ASSESSMENT OF QUEUE MANAGEMENT PRACTICES IN RELATION TO CUSTOMER SATISFACTION: CASE OF SELECTED TIGO SHOPS IN ARUSHA, TANZANIA

THOMAS BULUDA

A DISSERTATION SUBMITTED IN PARTIAL FULFILLMENT OF REQUIREMENTS FOR THE DEGREE OF MASTER OF PROJECT MANAGEMENT (MPM) OF THE OPEN UNIVERSITY OF TANZANIA

2020

CERTIFICATION

The undersigned certifies that he has read and here by recommends for acceptance by the Open University a dissertation entitled, **Assessment of Queue Management Practices in Relation to Customer Satisfaction: Case of Selected Tigo Shops in Arusha, Tanzania:** In partial fulfillment of the requirements for the award of Degree of Master of Project Management (MPM) of the Open University of Tanzania.

…….

Dr. France Shayo

(Supervisor)

…….……..

Date

COPYRIGHT

DECLARATION

I, **Thomas Buluda,** do hereby declare that, the work presented in this dissertation is original. It has never been presented to any other University or Institution. Where other people's works have been used, references have been provided. It is in this regard that I declare this work as originally mine. It is hereby presented in partial fulfillment of the requirement for the Degree of Master of Project Management.

……

Signature

…….……..…

Date

DEDICATION

I dedicate this work to my beloved wife and my parents. Their never ending encouragement and prayers has made this work to be an achievable goal. Lastly but not least, I thank God for his guidance throughout the entire period of the research work.

ACKNOWLEDGEMENT

This work is a result of a good communication and collaborations with a number of people and institutions.

Firstly I would like to humbly thank Dr. France Shayo my supervisor, for his dedicated assistance and guidance throughout the entire period of the research from early proposal development to this final dissertation work.

Secondly, I would like to thanks Tigo for allowing me to conduct my research at their shop. Their support has been of great help. Special thanks go to Mr. Vitalis (cop manager north zone) for his friendly support during the data collection phase. The same goes to Mr. Victus Valeria (The Sokoine Drive Tigo shop Supervisor/ branch manager).

I am also indebted to the Open University specifically Arusha center, for their assistance whenever needed. I am again thankful to my family for their tolerance and support during the entire period of the research. Lastly I would like to appreciate the contribution of all those who helped me directly and or indirectly in one way or another. This dissertation has been achieved through hard work, perseverance and most importantly by God's Grace!

ABSTRACT

The main objective of the research was to assess queue management practices in relation to customer satisfaction at Sokoine Drive Tigo shop at the city of Arusha. A sample of 68 Tigo customers visiting the shop were randomly selected and provided with the questionnaires to answer questions therein. All questionnaires were answered. Queue management was observed by looking at the waiting time for service, the waiting environment conditions and service quality in relation to customer satisfaction. The result showed that a significant percentage of the customers were satisfied with how queues were managed at the shop. Regression analysis shows that, service quality and waiting room conditions were correlated to general satisfaction of customers towards service provided at the shop, but the service time had no effect on the satisfaction of the customers. The conclusion of the research is that, application of Queue management system (QMS) in the shop enhances an excellent customers experience at the shop. Though few things (such as making sure all services offered are always at the required standards and quality) need continual attention by the shop authorities to boost a good customer- management (Tigo staffs) relationship. As a recommendation, the shop management should see how best they can increase the waiting room space especially during peak periods. Customers should also be informed at what time they will be served so as to make their experience an enjoyable one. Lastly but not least, the Tigo shop management and staffs should emphasis a bit more on the responsiveness and reliability service dimensions to increase customers perception and satisfaction on them as compared to tangibility, assurance and empathy.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

LIST OF ABBREVIATIONS

ANOVA	Analysis of Variance
FCFS	First Come First Served
LCFS	Last Come First Served
MPM	Masters of project management
QMS	Queue Management System
SERVQUAL	Service Quality
SIRO	Service in Random Order
SMS	Short Message Services
SPSS	Social Package for Social Science

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

We normally encounter queues (waiting lines) in our life while attending different issues at different service provider industries, companies, or office/ business outlets. This experience is mostly devastating if the premise attended has a poor established queue management system. A well managed queue management system in service delivery industries is beneficial to all stakeholders involved.

Queue management is the most vital section in maintaining the satisfaction level required by customers. Queuing theory deals with waiting lines and its related activities. A person is likely to encounter a queue whenever he/ she pay a visit to a bank, hospital, a restaurant and the like. The theory utilizes mathematical models and performance measures to assess and hopefully improve the flow of customers through queuing system (Yusuf, Blessing, & Kazeem, 2015).

In the contemporary business environment, queue management in any service delivery industry is an imperative issue that must be handled correctly and efficiently. Time is of paramount importance in everyone daily activity. A person paying a visit to any service delivery company or outlet is expecting to be served in a very short time possible and in an efficient manner. Unfortunately this is not what is experienced in most cases. Poor adherence to institutional and/ organization working ethics, poorly established and/ managed queue management practices and complacency of working staffs might be some of reasons for the delays of services. In a short term analysis, the

effect of poor queue management practice in relation to customer satisfaction might be neglected and/or ignored. This negligence might pose a slightly different effect when long term assessment/ analysis are carried out. A company concerned might lose potential customers and directly affects their overall profit margins, eventually sustainability might be tempered negatively. Brahma (2013) in his paper titled "Queuing theory and customer satisfaction: A review of terminology, trends and application to hospital practice", had a story from patient's perspective which will elaborate the importance of time and a well established queue management practice to customer satisfaction:

I just arrived at my local hospital to get a new prescription filled and to pick up a few other things. There is a line of four people in the registration counter and six people sitting in the waiting area. By the time I get to the counter to hand the cashier/ technician my prescription, 5 minutes have passed. I asked how long the wait will be and I am told 30 to 40 minutes. I go about my shopping and return 35 minutes later. Again, there are people in the line at the register and it takes me another 5 minutes to find out that my prescription is not ready. Feeling weary and frustrated, I have a seat in the waiting area. As I sit there, I watch people come and go and wonder, "Wasn't I here before that guy?" At last my name is called! I pay the cashier and my pharmacy encounter is complete. However, I don't feel good about it. Why did I have to wait so long? Did others get special priority over me? Maybe another hospital or pharmacy will service my needs better? Am I a satisfied patient or customer? (Brahma, 2013).

The story above is experienced by a lot of people whenever they pay visits to different service industries for their purchases, especially when queue management is poor or

not practiced at all. The long term effects to the concern organization are bad normally. Shaw, (2013) published an article titled “15 Statistics that should change the world-but haven’t”. In it he showed that, 96% of unhappy customers don’t complain, however 91% of these will simply leave and never come back. He also pointed out that, a dissatisfied customer will tell between 9-15 people about their experience, and around 13% of dissatisfied customers tell more than 20 people. He further showed that, happy customers who get their issues resolved tell about 4-6 people about their experience. With this revelation, the importance of customer satisfaction to the well being of any business oriented organization is inevitable.

Depending on the type and how well established queue management practices in an organization, customers may balk, reneged or jockey while waiting for service. This experience is mostly frustrating to all stakeholders concerned. Though this might be taken lightly/ not seriously especially when competition is minimal or none at all, the situation is quite different when the competition is of great magnitude. Customers may switch between companies temporarily or permanently. With queue management as a component of service quality, customers will chose and prefer a company offering quality services. It was with this in mind Tigo was selected to assess its commitment to customers happiness in relation to the queue management practices at the selected shop.

Tigo Tanzania is a mobile phone company with a vast experience in the cellular network in Tanzania. It is the first cellular network company which was granted operational license in 30 November, 1993. Back then known as Mobitel, the company passed through different operational and business phases until 2006 when it became a

full flagged digital GSM Network Company and rebranded to Tigo, Wikipedia (2019). Currently the company offers a diverse product portfolio in Voice, SMS, high speed internet and mobile financial services. Just recently (4 November, 2019) the company has announced the completion of takeover of Zanzibar Telecom Public Limited Company (Zantel) from Zanzibar to expand its operational and customers base (Tigo, 2019).

1.2 Statement of Research Problem

The waiting experience for service is mostly frustrating in a lot of places. In Tanzania, there are a number of mobile phones service operators. Tigo, Vodacom, TTCL, Halotel are some of the companies within the industry with viable operation licenses in Tanzania. Products and services offered by these companies do not vary much. They all offer registrations for lines, voice call services, short message services (sms), mobile money services, internet connection services and other services to a vast range of customers. To be a client of either company, one has to buy and register a line to start enjoying the services offered by the chosen company.

In previous years (i.e. before may, 2019), conditions for acquiring a selected company's line was straight forward. An eligible person back then had several identification options to use for registration such as driving licenses, workers ID, voters ID and so on. As of may 2019, the conditions were changed and only the National Identity Card is recognized and required for one to register the line. The exercise requires all previous registered mobile phone users (those registered using other IDs with the exception of those who used the National Identity Card) to re-register their lines using this current procedure, where biometric finger prints are used

and the identification card used being National Identity Card only. The exercise is time limited (ending 31st December, 2019) for old clients to re-register their lines in their respective mobile phone service providers.

The explained line re-registration above and other issues are the driving forces for customers to pay a visit to mobile phone shops, including Tigo shops. Different research reviews and personal experience in Tanzanian environment shows that, most of the service delivery industries visited, such as banks, other mobile phones shops, super market and the like, queue management is practiced. It was observed that, some of these companies have put a lot of emphasis on the application of queuing theory in dealing with lines management at their premises. It was interesting to note that, both linear and virtual means of queue management practices were observed in some places. This tends to fasten the speed of service delivery and decrease the amount of time a customer spends in a concerned company.

However, application of queuing theory by a company to solve waiting line issue does not guarantee directly efficiency, a company has to go extra miles to study and re-study queue management issues to stay afloat in the ever changing business arena. In contemporary business environment almost each service delivery industry is applying queuing theory in solving queue issues, but it is the attention to details that makes the difference among companies. Maina (2013) pointed that, the usual purpose of applying queuing theory models or techniques is to facilitate the identification of an adequate but not too liberal facility.

It was anticipated that, queues will be encountered in most of the shops if not all. The aim of this research work was to observe and assess how the management of the Tigo shop to be visited deals with queue management to make customers waiting experience a less boring, hassle free and rather a fruitful, pleasant and a memorable positive experience all together A happy customer (service satisfied) means a lot to the sustainability of the company. This research aimed at assessing customer's satisfaction in relation to queue management practices and other services offered at the shop.

1.3 Research Objectives

1.3.1 General Research Objectives

The general objective of this study was to assess queue management practices in relation to customer satisfaction: case of selected Tigo shops in Arusha, Tanzania.

1.3.2 Specific Research Objectives

i. To assess how satisfied are customers regarding the length of time they spend waiting for service.
ii. To determine customer feeling regarding the waiting environment at the Tigo shops.
iii. To determine the service quality offered by the shops to customers.

1.4 Research Questions

1.4.1 General Research Question

How queuing management practices used by Tigo shops do affects customer's satisfaction on the products and services offered by the shop?

1.4.2 Specific Research Questions

(i) How satisfied are customers on the time they spend waiting for service?

(ii) How do customers feel on the waiting environment at the Tigo shops?

(iii) What is the quality of service offered by Tigo shop to customers?

1.5 Significance of the Study

Queues are encountered daily in different places as one seeks to purchase a product or a service. Unfortunately, customers experience with this unavoidable situation in most cases is not appealing. Tigo is the company with a vast experience in telecommunication services in Tanzania. This study aims at knowing, how this company applies Queuing Theory at its shops for efficiency and effective service delivery. As it is well known in the current business environment, keeping a customer happy is the number one goal of any business oriented company. The results of this work, will certainly be beneficial to the management of the concerned shops, and ultimately to the company to assess themselves on their status in product and service delivery. Are customers being attended and being treated fairly at Tigo shops? Such worries and solutions/ answers highlighted in this research will certainly be valuable to all stakeholders involved.

1.6 Organization of the Research

This work is divided into five main chapters followed by references and appendices section. Chapter one is an introductory chapter with background information on the selected topic of the research, research problem, research objectives and the importance of the research. Chapter two is mainly concern with literature review of

the study. It is also dealing with the conceptual definitions, empirical reviews of related studies to the current research, explanations of some theories related to this work, research gap identifies and the conceptual framework of the research. Chapter three deals with the research methodology, how data was collected, tools for data collection and procedure used for data analysis. Chapter four is for the results and discussions and chapter five deals with conclusion and recommendations of the research. The last sections in this Dissertation will be for references and appendices.

CHAPTER TWO

LITERATURE REVIEW

2.1 Chapter Overview

This chapter covers basic concept used in the study, theoretical literature review, empirical literature review, research gab and the conceptual framework of the study.

2.2 Conceptual Definitions

2.2.1 Queuing Management

According to Lee (2019) queue management refers to set of principles aimed at customer flow and streamlining the queuing experience. As well known to almost everyone of us, waiting experience in queues in various service industries is mostly disturbing. Due to a number of reasons, sometimes customers are forced to wait for long periods of time before being served or quitting the queue unattended. Using queue theory, most of these service industries have adopted and developed means that suits their organizations so as to make the customers waiting time a good and enjoyable experience. In other words, one could say, in contemporary business environment and mostly importantly in the service industries, application of a suitable queuing management system, is vital for profitability and sustainability of the business. Omendi (2018) pointed out that, organizations that fail to affectively deal with queue challenges may lose customers to rival companies. Furthermore, recently some of the companies have shifted their attention from traditional methods of handling customers in waiting lines to a recent and more modern way in which virtual queue management systems are preferred. Kuklin (2013) pointed out that, one of the

areas where a business or a company can look at in order to improve efficiency, productivity and customer satisfaction is the area or section dealing with waiting lines. According to Kuklin (2013) the use of sophisticated technology on queue management will have positive outcomes including optimization of customer flow, decrease of real and perceived time, customer experience is enhanced, increased efficiency of agents and managers are better informed of what is going on in queues at the specific periods.

2.2.2 Queue Discipline

Queue discipline refers to the order in which those in queues are selected for service. The most common queue discipline used is the first come, first served (FCFS). Others include last come, first served (LCFS), service in random order (SIRO) and priority service order. It should be noted that, the queuing chosen by the service facility would invariably affect the waiting time of customers in the system (Hillier and Lieberman, 2015).

As a result of queue discipline practiced in a concerned organization, a customer may sometime balk (deciding against joining the queue and leave the area), renege (entering the queue but becomes impatient and eventually leaving the line/or the area altogether) and/or jockey (shifting between lines in situations were waiting line is more than one thinking they will get served faster by doing so), David (2005) as cited in Maina, (2013). With virtual queue management system, jockeying is avoided as there is no physical line for customers waiting for service. This can be regarded as one of the advantages of the virtual queue management system.

2.2.3 Waiting Environment

A place where customers wait for service is the waiting environment. A good waiting environment normally has a positive effect to customers mind. Moreover waiting environment are made of physical designs i.e. architecture, layout and lighting, which create attractiveness in terms of comfort, spaciousness and atmosphere (Polar *et al*, 2018). The waiting environment can also be installed with other materials such as reading materials and TV screens to distract a bit customers minds while waiting for service. Polar *et al* (2018) also showed that, waiting environment has a direct impact on customer's satisfaction toward waiting time satisfaction.

Bielen and Demoulin (2007) stated that, there is a positive relationship between waiting time environment and waiting time satisfaction. Baker and Cameron (1996) did a study on "The effects of Service Environment on Affect and Consumer Perceptions of Waiting Time: An Integrative Review and Research Proposition". In their findings among others, they pointed out that, service managers should consider making the service environment as comfortable as possible for the waiting customers to influence time perceptions.

2.2.4 Waiting Time

The time a customer waits to be serviced in the waiting area is referred to as the waiting time. Brahma (2013) in his paper, pointed out that, although it is possible to manage and decrease actual waiting time and to some extent to manage patient expectations about patient satisfaction, managing the patient's perception of the queuing experience can be a vital element in satisfaction with the service interaction. He further emphasized that, the measurement of patient satisfaction as it relates to

waiting time is highly qualitative and subjective, and the relationship is generally inverse in nature (i.e. as waiting time increases satisfaction decreases).

Yusuf *et al* (2017) also did a study on Queuing Theory and Customer Satisfaction. in their findings, they demonstrated that majority of customers were dissatisfied with service offered and major cause of the dissatisfaction were the long waiting time.

Chin and Ling (2014) in their paper titled "The Effects of The Service Environment on Perceived Waiting Time and Emotions" showed that, a customer's waiting experience is composed of a perceived waiting time and his or her emotional response to the wait. They also pointed that, by improving this subjective experience (i.e. by making a customer feel that the time passed quickly or improving the customer's emotional state during the wait), it may be possible to reduce the negative perceptions when the wait is unavoidable.

2.2.5 Service Quality

Service quality has been defined several times in different ways by different researchers. Bitner *et al*, (1994) defined service quality as the customer's overall impression of the relative inferiority/ superiority of the organization and its services. Parasuraman *et al*, (1985) defined service as a function of differences between expectation and performance along the quality dimension.

This last definition seemed to be consistent with Roest and Pieters (1997) definition, which states that, service quality is a realistic and cognitive discrepancy between experiences based norms and performances concerning service benefits.

2.2.6 Customer

According to Investopedia website, a customer is an individual or business that purchases another company's goods or services. In today's business environment, a customer is the main focus of every service industry. Sustainability of a business oriented company is centered on pleasing customers strategically.

2.3 Theoretical Analysis

2.3.1 Queuing Theory

Queuing theory is concerned with mathematical study of queues or waiting lines, formulating mathematical models of queues and measuring performance using these models (Katoch and Wadhwa, 2014). Queuing theory has also been defines as the formal study of waiting line and is an entire discipline within the field of operations management (Brahma, 2013). The theory utilizes mathematical models and performance measures to assess and hopefully improve the flow of customers through queuing system (Yusuf *et al*, 2015). Vazsonyi (as cited in, Ndungu, 2013) observed that queuing theory provides a good conceptual model of waiting line conditions, because it gives one a general understanding of the influence of such factors as arrival distribution, service distribution and number of servers on queue conditions.

Queuing theory was developed to provide models to predict the behavior of systems that attempt to provide service for randomly arising demand. The pioneer investigator was A. K. Erlang, a Danish mathematician whose early work was on telephone traffic congestions in 1909 publication "The theory of probabilities and Telephone Conversations" (Harris *et al*, 2003). Ever since its inversion by Erlang in 1909, the theory has gained a broad application and uses in various service industries. Queuing

theory has been used in the past to assess staff schedules, working environment, productivity, performance, customer waiting time, and customers waiting environment (Yusuf *et al*, 2015).

Queuing theory can also been applied to a variety of operational situations where it is not possible to accurately predict the arrival rate (or time) of customers and service rate (or time) of service facility of facilities (Darlingtina and Obinwanne, 2015).

2.3.2 Queuing Models

There is a number of queuing models that can be considered. The most used models in several service industries are, single channel single phase model, single channel multiphase model and multichannel and multiphase models.

A basic queuing system is comprised of three main parts: The arrival process of users (customers) in the system, the order in which users (customers) approach service facility, once they join the queue (i.e. FCFS, SIRO or others), Service process and lastly the departure from the system.

2.3.3 Queuing Psychology

The experience of waiting in lines by customers for any service as mentioned earlier is disturbing. There are couple basic psychological aspects of customers in waiting lines have to be understood by service organization (Katoch *et al*, 2014).

Firstly, unoccupied time of the customer in the waiting line is always felt longer than occupied time. If a customer in service waiting is engaged with activity either himself or by service personnel, he will not feel waiting as longer. There has been several

suggestions on practicality of these, one being installment of TV screens in the waiting rooms.

Secondly, preprocess waits of customers is always felt longer by the customer than in-process waits. Obviously the customer do not take cognizance of longer time involved in the service delivery process as long as he is actively participating in the process. Thirdly, any anxiety on the part of the customer make him/ her to feel waiting time as subjectively longer.

Fourthly, uncertain waits appear longer to customers than known or certain waits. Customers need to be informed on how long they have to wait in queues for their turn to be serviced. Fifthly, any open explanation about why one has to wait so long, always relieves commotion in the mind of customer. Hence unexplained waits appear longer than explained waits.

Sixthly, customers obviously expect either equitable treatment or a specials favorable treatment from service personnel. Thus, any unfair waits appear longer to them than equitable waits. Any by-passing of a customer in the waiting line causes dissatisfaction. Further researches shows that, the perceived equality of customers in a service center has a vital positive effect on customer satisfaction of the service.

Seventhly, the more valuable the service, the longer the customer is willing to wait. Lastly, customers having solo waits feel it longer than those waiting in groups. It is always better to allow customers in groups for waiting. All of these psychological aspects of waiting lines have a great value for service managers who have to design service counters and operate them, to help customers in waiting lines.

2.3.4 Customer Satisfaction

A customer is a main driving force in today's service industries and companies. Retention and recruitment of new customers on any business, will depend much on how well, existing customers are treated. To do so, service industries and companies put a lot of efforts to satisfy their customers on the services or product they offer. Zari (2000), pointed that, organizations depend on customers more than the other way round. That is why organizations today are focusing on customer satisfaction, loyalty and retention.

Customer satisfaction has been defined in various manners with different scholars and researchers. Mwatsika, (2014) defined customer satisfaction as a response, emotional or cognitive, pertaining to a particular focus either expectations about a product or a consumption experience which occurs at a particular time, after the consumption, or choice or based on accumulated experience.

2.3.5 Measuring Customer Satisfaction

Measuring customer satisfaction is a bit tedious and tricky activity. A number of methods have been proposed and used in measuring customer satisfaction depending on the scope of the activity. Some of the methods used are, National Customer Satisfaction Index (NCSI), MUlticriteria Satisfaction Analysis (MUSA), Service Quality (SERVQUAL), Ordered Probit and Ordered Logit Model to mention the few.
In this research SERVQUAL model is adopted. The central idea in this model is that, service quality is primarily a function of different scores or gaps between expectations and perceptions (Jamali, 2007). The service quality research has been dominated by the SERVQUAL instrument, which is usually cluster in five group quality

determinants:. Reliability, responsiveness, assurance, empathy and tangible (Parasuraman *et al*, 1985); Ghobadian *et al*, 1994; Curry and Herbert, 1998; Wisniewsk, 2001) as cited in (Ngo, 2015).

2.4 Empirical Analysis

Studies and researches on different factors influencing customer's satisfaction in service industries worldwide are exhaustive. Presented below are some of those studies from other parts of world, Africa and Tanzania.

Choi and Sheel, (2012) did a research aimed at assessing the relationship between waiting services and customer satisfaction in family restaurant. The study used a survey in which 160 respondent questionnaires were administered and collected for data analysis. The questionnaires were collected from customers in family restaurants in Hampshire County, Massachusetts, during 2008. Descriptive analyses, factor analysis, and multiple regression analysis were employed for data analyses. The research finding were that, all grouped waiting management tools i.e. the sitting service, the visual media service, the human service, the menu service, and notice service have an impact to customer satisfaction. The research further stressed that, the most critical factor that affected customer satisfaction was sitting services. That is, providing spaces and chairs for waiting customers significantly enhance their satisfaction. The researchers pointed out the importance of a well managed waiting environment, something the current research is aiming to look at.

Austria, (2015) did also a study aimed at assessing the queue management practices of quick service restaurants in Lipa City, Philippines. Specifically the study was

conducted to determine the profile of the quick service restaurants in terms of queuing system used, waiting line structure and to assess the level of satisfaction of the customers on queue management practices in terms of customer arrival, waiting line and service facility. These were all among the issues deduced by the researcher. Using descriptive type of research, the researcher used observations, interviews and provision of questionnaires as means for data collection.

A total of three hundred and sixty three (363) respondents were given questionnaires. Questionnaires were used as source of primary data, while interview were also performed as source of secondary data together with information and theories published on magazines, newspapers and books. Data was collected during the peak days and hours. From the analyzed results (descriptive statistics, means, frequency, weighted means and T-test and ANOVA) the researcher found out that, the type of queue management practiced by the restaurant has a significant effect to customer satisfaction. Among others, the researcher recommended that, restaurants should consider the use of electronic queuing system to increase efficiency in serving customers.

Polas, Rahman, Miah, & Hayash. (2018). Conducted a research on the impact of waiting time towards customer satisfaction in fast food establishment at Dhaka, Bangladesh. The researchers collected primary data using a survey method through questionnaires. The survey was conducted among 165 randomly selected customers of the fast food restaurants available at Dhaka. Together with the demographic information obtained, the questionnaires also had questions for waiting environment, perceived waiting time, service quality, waiting time satisfaction and customer

satisfaction. Descriptive analysis was done together with correlation analysis to determine the relationship between tested variables. The researchers found out a significant positive relationship between perceived waiting time, service quality on waiting time satisfaction. They also reviled that, waiting time satisfaction is positively related to customer satisfaction.

Yusuf *et al,* (2015) did a study to examine how queuing theory has been used in offering satisfactory service to customers in banks in Abuja, Nigeria. The researchers used a survey approach to obtain primary data information through which out of 250 administered questionnaires, 200 were retrieved for data analysis. Secondary source of information from journals, book and e-books was also used to supplement primary data. The data were analyzed using regression model statistical techniques using SPSS. Their study showed that, customers were not satisfied with long time spent in queues before being serviced and services rendered to them. The researchers recommended that, with better understanding Queuing theory and various measures associated with customer waiting time, service managers can make decisions that are beneficial to all stakeholders involved.

Farayibi, (2016) investigated Queue theory on Nigerian Banking system with particular reference to GTBank and Ecobank Idumota branch, Lagos, Lagos state. In this study, the performance measures analysis including the waiting time and operation cost for the banks were computed with the view of obtaining optimal service level. The study concluded by emphasizing the relevance of queuing theory to the effective service delivery of the banking sector in Nigeria. It further recommended that, for efficiency and quality of service delivery to customers, the management of

the two banks should adopt 13- server and 15 server models respectively to reduce total expected costs and increase satisfaction. So the study showed that, with increased number of service channels to desired or optimal level, then the performance of the banks is also increased.

Odewole (2016) did a study on the impact of effective delivery system and technology driven services in banks in Nigeria. The researcher adopted the direct non-participatory observation to record time measurements and primary data. The study revealed that, the mean service rate, the mean time spent in the queue by a customer and aggregate service rate in the system by a customer are substantially reduced and the waiting line is short in a technology driven bank. The study conclude that, only technology driven services can reduce the customers waiting time and improves efficient service delivery systems in Nigerian modern banking.

Kamau, (2012) did a research to find out how waiting line management influences customer satisfaction in Kenyan banks. The research was carried out as a survey to all 43 registered commercial banks. Primary data was collected via administered questionnaires respondents which were one customer and one operation manager for each commercial bank. Descriptive statistics, percentage mean score and regression analysis were used for analysis of data. Through this work, the research found out that, majority of commercial bank customers are not satisfied with management of waiting lines. Customers were also not happy (not satisfied) with perceived waiting time, information provided in the waiting rooms and the waiting environment within the bank. The study recommended that, commercial banks in Kenya should invest in the provision of appropriate information to customers. The study further emphasized

the importance of adopting suitable strategies which will ensure customer satisfaction is a must. Furthermore the study pointed out the importance of the Banks to invest heavily on the issue of queue management.

A similar study to that of Kamau, but at a different service industry was done by Maina. Maina, (2013) did a research aimed at determining the relationship between queuing management practices and customer satisfaction at the customer care centers for the mobile phone providers in Nairobi, Kenya and to establish the principles used to manage queues in those customer care centers. Using stratified random sampling, the researcher used questionnaires to collect primary information from 104 respondents at the retail outlets within central business district at Nairobi. Descriptive statistics through percentage, proportions and frequency distribution was used to determine if there exists a relationship with queuing management practices. Regression analysis was also performed on the variables. The researcher found that, customers appreciate good services and he recommended that management should adopt queuing management practices in all outlets as this has shown to reduce customer waiting time, improve quality of service and subsequently increase customer satisfaction. The researcher emphasized the importance of automation of process and systems as means to ensure that customers waiting time is reduced. Continual training for customer care agents has also been emphasized, and lastly but not least, customers need to be informed on any improved technological trends for better understanding and improve their service experience.

Makanza, (2015) assessed the components of service quality and customer satisfaction at National Microfinance Bank (NMB) Temeke branch, Dar es Salaam, Tanzania. A

cross-sectional and descriptive research design was used by the researcher where by a purposive sampling technique and simple random samplings were used to obtain sample of 148 respondents, out of which 100 were customers and 48 were employees of NMB.

The researcher used both primary and secondary data for collecting data and information needed for the research. Questionnaires were used to retrieve primary data information. Data was analyzed. The researcher used positivism research philosophy in which probability and non probability sampling techniques were all used. Using Microsoft excel software date data were analyzed and results presented in tables, bar graphs, statements and percentage.

The findings of the study revealed that the service quality components (SERVQUAL dimensions) have effect on customer satisfaction. The findings further showed that, Empathy and Responsiveness dimensions have higher impact on overall customer satisfaction. The research pointed out that, Bank service quality has direct positive relationship with customer satisfaction. Finally the research recommends that, the banks should introduce back up services which works efficiently and they should also find a way to get feedback of their service quality from customers.

Mashingia, (2015) did a research to assess how customer care service provided by Tigo meet the need of its customers. The research used cross sectional survey and case study design to collect both quantitative and qualitative data. The research was done at Morogoro municipality in which a sample of 50 respondents (40 Tigo customers and 10 Tigo staffs) was selected based on judgmental and purposive sampling techniques.

The researcher also direct observation and questionnaires to obtain information required for her research objectives. Data obtained were run statistically via SPSS to obtain descriptive information of frequency distribution, percentage means and standard deviations. The researcher did not run a regression analysis. The results of the research show that, customers could not affirm directly to the satisfaction of the customer care service offered. She recommended that, the company can benefit from knowing on how customers regard their service quality. Knowing this will help the company to strategize effectively and efficiently for both customers and company's happiness and wellbeing.

Millas, (2013) did a research with main objective being to find out the interrelationship between service quality attributes, customer satisfaction and customer loyalty in the retail banking sector in Tanzania, the case being CRDB Bank. The study was conducted at CRDB Banks in Dar es Salaam. The study was empirical in nature in which a survey was conducted using questionnaires as instrument for obtaining primary data. Secondary data from relevant sources were also used in the research. A total of 40 respondents were used for data analysis, of which 20 were customers and 20 were Banks staffs. Data was analyzed using SPSS and results presented in form of tables, frequencies and percentages.

The findings of the research revealed that, all the service attributes were positively related to customer satisfaction. the researcher also recommended that, the Banks should always be up-to-date technologically and in terms of their service quality, they should pay much attention to the complaints and get regular feedback from customers point of view on the quality of service they are offering.

2.5 Research Gap Identified

As it has been noted in the empirical review section, a lot of work has been conducted in various service industries to evaluate, analyze various factors that have a direct or indirect effects to customers' behavior. Different researches show how important customers must be treated by a concerned service industry so as to increase its competitive edge in the market environment. Studies on queuing management practices and/ on customers satisfaction have been done in hospitals, restaurants, banks, carwash stations, fuel stations to mention the few. In most of the studies presented in the empirical review section, majority of the researchers were mainly concerned with assessing the impact of either service quality on customer satisfaction or the effects of waiting line periods on customer satisfaction. Few assessed other conditions such as waiting environment effects on customer satisfaction. Little has been done in the mobile phone service providers especially in Tanzania. It is the intention of this research, to find out how does Tigo (one of the telecommunication service provider in Tanzania among several) prevails and performs in queue management practices at its shops in Arusha by assessing the waiting time for service, waiting environment and service quality in relation to customer satisfaction.

2.6 Conceptual Framework

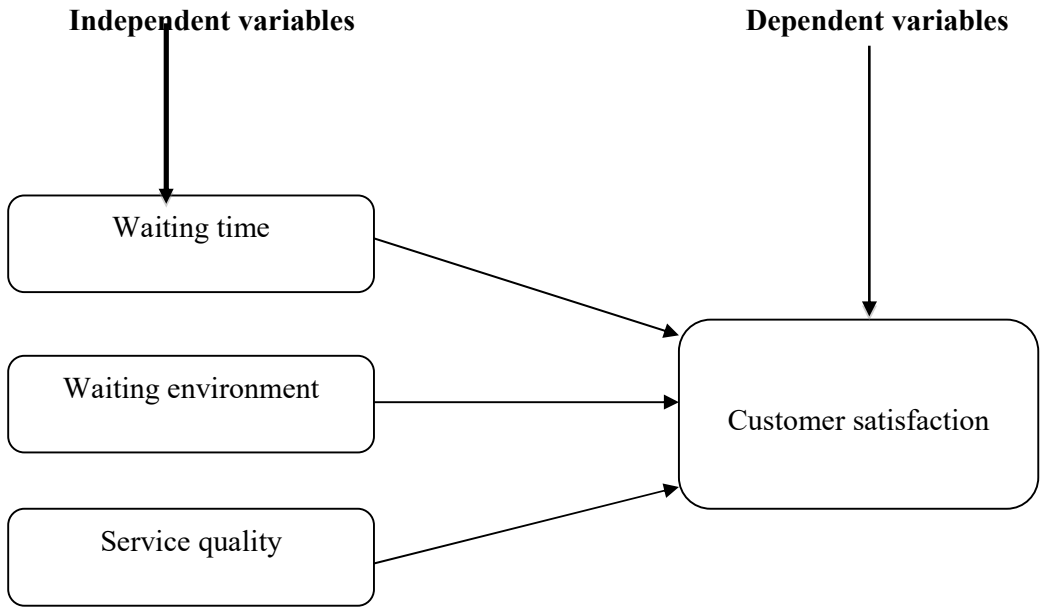

Figure 2.1: Conceptual Framework

Waiting time, waiting environment and all components of servqual model will be used as independent variables to evaluate the customer's satisfaction status.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Overview

The research used a descriptive research design. It is the type of research concerned with characteristics of a particular individual, or of a group, event or situation (Mbogo *et al*, 2012). One could say, descriptive research is primarily concerned with describing the nature or conditions and degree in detail of the present situation, the emphasis being on describing rather than on judging or interpreting, (Mbogo *et al,* 2012)

Interviews and questionnaires were the main instruments used by the researcher for data collection. Interviews were mainly used to get more information needed from Tigo staffs, while the questionnaire was used to collect data from customers. Most of the questions in the questionnaire were either 3 or 5 likert scaled. Appendix 1 shows the questionnaire.

After data has been collected via mentioned instruments, they were subjected to analysis using Spss software (version 16).

3.2 Research Philosophy

According to Saunders, Lewis and Thornhill (2019) the term research philosophy refers to system of beliefs and assumptions about the development of knowledge. The development of knowledge a researcher is embarking upon, may not be a dramatic as a theory of human motivation, but even addressing a specific problem in a particular organization you are, nonetheless, developing new knowledge (Saunders *et al*, 2019). Whether a researcher is consciously aware of them or not, Burell and Morgan (2016) pointed out that, at every stage in ones research, he/ she will make a number of types of assumptions. These assumptions are the basis of how one shape research questions to be researched, the method to be used and how the findings should be interpreted. Saunders *et al* (2019) further emphasized that, a well thought out and consistent set of assumptions will constitute a credible research philosophy, which will underpin the methodological choice, research strategy and ultimately data collection techniques and analysis procedures. Once this is followed, it will give room for a researcher to design a coherent research project in which all elements of research fit together (Saunders *et al*, 2019).

There are a number of research philosophies which are referred to in business and management researches. Among these philosophies are Positivism and Interpretivism which the current research adopted.

Saunders, (as cited in Stanley, 2015) pointed out that positivism philosophy is based upon the highly structured methodology to enable generalization and quantifiable observations and evaluate the result with help of statistical methods.

Saunders et al, (2007) define interpretive as a research philosophy that requires the researcher to seek in order to understand the subjective reality and meaning of participants. This research used both philosophies, with positivism being the main research philosophy used.

3.3 Research Strategies

This was a descriptive research aimed at obtaining relevant information on how Tigo customers are being treated whenever they visit Tigo shops. Kothari (2004) defines descriptive researches as those studies which are concerned with describing the characteristics of a particular individual or of a group. The researcher used interviews and a well structured questionnaire to achieve the intended objective of the research. Strategically, survey approach was used to obtain required data from customers and Tigo staff members.

3.3.1 Survey Population

According to Churchill and Brown (2007), population refers to all individuals or objects that meet certain requirements for membership in the overall group. The population in this research includes all customers subscribed by Tigo services within the city of Arusha.

3.3.2 Area of Research

The research was conducted at Arusha city, at one Tigo shop (Sokoine Drive) located near Arusha central market along Sokoine road. Tigo has got two more shops at the

city at different locations. The researcher opted to conduct his research at only one shop mainly due to time and financial constraints and secondly due to differences in the set up among the shops and size of these shops. The shop which the researcher selected to collect data is somehow in between in size among the mentioned shops. Customers who attended the shops for different reasons were the ones selected randomly after being serviced at the shop for data retrievals via questionnaires.

3.4 Sampling Design and Procedure

Due to time and financial constraints, it was certainly impossible to get required information from each and everyone that enters every Tigo shops in Arusha. Customers leaving the Tigo shop were approached by the researcher and/ or a recruited research assistant and introduced to what the researcher intend to do with the questionnaire. Those who were voluntarily willing to cooperate were given the questionnaire to fill and assisted whenever they had some queries about a question or needed a bit more elaboration on any question. The whole exercise was conducted within a period of one week (Monday to Saturday) till the required number of respondents was reached.

Sample size is a significant feature of any empirical study in which the goal is to make inferences about a population from a sample, Taherdoost, (2017). Since the sample for this research was drawn from an infinity population, the following formula was used to calculate the sample size as proposed by (Cochran, 1977).

$$n = \frac{z^2 pq}{e^2}$$

Where

n = sample size

z = selected critical value of desired CI

p= estimated proportion of an attribute that is present in the population

q= 1 - p

e = the desired level of proportion

using this question with p value of 0.5, q value of 0.5, e being 0.1 and z value of 1.645 the sample size obtained was 67.65 (i.e. 68 customers)

3.5 Methods of Data Collection

Kothari (2004) explained that, there are several methods for collecting primary data, especially in surveys and descriptive researches. In this research, interviews and structured questionnaires were used as tools for data collection.

3.6 Research Approach and Design

This research involved both qualitative and quantitative approaches, based on cross-section time horizon. Qualitatively, interview with assigned Tigo staffs was conducted to get required information and quantitatively, the questionnaire was the tool used to retrieve required data from respondents.

3.7 Validity and Reliability Analysis

According to Kothari (2004), sound measurement must meet the tests of validity, reliability and practicality. He emphasized that the three are major considerations one should use in evaluating a measurement tool. Validity refers to extent to which a test measures what we actually wish to measure, while reliability deals with accuracy and precision of a measurement test. The use of reliability and validity are common in quantitative research and now it is reconsidered in the qualitative research paradigm (Golafshan, 2003).

3.7.1 Validity Test

Validity is the most critical criterion and indicates the degree to which an instrument measures what it is supposed to measure (Kothari, 2004). Similar explanation was given by Joppe (2000) concerning validity in quantitative research. He pointed out that, validity determines whether the research truly measures that which it was intended to measure or how truthful the research results are. In other words does the research instrument answer correctly research objectives/ questions? Researchers generally determine validity by asking a series of questions, and will often look for the answers in the research of others. Trochim (2006) also defined validity as the extent to which the instrument accurately measures what was intended and supposed to measure. Stenbacka (2001) describes the notion of validity as one of the quality concepts in qualitative research which is to be solved in order to claim a study as part of proper research. According to Kothari (2004), what is relevant, evidence often depends upon the nature of the research problem and the judgment of the researcher.

Kothari further stressed that, one can certainly consider three types of validity in connection to that: Content validity, Criterion-related validity and Construct validity.

Before commencing the really work, the researcher did a pilot survey to test the correctness and validity of what was intended to be collected in the questionnaires. Having obtained the results from pilot survey, the researcher in consultation with college friends and other academic staffs from Open University Arusha Center and research supervisor was able to restructure the questionnaire so that all raised objective questions in the research were covered. With their supportive help, the researcher eventually was able to produce a much realistic questionnaire covering all angles highlighted in the research objectives.

3.7.2 Reliability Test

Miller (2008) defined reliability as the extent to which a questionnaire, test, observation or any measurement procedure produces the same results on repeated trials. Salkind (1997) defines reliability as something that is reliable will perform in the future as it has in the past. Sauro (2015) defined Reliability as the measure of the consistency of a metric or a method. According to Sauro (2015), the four common ways of measuring reliability for any empirical method or metric are: inter-rater reliability, test-retest reliability, parallel forms reliability and internal consistency reliability. The internal consistency reliability measure is the common used measure in applied settings. The measure is the easiest to compute using software. It requires

only one sample of data to estimate the internal consistency reliability. This measure of reliability is described most often using Cronbach's alpha (sometimes called coefficient alpha). It measures how consistently participants respond to one set of items. Cronbach's alpha ranges from 0.0 to 1.0. The minimally accepted measure of reliability since late 1960s has been 0.7. The researcher used this Cronbach's alpha for determination of internal consistency reliability in this research.

3.8 Data Processing and Analysis

Data was processed and analyzed using Statistical Package for Social Sciences (SPSS) version 16.0, with it, descriptive analysis for frequencies and percentages and were analyzed. Together with that, the multi linear regression analysis was also conducted to analyze the relationship between independent and dependent variables.

3.9 Expected Results of the Study

The results from this research are expected to add value to the knowledge pool on the issue related to customer's satisfaction in relation to services offered by Tigo shops to its customers. Furthermore, it is expected that, results obtained from this research, will be useful to Tigo management team, specifically Tigo shops management and staffs as it will help them to know if there is a need to revisit their queuing management strategies for maximization of profit, retention and recruitment of new customers. The findings hopefully will be used as the base to strengthen management – customer relationship.

3.10 Ethical Consideration

This study was conducted obeying all necessary ethical issues. Before commencing the research an official letter from Open University of Tanzania, Arusha branch explaining the aim of the research was sent to Tigo Office at Arusha seeking permission to conduct the research at their shops. After thoroughly discussion with Tigo Northern Zone Cop Manager, the research was granted permission to proceed with the research at Sokoine Drive Tigo shop. The research was mainly focused to customers visiting the shop, hence before being voluntarily asked to fill the questionnaires, respondent were briefed the purpose of the research, and the research assured them that, the information to be filled in the questionnaire provided will be for the intended academic uses only. Furthermore, their names, mobile phone numbers, and physical addresses of where they live or work were not retrieved to stress the importance of confidentiality and anonymity.

Plagiarism is another aspect of ethics that the researcher did consider strongly. According to Merriam – Webster dictionary (as cited in Roka, 2017) plagiarism is defined as theft and use of other's people ideas or words as yours, use of sources without attribution, literacy theft and presenting some ideas as own and as it is new, while the idea already exists in other source. To avoid all this unnecessary inconveniences, the researcher has acknowledged all sources of information in this research as much as required.

CHAPTER FOUR

RESULTS AND DISCUSSIONS

4.1 Introduction

This chapter contains results of analyzed data and discussion on each finding. The research aimed at assessing the queue management practices in relation to customer satisfaction at selected Tigo shop. Interviews and questionnaires were the tool used to collect data from customers and Tigo staffs. As pointed out in the methodology section a total of 68 customers were selected as researchers sample size. Fortunately all customers who were asked to fill the questionnaire responded positively. The questionnaire had different sections covering demographic data and other sections related to specific objectives. The results presented in the next sections in this chapter will cover those mentioned sections. To work within research ethics, the research data collecting instruments were tested for validity and reliability.

4.2 Validity and Reliability Analysis

Prior to take off of the research, a pilot survey was conducted on 10 respondents / Tigo customers to test the relevance of the questions in the questionnaire. This valid test enabled the researcher to adjust some questions so as to fit the required objectives of the research. Using Cronbach's Alpha the measure of reliability was done on the research data. The results of reliability test are summarized in the Table 4.1.

Table 4.1 Reliability test

	Cronbach's Alpha	Number of items
Waiting environment	.678	4
Service quality	.865	16

Source: Field data, 2019

4.3 Demographic and General Information

In this section the demographic information of customers involved in the research is presented. This include, gender, age group, education level and current customers social status.

4.3.1 Gender

Out of 68 customers, the number of male customers exceeds a bit the number of female customer. They constituted 51.5% of the entire sample size, while the remaining 48.5% was of female customers as seen in Table 4.2. This result does not necessarily imply that the number of customers visiting the shop is more of male customers.

Table 4.2: Gender of Respondents

Gender	Frequency	Percent (%)
Male	35	51.5
Female	33	48.5
Total	68	100.0

Source: Field data, 2019

4.3.2 Age of the Respondents

The results showed that out of 68 respondents, half of them were 21 years – 40 years old, and 14. 7% were young ones. The rest of the age distribution is as seen in Table 4.3. The results when observed with a keen eye have a story behind. It shows that more than 60% of the shops' customers are in the age of 41 years old and below. This is the young generation, thus though the shop should not leave any stone unturned in handling its customers, much emphasis should be directed in pleasing this group of customers so as to retain them, and recruit new customers.

Table 4.3 Age of Respondents

Age (years)	Frequency	Percent (%)
Less or equal to 20	10	14.7
21 yrs – 40	34	50.0
41 yrs – 60	19	27.9
Greater than 60	5	7.4
Total	**68**	**100.0**

Source: Field data, 2019

4.3.3 Education of the Respondents

The education of the respondent differed slightly. A significant percentage, 48.5% (a combined college and university percentages) had tertiary education. Even the remaining portion of the respondents 13 % had secondary education and others are as seen in Table 4.4. Knowing the education status of customers is quite important in business, as one will know the products and services to be offered will be directed to which customers. This enables the company concerned (Tigo in this case), to come out with strategies and policies aimed at all making customers experience something to be proud off.

Table 4.4: Education Level of Respondents

Education level	Frequency	Percent (%)
Primary	10	14.7
Secondary	13	19.1
A level	12	17.6
College	17	25.0
University	16	23.5
Total	**68**	**100.0**

Source: Field data, 2019

4.3.4 Respondents' Occupation

Customers were asked to identify themselves in what they were doing currently. Table 4.5 summarizes the results. Most of the customers were employees somewhere and others were either business vendors and or business women/men.

Table 4.5: Respondents' Occupation

Status	Frequency	Percent (%)
Student	7	10.3
Employed	36	52.9
Business man/ woman	1	1.5
Business vender	14	20.6
Farmer	2	2.9
Retired	7	10.3
Others	1	1.5
Total	**68**	**100.0**

Source: Field data, 2019

4.4 The Waiting Time

One of the specific objectives of this research was to determine how customers feel both on the waiting time for service and the time they spend in the service counter. Depending on the time one pay a visit to the shop, the response to a number of questions on customers feeling toward waiting and service time may vary significantly. When asked to describe the time they spent waiting for service, majority 57.4% of customers said the time was moderate, meaning neither too long nor too short. Other responses from that question are as seen in Table 4.6.

Table 4.6 Time Spent Waiting for Service

Responses	Frequency	Percent (%)
Very fast	8	11.8
Fast	14	20.6
Moderate	38	57.4
Slow	7	10.3
Total	**68**	**100.0**

Source: Field data, 2019.

When asked on the service time, out of 68 respondents, 22.1% said it was very fast 57.4% of the respondents said the time was fast, 19.1% of the respondents said it was moderate, and only 1.5% of the individuals felt the service rate was a bit slow. Further elaboration is as seen in Table 4.7.

Table 4.7 Service Rate

Responses	Frequency	Percent (%)
Very fast	15	22.1
Fast	39	57.4
Moderate	13	19.1
Slow	1	1.5
Total	**68**	**100.0**

Source: Field data, 2019

4.5 The Waiting Environment for Service

The waiting room in the shop has a significant role in making customers experience with the shop a nice or awkward experience. Customers were asked a number of questions relating to waiting room, the answers were analyzed using Likert scale of five cartegories (1 being strongly agree to 5 being strongly disagree). On the question

of the waiting room being specious and big, 33.8% of the respondents strongly agree and 44.1% agreed. The responses from other respondents on different questions related to the waiting room are as presented in Table 4.8.

Table 4.8 Waiting Room Information

Statement	Response in frequency and (percent)			
	Strongly agree	**Agree**	**Neutral**	**Disagree**
The waiting room is spacious and big enough	23(33.8)	30(44.1)	10(14.7)	5(7.4)
The waiting room is well ventilated	29(42.6)	39(57.4)	0(0.0)	0(0.0)
There are enough seats	7(10.3)	33(48.5)	13(19.1)	14(20.6)
Presence of distracting materials	35(51.5)	29(42.6)	4(5.9)	0(0.0)

Source: Field data, 2019

4.6 Service Quality Dimensions

Service quality at the shop was analyzed by looking at the components of the serviqual model (service quality dimensions). In all service quality dimensions analyzed, customers were satisfied in great percentage with the services at the shop. Though all dimensions showed satisfaction by customers, tangibility, assurance and empathy had greater impact to satisfaction as compared to reliability and responsiveness. This is slightly different from what Makanza (2015) in his research in which he observed that, though all five dimensions have significant contribution to customer satisfaction, responsiveness and empathy had higher impact as compared to others. The results of customers' responses are as presented in Tables 4.9 to 4.13.

Table 4.9: Tangibility

Statement	Response in frequency and (percent)			
	Strongly agree	**Agree**	**Neutral**	**Disagree**
Tigo shop is visible from a distance	21(30.9)	40(58.8)	5(7.4)	2(2.9)
Tigo is able to give access to information about its products and services	18(26.5)	45(66.2)	4(5.9)	1(1.5)
The waiting environment is good	11(16.20	46(67.5)	7(10.3)	4(5.9)
Appearance of Tigo working staff is good	13(19.1)	48(70.6)	3(4.4)	4(5.9)

Source: Field data, 2019

Table 4.10 Reliability

Statement	Response in frequency and (percent)			
	Strongly agree	**Agree**	**Neutral**	**Disagree**
Tigo services are delivered timely	8(11.8)	43(63.2)	9(13.2)	8(11.2)
Tigo keeps its promises to customers	2(2.9)	35(51.5)	17(25.0)	14(20.6)
Tigo is dependable and consistent in solving customers problems	10(14.7)	36(52.9)	19(27.9)	3(4.4)

Source: Field data, 2019

Table 4.11 Responsiveness

Statement	Response in frequency and (percent)			
	Strongly agree	Agree	Neutral	Disagree
Tigo staffs are able to tell customers when services will be performed	8(11.8)	42(61.8)	16(23.5)	2(2.9)
Tigo staffs are willing to attending to customer inquiry and problems	19(27.9)	31(45.6)	13(19.10	5(7.4)

Source: Field data, 2019

Table 4.12: Assurance

Statement	Response in frequency and (percent)			
	Strongly agree	Agree	Neutral	Disagree
The behavior of Tigo staffs inspire confidence in customers	27(39.7)	40(58.8)	5(7.4)	2(2.9)
Tigo staffs are able to fix customers problems	27(39.7)	29(42.6)	12(17.6)	0(0.0)
Tigo staffs have technological knowledge and skills to solve my problem	17(25.0)	42(61.8)	8(11.8)	1(1.5)
Tigo products and services are of high quality.	17(25.0)	43(63.2)	6(8.8)	2(2.9)

Source: Field data, 2019.

Table 4.13 Empathy

Statement	**Response in frequency and (percent)**			
	Strongly agree	**Agree**	**Neutral**	**Disagree**
Tigo staffs are approachable and easy to communicate	17(19.1)	51(75.1)	4(5.9)	0(0.0)
Tigo shop has convenient working hours	18(26.5)	44(64.7)	5(7.4)	1(1.5)
The attitude of customer care agent is good	28(41.2)	34(50.0)	3(4.4)	3(4.4)

Source: Field data, 2019.

4.7 Queue Management (Type, Characteristics and Queue Discipline)

Queues are well managed at the shop visited. The company (Tigo) has devoted its resource to make sure customers are well treated whenever they visit their shop. The shop where research was conducted uses Queue Management System (QMS) to manage customers at its shop and to increase efficiency at the shop. The Virtual queue management is the preferred means most of the time, but at certain instances due to a number of reasons they switch to normal standard Linear means in handling customers arriving at the shop.

Using Virtual queuing, once a customer arrives at the shop, a customer care agent will approach him/ her and asks to know the intention of the visit. Then the agent will take customers Tigo mobile phone number (in a machine) specifying the reason of the visit and eventually a customer is given a ticket with a number on it and asked to seat

anywhere in the room or roam around in the waiting room while waiting for his or her number called to proceed to a specified service counter. The room has 4 service channels. So once the number is called, the customer is directed to proceed to any of the four numbers (i.e. a customer number is called and the announcer will say for example, a customer with number 57, please proceed to counter number 2). Using this means of handling customers, there are no physical queues at the shop to be observed. The shop has two of these machines which are connected with a main server and other computers in each service channel. Since every customer who uses Tigo line his/ her information is with the company, it is easier for the company (through this QMS) to know the status of the visiting customers to guide them to the service channels. It should be noted that not all visiting customers are registered members of the company; some are new ones seeking information or planning to join the vessel. Still once information is entered in the QMS machines, the QMS is able to serve customers based on two main disciplines. The first one is first come first served (FCFS) and the second one is priority service. The system has been programmed in such a way, it will jump to a highly valued customer (priority) once noted before proceeding to the normal first come first serviced pattern. Using this way customers experience with the shop is taken care properly.

The use of Virtual queue management system is the primary objective of the shop as mentioned above. But sometimes due to a number a reasons, the shop switches to a normal linear queue management way of handling customers at the shop. In this way, once a customer arrives at the shop, the customer will be probed to know the intention of the visit by the customer's agent, and asked to join a single queue when needed with multi server points at the end (four service channel). In this order the first

customer arriving is normally the first one to be served. But there are some cases where a customer care agent or any other Tigo staff will pick certain customer (based on number of factors such as age, healthy status etc) and ask him/ her to proceed to the service counter leaving behind even those who were first to arrive at the shop. This is priority queue discipline as observed in the standard virtual queuing above.

With this being the case it seems customers visiting the shop were satisfies with how queues are managed as observed in the results which show that out of 68 respondents 10.3% and 80.9% strongly agree and agree respectively that queues were well managed. Other responses on queue issues are as seen in Table 4.14. The use of Queuing theory in managing customers at the shop has also been emphasized by Austria (2015), he pointed out that, the type of queue management practiced by the restaurant has a significant effect to customer satisfaction.

The recommendation by Austria (2015) speaks volumes about the importance of electronic queuing system to increase efficiency. With proper application of Queuing theory in managing customers at the shop, Tigo has managed to make customers happy and in one way or the other increase the efficiency of work at their shop. The use of modern technology via application of virtual queue management system has enabled this to be achieved.

Similar experience has been noted by Kaur and Singh (2017), in which they observed that, application of queuing theory in developing suitable queue model for an organization is important in reducing cost of services and increasing efficiency. Odewole (2016) research also agrees that, technology driven services such as queue

management are important shortening waiting time and service time eventually making customers more satisfied with services at the concerned organization.

Table 4.14 Queue management

Statement	Response in frequency and (percent)			
	Strongly agree	Agree	Neutral	Disagree
Queues are managed properly at the shop	7(10.3)	55(80.9)	4(5.9)	2(2.9)
Tigo staffs are of great help in helping customers in queues	20(29.4)	31(45.6)	12(19.1)	4(5.9)
Queue discipline follows FCFS (first come first served) mostly	10(14.7)	53(77.9)	4(5.9)	1(1.5)
Generally I am satisfied with how customers are treated at the shop	23(33.8)	39(57.4)	6(8.8)	0(0.0)

Source: Field data, 2019.

Sometime a customer a might open the shop door with the intention of entering the shop to proceed with whatever purpose of the visit, only deciding to balk, due to congestion in the room. This was rarely observed during the research period at the shop, as out of 68 respondents only 25% customers once did that with their previous visits. But sometime customers may or reneged after being bored or waited too long in the room for service. In these research respondents who have reneged before were 29.4% out of 68 respondents, Table 4.15. Luckily this reneging behavior was rarely observed, only a small percentage of respondents 2.9 % practiced it many times,

20.6% rarely and 75% did not respond to the question (how many time have they reneged). The shop and company management should put a lot of efforts to reduce to a very minimal level if solving it completely the number of people who balk or renege. This weird customer's behavior might end up jeopardizing the image of the company eventually tempering its customers' base.

Table 4.15 Customers' reneging and balking behavior

Statement	Response in frequency and (percent)		
	Yes	No	I can't remember
Have you ever reneged?	20(29.4)	46(67.6)	2(.9)
Have you ever balked	17(25)	51(75)	0(0.0)

Source: Field data, 2019

4.8 Customers Level of Satisfaction

All components observed or analyzed in the research, were done to relate them to customer satisfaction. When asked how satisfied are they with Tigo personnel, customers showed high levels of satisfaction, 42.6% were very satisfied and 47.1% were satisfied. This when combined one would note that, almost 90% of the 68 respondents were happy with the Tigo personnel. Almost similar results were observed on satisfaction levels of respondents with Tigo services and how the company made the purchase easier as it can be seen in Table 4.16. The same trend of satisfaction was observed when customers were asked to describe their satisfaction status with the waiting room environment at the shop, in which 20.6% were very satisfied and 63.2% were satisfied.

Table 4.16 Customers Level of Satisfaction

Statement	Response in frequency and (percent)			
	Very satisfied	Satisfied	Neutral	Unsatisfied
How would you rate your experience with Tigo service personnel?	29(42.6)	32(47.1)	5(7.4)	2(2.9)
Generally how satisfies are you with Tigo services?	25(36.8)	37(54.4)	6(8.8)	0(0.0)
How satisfied are you with the way the company made purchase easy?	25(36.8)	37(54.4)	5(7.4)	1(1.5)
How satisfied are you with the waiting room environment?	14(20.6)	43(63.2)	6(8.8)	5(7.4)

Source: Field data, 2019

4.9 Regression Analysis

The regression analysis reveals that, there is a positive correlation between the waiting environment and customer satisfaction (r = .563). Conditions of the waiting have a vital role to customers feeling at the shop. Further information is as observed in Tables 4.17. This regression finding is the same as those done by Choi and Sheel (2012) in which they pointed out that by providing enough space and chairs for waiting customers, the satisfaction is significantly enhanced. The importance of waiting environment has also been emphasized by Kamau (2012) in her research she noted that, customers were not satisfied as a result of poor waiting environment among other factors. So the importance of waiting room environment to happiness of customers for any organization is more or less uncompromised.

Table 4.17. Model summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.563[a]	.317	.273	.658

ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	12.655	4	3.164	7.304	.000[a]
	Residual	27.287	63	.433		
	Total	39.941	67			

When service quality dimensions was tested against customer satisfaction to service provided by Tigo, it was also observed that variables were strongly correlated (r = .701) as observed in Table 4.18. This also signifies the importance of a company to invest heavily in the quality of service to be offered. All components or dimension of service quality are important in making customers being satisfied with the service. Similar results have been shown by Makanza (2015) in which he pointed out that, service dimension have significant effect to customer satisfaction. He further stressed that, of the five dimensions, empathy and responsiveness had higher impact to customer satisfaction as compared to others. Millas (2013) has also similar results to the ones in this research, he showed that service quality attributes (dimensions) were positive related to customer satisfaction.

Table 4.18: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.701[a]	.492	.332	.506

ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	12.633	16	.790	3.084	.001[a]
	Residual	13.058	51	.256		
	Total	25.691	67			

The regression analysis on the service time and customers satisfaction with Tigo services showed that service time has got no significant role to customers satisfaction with the service quality provided by Tigo shop (r = 210) as observed in Table 4.19. This tells us that, customers were not much affected with the time they spent waiting for service or the service time itself, rather other factors such as conditions of the waiting room and service quality offered by the shop had significant role in the level of satisfaction.

Table 4. 19: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.210[a]	.044	.015	.615

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.210[a]	.044	.015	.615

ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1.129	2	.565	1.494	.232[a]
	Residual	24.562	65	.378		
	Total	25.691	67			

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Overview

This chapter summarizes the conclusion of the research and gives the re commendations for future studies related to this research.

5.2 Summary

The main purpose of this research was to assess the queue management practices in relation to customer satisfaction. Waiting time for service, waiting environment and service quality were all observed and assessed in relation to customers satisfaction

The results shows that a large percentage of the respondents (more than 50%) were a satisfied with the time they spend waiting for service and the time they spend while being served. The waiting environment was satisfactory to customers with few of them pointing out the need of availability of more sitting chairs. This was noted mainly during peak periods, but generally customers were comfortable with the conditions of the waiting environment.

The research also shows that, customers were generally satisfied with the service quality at the Tigo shop as observed in all service quality dimensions assessed.

Queue management being the main objective the research, application of virtual queue management system and occasionally linear queue management system, Tigo shop staffs and management have enabled the customers experience at the shop to be a

good one. Customers visiting the shop are generally satisfied with the services offered, environment of the shop and they time they spend while at the shop.

5.3 Conclusion

The research though done with several constraints, it was well observed that, customers at the Tigo shop (Sokoine Drive shop) were highly appreciative of the waiting environment, waiting time for service and generally with the service quality provided to them at the shop. All the three components (waiting environment, waiting and service quality) were observed as an indication of how queues were managed in relation to customer satisfaction.

The majority of respondents as observed in chapter four results were appreciative with how the shop handles customers in relation to queue management. The QMS used by the Tigo shop, seems to please customers and make their experience at the shop a comfortable experience. Thus with QMS application, the shop has done well to reduce significantly complaints from customers visiting the shop. The use of queuing theory in dealing with queue management at the shop has shown to give a positive impact to all stakeholders at the shop.

The study also concludes that, the waiting environment at the shop is appealing and tends to satisfy customers who are waiting for different services. A little rearrangement of sitting at the shop can further create more space and increase the number of benches and/ seats for customers while waiting for service. This complies positively with the psychology of waiting lines. As the waiting room is kept favorable with all necessary facilities, then the waiting experience will always be good to customers

Lastly the study concludes that, the service quality rendered at the shop to customers is generally satisfactory. All the five service quality dimensions seemed to be considered vigilantly by the shop.

5.4 Recommendations

The degree to which customer are satisfied with the waiting time at the shop has been noted to vary among customers. Since the queue discipline preferred at the shop is mostly FCFS and sometimes priority modal, the management and shop staff should put emphasis on enlightening customers when there is a switch between the two discipline modes during the waiting for service. This will reduce frustrations and unnecessary and unpleasant verbal confrontation between customers themselves and between customers and Tigo staffs. Explaining to customers the amount of time one is expected to spend at the shop frequently will easy the anxiety of customers.

The waiting environment at the shop is good generally and moderate I can say in size. When the number of visiting customers is minimal to moderate, the room looks big enough to carter for the required customers' service. The situation is a bit different during peak periods; the room space is somehow squeezed. According to the supervisor of the shop, this Sokoine Drive shop, is the one with a large number of clientele base as compared to any other shop in this zone. So the Tigo management should see how best they can either enlarge the waiting room area creating more space or build or shift and rent another building close by which will be bigger enough to serve customers efficiently regardless of their volume.

The research also revealed that, service quality dimensioned analyzed were all ok, though the management little more effort on two dimension (i.e. reliability and

responsiveness) so as to rise a bit their satisfaction levels to customers. The shop management and staffs should always be up to date technologically and attend customer care trainings frequently and being reminded tirelessly the values, mission and vision of Tigo in serving its customers. This will avoid and reduce the chances for Tigo staffs at the shop to be complacent.

5.5 Limitations of the Study

The research was conducted fairly well, though it has some share of its flaws. The main limitation observed in this research was time frame for the research. Few months granted to the researcher before submission of the work for examination, was the driving force for selection of small sample size used. Due to limited time frame, flexibility to any changes needed to in methodology to fit any encountered methodological issue was very minimal. The green light to proceed with the research at Tigo shop from Tigo authorizes was granted somehow late, forcing the research to collected data from only one shop. Due to tight schedule of the working staffs, the researcher could not manage to interview all working staffs at the shop, instead only the manager was available for interview.

5.6 Suggestion for Further Studies

The research is interesting, and it could have been much better, had it been possible to conduct the research in all Tigo shops within the city of Arusha. So further research can be done in that direction to see the intra variability among shops and come out with a much stronger analyses than the one done in this research.

REFERENCES

Austria, L. A. (2015). Queue management practices of quick service restaurants (QSR) in Lipa city, Philippines. *Asian Pacific Journal of Multidisciplinary Research, 3*(5), 87-95.

Baker, J., & Cameron, M. (1996). The effect of service environment of affect and customer perception of waiting time. An integrative review and research propositions. *Journal of Academy of Marketing Science*, *24*(4). 338-349.

Bielen, F., & Demoulin, N. (2007). Waiting time influence on the satisfaction-loyalty relationship in services. *Journal of Service Theory and Practice, 17*(2), 174-193.

Brahma, P. K., (2013). Queuing theory and customer satisfaction: A review of terminology, trends and applications to hospital practice. *Asian Pacific Journal of Marketing & Management Review*, *2*, 83-89.

Burell, G., & Morgan, G. (2016). *Sociological Paradigms and Organisational Analysis*. Abingdon: Routledge (originally published by Heinemann 1979).

Chien, S. Y. & Lin, Y. T. (2015). The effects of the service environment on perceived waiting time and emotions. *Journal of Human Factors and Ergonomics in Manufacturing & Service Industries, 25*(3), 319-328.

Choi, C., & Sheel, A. (2012). Assessing the relationship between waiting services and customer satisfaction in family restaurants. *A Journal of Quality Assurance in Hospitality & Tourism, 13*, 24-36.

Cochran, W. (1977). *Sampling techniques*. (3rd ed., pp 72-76). John Wiley and Sons, Harvard University, New York.

Darlingtina, O.A., & Obinwanne, E. E., (2015). On application of queuing models to customers management in banking system. *American Research Journal of Bio Science*, *1*(2), 14-20.

Farayibi, A., (2016). Investigating the application of queue theory in the Nigerian banking system. Retrieved from, https://mpra.ub.ini-muenchen.de/73614

Galafshani, N. (2003). *Understanding Reliability and Validity in Qualitative Research*. The Qualitative Report, *8*(4), 597-607.

Jamal, D. (2007). A study on customer satisfaction in the context of public private partnership. *International Journal of Quality & Reliability Management, 24*(9), 370-385.

Joppe, M. (2000). The Research Process. Retrieved from, http://www.ryerson.ca/-mjoppe/rp.htp

Kabamba, A. M., (2019). Modeling and analysis of queuing system in banks: (A case study of Banque Commerciale du Congo- BCDC/ Mbujimayi). Retrieved from, https://mpra.ub.ini-muenchen.de/92579

Kamau, G. W. (2012). *Waiting lines management and customer satisfaction in commercial banks in Kenya.* (Master's thesis). School of Business, University of Nairobi.

Katoch , K.S., Vats, A., & Wadhwa, P. (2014). Waiting lines and customer satisfaction. *Advances in Materials and Mechanical Engineering Research*, *1*(1), 33-42

Kothari, C. R. (2004). Research methodology: Methods and techniques. Wiley, 2nd Ed., New Delhi.

Kuklin, P. (2013). How technology can transform queue management. Retrieved from, https://www,business2community.com/customer-experience/technology-can-transform-queue-management-0650188#LLqfhMjcvH1R6d.97

Maina, A. N. (2013). *Queuing management practices and customer satisfaction among mobile phone customer care centers in Nairobi*. (Master's thesis). School of Business, University of Nairobi.

Makanza, J. (2015). *An assessment of the components of service quality and customer satisfaction: A case study of National Microfinance Bank, Temeke branch, Dar es Salaam, Tanzania.* (Master's dissertation). The Open University of Tanzania.

Masingia, N. N. J. (2015*). Customer care and its effectiveness in meeting customer's needs: Evidence of Millicom (Tigo) Company, Morogoro municipality*. (Master's dissertation). The University of Mzumbe, Tanzania.

Millas, A. (2013). *The link between service quality and customer satisfaction in the retail banking in Tanzania, case study of CRDB Bank*. (Master's dissertation). The Open University of Tanzania.

Mwatsika, C. (2014). Customer satisfaction with ATM Banking in Malawi. *African Journal of Business Management*, *8*(7), 218-227.

Ndungu, N. H. (2013). *Queue management in banks: The case of Mombasa county*. (Master's thesis). School of Business, University of Nairobi.

Ngo, V. M. (2015). *Measuring customer satisfaction*: A literature review. Proceeding of the 7th International Scientific Conference, Finance and Performance of Firms in Science, Education and Practice. (pp. 1637-1654).

Odewole, P.O. (2016). Waiting lines, banks effect delivery systems and technology driven services in Nigeria. A case study. *International Journal of Finance and Banking Research*, *2*(6), 185-192.

Omendi, G. K. (2018). *Electronic queuing management system and customer service in commercial banks in Kenya: A case study of Kenya Commercial Bank*. (Master's thesis). School of Business, University of Nairobi.

Parasuraman, A., Zeithaml, V.A., & Berry, L.L. (1988). A conceptual model of service quality and its implications for future research. *Journal of Marketing, 49*, 41-50.

Polas, M. R. H., Rahman, Md. M., Miah, Md. A., & Hayash, M. M. A. (2018). The impact of waiting time towards customer satisfaction in fast food establishments: Evidence from Bangladesh. *Journal of Business Management, 20*(5), 11-21.

Roka, Y. B. (2017). Plagiarism: type, causes and how to this worldwide problem. *Nepal Journal of Neuroscience, 14*(3), 2-6.

Saunders, M. N. K., Lewis, P., & Thornhill, A. (2019). *Research Methods for Business Student*. (8th ed.). New York: Pearson.

Sauro, J. (2015). How to measure the reliability of your methods and metrics. Retrieved from, https://measuringu.com/measure-reliability/

Shaw,C. (2013). 15 statistics that should change the business world-but haven't. Retrieved from, https://beyondphilosophy.com/15-statistics-that-should-change-the-business-world-but-havent/.

Stanbacka, C. (2001). Qualitative research requires qualitative concept of its own. *Management Decision, 39*(7), 551-555.

Stanley, K. L. (2015). *Assessing customer satisfaction on electricity conventional billing system in Tanzania the case of tanesco Ilala region*. (Master's dissertation). The Open University of Tanzania.

Taherdoost, H. (2017). Determining sample size; How to calculate survey sample size. *International Journal of Economics and Management Systems, 2*, 237-239.

Tigo, (2019). Tigo announces combination with Zantel. Retrieved from https://www.tigo.co.tz/tigo-announces-combination-with-zantel site visited on 4/11/2019.

Wikipedia, (2019). MIC Tanzania Limited. Retrieved from https://en.wikipedia.org/wiki/MIC_Tanzania_Limited

Yusuf, M. O., Blessing, N., & Kazeem, A. O. (2015). Queuing theory and customer satisfaction: A review of performance, trends and application in Banking practice, (A study of irst Bank Plc Gwagwalada, Abuja Branch). *European Journal of Business and Management*, *7*(35), 90-96.

https://www.investopedia.com/terms/c/customer.asp

APPENDICES

Appendix 1: Research Questionnaire

Questionnaire to Tigo Customers

Dear respondent, kindly fill out this questionnaire. It is strictly for educational purposes and therefore all information provided shall be treated with maximum caution and confidentiality. Your cooperation is highly appreciated.

Section A: Demographic and General Information.

Please mark the appropriate box with an (**X**)

1.Your gender

male	
female	

2.Your age

Age (years)	
≥ 20	
21 – 40	
41 – 60	
Above 60	

3.Your education level

Primary education	
Secondary education	
A level education	
Collage education	
University education	

4.Current status

Student	
Employed	
Unemployed	
Business man/woman	
Business vender	
Farmer	
Retired	
Others (mention)	

Section B: Service Quality

5. Please indicate with an X the degree to which you agree/disagree with each of the following statements. Choose among the given options where SA = strongly agree, AG = Agree, NAD = Neither agree nor Disagree, DA = Disagree, SD = Strongly Disagree

Dimension	Statement	SA	AG	NAD	DA	SD
Tangibility	The Tigo shop is visible from a distance.					
	Tigo is able to give you access to information about its products and services.					
	The waiting environment is good (big enough) with nice equipments and materials.					
	Appearance of working staff is attractive.					
Reliability	Tigo services are delivered timely					
	Tigo keeps its promises to customers					
	Tigo is dependable and consistent in solving customers problems.					
Responsiveness	Tigo staffs are able to tell customers when services will be performed					
	Tigo staffs are willing to attending to customers inquiry and problems.					
Assurance	The behavior of Tigo staffs inspire confidence in customers					
	Tigo staffs are able to fix customers problems					
	Tigo staffs have technological knowledge and skills to solve my problem					
	Tigo products and services are of high quality.					
Empathy	Tigo staffs are approachable and easy to communicate					
	Tigo shop has convenient working hours					
	The attitude of the customer care personnel is good					

C. Customer Satisfaction

6. Please indicate with an X the degree to which you are satisfied/dissatisfied with the Tigo services. Choose among the given options where VS = Very satisfied, SA = Satisfied, NT = Neutral, US = Unsatisfied, VU = Very unsatisfied

	Statement	**VS**	**SA**	**NT**	**US**	**VU**
6.1	How would you rate your experience with Tigo service personnel?					
6.2	Generally how satisfied are you with the Tigo service?					
6.3	How satisfied with the way the company made purchase easy?					
6.4	How satisfied are you with the waiting room environment?					

D. Queue Management, Waiting Room and Waiting Time

7. Are you happy with the service time? i) yes ii)No

8. How do you rate the service time? i)very fast..ii)fast iii)moderate.....iv)slow…v)very slow

9. Have you ever turned away due to longer time taken to be serviced? i) yes…ii)No…iii) I can't remember……

10. If the answer is Yes to question 7, how many times? i) many times…ii) rarely….iii) I can't remember…..

11. Have you ever balked (turn around and left) when you entered the Tigo shop and find out there a lot of people in queues or waiting for services? i) yes….ii) No……

12. How would you rate Tigo service time compared to other mobile phone service providers? i) competitive….ii)Average…..iii)poor……

13. Please indicate with a tick the degree to which you agree/disagree with each of the following statements. Choose among the given options where SA = strongly agree, AG = Agree, NAD = Neither agree nor Disagree, DA = Disagree, SD = Strongly Disagree

No	statement	SA	A	NAD	D	SD
13a	The waiting room is specious and big enough					
13b	The waiting room is well ventilated					
13c	There are enough chairs and/ benches in the room for customers to sit while waiting for service					
13d	Presence of distraction materials such as Tv screens, reading materials and other products displayed for sell at the shop helps to make customers occupied and comfortable					

14. Is there a queue management practice seen at the shop ? i) yes…..ii)No……

15. How would you describe the time you spent waiting for service at the shop? i) too long…ii)long….iii)moderate….iv)short…..v)very short…..

16, Please indicate with a tick the degree to which you agree/disagree with each of the following statements. Choose among the given options where SA = strongly agree,

AG = Agree, NAD = Neither agree nor Disagree, DA = Disagree, SD = Strongly Disagree

No.	Statement	SA	A	NAD	D	SD
16a	Queues are managed properly at the shop					
16b	There are barriers to guide customers in queues					
16c	Tigo staffs are of great help in helping customers in queues					
16d	Queue discipline follows FCFS pattern mostly (i.e the first to arrive will be serviced firstly).					
16e	Generally I am satisfied with how customers are handled at the shop while waiting for service.					

Appendix 2: Introduction Letter

The Open University of Tanzania
Arusha Regional Centre
P O Box 19
Arusha

Tel: 255-027-2501865
Fax: 255-027-2501865
Email: drcarusha@out.ac.tz

Chuo Kikuu Huria cha Tanzania
Kituo cha Mkoa wa Arusha
S L P 19
Arusha

Simu: 255 027 2501865
Faksi: 255 027 2501865
Barua pepe: drcarusha@out.ac.tz

REF: **PG201401270**

24th September, 2019

THE MANAGER
TIGO TANZANIA
P.O. BOX
ARUSHA

Sir/Madam

RE: INTRODUCTION LETTER

The Open University of Tanzania (OUT) is fully fledged, Autonomous Public University, established by An Act of Parliament Number 17 of 1992. The Act became operational on 1st March, 1993 by publication of Government Notice No. 55 in the Official Gazette. The first Chancellor was officially installed in a full ceremony on 19th January, 1994 and the first batch of students was admitted in January, 1994. In January 2007, following enactment of the Universities Act No. 7 of 2005, OUT started using the OUT Charter and Rules (2007) for its Operations.

The Open University of Tanzania offers its certificate, diploma, degree and postgraduate courses through the open and distance learning system which includes various means of communication such as face-face, broadcasting, telecasting, correspondence, seminars, e-learning as well as a blended mode which is a combination of two or more programmes and are quality-assured and as centrally regulated by the Tanzania Commission for Universities (TCU).

The purpose of this latter is to introduce to you **MR. BULUDA THOMAS** Registration number **PG201401270** who is a **MASTERS OF PROJECT MANAGEMENT (MPM)** student of the Open University of Tanzania, Arusha Regional Centre. Please accord him necessary assistance he may request at your capacity.

Yours Sincerely,

Marcel S. Masalu
Ag. Director

THE OPEN UNIVERSITY OF TANZANIA
ARUSHA REGIONAL CENTRE
P. O. BOX 19, ARUSHA