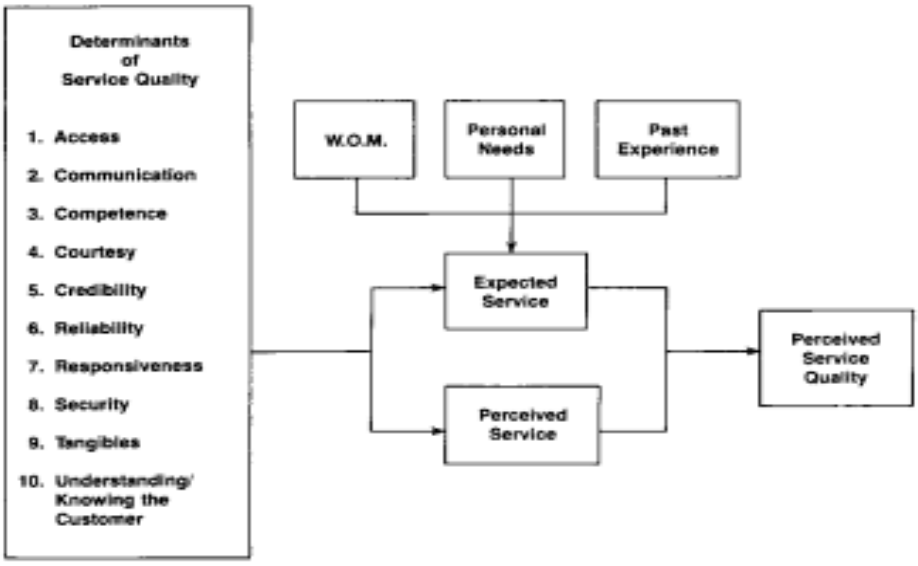

Figure 3.1: Determinants of service quality

Source: Parasuraman et al., (1985)

Questions were split into two sections- one measuring expectations of different organizations measuring perceptions regarding the company whose service is being evaluated Chi Cui et al. (2003). SERVQUAL model evolved by Parasuraman et al. (1988) represents the 10 originally conceptualized dimensions even though it presently has 5 dimensions.

Table 3.1: Dimensions of Service Quality

Dimension	No. of items	Definition
Tangibles	4	Physical facilities, display of personnel, and equipment
Reliability	5	Capacity to perform dependably and accurately on promised services
Responsiveness	4	Willingness to aid and give immediate services to customers
Assurance	4	Knowledge of workers and their abilities to increase trust and confidence
Empathy	5	Caring and giving individualized attention the organisation gives to its customers

Source: Parasuraman et al. (1988)

3.7.2. Model of Service Quality Gaps

SERVQUAL model also known as expectation – perception gap model is one of the most magnificent received and most heuristically better contributions to the literature of services (Brown and Bond, 1995). A summary of measuring quality gap (Q) is derived from Parasuraman et al. (1988) who endorsed that quality is calculated by deducting expectations (E) from perceptions (P). The summation of values from Q provides overall score of quality an important indicator of service quality dimension that directly or

indirectly influences customers over all perception towards organisations services. Therefore, service quality is:

$$SQ = P - E$$

Where,

SQ is defined as service Quality

P is perceptions of one towards a service received.

E is expectations of an individual towards a service received.

Moreover, (Buttle, 1996) suggested that quality analysis takes several forms. It can take; item by item analysis (P1 – E1, P2 – E2), and dimension by dimension (e.g. (P1 + P2 + P3 + P4/4) – (E1 + E2 + E3 + E4/4), where P1 to P4, and E1 to E4, depict four perception and expectation statements relating to a single dimension); as well as computation of a single measure of service quality (P1 + P2 + P3 … + P22/22) – (E1 + E2 + E3 + … + E22/22).

SERVQUAL model consists of several service quality gaps, see figure 6. These gaps are divided into two. Gap 1, 2, 3, and 4, representing marketers' side (Parasuraman et al. 1985); and gap 5 representing customer's side. In contrast to Parasuraman et al. (1985) study, (Curry, 1999; Luk and Layton, 2002), who extended the gap model urge that gaps 1,5, and 6 are the most influential gaps directly exhibited within external customers. Service quality gaps according to Parasuraman et al. (1985) are as follows:

Gap1: Customers' expectations versus management perceptions: This is so because of lack of enough marketing research, low communication, and the fact that the hierarchy is too big when fundamental decision support is needed.

Gap2: Management perceptions versus service specifications: There is less engagement with service quality by employees, approach of unfeasibility that affects production, ineffective task standardization and lack of a clear setting of goals.

Gap3: Service specifications versus service delivery: Lack of role ambiguity, poor employee selection, and poor technology-job fit, inadequate supervisory mechanisms, and low levels of teamwork in the organisation.

Gap4: Service delivery versus external communication: This is largely due to lack of internal communications.

Gap5: The disparity between customer expectations and cognitive perceptions of services delivered to them: Customers are largely induced by their environments starting with what they hear and see. The flaws from the sided of service provider force many customers to be curious and cautious if what they buy.

Gap6: The disparity between customer expectations and employees' perceptions: Front workers or customer care personnel's failure to understand what customers like.

Gap7: The disparity between employee's perceptions and (organization) management perceptions: It arises between leaders/managers of organizations and service providers.

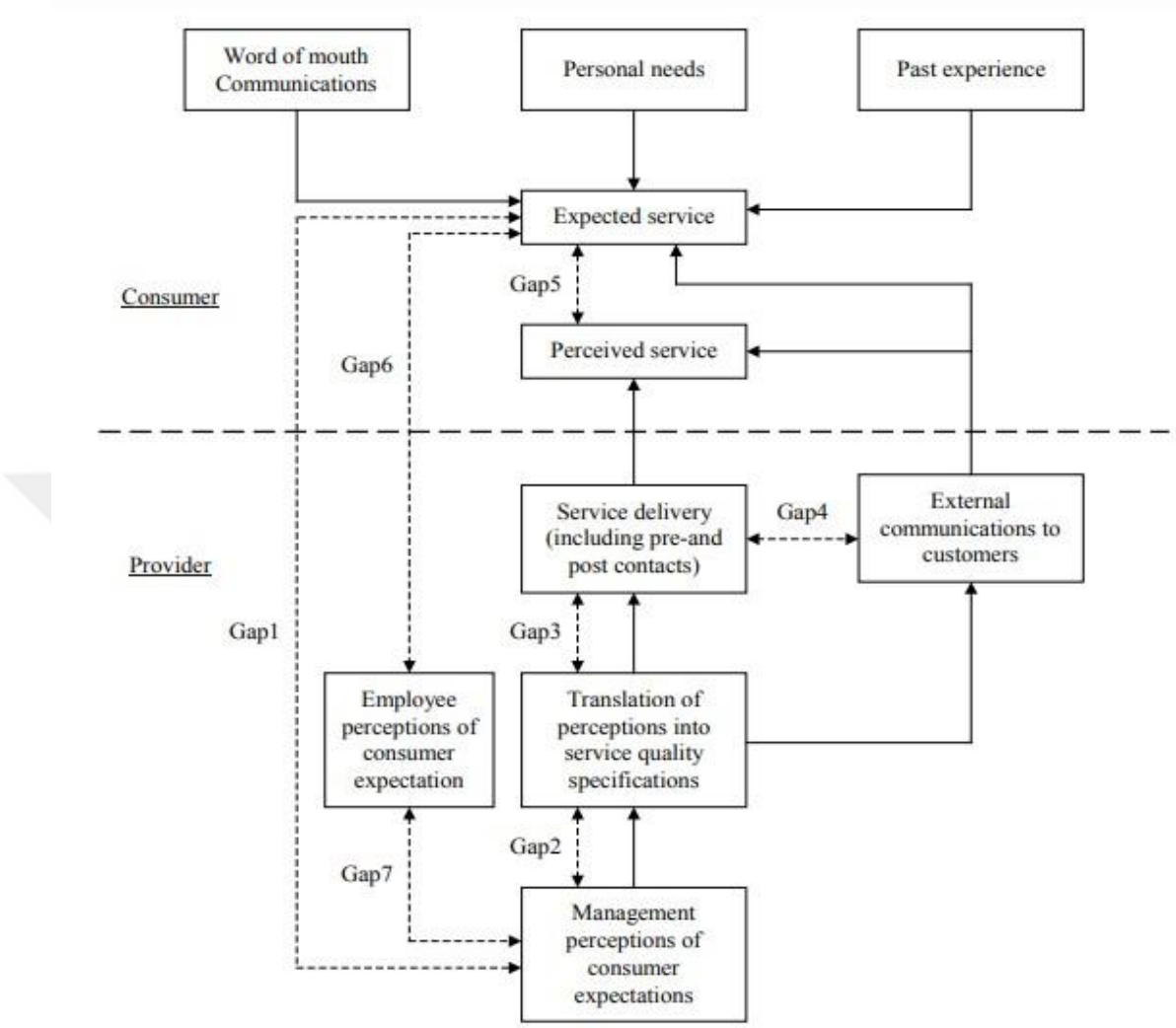

Figure 3.2: Model of service quality gaps

3.7.3. Servqual Criticisms

Despite its long-standing credibility in industry and cross-cultural contexts, the model has received various criticisms. The first criticisms to service quality and its associated SERVQUAL instrument were published by Francis Buttle in 1996 in which both theoretical and operational criticisms were identified. This study only focused on the most important criticisms. These criticisms are shown below:

3.7.3.1. Theoretical criticisms

Paradigmatic challenges: SERVQUAL is based on a pattern of disconfirmation than an attitudinal paradigm; and SERVQUAL has a backslide of establishing economic, psychological, and statistical theory. While this instrument is based on disconfirmation pattern, other researchers from different disciplines have suggested that the instrument rather capture satisfaction than service quality (Souca, 2011).

Gaps model: So far, little proves that business customers evaluate service quality with perceptions- expectations gap. In fact, (Boulding et al., 1993; Churchill, 1979; Cronin and Taylor, 1992,1994; Brady, Cronin, and Brand, 2002; Carman, 1990) debated the applicability of expectations-performance rifts as a base for assessing service quality. The suggestion from these knowledge carriers was that performance is a good provider of predictive validity than SERVQUAL which is gap-based.

Process orientation: SERVQUAL focuses on the process of how service is delivered, not the product of the service encounter. Grönroos (1982) named 3 elements of service quality: Reputational quality, Functional, and technical quality. Technical quality is concerned with the end-product of the service encounter, e.g., sleeping in a hotel. Functional quality is attached to the whole process of how services are delivered, e.g.,how courteous are hotel staff? Whereas reputational quality reflects the corporate image of the service organization.

Dimensionality: SERVQUAL's 5 features are not universal; the number of features comprising SQ is contextualized; some items do not load on the other factors which people carrying research would expect; and there are high degrees of intercorrelation among the 5 RATER dimensions (Carman, 1990). Parasuraman et al. (1991b) claimed that "SERVQUAL's dimensions and items represent core evaluation criteria that surpass particular companies".

3.7.3.2. Operational

Expectations: the term is ambiguous; consumers consider standards rather than expectations to examine SQ; and SERVQUAL does not measure absolute SQ expectations. Nevertheless, (Teas, 1993a) questioned the interpretation in the instrument. He further formed six interpretations to expectations in his study of 1993 (e.g., Teas, 1993b).

Item composition: 4 or 5 items are found to be inadequate to capture the dissidence within every SQ feature (Buttle, 1996). In addition, Parasuraman et al. (1991b) also acknowledged that context-specific elements can be important in different studies but latter on caution that items added should be the same with those of SERVQUAL items.

Moments of truth (MOT): The method used by customers to examine service quality might vary from MOT to MOT (cf. Carman, 1990).

Polarity: The reversed contrariness of items in the scale causes respondent error.

Scale points: The scale is flawed.

Two administrations: Having many administrations on one instrument causes confusion.

Variance extracted: The over SERVQUAL score accounts for a disappointing proportion of item variances.

3.8. Servperf

A contemporary debate concerning the validity of SERVQUAL and SERVPERF scale in the market literature (e.g., Carman, 1990; Boulding et al., 1993; Churchill, 1979; Cronin and Taylor, 1992,1994; Brady, Cronin, and Brand, 2002; Parasuraman et al., 1994, 1985, 1988). Although these debates have raised important theoretical and practical issues in the operationalization of the service quality construct in developed countries, the validity of the two scales is yet to be agreed on, this is because- there are relatively little studies that

have been conducted to address the measures of service quality especially in developing countries.

SERVPERF instrument was propounded by Cronin and Taylor (1992) in a critique to Parasuraman et al. (1985,1988) work. Cronin and Taylor developed the new instrument after finding out that the instrument by Parasuraman, Zeithaml, and Berry was inadequate. A new instrument that utilizes only performance-based items is an alternative to (expectation- performance) suggested by Parasuraman et al., (1985) for measuring of service quality (Cronin and Taylor 1992). The model directly assumes that measuring performance-expectation is unnecessary (Carrillat et al., 2007). The new instrument developed by Cronin and Taylor has received support and empirical evidence from enormous researchers. This empirical evidence will be discussed when comparing SERVQUAL and SERVPERF in empirical analysis step.

Cronin and Taylor support the procedure and support the face validity of 22 items developed by in 1988 but they ask themselves how service quality measures should be developed and whether individual items describe 5 separate service quality components. Despite the critique, Cronin and Taylor (1992) decided to use the same number of items to analyse the relationship between service quality, purchase intentions and consumer satisfaction. Cronin and Taylor (1992) provided empirical evidence across four industries viz. fast food, dry cleaning, pest control and banking to support their (performance only) scale over SERVQUAL scale.

The team formulated four measures. SERVQUAL, weighted SERVQUAL, SERVPERF, weighted SERVPERF. Each one of these models presume that service quality is an antecedent of customer satisfaction (Cronin and Taylor, 1992; Parasuraman et al., (1985,1988).

SERVQUAL = $SQ = P - E$

weighted SERVQUAL = $SQ = I * (P - E)$

SERVPERF = $SQ = (P)$

weighted SERVPERF = $SQ = I * (P)$

where I= importance

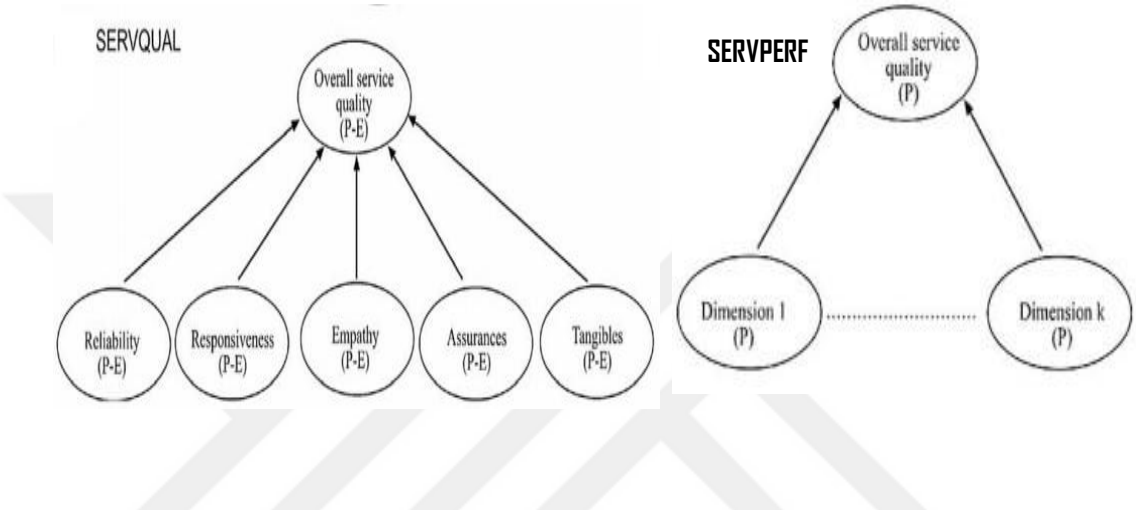

Figure 3.3: Comparison between Servqual model and Servperf model

Source: Martínez and Martínez (2010)

3.8.1. Empirical Analysis Of Servqual And Servperf Models

A study was conducted by Paul III (2003) with three prosthodontic doctors eager to actively participate in the study. The study was to be conducted in America to find out the difference between the validity and reliability of SERVQUAL and SERVPERF models. The research intended to modify ways of using survey method while eliminating available methodological issues. Expectations and perceptions were assessed separately banning the perplexing of areas that had been denounced in past research. Results from his research were to be used to compare the measurement of adult patients' perceptions of service quality using SERVPERF and SERVQUAL instruments.

In addition to the above, it was found out that SERVQUAL without importance weights was by far the clearest model, however, it was also latter found that SERVPERF accounted

for the most variance. The conclusion held that SERVPERF without importance weights seemed to be enough for dental practitioners' purposes.

(Cronin and Taylor (1992) carried out a study to assess service quality within four industries. These industries were namely, pest control, banking. A total of 600 answered questionnaires were gathered randomly in a two-week period. Notable measurements that were meant for understanding the study were performance and perceptions, expectations, as well as importance measures to construct four alternative measures of service quality, customer satisfaction measures, a direct measure of service quality, and measures of purchase intentions. The empirical analysis was carried out in steps. Step 1called into question the 5-concept developed by Parasuraman et al. (1988). Step 2 indicated that SERVPERF scale clarifies more of the changes in service quality than it does with SERVQUAL, this is because SERVQUAL was based on a flawed-satisfaction cycle rather that an attitude model.

The other critique from the empirical analysis suggested that SERVQUAL model only confirmed in two industries than SERVPERF which confirmed in the four industries. The utmost failure of a five-Servqual model to affirm accentuates the importance of SERVPERF which is a performance-based service quality measure.

Saleh and Ryan, (1991) adopted a similar model (SERVQUAL model) with two objectives, 1) to identify whether gaps existed among sets of perceptions and expectations of hotel guests and management, and to examine the validity of the measure of what might be termed as the conviviality in services. It was known that internal structures of their study design had clear reliability in terms of alpha coefficients that were persistent with indistinguishable studies using Likert scales. 2) to determine whether a factor analysis of the responses generated 5 clusters, in as much as the questionnaire was based on the concept of the five dimensions conceptualised by Parasuraman, Zeithaml and Berry (1985).

The researchers presumed that factor analysis would certify the five dimensions but that did not yield any results. The failure was for several reasons, the questionnaire might have been a problem with its construction to the five-point Likert scale. The second problem was that the questions were not valid interpreters of the dimensions. Indeed, it was latter noted that management took tangibles for granted and yet from this node, it would be emphasized that if tangibles were lacking, they would be thought of to be much important. This, therefore, proved SERVQUAL scale as a reliable tool in testing the expectation and perception of services of hotel.

One of the poorly performing industries is airline industry. Without questioning, there are various reasons as to why airline companies face criticism. Criticism is likely caused by dissatisfaction. Consumers of airline industries become dissatisfied with their flying experience. The higher the poor experience, the higher dissatisfied they become and vice versa. A study was carried out by Elliott (1994) to assess the practical value of SERVPERF and SERVQUAL approaches to measuring perceived service quality to marketing managers. The study gathered information from a national mailing list company.

A 39- item instrument was employed. The first 19 measured consumer expectations while the next 19-items measured consumer perceptions of airline performance. The last item measured overall satisfaction of airline performance. Data analysis was done in two steps. Firstly, mean dimension scores were computed to assess perceived level of service quality across all dimensions of airline carrier service. Secondly, the two stepwise regression models were employed to assess the predictive ability of both SERVPERF and SERVQUAL instruments. Results from his study suggested that SERVQUAL instrument might have a more diagnostic value to marketers for making strategic decisions.

Service quality in educational institutions is at times assessed to identify the general performance of higher education organisations. Bayraktaroglu and Atrek. (2010) in Turkey investigated the superiority of SERVPERF and SERVQUAL instruments basing on criticisms regarding reliability, validity, and dimensionality. The authors wanted to

investigate the dimensionality of SERVPERF and SERVQUAL regarding gap and performance scores. The superiority of the two measurement approaches over each other were examined using confirmatory factor analysis.

The study was tested in only higher education facilities. Results from their research supports the two measurement approaches giving more support to SERVQUAL which according to their results were having a good model fit. In addition, the pair found SERVQUAL and SERVPERF measurements to be having a close convergent reliability and validity scores. The researchers finalised that both measurement scales were having a good model fit and can be used in measuring service quality of higher-education services.

Although there are many studies about service quality in India, there are yet many studies to prove the reliability and validity of the two measurements of service quality. In a quest to measure service quality in Indian banks; Vanparia and Ganguly (2010) carried out a descriptive study with a focus of examining the applicability of two popular measures of service quality in the banking sector in Indian context. In addition, their study also examined the correlations of service quality with positive word-of mouth, customer satisfaction, and loyalty. Using questionnaire like Parasuraman et al. (1991), 293 questionnaires were administered from customers of local banks in India. Results from correlation coefficient SERVPERF and SERVQUAL (0.701) indicated validity of the scales as well as the discriminant validity (SERVQUAL with 0.500 whereas SERVPERF with 0.669) was low providing proof for the two measures to be valid for measuring service quality. The researchers were convinced of the validity and reliability in the banking industry of India.

A study performed by Brochado (2009) in 2007, in Portuguese university of Lisbon with the aim of comparing performance of 5 operationalizations of service quality concepts of SERVPERF, SERVQUAL, importance-weighted SERVPERF, importance-weighted SERVQUAL and HEdPERF had a tremendous conclusion it made. The study was conducted in a technology school. Data was collected using a structured questionnaire from a sample of students who answered questionnaires containing perception items

enhanced from the HEdPERF and SERVPERF scales and expectation items from the SERVQUAL scale, changed to fit into higher education sector.

Five multi-item scales assessed using unidimensionality, validity, reliability, and explained variance. Reliability and validity results from the study concluded that HEdPERF and SERVPERF presented the best measurement capability, but it was not possible to identify which one was the best. The researcher also urged that since the analysis was carried out from a single faculty, there is need for more data from other institutions to enable comparisons.

Because all the above studies were only carried out in various sectors without the examination, this next study will reveal some of the conceptions and inferences happening in telecommunication companies. With the aim of 1) using SERVQUAL model to examine significant differences in the five service quality dimensions by assessing customers' expectations and their actual perceptions of the GSM telecommunication firm and 2) assessing the impact of each service quality dimension on customer perception. A preliminary research was conducted by Loke et al. (2011) to examine service quality of telecommunication companies and satisfaction in Malaysia.

The three researchers used Gap analysis to assess perceived importance and satisfaction on every single dimension of service quality. A regression analysis was conducted to test the link between levels of customer satisfaction and service quality. Results from their study indicated that assurance, empathy, reliability, and responsiveness, significantly positively influenced customer attitudes in terms of satisfaction.

Customer satisfaction and loyalty have been tested using service quality dimensions. In Jordan, SERVQUAL instrument was adopted to find out the loyalty of customers to telecommunication companies. For this case, a study was carried out by Alnsour et al. (2014) in Jordan to explore the use of SERVQUAL approach to examine the quality of service of Jordanian telecommunication sector and how it influences customer loyalty. They conducted the study using a stratified sample that consisted of customers of

Jordanian Telecommunication Companies who filled questionnaires. Using regression analysis, results predicted that service quality dimensions positively affect customer loyalty, with responsiveness showing the highest correlation with loyalty.

It was also upheld that SERVQUAL could still be used to measure service quality across all cultures. Similar to this study, there are lots of studies that have assessed the relationship between service quality, customers' perception and expectations. With the aim of determining service quality at cellular telecommunication retail outlets in the south African context, Van der Wal et al, (2002) conducted research to identify which SERVQUAL dimensions were important to customers while buying products and services from telecommunication outlets. Primary data was collected from telecom subscribers asking them about their perception and expectations of service quality using telephonic interviews.

Factor analysis and homogeneity of dimensions using Cronbach's alpha analysis were used to find out the variability and reliability of variables. Results from their study indicated that reliability and tangibles loaded into separate factors meaning that customers identified the two variables as separate whereas assurance, responsiveness, and empathy loaded into a unified single factor holding that customers did not see any differences within the three variables.

Majority of the studies above are in favour of SERVQUAL over SERVPERF model. Since this study intends to examine the likely relationship between customer satisfaction and service quality, SERVQUAL instrument proposed by Parasuraman et al. (1990) will be used to evaluate the level of service quality in telecommunication companies found in Uganda.

3.9. Research Gap

There is plenty of research that has been carried out in Uganda by enormous non-government organisations to assess service quality within telecommunication companies.

However, these studies have not employed SERVQUAL instrument to measure how customer satisfaction is affected by service quality measures in Uganda's telecommunication sector.

The other gap is that SERVQUAL model has been studied in countries which have different cultures than in Uganda. Therefore, the goal of this research is to examine the degree to which the level of satisfaction is affected by service quality which is here by measured by SERVQUAL scale. Results from this study will fill the gap of studies that do not employ the instrument while assessing service quality in Uganda.

3.10. Research Hypothesis

The theoretical framework is adopted by a study conducted by Zeithaml, Parasuraman and Berry (1993). The reason for choosing the five service quality variables is because they are believed to affect customer satisfaction within telecommunication services.

The model proposes that service quality consists of reliability, tangibles, empathy, assurance, responsiveness which are assumed to have an enjoined effect on customer satisfaction. Like presented below, our service quality dimensions are placed to be independent variables, whereas customer satisfaction presented as dependent variable as well as age, gender, level of education as controlling variables.

3.10.1. Reliability

Reliability is still known to be one of the most influential factors of service quality. In short, reliability refers to the ability to deliver expected standards to customers at all time, handling customers' problems within a less times and overhauling error free record. Parasuraman et al. (1985, 1988, 1994) ascertained that reliability means organizations serve services in a correct manner. In addition, Ennew et al. (2013) defined reliability as the ability to dependently perform services, accurately and the ability to treat problems faced by customers. On the other hand, reliability is similar with consistency. Consistency refers to the compatibility and consistency between things and parts. Frei et al. (1999)

suggests that service quality need to include consistency of service output around an ideal target value which is determined by customers. In case of telecommunication, a strong network connection together with its availability all times is a significant measure to increase and maintain the reputation of an organization. Hence it was hypothesized that:

H_1: Reliability positively influences customer satisfaction in the telecom sector of urban Uganda.

3.10.2. Empathy

Empathy means to provide individualized attention to customers. It is believed by (Parasuraman et al, 1994) as a special attention given to customers, caring, and providing services to customers. Empathy is believed to be inborn and cannot be taught. It increases customers loyalty that arises from the good behaviour employees extend towards customers. Empathic employees are said to identify customers' needs and are also known for tailoring interactive behaviours to specific customers (Giacobbe et al. 2006). Further, while empathy increases employees' identifying of customers, higher levels of satisfaction then result (Homburg, Bornemann, Wieseke, 2009). In a developing world, customers have requirements and demands that vary day by day, and it is always companies' obligations to meet the demands of customers. Once their demands are not met, they are obliged to search for other suppliers. Based on the above relevance of empathy in measuring customer satisfaction, I put forward the following hypothesis:

H_2: Empathy positively influences customer satisfaction in the telecom sector of urban Uganda.

3.10.3. Responsiveness

Responsiveness is defined as the ability to react to customers' requests timely and flexibly. Responsiveness also consists of partners understanding themselves in such a way that they understand and support each other as well as fulfilling important personal needs and goals. It also holds the notion of elasticity and ability to tailor services that satisfy customer needs. Thus the importance of this dimension is undeniable. In a study by Parasuraman et

al. (1990), responsiveness was the second important attribute behind reliability. Therefore, from the present relevance of responsiveness, it is then hypothesized that:

H_3: Responsiveness positively influences customer satisfaction in the telecommunication sector of Uganda.

3.10.4. Tangibility

Generally, tangible assets are man-made physical components and materials (Sureshchandar et al, 2002). Parasuraman also described tangible dimension as physical quality such as equipment's, facilities as well as personal appearance (Parasuraman et al., 1988). In telecommunication industry, tangibles like Simcard packets, interior design of telecom network shops are one of the most important elements that entice customers to enter shop halls to purchase services. For this reason, tangibility should always be modified to fit within the perception and expectation of customers. Because of this, I hypothesize that:

H_4: Tangibility positively influences customer satisfaction in the telecommunication sector of Uganda.

3.10.5. Tariffs

Tariffs in this case are prices charged for different sets of services provided by telecom companies. Customers become price sensitive if they find it easy to evaluate products and services. Moreover, price evaluation process will always match with customers perception of the services. Where product A falls short of a customer's perception, tariff evaluation might become tight. However, tariffs should always match consumption goals of customers. For example, heavy purchasers of telecom services tend to present a low-price sensitivity than low buyers. A study by (Leinsle et al, 2018) found that customers usually judge tariffs basing on price fairness and transparency of the firm. Because of this, I hypothesize that:

H_5: Tariffs positively influences customer satisfaction in the telecommunication sector of Uganda.

3.11. Conceptual Framework

Using SERVQUAL model, Figure 8 shows a model that represents the impact of service quality dimensions on customer satisfaction. The dimensions used here to assess the relationship between service quality and customer satisfaction are reliability, tangibility, empathy, assurance, and responsibility.

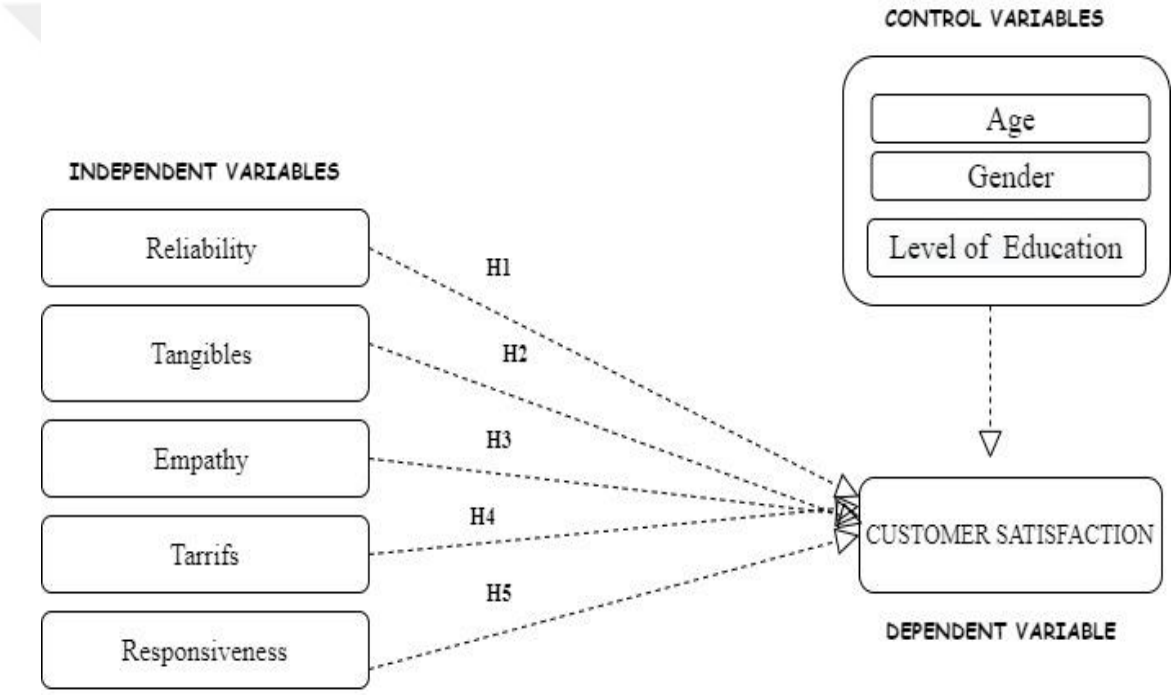

Figure 3.4: Research framework

Source: Author

CHAPTER IV

RESEARCH METHODOLOGY

This study aims to evaluate the relationship between dimensions of service quality and customer satisfaction. As mentioned in the overall study, these dimensions are reliability, tangibility, empathy, assurance, and responsibility, respectively. This chapter provides methods and procedures that the researcher proposed to use in the study. The chapter consists of research population, research design, sampling design, data collection instruments, validity and reliability of the research instrument, method of data analysis.

4.1. Research Design

Research design is a plan enhanced to achieve expected results. A research design was emulated by Malhotra (1996) as a framework for conducting marketing research; and also used as a guide for data collection and carrying out data analysis. There is a plethora of research designs depending on the type of research. This study was carried out with a survey research design. The reason for adopting this design is because its advantages such as low cost, low bias on the side of the side of the interviewer, there is control of time, as well as the fact that there are no geographical boundaries. Besides, a survey research design also helps the researcher to get information free of bias and secrecy in responses from respondents.

To meet the goal of this research, a survey method was adopted to collect opinions/data using online google forms from respondents. The reason for collecting data using online google forms is because the study was carried out within a pandemic period that could not allow the author to easily access data on the ground. The design was expected to yield analysable data that would identify the factors, which could be tested quantitatively.

Furthermore, the study sought to provide information that would form the basis for recommendations for practice.

4.2. Research Population

The target population of this study consisted of customers (middle and upper class) of different telecom companies located in urban Uganda. The population of residents living in Kampala which is the base of the study is about 3,469,510 according to World population review website. Out if this population, only those above 15 years which were the least age within age of below 18 shall and will be eligible for this study. The reason for targeting urban areas in Uganda is because of the access of telecommunication services that the population have, and the fact that it is where the majority of people have access to mobile phones. The other greater reason for targeting population aged 15 (18 and above) is that it is assumed that these groups of people are likely to participate and freely engage in the study without any influence.

4.3. Sample and Sampling Technique

It is not always simple for researchers to collect data from different specific groups of people at ago. There are different ways of carrying out sampling not limited to stratified, simple random, but random sampling as presented here is the most reliable and in expensive (Hurlburt, 1979). It also allows a researcher to collect data for a long period without influencing respondents' results. The study intended to conduct sampling as opposed to carrying out a census because the population of Uganda is large, and it is inappropriate for the researcher to carry it out. In addition, the best way to reduce the influence of uncontrolled factors in research is to use random sampling (Emerson, 2015), by this way, participants consist of a population living and residing in urban places of Uganda particularly in Kampala in which telecommunication services trade mostly.

The study was carried out in urban Uganda. A random sampling method was adopted because the research intended not to influence any result that might nullify the aims and

objectives of the study. And for this reason, the researcher followed all appropriate procedures to avoid errors that may occur in the study.

4.4. Data Collection

When designing a survey, the primary goal is to improve data collection activities and reduce survey error. However, one should also note that one of the most challenges to survey researchers is deciding upon which data collection technique to use in a contemporary situation (De Leeuw, 2005). Therefore, it is likely that the most cost-effective method may not be optimal if the researcher has his other expectations.

The most important advantage of collecting one's data is that the operation of theoretical constructs, research design, and data collection assures coherent and makes the data useful in solving underlying problems (Hox and Boeije, 2005). Primary data is intended to be used in this research. Primary data was mainly collected using a self- administered questionnaire. The questionnaire was circulated electronically using email, Facebook, and other online platforms of which respondents were supposed to return upon completing filling in.

4.5. Data Collection Instruments

A self-administered questionnaire was used to obtain respondents data. The data collection tool consisted of both closed and open-ended questions in line with the research questions. The questionnaire also consisted of SERVQUAL dimensions (Reliability, Responsiveness, Tangibles, Assurance, and Empathy) subdivided into 24 statements, which were directed to measuring service quality in urban Uganda.

The first part provides information related to demographic dimensions of respondents such as age, marital status, and gender. The second part provides information of telecom companies that respondents are subscribed to, the number of years they have so far spent using the operator's line. The next step provides information related to perceptions of customers towards service quality in urban Uganda.

The model of the present study was used as a guide for the structured questionnaire because it provides an in depth understanding of full information of research questions in which it tries to describe how customers perceive quality of services in urban Uganda and in reality, while also measuring their customer satisfaction levels.

4.6. Validity and Reliability

Reliability and Validity are among the most important criteria with which to assess the credibility of research findings. The two must be mirrored in the measurements and variables of research and in findings. Validity can be defined as the extent to which a concept is accurately mensurable in a quantitative manner. Validity is also more concerned with the accuracy of scientific findings.

There are three general types of validity namely construct, content, and criterion validity. Criterion validity was carried out with the help of literature to find out whether the questionnaire was consistent with other questionnaires used in other studies. The content validity of the questionnaire of this study was also followed by an extensive review of substantive literature that is related; the face validity of the measurement instrument was assessed by a conducted pilot study. Reliability refers to the extent to which studies can/ are replicated (LeCompte and Goetz, 1982). Saunders et al. (2009) suggests that the measurements should be precise and reliable, so that if another researcher uses the same instrument or measurement, that researcher should obtain results that are consistent. Cronbach's α is the famous tool and test employed by researchers to determine internal consistency of an instrument (Heale and Twycross, 2015) and it displays the extent to which a set of items constituting a scale are inter-related.

The values of Cronbach's alpha range between 0 to 1. The higher the values, the higher the reliability of the scale and vice versa. Generally, for good reliability, the values of Cronbach's alpha should be 0.70 and more (Cronbach, 1951). It is said that 0.70 and above is generally accepted. However, this does not mean that 0.60 cannot be accepted. In fact,

researchers emphasize that it is acceptable for newly developed measures such as of this study.

4.7. Method of Data Analysis

The present study is a quantitative and we expect to present quantitative results after carrying out analysis. Different software packages are available for carrying out analysis of quantitative data some of which are broader in scope and user friendly such as the statistical package for the social sciences (SPSS). The study used descriptive and inferential statistics to analyse data with the aid of SPSS Version 21.

The study used frequencies and percentages as the mode of analysis for the first section of the instrument which was focused on demographic information. The frequency and percentage tables provided a general count for the responses and formed the first stage of describing data collected. In the second stage, means/averages were used to calculate the different questions including the three variables that help to provide a general understanding of the typical responses and this has been discussed in relation to the demographic information.

The study also calculated the correlation between the independent and the dependent variables as well as the control variables in order to establish the relationship and determine the influence of the independent variables on the dependent variable, where any existed. Thus, the study used both inferential and descriptive statistics to investigate the data provided by the respondents who participated and to provide results and conclusions expected of the study. Presentation of data was done in form of tables, charts, and graphs only where it provided successful interpretation of findings.

CHAPTER V

RESULTS AND ANALYSIS

This chapter will focus on presenting results from the study. The findings will follow a systematic order from descriptive analysis, demographic analysis, reliability statistics and so more. The results reflect online questionnaires that were filled by respondents who are living within urban Uganda. There are only 511 respondents who fully filled the questionnaire online.

5.1. Demographic data

The findings on respondents' demographic data are presented in this section; this includes respondents' age, marital status, gender, level of education, and employment status, number of years they have been using different networks in Uganda.

5.2. Age

Table 4 below show results that were extracted from SPSS (V21) analysis. The analysis shows the different categories of ages that filled the online questionnaire that was found on different platforms. Results report that ages between 23-24 had the highest number of respondents with 39.7%, followed by those within the age of 18-22 with 27.8%. 15% of the respondents were aged 46 and above while 16.8% was aged below 18 years.

Table 4.1: Age

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Below 18	86	16.8	16.8	16.8
	18-22	142	27.8	27.8	44.6
	23-45	203	39.7	39.7	84.3
	46 and above	80	15.7	15.7	100.0
	Total	511	100.0	100.0	

Source: Author,2021

5.3. Gender

The study findings indicate a high proportion of male respondents with a percentage of 58.9% compared to women who had 41.1% as tabulated in **Table** . This likely sums up that women's' interaction with mobile phones and telecommunication services is still low in urban Uganda as to compared to the rate of their counterpart.

Table 4.2: Gender

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	301	58.9	58.9	58.9
	Female	210	41.1	41.1	100.0
	Total	511	100.0	100.0	

Source: Author, 2021

5.4. Marital Status

Results from the statistics indicate that people who are single (P= 30.7%) have the majority number of using telecommunication services than other groups followed by

Divorced respondents with 20.5%. The number of those married however seems to have fallen short of this studies' expectations having 19.0%. Furthermore, the number of widowed people 20.5% seem to be higher than those cohabitating with a 13.7% as tabulated in **Table 4.3**.

Table 4.3: Marital Status

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Single	157	30.7	30.7	30.7
	Married	97	19.0	19.0	49.7
	Cohabitating	70	13.7	13.7	63.4
	Divorced	105	20.5	20.5	84.0
	Widow/ Widower	82	16.0	16.0	100.0
	Total	511	100.0	100.0	

Source: Author, 2021

5.5. Level of Education

The results in the table describe the level of education of respondents who participated in the study. As clearly indicated in the table, the number of participants in undergraduate were the highest with a percentage of 43.8% followed by master students with a frequency of 142. It is also believed that the young population makes up the highest total number of telecommunication service consumers in Uganda due to the increase in the population increase of youths. High school accounts for the lowest amount of frequency (F= 44%). This is attributed to regulations and rules in Uganda that do not allow under aged students to carry phones while at school.

Table 4.4: Level of Education

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	High school and below	44	8.6	8.6	8.6
	Undergraduate	224	43.8	43.8	52.4
	Masters	142	27.8	27.8	80.2
	PhD	101	19.8	19.8	100.0
	Total	511	100.0	100.0	

Source: Author, 2021

5.6. Employment Status

Those who participated in the research were requested to clearly indicate their status of employment as shown in table 8. Self-employed respondents account for the highest number with 25% followed by salary earners with 21.9 %. It should be noted that most of the self-employed Ugandans spend time communicating and conducting business on phone. As reflected in the table, the number of non-employed Ugandans accounts for 17% and this explains the reason as to why telecommunication services are only concentrated in urban areas of Uganda. From this point of view, it means that 83% of the population earns money making it considerable for conducting marketing research.

Table 4.5: Employment Status

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Student	97	19.0	19.0	19.0
	Salary employed	112	21.9	21.9	40.9
	Self employed	131	25.6	25.6	66.5
	Retired	84	16.4	16.4	83.0
	Not employed	87	17.0	17.0	100.0
	Total	511	100.0	100.0	

Source: Author,2021

5.7. Independent Variables

A descriptive analysis for independent variables was carried out to find which variable was concerned more by customers. The five SERVQUAL dimensions that were run in the analysis are presented in the table below. According to the results, it was found that empathy was as significant less attractive (M=14.6399; SD=3.80241) than that of other variables. This arguably represents that the people in Uganda are less concerned about empathy than other variables. In other words, they are more concerned about other variables.

In addition, responsiveness looks to be the most important variable that influences customers to buy telecommunication products and services. It has the highest mean (M=15.1663; SD=3.24758).

Table 4.6: Independent Variables

	Mean	Std. Deviation	N
TANGIBILITY	14.9726	3.38382	511
EMPATHY	14.6399	3.80241	511
TARRIFS	14.9217	3.38592	511
RELIABILITY	15.1663	3.24758	511
SATISFACTION	13.7202	2.95156	511
RESPONSIVENESS	15.1292	3.59452	511

Source: Author,2021

5.8. Inter-item Correlation

An inter-item correlation was carried out using Pearson correlation test to find out the existence of any relationship between independent variables excluding controlling variables. The findings show that tangibility had the highest relationship with tariffs, r (0.786; $P < 0.01$). Whereas the relationship between tangibility and reliability followed

with r (0.619; P < 0.01). The results further proved that variables namely reliability and tariffs also had a strong relationship, r (0.602; P < 0.01)

Table 4.7: Inter-item Correlation

	TANGIBILITY	EMPATHY	TARRIFS	RELIABILITY	SATISFACTION	RESPONSIVENESS
TANGIBILITY	1.000	.466	.786	.619	.480	.543
EMPATHY	.466	1.000	.521	.343	.597	.482
TARIFFS	.786	.521	1.000	.602	.490	.531
RELIABILITY	.619	.343	.602	1.000	.452	.531
SATISFACTION	.480	.597	.490	.452	1.000	.466
RESPONSIVENESS	.543	.482	.531	.531	.466	1.000

Source: Author

5.9. Reliability and Validity of the Scale

- **Case Processing Summary**

The table below shows the total number of respondents who filled the questionnaire online. Since no value was excluded from the analysis, we expect that respondents prompted/ attended to all the available questions and that no question was left unanswered.

Table 4.8: Case Processing Summary

		N	**%**
cases	Valid	511	100.0
	Excluded[a]	0	.0
	Total	511	100.0

Source: Author, 2021

Table 4.9: Reliability Statistics

Reliability Statistics		
Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.806	.716	9

Source: Author, 2021

The results from reliability analysis in table 12 above clearly indicate that there is a high level of internal consistency of the scale used by the study. This is well explained by the value of Cronbach alpha which is 0.806.

Table 4.10: Correlation

	1	2	3	4	5	6	7	8	9
AGE (1)	1								
GENDER (2)	.030	1							
HLO EDUCATION (3)	.072	.065	1						
TANGIBILITY (4)	-.057	.033	.018	1					
EMPATHY (5)	-.038	.043	.109*	.466**	1				
TARRIFS (6)	-.042	.005	.031	.786**	.521**	1			
RELIABILITY (7)	-.016	.025	-131**	.619**	.343**	.602**	1		
SATISFACTION (8)	-.035	-004	-104*	.480**	.597**	.490**	.452**	1	
RESPONSIVENESS (9)	-.041	-005	.013	.543**	.482**	.531**	531**	466**	1

Source: Author, 2021

* Correlation is significant at the 0.05 level (2-tailed)

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

Correlation intends to measure the strength of association between two variables. How do we get to know the correlation between variables? This is done by looking at the values in the individual cells of the correlation matrix that present Pearson correlation coefficient between each pairwise combination of variables. Correlations in this study were statistically significant at 0.05 and 0.01, respectively. In the table, controlling variables are categorised as age, gender, and highest level of education.

Highest level of education was found to be correlated with empathy (0.109), reliability (-0.131), and satisfaction (-0.104). Highest level of education is slightly negatively correlated with reliability (-0.131), but this value is close to zero that there is a strong evidence for a significant association between them. Ugandans who have studied within higher institutions of education prefer to choose telecom companies that solve their problems without interaction. Furthermore, there is a chance for learned people to choose telecom companies that are available 24 hours a day in case if a customer encounters a problem.

Empathy and tangibility are correlated with a coefficient of 0.466. This means that the more empathy the telecom company is towards its customers, the more they would make their show rooms and infrastructure to look better so as they attract more customers.

Correlation between tariffs and tangibility, as well as empathy. Tariffs has a positive correlation coefficient of 0.786 with tangibility. The increase in tariffs for different telecom services accounts for an improvement in companies' infrastructure and tangible components such as top up cards for credit on the mobile phones.

Results in the table above also present correlation between reliability and other variables of tangibility, empathy, and tariffs. The level of reliability is highly attributed to the level of sophisticated technology that the company uses. For a call centre to be reliable, there should be a reliable network and data for online communication.

Responsiveness is positively correlated with tangibility (0.543), empathy (0.482), tariffs (0.531), reliability (0.531), and satisfaction (0.466). Customers prefer telecom companies that are responsive to their inquiries. The more responsive the customer support centre are, the more empathy and reliable they are assumed to be by customers, hence the more satisfied they become.

Table 4.11: Over all Model fit summary

Model Summary							
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics		
					R Square Change	F Change	df1
1	.678[a]	.460	.452	2.18547	.460	53.527	8

Model Summary		
Model	Change Statistics	
	df2	Sig. F Change
1	502	.000

Source: Author, 2021

a. Predictors: (Constant), Responsiveness, Gender, Age, Highest level of education attained, Empathy, Reliability, Tangibility, Tariffs.

The overall model fit represents the correlation between the predicted and observed values of customer satisfaction which is .678. The R squared is the proportion of variance in dependent variable (customer satisfaction) that can be predicted from the independent variables which in this study are categorised as age, gender, highest level of education, tangibility, responsiveness, empathy, tariffs, and reliability. R squared is also referred to as the coefficient of determination.

As indicated in the table above, the value of 46% of the variance in satisfaction can be predicted from independent variables. This technically means that 46% of customer satisfaction is predicted from level of independent variables. However, these results

measure the overall strength of the association and unlikely, they never reflect the extent to which any independent variable is associated with the dependent variable. To understand this, check table 15 below.

Table 4.12: Durbin-Watson test

Model Summary[b]					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.678[a]	.460	.452	2.18547	1.705

Source: Author, 2021

The independence of observations is checked by examining for independence of errors using the Durbin-Watson test. Durbin-Watson test also tests for autocorrelation in the data set. Autocorrelation can be important for technical analysis which is mostly concerned with the relationships of different data more especially in the marketing environments. The value of Durbin-Watson test ranges in values from 0 to 4. A value from 0 and less than 2 means that there is a positive autocorrelation and values from 2 to 4 indicate a negative autocorrelation. Considering our model, the Durbin-Watson test is lesser than 2 indicating a positive autocorrelation within the sample.

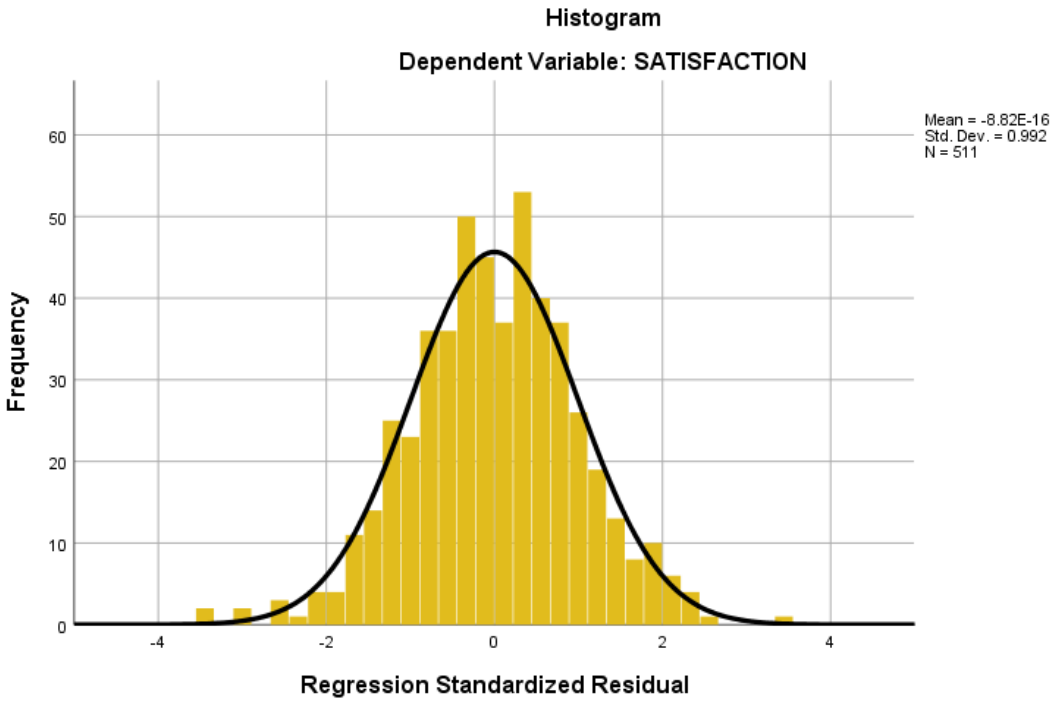

Figure 4.1: Histogram of approximately normally distributed data

Source: Author, 2021

Univariate normality tests are essentially done to look for data that is not normally distributed. For data to be normally distributed, the histogram should be perfectly symmetric and belly- shaped. However, the histogram is not the formal way to test for normality because it is not useful for small sample sizes as it is hard to get a clear vivid of the distribution.

It however gives us the ability to quickly visualise the distribution of our variable and it also gives us a rough idea of whether the distribution is nicely bell shaped. In this case, our histogram meets this criterion. Therefore, our dependent variable is nicely normally distributed.

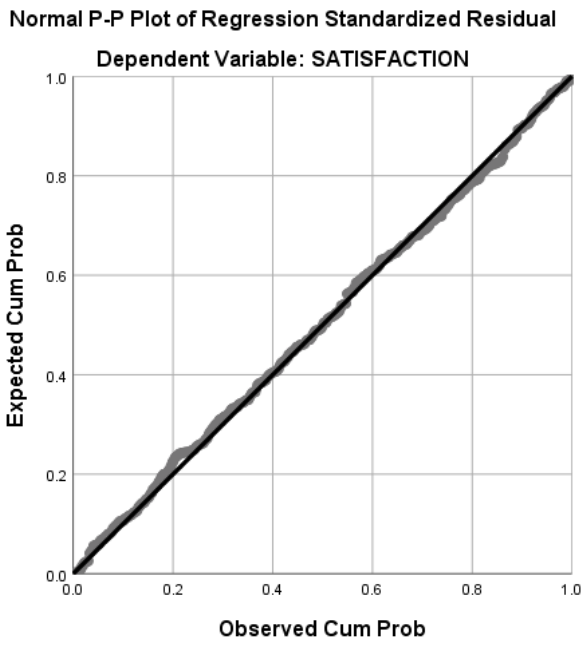

Figure 4.2: Normal P-P Plot of regression Standardized Residual

Source: Author, 2021

In statistics, a normal probability-plot is a plot used for examining how 2 sets of data are close. It can also be used as a graphical aid to a test of a fit of probability distribution (Michael, 1983). It's clearly known that the P-P plots two cumulative distribution functions (cdf's) against one other. Normally, range from 0 to 1.

The comparison line in the analysis is the 45° line that has ranges of from (0,0) to (1,1). The distributions are said to be equal if the plot falls on the line. Thus, any deviation indicates create a gap between the distribution (Derrick et al., 2016) or non-normality. The dots of our plot are along the 45-degree line. So, since they lie within the degree line, we have a normality of residuals.

Table 4.13: ANOVA

ANOVA[a]						
Model		**Sum of Squares**	**df**	**Mean Square**	**F**	**Sig.**
1	Regression	2045.291	8	255.661	53.527	.000[b]
	Residual	2397.691	502	4.776		
	Total	4442.982	510			

Source: Author, 2021

a. Dependent Variable: SATISFACTION

b. Predictors: (Constant), Responsiveness, Gender, Age, Highest level of education attained, Empathy, Reliability, Tangibility, Tariffs.

One should remember that ANOVA, regression, and T-test are all part of the general linear model. So, the results in the table above are also another way that we can look at our linear model. The table tells us that the model with several predictors works better than simply predicting using the mean. The significance value .000 in the table means that using independent variables as our predictor is better than not using independent predictor in the model. Nevertheless, the ANOVA table simply tells us that the model works. See below to the regression- coefficients explanation to find out how the model works.

Table 4.14: Coefficients

coefficients[a]						
Model		**Unstandardized Coefficients**		**Standardized Coefficients**	**t**	**Sig.**
		B	Std. Error	Beta		
1	(Constant)	4.884	.708		6.896	.000
	Age	.021	.103	.007	.209	.835
	Gender	-.125	.198	-.021	-.632	.528
	Highest level of education attained	-.454	.111	-.138	-4.092	.000
	TANGIBILITY	.083	.049	.095	1.680	.094
	EMPATHY	.346	.031	.446	11.023	.000
	TARRIFS	.045	.050	.051	.901	.368
	RELIABILITY	.126	.041	.138	3.038	.003
	RESPONSIVENESS	.083	.035	.101	2.343	.020

Source: Author, 2021

While ANOVA tells us whether our model works well, we are yet to find out how the model works. This table tells us how the individual predictor variables contribute to the model. First, there are two types of coefficients in the table, and this is unstandardized and standardized. We have the B values that help us to create our regression equation. Additionally, there is also something interesting about T-test scores. If it is not significant, then it means that predictor variables do not add to a model, and if that is the case, we ignore it and the vice versa is true. When we carefully investigate our model, there are predictors with significant levels of statistics.

A bivariate regression was conducted to examine how well (independent variables) such as Age, gender, highest level of education, tangibility, responsiveness, empathy, tariffs,

and reliability could predict the level of customer satisfaction. It was conducted to systematically test the hypothesis. Table 20 presents structured results for the full sample.

A scatter plot showed that the relationship between our independent variables and customer satisfaction was negative linear and did not reveal any bivariate outliers. The correlation between our independent variables and customer satisfaction was statistically significant, r (502) = .678, $P < .001$ (look back to our regression model summary).

The regression equation for predicting customer satisfaction from our independent variables was $y = 4.9 + .021 - .125 - .454 + .083 + .346 + .045 + .126 + .083 + e$.

The R^2 for this equation was .460; that is 46% of the variance in customer satisfaction was predictable from the level of independent variables.

Table 4.15: Collinearity Statistics

Coefficients[a]			
Model		**Collinearity Statistics**	
		Tolerance	**VIF**
1	(Constant)		
	Age	.988	1.012
	Gender	.989	1.011
	Highest level of education attained	.938	1.066
	TANGIBILITY	.337	2.967
	EMPATHY	.657	1.522
	TARRIFS	.331	3.018
	RELIABILITY	.518	1.929
	RESPONSIVENESS	.583	1.717

Source: Author, 2021

Our output above shows results of multicollinearity from SPSS. We have the variance inflation factor (VIF) and Tolerance. However, the focus on this output will be driven towards VIF. Collinearity can produce regression coefficients that are on average, wrong, and at times too large (Hoerl, and Kennard, 1970). The variance of a regression coefficient

is directly proportional to the collinearity of a dimension. Therefore, VIF below 10 are acceptable (Ronald, 1983) and a VIF of above 10 are indicators for a problem with multi-collinearity. In this case, we do not have any VIF with a value over 10.

Table 4.16: Collinearity Diagnosis

Collinearity Diagnostics[a]							
Model	**Dimension**	**Eigenvalue**	**Condition Index**	**Variance Proportions**			
				(Constant)	**Age**	**Gender**	**Highestlevelofeducationattained**
1	1	8.535	1.000	.00	.00	.00	.00
	2	.143	7.730	.00	.39	.05	.09
	3	.110	8.810	.00	.43	.40	.14
	4	.102	9.156	.00	.03	.41	.57
	5	.038	14.964	.00	.01	.00	.03
	6	.028	17.511	.01	.01	.00	.00
	7	.020	20.687	.29	.08	.08	.01
	8	.015	24.106	.70	.05	.05	.15
	9	.010	28.925	.00	.00	.00	.00

Source: Author, 2021

The collinearity diagnosis table shows different sets of data. The importance of collinearity diagnosis is to confirm whether there are problems with multicollinearity. In our table above, the program in this case SPSS tries to extract uncorrelated dimensions from the predictor data of the model and if there is no multi-collinearity, all dimensions should contribute something meaningful to the variance of the predictor data set. On the other hand, we have multicollinearity, then one of more of the dimensions become redundant.

Eigen values as shown above in the table are from vector analysis. It is a standard rule that dimensions with a high Eigen value show a large independent contribution to the data and

dimensions with a very low eigen value are a problem. And because they are a problem, they do not contribute anything meaningful to the data which is assigned for multicollinearity. Looking at results from the table above, dimension 2-9 are all having no problem. However, it is not always simple to interpret results with eigen values because they at times depend on the number of predictors in the model.

The next column is the condition index. Condition indices are computed as the square roots of the ratios of the highest eigenvalue to each successive eigenvalue (IBM, n.d.). A rule of thumb is held that values greater than 15 indicate a multicollinearity possible problem and values greater than 30 a greater sign of a problem. In our table, four {dimension 6,7,8, and 9} of the indices are larger than 15, suggesting a possible multi-collinearity problem.

The next is to consider regression co-efficient decomposition matrix. Here, for each regression coefficient, variance is distributed to different eigen values. There are no dimensions that are linearly dependent because there isn't any dimension having a variance proportion greater than .90.

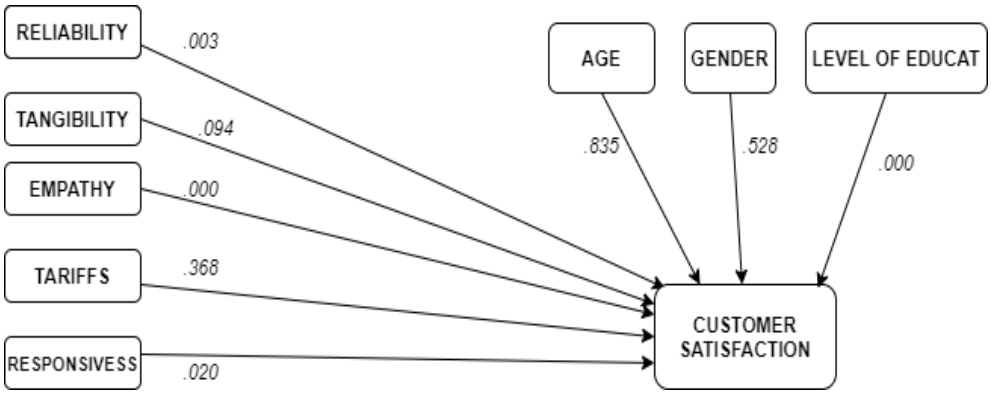

Figure 4.3: Regression -coefficients analysis results4.3

Source: Author, 2021

Table 4.17: Structural results for hypothesis

DIMENSION	PATH	SIGNIFICANCE	HYPOTHESIS
Reliability	CS	.003	**Supported**
Tangibility	CS	.094	Not supported
Empathy	CS	.000	**Supported**
Tariffs	CS	.368	Not supported
Responsiveness	CS	.020	**Supported**

Source: Author, 2021

H1 is fully supported meaning that reliability has a significant influence on customer satisfaction.

H2 is not supported meaning that tangibility does not significantly influence customer satisfaction in the Ugandan context.

H3 is supported denoting that empathy significantly influences customer satisfaction.

H4 is not supported meaning that tariffs do not influence customer satisfaction according to this study.

H5 is fully supported explaining that responsiveness of telecommunication companies largely influences customer satisfaction.

CHAPTER VI

DISCUSSION

The main objective of this study was to examine the effect of service quality on customer satisfaction. The particular focus of this study was to investigate the impact of mobile telecom service characteristics on consumer satisfaction in urban Uganda. Mobile telecom service characteristics were considered as SERVQUAL dimensions that affect customer satisfaction in the telecom sector of urban Uganda. This followed a couple of analysis was carried out considering customer satisfaction as the dependent variable and SERVQUAL dimensions as the independent variable.

The general findings of the study suggest that service quality dimensions influence customer satisfaction. As such, the study concludes that if one of the dimensions of service quality are handled with a high level of seriousness, then customer satisfaction is believed to increase with time. Along with the impact of service quality dimensions on consumer satisfaction, the theoretical development also hypothesized that control variables of age, gender, and highest level of education of respondent's impact customer satisfaction, but this also depends on different environments and cultures. Given the role of tariffs in influencing peoples behaviours to selecting what to buy in the markets, the study decided to employ the use of tariffs instead of assurance to measure its influence on customer satisfaction. This dimension (tariff) has been absent in the marketing literature.

Many scholars have been using it as a proxy in measuring customer satisfaction but not using it in SERVQUAL model. The findings however did not find any significant influence of tariffs on customer satisfaction. Results show that when customers feel like they want to purchase something, they do not care about the price of a product, rather; they care about consuming it and measuring its influence on satisfaction comes as when it is in usage.

The descriptive analysis in table 4 suggests that the highest number of people who filled in the survey which in this case online were above 23 years of age and that they are well conversed with the usage of mobile phones. This was then followed with descriptive of males having the highest number of respondents in the category of gender. It is also believed that males do carry out a lot of business with clients and this is one of the reasons as why they had the highest number of respondents from the analysis.

Based on the population of Uganda, this study assumed that the majority number of respondents would be married. However, this was not the case when majority of the respondents turned out to be single. In addition, the number of singles is also greatly increasing due to the rise in the number of youths. The government of Uganda laments that the number of youths has drastically increased from 2008 to present. Undergraduate students were also found to be the highest within the analysis. This is likely because most Ugandans can only afford to study undergraduate, and it is the level of education which attracts students from high school.

A descriptive analysis for independent variables was carried out and the analysis found out that responsiveness with the highest (M=15.1663, SD=3.24758) was the most important variable that influences customers to buy telecommunication products and services. In contrast, descriptive analysis also found out that empathy was less significant in influencing customers to buy telecom products and services.

Reliability analysis in table 12 clearly demonstrated that there is a high level of internal consistency of the scale used by this study. This is well explained by the Cronbach alpha value of 0.806. A Cronbach alpha of 0.70 and above is believed to be acceptable by many profound researchers, and a value of 0.8 and above is good. Since the Cronbach alpha from the analysis of our study was 0.806, it implies that this is good and acceptable.
Correlation was carried out to measure the strength of association between variables. According to our results, tangibility and tariffs was having the highest value of correlation with .786. Ugandans are found of responding to companies that deliver good products. Nevertheless, they also get attracted to companies with good show rooms with good

furniture inside and attractive colours. MTN is still ranked best when it comes to designing their customer care centres and improving on their infrastructure year to year. Thus, prices of MTN products are deemed not to be high as compared to other telecommunication networks.

Reliability and tangibility were ranked second having the highest correlation of .619. telecommunication companies that have good accessories and attractive customer care rooms in Uganda are perceived to be reliable to customers inquiries and complaints. It seems that telecom companies that are not reliable to customers problems are not attractive to most of the Ugandans. Therefore, companies should try to balance the way they do their operations in terms of reliability.

Correlation between observed and predicted values of customer satisfaction which in this study was .678 was represented by an on over all model fit. To find the capacity of variance within the dependent variable that are predicted from independent variable, we looked at the value of R squared. The value of R^2 was found to be 46%. This technically meant that 46% of customer satisfaction is predicted from the level of independent variables.

The regression model of this study showed the variability in total customer satisfaction is explained by the total SERVQUAL dimensions. The regression model shows how SERVQUAL variables affect customer satisfaction. The results indicate that all the service quality items; responsiveness, tangibility, empathy, reliability, and tariffs are good predictors of customer satisfaction. The significance of variables indicates that there was a relationship between the dependent variable customer satisfaction and the five independent variables (SERVQUAL dimensions) as well as three controlling variables (age, gender, highest level of education).

The regression results present to us that age of customers does not affect customer satisfaction. In other words, customer satisfaction does not depend on the age of customers. The results also presented that gender does not affect customer satisfaction.

Research assumes that gender of telecom customers does not significantly contribute to their level of satisfaction. However, results do highlight the importance of being educated. Those who attain education take a lot of time evaluating which telecom company to use. Because of this, results in our analysis assume that the more educated people become, the more they are likely to significantly affect customer satisfaction.

On the other hand, tangibility was found to be a lesser influencer of customer satisfaction. The results highlight that customers in Uganda do not care about how telecom companies design their customer care centres. According to this study, tangibility not to be important in influencing customer satisfaction lays a good foundation for discussions and arguments as to whether companies should always spend more of their money on maintaining and designing their show rooms.

The study also revealed that empathy is an absolute influencer of customer satisfaction. Our results correlate with those of Homburg et al., (2009) and Loke et al (2011) who put emphasis on empathy. Customers tend to reflect their emotions basing on how customer service representatives respond to their problems. In Uganda, it is whispered that MTN has one of the best empathetic customer care representatives, and that this is the reason as to why they are above other operating companies in terms of revenue generation as well as a larger customer base. Therefore, since our results show that empathy has a significant influence on customer satisfaction, customer care representatives of different telecom companies should utilize their empathetic skills to understand what upsets as well as what makes their customers happy.

Tariffs is always something that companies take caution of. At times, an increase results to dissatisfaction and vice versa. In this study, the dimension of tariffs was found to be insignificant of influencing customer satisfaction. These results throw concerns to the management of different companies in Uganda that charge high fares for less bundles. In addition, the results also shed light to understanding that customers in Uganda are more reactive when prices are deemed to be high. Just as an example of Leinsle et al, 2018, who found out how customers were judging tariffs basing on transparency, the same can be

applied to Uganda context. Therefore, the management of different companies should always consider of assessing the available market prices to price their products and services accordingly.

Reliability has been the backbone of service sectors. Companies that are deemed to be unreliable have witnessed a reduction in the number of customers over the time. Not to be different from the findings of Loke et al., (2011) as well as Van der Wal et al., (2002) whose study proposed that reliability was the important variable affecting customer satisfaction. The results of this study suggest that reliability significantly affects customer satisfaction in urban Uganda. Customers prefer to choose companies that are reliable 24 hours in case when a sudden problem needs to be quickly solved. Nevertheless, customer care representatives should be available to solve or help at the time when they are needed. Thus, during employee–customer interactions, employees should adopt an empathic behaviour that will enable them to establish an invisible connection with customers hence ensuring customer satisfaction.

Results from this study also proved responsiveness to be a good predictor of customer satisfaction. See Parasuraman et al, (1990) and Loke et al, (2011) to find similar results. The table suggests that customer satisfaction is influenced by responsiveness of customer care personnel while interacting with customers. Initially customer responsiveness measures the speed at which a company provides customer service and communication. The lesser time it takes for a company to solve a customer's problem, the more it will attract more customers. Where customers are required to wait for a long time for a customer care representative to reply, the more dissatisfied customers might easily become if adjustments are not made.

The regression equation shows that if there are no initiatives taken to increase the level of the identified variables (i.e., empathy, reliability, and responsiveness), the level of customer satisfaction is ought to decrease. In addition, telecommunication companies are urged to put more effort in improving the competence of staff by training them as well as making their services more reliable to customers' needs. This can be solved by acquiring

up-to date technologies that facilitate faster transactions as well as understanding customers complaints that need to be solved.

CHAPTER VII

CONCLUSION, MANAGERIAL IMPLICATIONS AND LIMITATIONS

7.1. Conclusion

In an attempt to investigate the impact of mobile telecom service characteristics on consumers in urban Uganda, the results of this study suggest that the five dimensions of SERVQUAL, are dichotomous and are subject to conditioning based on user perceptions. Especially, SERVQUAL the instrument is not homogeneous, and some dimensions probably matter more to users than others. It should be noted that this possibility exists because of a function of user experience of telecom services.

Data from an online survey of 511 consumers were collected. The data collected was analysed using SPSS 20. Linear regression was then run to empirically test the research model and the results obtained from the table are below.

The results suggest that dimensions of reliability, which refers to the probability of a firm to perform its intended service dependably and accurately for a specific period, and the dimension of responsiveness, which is the ability to provide quality services at a higher speed as well as empathy rank highly in terms of influencing customer satisfaction. These results are consistent with those of Parasuraman et al (1990), Loke et al (2011), as well as Homburg et al (2009), who found out that responsiveness, reliability, and empathy were ranked higher when examining SERVQUAL dimensions.

When people experience stress at work, they usually demand reliability and responsive services that might help them meet their deadlines scheduled at their workplaces. In this case, the charge/tariff, and the nature of tangible components of services are relatively less important to a user who is in need of solving a contemporary problem. Our results stress

that Ugandans care about how responsive and reliable telecommunication companies are. This sends a signal to management bodies of different companies to always rethink or redesign their business to meet customers' demands in a quick manner.

Our results also highlight the importance of SERVQUAL dimensions in measuring service quality adding on the future that most of the Ugandans are satisfied with the services offered by the telecommunication companies. The study recognises how these dimensions are a perfect measure in understanding the nature of different markets (this takes us back to our objectives). Our results have proved that to an extent, service quality dimensions affect customer satisfaction (see regression-coefficient analysis in table 20). There are different studies that confirm the likeliness of customer satisfaction being affected by service quality. (For example, Eugine and Mary, 1993; Surprenant, 1982; Cronin et al, 2000; Carlson and O'cass, 2010; Sivadas and Baker-PreWitt, 2000; Rust and Oliver, 1994; Muhammad et al, 2011; and Ravichandran et al, 2010) all confirm that service quality affects customer satisfaction.

The main difference between this study and studies mentioned above is that our analysis did not measure the difference or gap that exists between customers perceptions and expectations while measuring the influence between customer satisfaction and service quality. Instead, this study measured how individual dimensions of service quality influence satisfaction basing on the responses provided by various respondents from the online questionnaire. This is the first limitation of the study. Therefore, for anyone interested in measuring the effect of service quality on customer satisfaction, measuring the gap between respondents' perceptions and expectations of different services should be considered.

Finally, the study has suggested for SERVQUAL model to be a good measure in explaining the variance in customer satisfaction and overall service quality. The key to any organization is to satisfy customer needs. In today's environment, it is so important for telecom companies to deliver what is promised to customers in a preferable manner so that customers are also highly retained. On this same note, since our results have proved

for the importance of SERVQUAL model, managers should be able to grasp through all dimensions of the model to find out which attribute is most treasured by customers. By doing this, it will be easy for them to overhaul organizations strategies and directing them towards customers' interests.

7.2. Managerial Implications

This study has identified several important implications that need service managers to take note of. Firstly, employees of telecommunication companies must adopt empathic behaviours during employee–customer interactions. Employees are one of the internal customers and the first stake holders of an organisation. This directly affects their way of operation because empathetic behaviours they portray have a direct impact on brand awareness and the same effect on loyalty. It should be noted that this study identified that empathy significantly influences CS. Thus, employees are supposed to be trained on how to show empathetic behaviours to create a pro-customer image at workplace. Once this is installed, customer loyalty increases, the number of customer increases, as well as employee's behaviour being overhauled.

Secondly, service reliability should be put in place to secure existing customers as well as attracting new ones. Strategies that outline the importance of reliability should be made. This can be through making sure that connectivity is made available throughout the whole geographical areas of Uganda. Uganda is well known to have low connectivity especially in areas outside Kampala. Perhaps reliability of telecom companies entirely depends on how they establish their services accessible to everybody in different areas. This should then be followed by employing employees with the right skills to promptly attend to customers problems as soon as possible. Managers should therefore avoid employing employees with low interpersonal skills who cannot easily identify problems in rush conditions.

Thirdly, the results of this study confirmed the importance of responsiveness. The most important element in a business is to be able to respond to a challenge in a quick manner.

Once this is not present, then there is no reason for making negotiations. For a better service, managers should always consider hiring employees who can easily identify customers problems. Customer care personnel who attend to phone calls always have a gift of understanding callers' problems that need to be fixed. And the same applies to customers, their intention to call support centres is to seek for solutions not explanations. Therefore, managers should think to integrate process restructuring to clearly figure out recurring problems so that they are attended to.

7.3. Limitations

It is important to measure perceptions and expectations while measuring CS and SQ. The present study unfortunately did not consider the two to measure the existing gap of service quality. While it did not use perceptions and expectations to measure customer satisfaction and service quality, the two should be taken seriously while evaluation markets. Future studies are hereby emphasized to incorporate and likewise consider measuring service quality using the perception-expectation model. Using perception-expectation model does not only measure the existing gap of service quality but also helps to identify valuable features or elements considered by customers in different industries.

Besides not employing the use of perceptions and expectations, the population or total number of respondents is another factor to consider while carrying out research. It should also be noted that the sample size of 511 is quite low to consider given the total number of customers in urban places located in central Uganda for different telecom companies. Research that involves many participants is highly preferred to research with low number of participants. In fact, low participants lead to data generalizations. Therefore, further research should focus more on surveying more people by using measures to gather data and more measures centred towards objectives to lessen the number of self-reporting bias.

Moreover, this study particularly focused on only urban areas found in the central region of Uganda to investigate the impact of telecom service characteristics on consumer satisfaction. The major aim of concentrating only in urban areas is partly because major

telecom service activities happen in these specific areas than in other rural areas. However, still this amounts to a greater portion of failure because it dismissed/ignored the importance of other regions which is not acceptable while carrying out research. The idea of being selective while carrying out research is not recommendable because it reduces the relevance of the study just in case the study will be used in other fields. Perhaps future research can also think about incorporating all active users of telecom services in Uganda rather than focusing on only urban areas.

Assurance is said to be one of the best dimensions incorporated in SERVQUAL model to measure CS. This study did not list assurance in the model, instead it incorporated tariffs to find out what people think about and to evaluate its influence on customer satisfaction. Thus, future studies should incorporate assurance to fully examine its effect on CS in telecom sector of Uganda.

Nevertheless, age, gender, and highest level of education are used as control variables in this study to measure CS and SQ. This study suggests that future studies can also consider more customer characteristics (e.g., tribes, level of education) as control variables to measure customer satisfaction and service quality.

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APPENDIXES

APPENDIX A

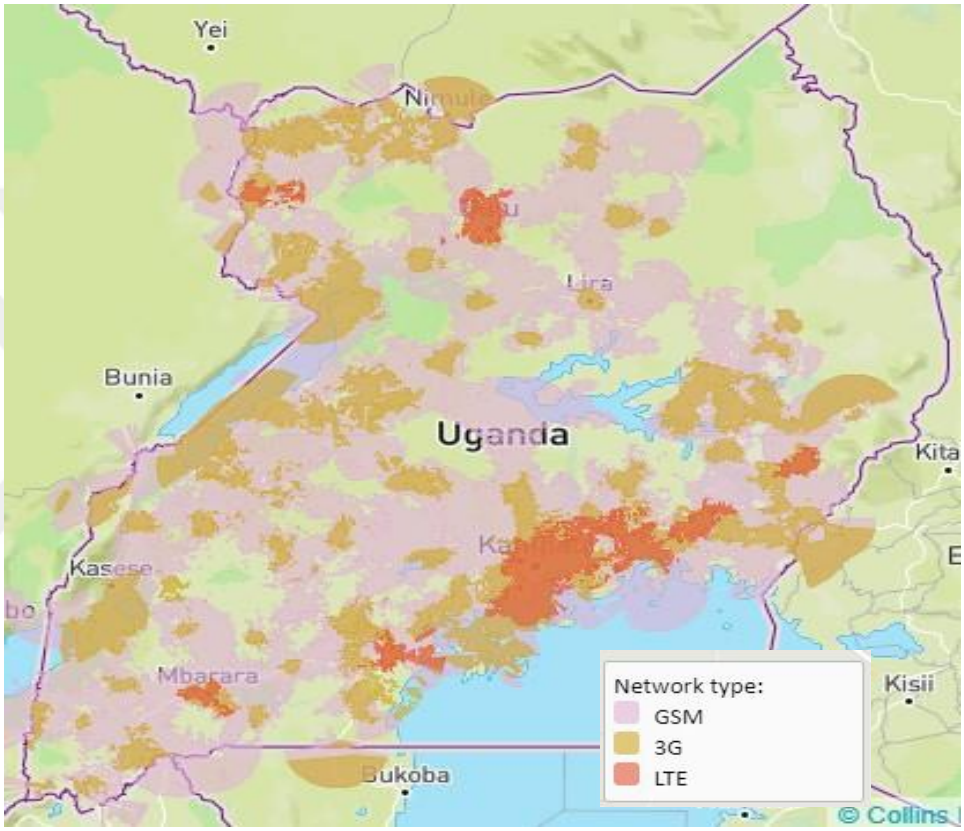

Figure A. Africell Network Coverage Map in Uganda

APPENDIX B

General Notice No. 977 of 2017.

UGANDA COMMUNICATIONS COMMISSION

THE UGANDA COMMUNICATIONS ACT, 2013

NEW LICENSE FRAMEWORK, FEES AND FINES

IN EXERCISE of the powers conferred upon the Uganda Communications Commission under sections 6(1)(a), (d) and (e) of the Uganda Communications Act 2013, the Commission approved the following license categories, license fees, spectrum charges and fines for implementation effective the date of this notice.

(a) TWO WAY RADIO COMMUNICATIONS SERVICES

No.	CATEGORY	FEES in UGX
1.	HF Fixed Station	110,000
2	HF Mobile Station	110,000
3	VHF & UHF Fixed station	75,000
4	VHF & UHF Mobile station	75,000
5	VHF Hand held sets	75,000
6	Application processing fees	50,000

(b) RADIO STATIONS BROADCASTING FEES

	CATEGORY	FEES in UGX
1	Application processing fees (One off)	6,240,000 (Non Commercial Radio Stations) & 9,400,000 (Commercial Radio Stations)
2	Initial entry fee/ change in ownership (One off fee)	33,000,000 (National commercial Radio – Tier 1) Commercial Regional Stations (25,000,000 Tier 2; 20,000,000 for Tier 3; & 15,000,000 for Tier 4) Community/ Non Commercial Radios (200,000)
3	Commercial Radio License	10,000,000 Tier1; 8,000,000 for Tier 2; 6,000,000 for Tier 3 and 5,000,000 for Tier 4
4.	Non -Commercial Radio License	2,000,000
5.	Spectrum fees (Radio)	ERP watts <1120 = Shs.500,000 ii) ERP = 1120 &<ERP <2800 = Shs.750,000 iii) ERP> 2800 &<ERP 5600= Shs.1,000,000 iv) ERP> 5600 Shs 1,000,000 for every 2800
6.	Studio Transmitter Link	1,000,000
7.	Online Radio	100,000 per year(Providers of such service to be granted authorisation as opposed to licenses)

TIERS CLASSIFICATION:

Tier 1 National Radio; Tier 2 Kampala Region; Tier 3 Jinja, Mbale, Soroti, Lira, Gulu, Arua, Fort Portal, Masaka, Mbarara; Tier 4 Rest of the country.

Factors: 1 for Tier 1, 0.8 for Tier 2 and 0.6 for Tier 3 and 0.5 for Tier 4 to be applied on initial entry fees, annual license fees and spectrum fees.

(c) BROADCASTING SERVICES (TELEVISION STATIONS)

No.	CATEGORY	FEES IN UNITED STATES DOLLARS
1.	Application processing fees	2,500
2.	Public Infrastructure Provider License -(National)	Initial Entry Fees (One off-100,000) Annual License Fees (30,000) And 2% on GAR
3.	Public Infrastructure Provider License -Regional)	Initial entry fees USD 25,000 ; Annual License fees USD. 3000 and 2% on GAR
4.	Content Service Provider- (Free To Air -National License –Single Stream)	Initial entry USD 20,300; Annual fees USD 17,600 per stream
5.	Content Service Provider- (Free To Air -National License –Multiple Streams)	Initial entry USD 40,500 Annual fees USD 67,600 per licensee
6.	Content Service Provider – (Free To Air – Regional –Single Stream)	Initial entry USD 5400 Annual fees USD 2,700
7.	Content Service Provider – (Free To Air – Regional –Multiple Stream)	Initial entry USD 5,400; Annual fees USD 5400 per licensee
8.	Content Service Provider - Free To Air -International Single Stream	Initial entry USD 27,000 & Annual fees USD 20,300 per stream
9.	Content Service Provider (- Pay TV –National -Single Stream)	Initial entry USD 27,000 ; Annual fees USD 20,300
10.	Content Service Provider (- Pay TV –Regional -Single Stream)	Initial entry USD 8,100; Annual fees USD 4,100
11.	Content Service Provider (- Pay TV – International -Single Stream)	Initial entry USD 32,400 ; Annual fees USD 27,000
12	Content Service Provider (- Pay TV –National -Multiple Streams)	Initial entry USD 67,600 Annual fees USD 150,000 per licensee
13.	Content Service Provider (- Pay TV –Regional -Multiple Streams)	Initial entry USD 20,300 Annual fees USD 33,800 per licensee
14.	Content Service Provider - Hybrid TV (Single Channel)	Initial entry USD 21,600 Annual fees USD 18,900
15.	Subscriber Management Services	Initial entry USD 13,500 Annual fees USD 5,400
16.	Public Broadcaster Fee - UBC	33,800 for all streams per annum
17.	Private Television Stations (Spectrum charges)	ERP watts /12db gain/channel : ERP 3865 =USD **1,350;** ERP 3865-6440w = Usd. 1,800; ERP6440-12885w= **USD 2,200** ERP 12885-19330w = USD **2,700** ; above ERP 19330 USD 270 for every 1288 watts above 19330 watts per transmitter
18.	Application to offer an innovative communication service for Academic/Research, and/or for potential commercial purposes but when not covered by the existing license category/regime (For Six Months renewal only once)	USD1,350

No.	CATEGORY	FEES IN UNITED STATES DOLLARS
19	Content Service Provider (Online Broadcasting)	USD 8,100 per stream per annum
20	Logical Channel Numbers (LCN)	a) Premium Logical Channel Number UGX 3,000,000 b) Ordinary Logical Channel Number UGX 600,000 c) Ordinary Logical Channel Number (Content Aggregators; UGX 4,500,000 for 1st 10 channels; & UGX 300,000 for every extra channel d) Premium Logical Channel Number (Content Aggregators; UGX 9,000,000 for 1st 10 channels; & UGX 600,000 for every extra channel
21	Online Data Communication Services (Publishing)	USD 20 per annum

[Note: Factors based on geographical regions will be applied on the above fees as follows: A factor of 1 shall be applied to Kampala region; a factor of 0.8 shall be applied on all regional licenses/ fees outside of Kampala region and a factor of 0.6 shall be applied on stations in hard to reach areas as defined by the Commission.]

(d) RADIO TRANSMISSION LINKS (MICROWAVE LINKS)

The annual spectrum fee payable is based on the formula:

Frequency Fees (FF) = Up x K1x BW x Nf x Fr

Where FF = Frequency Fees
Up= USD 120 per transmit frequency per site
K1 is the Frequency band factor, where:
K1= 0.7 f ≤ 8GHz
K1= 0.6 for 8GHz ‹ f ≤ 15GHz
K1= 0.5 for 15GHz ‹ f ≤ 23GHz
K1= 0.4 for 23GHz ‹ f ≤ 38GHz
K1= 0.3 for f > 38GHz

Nf = Number of same transmit frequencies in the network
Fr is the Frequency reuse factor, where:
Fr = 1 for first 10 frequencies reuse
Fr = 0.3 for next 10 frequencies reuse
Fr = 0.1 for frequencies reuse ≥ 20 times

(e) ACCESS BANDS:

	Band Category	Fees in USD (per Mhz paired)
1.	1.7GHZ	2,700
2.	3.3GHZ	4,100
3.	3.5GHZ	4,100
4.	2.3GHZ	4,100
5.	2.6GHZ	5,400
6.	800 Mhz	24,300 for 1st 5 Mhz paired, & 150m per extra Mhz above 5 mhz paired
7.	900 Mhz	40,500 for first 5Mhz & 121,600 per extra Mhz above 5Mhz
8.	1800Mhz	20,300 for first 5Mhz & 40,500 per extra Mhz above 5Mhz
9.	2.1Ghz	27,000 for first 5Mhz & 81,100 per extra Mhz above 5Mhz
10.	450 Mhz	5,400
11.	GSM Jamming services	135 per device

(f) LICENSE FEES:

		Fees in USD per annum (unless stated)
(i)	**TELECOMS**	**Fees in USD per annum (unless stated)**
1.	(i) Application processing Fees	2,500
2.	(ii) Public Infrastructure Provider (PIP) initial entry fee	100,000 (One off)
3.	(iii) Public Infrastructure Provider Licence	30,000
4.	(iv) Public Service Provider Licence (Voice & Data)	10,000
5.	(v) Public Service Provider Licence (Capacity Resale) Initial entry	3,000
6.	(v) Public Service Provider Licence (Capacity Resale) Annual Lic Fee	3,000
7.	(vi) Customer premises bloc wiring & Repair Workshop Application Fee	85
8.	(vi) Customer premises bloc wiring & Repair Workshop	500
9.	(vii) Satellite phone users licence	500
(ii)	**SALE OF TELECOM APPARATUS**	
1.	Application fees	1,000
2.	National distributors of telecoms apparatus Annual License fee	5,000
3.	Importers, Wholesalers of telecoms apparatus Annual License fee	2,500
(iii)	**POSTAL SERVICES**	
1.	Application fees	190
2.	Domestic (City to city)	400
3.	Domestic (National) Courier License fee	1,000
4.	Regional Courier License fee	2,500
5.	International Courier License fee	5,000
6.	Postal-Reserved National Operator	50,000 (Five year licence)
(iv)	**SERVICE AUTHORISATION**	
1.	(i) Application processing fees	140
2.	(ii) Private VSAT use Authorisation	2,500
3.	(iii) VSAT fees per Node	100 per node per annum
4.	(iv) Medical & Educational use VSAT	500
5.	(v) Satellite Earth Stations	10,000
(v)	**SHORT CODES**	
1.	Short code application fee	250
2.	Initial entry fees - One time	1,000
3.	Range 140-189	2,000
4.	Range 6000 - 8999	2,000
5.	Range 200 - 298	10,000
(vi)	**D. TYPE APPROVAL**	
1.	Application processing fee	20
2.	VSAT type approval	20
3.	VSAT Registration	100

		Fees in USD per annum (unless stated)
4.	Telecom Network Subsystem	150
5.	Telecom base station subsystem	625
6.	Media Gateway subsystem	1,500
7.	Radio Equipment ≤10 watts	100
8.	Radio Equipment 11-25watts	200
9.	Radio Equipment 26-50 watts	300
10.	Radio Equipment 51-100	500
11.	Radio Equipment >100watts	1,000
12.	PABX	500
13.	Vehicle immobiliser	150
14.	Tracking Device	50
15	STB's	150
16	Mobile TV, IDTV	200
17	TV & Radio Broadcast equipment	200
18	Community Broadcast equipment	150
(i)	**LEVY ON GROSS ANNUAL REVENUE(GAR)**	**2% of GAR**
(j)	**FILM INDUSTRY LICENSES**	
1.	National Distributor	270
2.	Regional Distributor	80
3.	Exhibition License	135
4.	Exhibition Premises - Cinema	270
5.	Exhibition Premises - small (Bibanda)	27
6.	Permit to stage a play	27
7.	Filming Permit (Local Film)	27 per film
8.	Filming Permit (International Film)	1,000 per film
9.	Filming License (National)	1,350
10.	Public Performance Permit	27
11.	License Commercial Still photography	27
12	Permit exhibit film, documentary of photography	27
13.	Permit advertise exhibition of a play or commercial still photography or a documentary	27

(k) FINES

	Violation	Fine (in USD unless stated)
1.	Failure to disclose information to the Commission	260
2.	Failure to display required notice, certificates, authorisations at premises or on communication equipment or apparatus.	260
3.	Failure to maintain required records	260
4.	Failure to implement a lawful order issued by the Commission	260
5.	Denial of the regulator access to premises, apparatus, equipment, information	260
6.	Unauthorised discontinuance of services licenced by the Commission	The Commission may invoke s.41 and fine 10% of Gross Annual Revenue(GAR)
7.	Exceeding power limits	260 per day of offence or if repeated the Commission invoke s.41 and fine up to 10% of the GAR
9.	Failure to engage in required frequency coordination	260
10.	Failure to install band pass filters	260 per day from day of commission of offence or may if repeated the Commission invoke s.41 and fine up to 10% of the GAR
11.	Over modulation	260 per day from day commission of offence or may if repeated the Commission invoke s.41 and fine up to 10% of the GAR
12.	Distribution of prohibited content	260 or invoke s.41 and fine
13.	Reconnection fees	540
15.	Exceeding antenna height	260 per day when the offending antenna remains high
16.	Relocation without authorisation	260 per day of operation from the date of relocation
17.	Air testing without authorisation.	260 or prosecution under s.26(3)
18.	Falsifying information	s.41 and fine up to 10% of the GAR
19.	Non-compliance with any of the provisions of the codes, guidelines and standards of the Commission.	260
20.	Failure to pay for services within the stipulated time	All Annual licence fees are subject to a monthly interest of 2% where it remains unpaid ninety (90) days after it becomes due

UGANDA COMMUNICATIONS COMMISSION

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Email: **ucc@ucc.co.ug**, Website: **www.ucc.co.ug**

Figure B. UCC Licence Fees

APPENDIX C

Questionnaire

KINDLY CONTRIBUTE TO MY STUDY

I am a student currently studying master's in management (MIM) at Ibn haldun university. I would like to inform you that this is my greatest opportunity having you as one of a few people who are about to sacrifice their time to attend to my questionnaire. I am undertaking a research topic which is about "INVESTIGATING THE IMPACT OF MOBILE TELECOM SERVICE CHARACTERISTICS ON CONSUMER SATISFACTION IN URBAN UGANDA". Please help me to collect data by answering the following questions. This research is intended for academic purposes only and every respondent will be treated as anonymous. I would like to thank you in advance for contribution.

1. Age

- Below 18
- 18-22
- 23-45
- 46 and above

2. Gender

- Male
- Female

3. Employment status

- Student Salary employed
- Self-employed
- Retired
- Not employed

4. Highest level of education attained

- High school and below
- Undergraduate
- Masters
- PhD

5. Marital status

- Single
- Married
- Cohabitating
- Divorced

- Widow/widower

6. Which of the following mobile operators are you subscribed to? Select as many lines you are accredited to.

- Airtel
- Mtn
- Africell
- Smile telecom
- Lyca mobile
- K2 telecom

7. How many years have you been using this operator (S)?

- Less than a year
- 1-5 years
- Over 5 years

8. What is your tariff plan?

- Prepaid
- Post paid
- Don't know

9. Would you re-register your favorite line just in case it gets lost or damaged by prevailing conditions?

- Yes
- No

For the following table, please give your opinion to each statement below by simply attaching your basis on different avenues. These questions are asked in relation to your preferred/ favorite mobile network mentioned in 6 above.

PRICE AND TARRIFS

10. The pricing policies of products and services for this network are attractive

1. Strongly disagree
2. Disagree
3. Neutral
4. Agree
5. Strongly agree

11. I will continue using this network unless only if there are poor adjustments made to prices

1. Strongly disagree
2. Disagree

3. Neutral
4. Agree
5. Strongly agree

12. This operator offers prices for different services that suit my needs

    1. Strongly disagree
    2. Disagree
    3. Neutral
    4. Agree
    5. Strongly agree

13. Price ranges for this network are better than other networks

    1. Strongly disagree
    2. Disagree
    3. Neutral
    4. Agree
    5. Strongly agree

RELIABILITY

14. This network has a good coverage nationwide

    1. Strongly disagree
    2. Disagree
    3. Neutral
    4. Agree
    5. Strongly agree

15. This service provider accurately keeps all transactions safe and reliable

    1. Strongly disagree
    2. Disagree
    3. Neutral
    4. Agree
    5. Strongly agree

16. There are enough number of shops allocated within different regions

    1. Strongly disagree
    2. Disagree
    3. Neutral
    4. Agree
    5. Strongly agree

17. Services are delivered as intended by service providers

1. Strongly disagree
2. Disagree
3. Neutral
4. Agree
5. Strongly agree

CUSTOMER SATISFACTION

18. I am happy with my network because it meets all my expectations

1. Strongly disagree
2. Disagree
3. Neutral
4. Agree
5. Strongly agree

19. Instructions of all products and services provided by this network are self-explanatory and easy.

1. Strongly disagree
2. Disagree
3. Neutral
4. Agree
5. Strongly agree

20. I am happy for a wide range of products and services offered by this network

1. Strongly disagree
2. Disagree
3. Neutral
4. Agree
5. Strongly agree

21. They always look for what is best for a customer

1. Strongly disagree
2. Disagree
3. Neutral
4. Agree
5. Strongly agree

RESPONSIVENESS

22. They give immediate feedback to users, even when they cannot fulfil their requests immediately.

1. Strongly disagree

2. Disagree
3. Neutral
4. Agree
5. Strongly agree

23. They let users know when processing is in progress

1. Strongly disagree
2. Disagree
3. Neutral
4. Agree
5. Strongly agree

24. The provision of services occurs as soon as they are contacted

1. Strongly disagree
2. Disagree
3. Neutral
4. Agree
5. Strongly agree

25. This network provides different means of contact through telephone, shops, emails, over the counter, Posta and website.

1. Strongly disagree
2. Disagree
3. Neutral
4. Agree
5. Strongly agree

EMPATHY

26. The customer care team carefully understands what I tell them

1. Strongly disagree
2. Disagree
3. Neutral
4. Agree
5. Strongly agree

27. All responses of this network are shaped to fulfil customers' demands and interests

1. Strongly disagree
2. Disagree
3. Neutral
4. Agree
5. Strongly agree

28. I am always saved by customer care personal on how to protect my transactions.

1. Strongly disagree
2. Disagree
3. Neutral
4. Agree
5. Strongly agree

29. Employees of my network are always polite and nice

1. Strongly disagree
2. Disagree
3. Neutral
4. Agree
5. Strongly agree

TANGIBILTY

30. Customer care staff of this network is always smart and clean easily aligning with their job

1. Strongly disagree
2. Disagree
3. Neutral
4. Agree
5. Strongly agree

31. I always like the furniture and couch because they are comfortable for customers' interaction with customer care within the showrooms

1. Strongly disagree
2. Disagree
3. Neutral
4. Agree
5. Strongly agree

32. Counters are always equipped with sophisticated facilities like Wi-Fi, camera, re-load machines

1. Strongly disagree
2. Disagree
3. Neutral
4. Agree
5. Strongly agree

33. Materials and information related to services (promotion banners, cards) are always clearly displayed

1. Strongly disagree
2. Disagree
3. Neutral
4. Agree
5. Strongly agree

34. Would you recommend others to use the same network (s) you are using?

- Definitely
- Probably
- Not sure
- Probably not

CURRICULUM VITAE

Personal information:

Fawz Manyaga

Education:

2015-2018 BA in business Administration, Makerere university, Uganda

Experience:

2021-2021 Plastturk Makina

2021-2021 Elemental Geri Dönuşüm A.Ş

2019-2020 Bussecon international

2018-2019 Sena Foundation

2019-2019 Ministry of East African community Affairs Uganda

Publications:

Manyaga, F., & Taha, A. (2020). Linking firm performance with board diversity: A literature review. *Bussecon Review of Finance & Banking* (2687-2501), 2(1), 10-18. https://doi.org/10.36096/brfb.v2i1.160

Manyaga, F., Nilufer, N., & Hajaoui, Z. (2020). A systematic literature review on multi-criteria decision making in disaster management. *International Journal of Business Ecosystem & Strategy* (2687-2293), 2(2), 1-7. https://doi.org/10.36096/ijbes.v2i2.197