LINKING WAITING LINES MANAGEMENT AND PERCEIVED SERVICE QUALITY: A CASE OF SELECTED COMMERCIAL BANKS IN RUVUMA, TANZANIA

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CERTIFICATION

The undersigned certifies that he/she has read and here by recommends for acceptance by The Open University of Tanzania a dissertation titled, **Linking Waiting Lines Management and Perceived Service Quality: A Case of Selected Commercial Banks in Ruvuma, Tanzania** in partial fulfilment of the requirements for the award of degree of Master of Project Management (MPM) of The Open University of Tanzania.

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(Supervisor)

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Date

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DECLARATION

I, **Lambert Fulgence Muliro**, I 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 work has 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 (MPM) of The Open University of Tanzania.

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Signature

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Date

DEDICATION

This dissertation is dedicated to my lovely family; my wife Beatrice and my daughter Careen-Byela. They are truly the reason and drive for this achievement.

ACKNOWLEDGEMENT

I sincerely admit that the research project that resulted into this report was not an easy task. It required to work tirelessly and actively, yet it could have never been successful without contributions from several parties to whom I am so much indebted.

First and foremost, I would like to give the very special thanks to the Almighty God, Jehovah, for His everlasting providence, love and grace that makes my entire walk of life a success at every stage. Blessed be His holiest name.

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ABSTRACT

This study was designed to examine the link that exists between waiting lines management and perceived service quality. Specifically, it aimed at determining the influence of the comfort of waiting area, the discipline of waiting lines, the engagement of customers during wait, and the waiting time guarantee on customer's perception of service quality. To meet the objectives of the study, a cross-sectional survey was employed involving a sample of 256 respondents selected randomly from four bank branches operating in Songea, Ruvuma region; namely CRDB, NBC, NMB and TCB. Data were collected by the use of structured questionnaire and thereafter analyzed quantitatively using multiple regression model through SPSS data analysis software. The findings of the study indicate that comfort of waiting area, discipline of waiting lines, engagement of customers during wait, and waiting time guarantee have a significant and positive influence on perceived service quality for the customers of the researched bank branches. Based on these findings, it is therefore recommended that the banks employ appropriate strategies to manage the waiting lines so that they can improve the perceptions of their customers towards the quality of service they provide. These strategies include, but not limited to, providing comfort for customers in the waiting areas, investing in the technologies that could enhance effective management of the waiting lines and exhibiting commitment to timely delivery of service to the customers.

Keywords: *Waiting line Management, Perceived Service Quality, Comfort of Waiting area, Customer Engagement, Waiting time Guarantee, Waiting line Discipline.*

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LIST OF ABBREVIATIONS AND ACRONYMS AND SYMBOLS

ANOVA	Analysis of Variance
ATM	Automatic Teller Machine
COMFT	Comfort of Waiting Area
CRDB	Cooperative and Rural Development Bank
DISCP	Discipline of Waiting Line
ENGT	Customer Engagement during Wait
FCFS	First Come First Served
FIFO	First Come First Out
GUART	Waiting Time Guarantee
IV	Independent Variable
KMO	Kaiser-Mayer-Olkin
M	Mean
NBC	National Bank of Commerce
NMB	National Microfinance Bank
PLS	Partial Least Squares
PLS-SEM	Partial Least Squares-Structural Equation Modelling
P-P	Predicted Probability
PSQUAL	Perceived Service Quality
R-square	Coefficient of Determination
SD	Standard Deviation
Sig	Significance level
SPSS	Statistical Package for the Social Sciences

TCB	Tanzania Commercial Bank
TPB	Tanzania Postal Bank
TV	Television
VIF	Variance Inflation Factor
Wi-Fi	Wireless Fidelity
β	Beta

CHAPTER ONE

INTRODUCTION

1.1 Overview

This chapter explains the whole context of the research problem and the study that was undertaken. It provides preliminary and basic information which served as the foundation for undertaking this research. The chapter is organized beginning with the background information to the study, followed by a statement of the problem, research objectives, research questions, relevance of the study, and closes with explaining how this proposal is organized.

1.2 Background to the Study

Waiting in lines or queues seems to be a normal phenomenon in our daily life. Anyone who has ever had an interaction with a service providing system must have experienced some sort of waiting. Generally speaking, waiting lines or queues are seemingly inherent characteristic of service delivery systems; be it in banks, hospitals, supermarkets or barber shops, we oftentimes all experience moments of waiting for service. In the end, waiting experience and time spent on waiting seems to have an impact on how customers perceive the quality of service they receive. As well stated by Ogbadu and Usman (2012), customers' evaluation of service quality is affected not only by the actual waiting time but also by the perceived waiting time. Thus, the amount of time customers must spend waiting can significantly influence their perception on service quality.

According to Stevenson (2018) waiting lines are a direct result of arrival and service variability. They are formed whenever the current demand for a service exceeds the

current capacity to provide that service. This is because of difficulty in accurately predicting arrival pattern of customers for service and how much time is required to provide service to each customer which can cause service systems to be temporarily overloaded.

Bae and Kim (2014) assert that waiting process could be generally categorized into three stages which are pre-process waits, in-process waits, and post-process waits. In the context of banking service where this study focuses, pre-process waiting occurs when a customer is on a queue before approaching the counter; in-process waiting occurs during transaction execution; and post-process waiting occurs when a bank officer or a self-service customer is completing a transaction.

In the modern era of banking, customer-centric approaches have attracted so much attention of the banking organisations which seeks to satisfy and develop long term business relationship with their profitable customers (Kotler and Keller, 2016). Doing so, one important area of concern to both bank managers and bank customers is managing the customer waiting time, as it has shown a tremendous impact in building strong relationship between the banks and the bank customers. Katz et al. (1991) put it so well that customers not only demand quality, they also demand speed; they do not tolerate waiting in line for long periods of time.

The comments of this nature from scholars and practitioners are what makes banks want to pay more attention on how they manage their waiting lines so as to enhance speed and reduce waiting time, or provide the best waiting experiences so as to reduce the perceived waiting time. The importance of customer waiting time management is embedded in the fact that customers' perception of waiting time for

service could affect their current and future relationship with service providers (Lin et al., 2015; Palawatta, 2015). This implies that when customers are satisfied with the amount of time they wait for services, it can induce loyalty behaviours in customers and influence them to desire more future business with service providers, as they view the quality of service provided as good (Lee et al., 2015).

With this in mind, practitioners and scholars have developed and proposed various strategies and approaches to manage waiting lines in various service organizations including making the waiting area attractive and comfortable for customers, serving customers in the order of their arrival, increasing the number of servers and so forth. However, these strategies find their origins in the developed countries (Larson, 2006). Though mostly applied, it is less known if the application of these techniques has the similar impact to customers' perception of service quality in the developing countries, like in the developed countries. More specifically, in Tanzania, the impact of these techniques is almost unknown as there are no studies whatsoever conducted concerning this area known to the researcher. The application of these techniques observed in Tanzania banking firms seems to have gotten their roots from the theoretical viewpoint; as various theories exists which promises benefits to banks that applies waiting lines management techniques. The theories will be covered in details in the next chapter.

1.3 Statement of the Research Problem

Waiting time in banking industry has become among important areas of concern as it could negatively influence customers' perception of quality (Cameron et al., 2003). This has pushed banking organizations into developing various measures that could

help in managing the waiting lines to reduce both the actual and perceived waiting times; that is decreasing actual waiting time and/or enhancing customer's waiting experience. The measures that can be witnessed in Tanzanian commercial banks include extension of banking services through bank's agents, introduction of signage and signaling systems, expansion of ATM networks and introduction of mobile banking services.

However, this has not succeeded to eliminate the waiting lines in banking institutions, because, as stated by Stevenson (2018), waiting lines are almost impossible to eliminate in a service system. In Tanzanian banks long queues can still be seen all over due to the fact that a lot of bank customers still prefer to be serviced at a branch office. This is partly because only a limited number of bank services can be extended outside the branch offices. Further, additional charges associated with agent services and fear or incompetence of some customers to execute self-service facilities like ATMs or mobile banking services adds up to this problem. This has caused the introduction of these measures to produce insignificant impact on the problem of long queues (Djelassi et al., 2018). In fact, the number of complaining customers concerning time wastage that happens at banks is enormous. Comments of customers both in media and social platforms indicate the problem is still huge. For instance, it was reported that a customer fainted after standing on a queue for about four hours at NMB Buzuruga branch in Mwanza (Msaga Sumu, 2021). Quoting another customer, on waiting line problem he said;

> *"Yesterday I arrived at NMB bank, Mbinga branch, and stood in the queue for three hours. When I reached the teller's window, I further waited for another hour to complete the service I wanted, that makes it four hours" (Rohongumu, 2018).*

Another customer was quoted saying;

> *"Waiting lines at banks in Kahama are very long and no steps being taken to reduce them. It seems the bank managers don't care at all." (Andeca, 2018).*

The literature proposes a number of strategies and approaches which managers and organizations can use to manage waiting lines and provide customers with good waiting experience. These approaches include, but not limited to, reducing perceived waiting time (Pruyn and Smidts, 1998), improving waiting environment/area (Voorhees et al., 2009), maintaining queue discipline (Larson, 2006; Kamau, 2012), and providing information in case of delay (Antonides et al., 2002). Though mostly applied, the impact of these techniques to customer's perception of service quality is unknown for most of service organisations in Tanzania. Thus, the researcher is curious to know if the application of these techniques in managing waiting lines has any impact on customer's perception of quality of services provided by Tanzanian commercial banks operating in Ruvuma region.

1.4 Research Objectives

This research aimed at achieving the following objectives.

1.4.1 General Research Objective

The main objective of this research was to determine the relationship that exist between waiting lines management strategies and perceived service quality.

1.4.2 Specific Research Objectives

The specific objectives of this study were:

i) To determine the extent by which the comfort of waiting area influences customer's perception of service quality.

ii) To determine the extent by which the discipline of waiting lines influences customer's perception of service quality.

iii) To determine the extent by which the engagement of customers during wait influences customer's perception of service quality.

iv) To determine the extent by which the waiting time guarantee influences customer's perception of service quality.

1.5 Research Hypotheses

Based on the above stated research problem, with respect to the research objectives as listed in the previous sub-section, the following research hypotheses were formulated.

i) H1: Comfort of the waiting area has a significant positive influence on perception of quality of service received by commercial bank customers.

ii) H2: Discipline of the waiting lines has a significant positive influence on perception of quality of service received by commercial bank customers.

iii) H3: Engagements of customers during wait has a significant positive influence on perception of quality of service received by commercial bank customers.

iv) H4: Waiting time guarantee has a significant positive influence on perception of quality of service received by commercial bank customers.

1.6 Relevance of the Research

This study is expectedly going to be useful and significant in many different ways.

1.6.1 Practical Relevance

The findings of this study will be of immense importance to managers of commercial banks, as well as other service organizations, as it will provide the businesses' managements with an opportunity to improve on their policies and processes related to queue management which will, in turn, help to increase their quality and performance.

1.6.2 Theoretical Relevance

This study is theoretically significant as its findings have shown an immense support for the existing theories pertaining to waiting lines management; specifically, Queuing Psychology Theory and Operations Management Approach to queue management. Further, in theory, this study is expected to improve the researcher's competency in research activities, as well as to qualify for a master degree award in Project Management of the Open University of Tanzania.

1.6.3 Empirical Relevance

This study is expected to produce academic publications which will add up to the existing body of knowledge concerning waiting lines, and thus can be used as reference to other researchers who will come to undertake the study on the related subjects.

1.7 Organization of the Report

This report is organized into five chapters. The first chapter which has been covered in previous pages discusses the general background to the study and an introduction to research problem at hand. The second chapter covers the reviewed literature and establishes the research gap together with the conceptual framework which guides this study. The third chapter gives an account of the design of the study and the methods that were employed to accomplish it. The fourth chapter discusses the findings of the study. The report closes with the conclusions and recommendations from the findings covered in the fifth chapter.

CHAPTER TWO

LITERATURE REVIEW

2.1 Overview

This chapter covers the review of literary and scholarly works related to the subject under study. It intends to expand the horizon of understanding on the basic concepts about the research topic as laid down by different authors and researchers. The chapter is organized into five parts namely, conceptual definitions of key concepts, theoretical literature review, empirical literature review, research gap and the conceptual framework.

2.2 Conceptual Definitions

2.2.1 Waiting Line

Waiting line is sometimes referred to as queue. In simple terms, a queue is a sequence of people or vehicles or any other items awaiting their turn to be attended to, or be processed or to proceed. Slack et al (2007) described a queue, in a business context, as being formed by customers waiting to be served. He added that if there is relatively little limit on how many customers can queue at any time, it is assumed that an infinite queue is possible. Actually, waiting lines are frustrating and unpleasant and most of customers regard them as negatively affecting service quality (Koc, 2013; Nowlis et al., 2004).

According to Stevenson (2018), waiting lines occurs whenever the current demand for a service exceeds the current capacity to provide that service. For any service system, customer arrivals are always random and highly variable. This may cause a service system to be temporarily overloaded as it becomes difficult to predict with

accuracy arrival patterns of customers for service and/or how much time is required to provide service to each customer. This may cause temporary imbalance between supply and demand in the service system which ends up forming waiting lines (ibid).

2.2.2 Waiting Line Management

Management of waiting lines is among the critical issues that managers are concerned with. However, managing the waiting lines is not a straightforward problem because waiting in a queue is more of a psychological experience than the actual one (Rowbotham et al, 2007). Waiting line management expands from just managing the actual amount of time customers has to wait for service to include perception of waiting customers towards their wait. This is because the perceived waiting time is usually different from the actual waiting time. Thus, if the management focuses only on reducing actual waiting time might not necessarily influence customers' subjective interpretation of their waiting experience for service (Pruyn and Smidts, 1998).

2.2.3 Queue Discipline

According to Slack et al. (2007), queue discipline can be described as the set of rules that determines the order in which customers waiting in the line are served. Perhaps, the most commonly used queue discipline is a first-come-first-served (FCFS), where the customers are processed in the order in which they arrived in the queue, such that the head of the queue is always processed (ibid; Stevenson, 2018). We can observe first-come-first served service at banks, stores, restaurants, and so on. However, more various queue disciplines exist and may be applied based on specific situations.

These include customer priority, which allows an important or aggrieved customer to be ‘processed’ prior to others; due date priority, in which customers are sequenced according to when their issues are due for delivery, and longest/shortest processing time priority in which operations may feel obliged to sequence their customers according to the length of time required for their jobs (Slack et al., 2007).

2.2.4 Waiting Time

Waiting time can simply be defined as the total elapsed time between issuance of a customer order and satisfaction of that order (Qfinance dictionary, n.d). If the customers waiting in a queue are real human customers, an important aspect of how they judge the service they receive is how they perceive the time spent waiting. It is well known that if a person completes the service waited for in lesser time than promised, their perception of the queuing experience will be more positive than vice versa. This is why management of queuing systems usually involves attempting to manage customers’ perceptions and expectations in some way (Slack et al., 2007).

2.2.5 Quality

Quality, as a concept, can be very hard to define. However, the gurus in the area of quality management have put forth some important definitions which can be useful for this study. Crosby (1979) defined quality to mean the conformance to the requirement or specification. This means, quality describes how well a product or service meets the targets determined by it designers. On the other hand, Juran (1950s) defined quality as the fitness for use. In Juran’s mind, quality was measured by how well a product or service performs its intended function. Putting it all

together, quality emphasizes a link between the customer and his purpose on one hand and the product or service being received on the other. With this in mind, quality can be briefly defined as the totality of features and characteristics of a product or service that bear on its ability to meet stated or implied needs of users or customers (Sridhar, 2001).

2.2.6 Perceived Service Quality

According Jiang and Wang (2006), perceived service quality is the consumers' evaluation of the performance of service received and how it compares with their expectation. In the words of Malik (2012), quoting from Parasuraman et al (1988), stated that perceived service quality is viewed as the degree and direction of discrepancy between consumers' perceptions and expectations. To simplify, Reimann et al (2008) concluded this complex concept into a mathematical equation as follows: Perceived Service Quality = Service Perception – Service Expectation

Further, Jiang and Wang (2006) pointed out that under perceived service quality, evaluations are not based on service attributes, but rather they depend on a customer's feelings or memory. So, customers measure service quality in terms of how much pleasure they have received from a service. Putting this much clearer, perceived quality is the actual experience of a customer about service (Turel and Serenko, 2004).

2.2.7 Customer Engagement

In the context of this study, customer engagement refers to a group of service providers' strategies and tactics that are meant to engage the mind of customers

while they wait for services (Antonides et al., 2002; Bae and Kim, 2014). These tactics are meant to help customers find something interesting, useful and thoughtful to do while waiting for service. Lee et al., (2012) referred to mind-engagement activities as “filler interfaces”. In this regard, filler interfaces can include firms’ provision of music, television and video shows, free snacks, drinks and others similar to customers waiting for service.

2.2.8 Waiting Time Guarantee

Waiting time guarantee is one of the important initiatives employed by service providers to better manage the negative waiting experiences. Waiting time guarantee can be defined as the commitment from a firm to serve its customers within a specified period of time. If the firm fails to meet this commitment, then it apologizes or compensates customers for the delay (Kumar et al, 1997). Apologies and compensations are excellent ways the firms can use to expresses regret for inconveniencing customers or making them wait for too long, and provides a form of value to waiting customer for the time wasted in waiting for service to be completed (Lin et al., 2015). Actually, many studies suggest that complaining customers who receive an apology are more satisfied than those who do not (e.g., Mostafa et al., 2014; Wirtz & Mattila, 2004),

2.3 Theoretical Literature Review

There are multiple theories that have been developed on waiting lines management. Two of these theories which deems appropriate and relevant to this study are discussed below. The critical review of these theories helped the researcher to

establish and explain the relationship that exists between waiting lines management and customer's perceived quality of the service received.

2.3.1 Queuing Psychology Theory

In the light of waiting line problem, Maister (1985) developed a theory of queue psychology which focuses on combination of perception and expectation management to enhance customers' waiting experience. In particular, he defined a concept which he referred to as the First Law of service where he concluded that customer's satisfaction is the difference between customer's perception and expectation (i.e. Satisfaction = Perception – Expectation). This means, if customers expect a certain level of a service and perceive the service received to be higher, they will be satisfied, vice-versa, they will be dissatisfied.

According to Maister (ibid), customer's satisfaction can be influenced by either working on what a customer expects or what a customer perceives. The fundamental premise of Maister's model is that it is the perception of the wait that determines satisfaction rather than the actual waiting time. Thus, if perceptions of waiting customers are effectively managed it may enhance customers' experience, hence improving perceived service quality.

Further, Maister (ibid) established eight facts that should be considered when trying to manage expectations and perceptions of customers. These are; unoccupied times feel longer than occupied time, anxiety makes waits seem longer, uncertain waits are longer than known finite waits, pre-process waits feels longer than in-process waits, unexplained waits are longer than explained waits, unfair waits are longer than

equitable waits, the more valuable the service, the longer one will wait and solo waiting feels longer than group waiting.

In many waiting instances management can reduce their customers' perception of the waiting time through psychological approaches (Karen &Blaire, 1989). If those waiting in line have nothing else to occupy their thoughts, they often tend to focus on the fact that they are waiting in line and usually perceive the waiting time to be longer than the actual waiting time. Conversely, if something else occupies them while they wait, their perceived waiting time is often less than their actual waiting time (ibid; Maister 1985).

Some strategies can be employed as part of waiting lines management to shift the focus of those in waiting line from the fact that they are waiting. One is to use distractions, such as in-flight snacks, meals or videos, and magazines or televisions in waiting rooms, or giving customers some productive tasks to do while waiting, like filling out forms. Of course, some customers provide their own distractions such as talking on their cell phones, chatting, or playing games on handheld electronic devices. These distractions allegedly prevent mental idleness and boredom so that less psychological attention is devoted to the experience of waiting in a queue (Katz et al., 1991; Maister, 1985). Another strategy can involve providing comfort in the waiting area like seats for waiting customers than let them stand in a line. Moreover, it can be useful to inform customers how long their wait for service will be so as to reduce anxiety (Heizer, et al, 2017).

2.3.2 Operations Management Approach

The other theory that tries to explain the waiting line problem is based on the application operations management approaches. The theory asserts that managers must carefully assess various alternatives for capacity of service systems and actively manage one or more system constraints to be able to reduce waiting times. Multiple options exist for this purpose. These can include working to increase the processing rate by acquiring new and advanced equipment or methods, increasing the number of servers, reducing variability in processing times by increasing the degree of standardization of the service, and shifting some arrivals to "off-times" by using reservations systems, "early-bird" specials, senior discounts, or any other variable pricing strategy (Stevenson, 2018).

Additionally, managers can effectively reduce the waiting times by considering options like using temporary or part-time workers during busy periods (Karen and Blaire, 1989), looking for a bottlenecks and improving the process aspects that are largely responsible for a slow service rate (Stevenson, 2018), and providing appropriate, adequate and frequent training to workers in the service system (Bitner et al., 1990).

2.4 Empirical Literature Review

A good number of studies have investigated different issues on waiting line management as related to customer perception of quality and their satisfaction. A reasonable number of them have been reviewed by the researcher and summarized here under for each specific objective of this study.

2.4.1 Comfort of Waiting Area and Perceived Service Quality

Comfort of waiting area refers to the extent by which a customer feels comfortable in the waiting environment or banking hall while waiting to be served (Mbawuni and Nimako, 2018). Empirical evidences and experience suggests that service providers should manage the areas, rooms or halls in which customers spend their time while waiting to be served by ensuring that the general waiting environment cheers up customers throughout the entire period of waiting.

The study by McQuilken et al (2017) examined the service recovery for overstaying customers in the high-contact restaurants in Australia. Web-based self-report survey data were collected from 400 Australian online panel members aged 18 years old and above. The study employed a two-by-two-by-two full factorial, between-respondent experimental design to establish the relationship between recovery actions (independent variables) and focal customer complaint intention (dependent variable). The results revealed that in order to reduce customer complaints and positively enhance their view of service quality, wait comfort is obligatory to any service firm facing the waiting problem. Further, their study found that when comfortable waits are provided they can substitute for wait effort and apology.

Chien and Lin (2014) conducted another study in Taiwan to examine the different effects of environmental elements on the perceived waiting time and customer emotions. In their study, they surveyed 326 customers of a leading fast-food chain in Taiwan during rush hour. Their study findings established the quality of the physical environment to be the most consistent moderator of the negative effects of waiting time and the critical component of the overall service experience and customer

impressions. In fact, they found that when the waiting area is looking neat, uncongested, welcoming, refreshing, pleasant, attractive, and with appropriate temperature and seating for relaxation, it serves as nonverbal evidence that the restaurant cares about its customers. Conclusively, they argued that making a wait more pleasant could be more effective than addressing the perceived waiting time itself.

Another study by Bielen and Demoulin (2007) on waiting time influence on the satisfaction-loyalty relationship in services was conducted in Belgian health care industry involving the sample of 946 respondents and employing regression analyses and the Baron and Kenny method to test moderator and mediator impacts of variables. The results of the study confirmed that waiting time satisfaction is not only a service satisfaction determinant, but it also moderates the satisfaction-loyalty relationship. Moreover, the comfort of waiting environment was found to be a strong determinant of customer waiting time satisfaction.

2.4.2 Discipline of Waiting Line and Perceived Service Quality

Studies suggest that queue discipline is another variable for waiting lines management that influences customer satisfaction due to the fact that, if well managed, it creates a sense of social justice to the waiting customers (Larson 2006).

The study by Kamau (2012) focusing on how waiting line management influences customer satisfaction in Kenyan commercial banks had interesting findings on the impact of managing queue discipline. This study applied a census survey of all the 43 registered commercial banks in Kenya. The primary data was collected using self-

administered questionnaire and the analysis was done using descriptive statistics generated from SPSS. The study revealed that maintaining queue discipline, among other factors, minimizes perceived waiting time and leads to customers' satisfaction. Further, the study recommended a few measures that could be implemented by banks to enhance queuing discipline, including providing direction in terms of dedicated terminals in self-service, having receptionist to allow customers take their place in the queue for a service, using physical barriers aimed at guiding queue formation, adopting automatic queue measurement systems, seamless banking, internet banking, mobile banking, agency banking, and allowing customers' freedom of movement while keeping their spot in a queue.

Nadiri (2016) conducted another study on the impact of retail bank customers' perceived justice on their service recovery satisfaction and post-purchase behaviours in Dubai. His study involved a sample of 178 retail bank customers and used partial least squares (PLS) approach in analysis to estimate the measurement and structural parameters. His study concluded that perceived justice of customers, which is expressed through maintaining queue discipline in the context of this study, has a significantly positive effect on their perception of service quality and satisfaction. In other words, when the principle of FCFS is violated customers become dissatisfied and associate it with poor service quality.

Mariyappan et al (2021), also, applied a mathematical model to analyze the bank queues in urban area of Thanjavur District in India. Their study used descriptive statistics to estimate the total waiting time and duration of queues and analyzed the results using the ANOVA method so as to make conclusions on how to improve

service quality, optimize queue length and waiting time in queues of banking sector. The study concluded that internet banking, ATMs, mobile banking, automatic cheque deposit machine and virtual queuing solutions may help to manage queue discipline and eventually lead to reduced waiting time, improved productivity of employees and optimization of costs of banks which all adds up to improved service efficiency and customers' perceptions.

2.4.3 Customer Engagements during Wait and Perceived Service Quality

Beginning from little bit a far off, the study from four decades ago by Sasser et al (1979) provide good examples of both managing the perception and the expectation of waiting times. Their study took place in the UK where they investigated 37 different case studies involving the Lex Service Group. In this study, they offer the example of the well-known hotel group that received complaints from guests about excessive waiting times for elevators. After an analysis of how elevator service might be improved, it was suggested that mirrors be installed near where guests waited for elevators. The natural tendency of people to check their personal appearance substantially reduced complaints, although the actual wait for the elevators was unchanged. This implies that engaging customers with various activities during the time spent waiting for service can play a vital role in influencing customers' perception of service quality through reduction of perceived waiting time.

Another important study focusing on customer engagement during their wait for service was carried out by Yeddula (2012) in a regional medical center in Grand Island, Nebraska, involving the sample of 172 patients. The principal focus of the

research was to investigate whether simple changes in the waiting area affected patient's evaluation of service. The data were collected by observing and surveying the patients, and then regression analysis and ANOVA were performed to determine the effect of independent variables on the dependent variable. The results of the study showed that adding the new activities in the waiting area made the patients remain interested and entertained while waiting for service which further improved the overall satisfaction. The addition of more activities in the waiting area which patients can engage with while waiting was proved by this study to be an effective tool for managing perceptions towards quality of service.

Moreover, the study by Bae and Kim (2014) attempted to measure the effect of offering menu information on perceived waiting time employing an experimental research design in a real restaurant setting. The study treated menu information as a method of distracting customers and reducing perceived waiting time and conducted the test for 3 weeks under three manipulated conditions (i.e., music, no distraction, and offering menu information). The results of this study showed that there are significant mean differences in three conditions in terms of the gap score between perceived and actual waiting time. Specifically, the study revealed that customer engagement helps to fill the time with something worthwhile as customers wait to be served. Besides providing menu information, the study identified other customer distracter to include playing appropriate music in the environment where customers wait for service completion. The study concluded that customer engagements are a way of shortening the perceived waiting time and helping waiting customers to have positive moods and feelings instead of focusing on the fact that they are waiting for a

service. Eventually, this could have a positive influence on customers' perception of quality, as customers tend to associate shorter waiting time with good quality of service.

2.4.4 Waiting Time Guarantee and Perceived Service Quality

One of the most important works on the area of waiting time guarantee was done by Kumar, Kalwani and Dada (1997). In their study, they used a series of interactive, computer-based laboratory experiments by the use of computer simulations of real-life waiting experiences. In the course, they developed a utility theory-based model of satisfaction with customers waiting in line based upon the assumption that when a customer joins a queue he or she has some prior beliefs about the distribution of service times at the firm. Then, they applied the model to derive select hypotheses pertaining to the impact of a waiting time guarantee on customers' waiting experiences. Their hypotheses were based upon the assumption that an offer of a time guarantee is a signal of reliability from the firm and reduces customers' perceived variance around the expected service times. Results from their experiments suggested that if customers observe the service times to be less than expected, their satisfaction increases monotonically during the wait. Further, under such circumstances, the explicit provision of a waiting time guarantee enhances satisfaction both during as well as at the end of the wait. Overall, they found that a time guarantee, if met, increases satisfaction at the end of a wait; however, if violated, it decreases satisfaction at the end of the wait.

Another study that assessed the effect of waiting time management strategies on waiting time satisfaction among bank customers was conducted by Mbawuni and Nimako (2018) in Ghana. This study investigated five waiting time management strategies to determine how they affect customers' perception of waiting. Drawing from relevant banking and financial marketing literature, a conceptual framework was developed and tested using empirical data from a cross-sectional survey of 480 sampled customers of commercial banks. Data were analyzed using partial least squares structural equation modeling (PLS-SEM). The findings of this study indicated that, together with the other three, waiting time guarantee in terms of compensation for delays was the critical factor that influenced consumer waiting time satisfaction. They further commented that waiting time compensation and apologies provides a form of value to waiting customer for the time wasted in waiting for service to be completed. Moreover, they asserted that where service provider does not apologize nor provide compensation to customers, it could be perceived by customers as irresponsibility and lack of concern for customers which could result in customers' branding of the service delivery process as poor.

2.5 Research Gap

The literature that has been reviewed on this topic has indicated a lot of ways in which management of waiting lines can affect customers. However, much of the studies in this area tend to focus on the relationship that exists between waiting lines management strategies and customer satisfaction (Kamau, 2012; Munirate et al, 2015; Mbawuni and Nimako, 2018). A considerable number of some others seem to concentrate on the effect of waiting lines management on areas like organizational

costs, operations efficiency and strategies to reduce waits through the use of operations management techniques or altering the perceived wait through perceptions management (Katz et al., 1991; Maister, 1985). Further, of all publications that the researcher has reviewed relating to this area of study, none was conducted in Tanzania; specifically, on the Tanzanian banking industry. A lot of the papers found by the researcher were based in Europe, Australia, America, Asia as well as Nigeria, Ghana and Kenya in Africa.

Thus, though queuing problem has been adequately studied in other countries and various strategies developed to manage the waiting lines, the issue is still under-researched in Tanzania. Of course, some of the waiting line management strategies are evidently being applied in Tanzanian banking firms like in other countries of the world; however, their impact to customer's perception of service quality for most of Tanzanian service organisations is unknown. This has triggered the researcher's curiosity to undertake this study so as to know how and to what extent these techniques links to customer's view of quality of service they receive from selected commercial banks in Tanzania; Ruvuma region to be specific. And this describes the distinction between this study and other studies that have been done all over the world concerning queuing management.

2.6 Conceptual Framework

From the reviewed literature, the strategies employed to manage the waiting lines so as to enhance the perception of quality of service received by customers waiting in

line has been identified and the following model has been developed to illustrate the relationship between them.

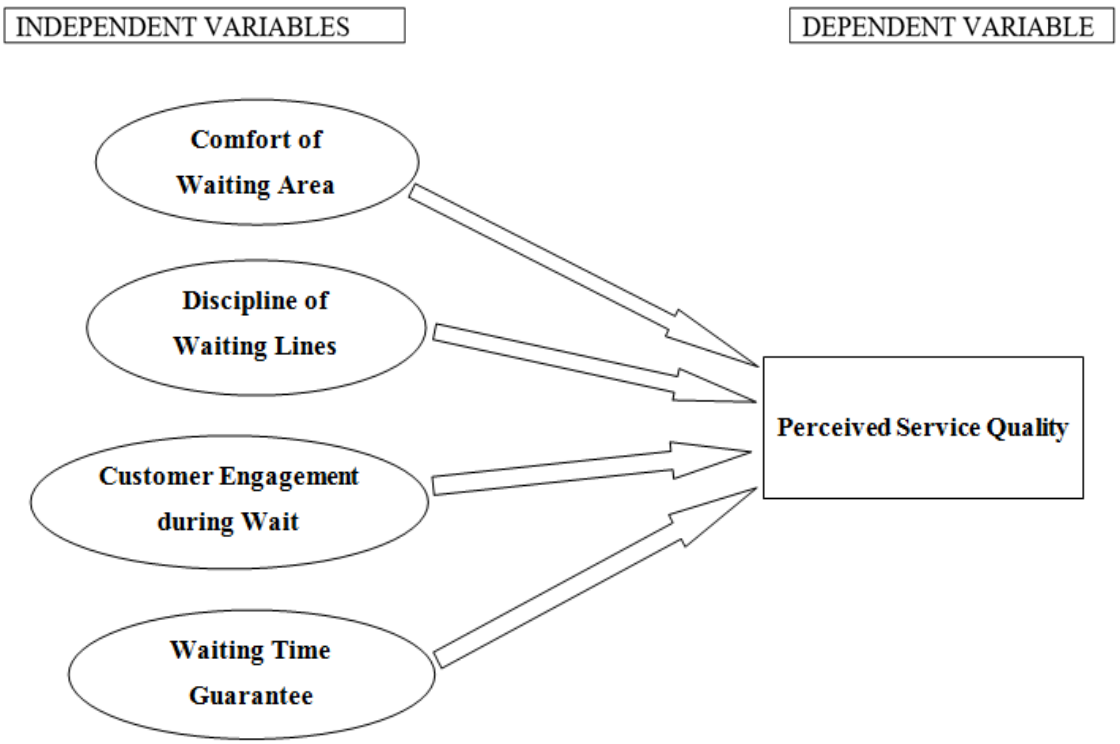

Figure 2. 1 The conceptual framework

Source: Researcher's construct (2022)

Figure 2.1 shows the linkage between waiting line management and customers' perception of service quality. In this study, perceived service quality stands a dependent variable which depends on how waiting lines are managed. However, waiting line management encompasses a total four strategies, namely comfort of waiting area, discipline of waiting line, customer engagement during wait and waiting time guarantee, which were investigated to determine how they individually and collectively contribute to perception of service quality by a waiting customer.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Overview

Research methodology is a way to systematically solve the research problem. It may be understood as a science of studying how research is done scientifically. In it, various steps that are generally adopted by a researcher in studying the research problem along with the logic behind them are learned (Kothari, 2004). Thus, this chapter details the systematic course through which this study was conducted. The research philosophy, study area where the research was conducted, research approach, research design, study population, sampling techniques and sample size, data collection methods, data processing and analysis as well as ethical considerations of this research are discussed under this chapter.

3.2 Research Philosophy

This study adopted the deductive positivism philosophy as it subjected itself to quantitative research. According to Wilson (2010), positivism as a philosophy seeks to gain knowledge through research that is only factual and trustworthy. In positivism studies the role of the researcher is limited to data collection and interpretation in an objective way. Positivism depends on quantifiable observations that lead to statistical analyses. Moreover, in positivism studies, the researcher is independent form the study and there are no provisions for human interests or personal values within the study. Crowther and Lancaster (2008) argue that as a general rule, positivist studies usually adopt deductive approach and relates to the viewpoint that researcher needs to concentrate on facts.

3.3 Area of the Research

This study was conducted in Songea, Ruvuma region. Banks from Songea, which is situated in the southern part of Tanzania, were selected for this study because of two main reasons. First, there has not been any relevant or close research known to the researcher conducted in this area. Second, the researcher feels an obligation of finding solutions to business problems prevailing in his immediate society, thus doing this research in Ruvuma, which is the researcher's place of domicile would be a great social responsibility and giving back to the community.

3.4 Research Approach

Drawn from the research philosophy, this study necessitated the application of quantitative approach. This is due to the fact that quantitative research produces objective data that can be clearly communicated through statistics and numbers, and particularly appropriate when dealing with large sample sizes (Bhandari, 2022). Further, the study employed descriptive analysis for quantitative data in order to control bias and preserve research objectivity. Actually, descriptive statistics has been opted for because it is good when comes to examination of the relationships between variables as well as for summarizing data in visual form (Chatterjee, 2011).

3.5 Research Design

According to Kothari (2004), a research design is the arrangement of appropriate procedures adhered to during the collection and analysis of data while considering time and funds available for the study. This study adopted cross-sectional research design as it is the most appropriate design when the researcher intends to measure the outcome and the exposures in the study participants at the same time (Olsen and

Marie, 2014). This kind of research design was suitable for this study as it was focused on describing the existing situation by collecting data from many different individuals at a single point in time. By the same token, this design aided this study to understand the existing waiting line situation in commercial banks and how management of waiting lines relate to customers' perception of service quality.

3.6 Study Population

A study population is simply a target group to be studied in a particular place. The population for this study was basically the customers of commercial banks operating in Ruvuma region, which are CRDB, NBC, NMB and TCB (previously known as TPB). This study focused on these banks because of their wider branch networks and larger customer base which enabled the researcher to capture an adequate representation of the bank customers in the research area.

3.7 Sampling Design and Procedures

Techniques used to obtain samples as well as the sample size are stated under this section.

3.7.1 Sampling Techniques

According to Taherdoost (2017), sampling is the process of obtaining information about an entire population by examining only part of it. This study relied on a randomly selected sample to make conclusions about the study population. Specifically, the study used stratified random sampling technique to obtain its sample. The study population was divided into strata corresponding to the selected

commercial banks, and then the simple random sampling was applied to select appropriate samples from each stratum. In the actual data collection exercise, the data collectors physically visited the selected bank branches during work hours and randomly pick customers to fill the questionnaires as they arrived for service.

3.7.2 Sample Size

Sample size is the number of observations taken from a population through which statistical inferences for the whole population are made (Sims, 2016). For this study, the total population was not certainly known; i.e., the total number of customers of commercial banks in Ruvuma. Therefore, the minimum sample size was calculated basing on the formula for determining sample size for unknown population as suggested by Kothari (2004).

This formula is:

$$n = \frac{z_a^2 * p * q}{\mathcal{E}^2}$$

Where;

n = minimum sample size required
z = confidence level (i.e., 95% selected for this study, where z = 1.96)
p = numerical probability of success (i.e., p = 0.8)
q = numerical probability of failure (i.e., q = 1 - p = 1 - 0.8 = 0.2)
Ɛ = maximum estimation error accepted (i.e., Ɛ = 0.05)

Substituting in the above formula;

$$n = \frac{(1.96)^2 * 0.8 * 0.2}{(0.05)^2}$$

$$n = 246$$

Therefore, at least 246 respondents were required for this study.

3.8. Methods of Data Collection

Only the primary data were collected for this study. The researcher employed structured questionnaires as a tool to collect data from respondents. This method was suitable for this study due to its potential ability to collect information from a large portion of a group in a standardized way (Sarantakos, 2005). Also a method yields well thought off information, and the result can easily be quantified and analyzed more scientifically and objectively.

The questionnaire used for this study was an original design of the researcher adopting some questions from Kamau (2012) and Yeddula (2012). However, the borrowed questions were adjusted and customized to suit the objectives of this study. The questionnaires were distributed either by handing the hardcopies physically to the respondents or by online sharing of an electronic copy prepared by Google forms to respondents who opted for it through WhatsApp. Online data collection helped to reduce data collection costs, to minimize paper work and to ease the tedious exercise of manual data entry into the analysis software; i.e. SPSS.

3.9 Variable Measurement Procedure

In this study, four independent variables were used to predict the dependent variable. Further, each independent variable was described by a number of observable factors which formed the grounds for questionnaire items. The procedure for measurement of the variables involved in this study is summarized in Table 3.1 below.

Table 3. 1 Variables and measurement procedure

Construct type	Construct variable	Observed variable	Source	Measurement scale
Independent Variable 1	Comfort of Waiting Area	Queues in the waiting area	McQuilken et al (2017)	7-point Likert scale; 1 being the lowest to 7 being the highest
		Comfortable seating in the waiting area	Bielen and Demoulin (2007)	
		Congestion in the waiting	Chien and Lin (2014	
		Neat waiting area	Chien and Lin (2014)	
		Ventilation and lighting in the waiting area	McQuilken et al (2017)	
		Indoor temperature	Chien and Lin (2014)	
		Waiting area attractiveness	Bielen and Demoulin (2007)	
Independent Variable 2	Waiting Line Discipline	Physical barriers guiding queue formation and flow	Kamau (2012)	7-point Likert scale; 1 being the lowest to 7 being the highest
		Receptionists guiding queue formation and flow	Kamau (2012)	
		Signage and signalling systems guiding queue formation and flow	Kamau (2012)	
		Queuing without physically being in a line	Kamau (2012)	
		Freedom of movement while keeping line position	Kamau (2012)	
		FIFO service discipline	Kamau (2012)	
Independent Variable 3	Customer Engagement	TV or Radio in waiting area	Bae and Kim (2014)	7-point Likert scale; 1 being the lowest to 7 being the highest
		Magazines, newspapers or leaflets to read in	Yeddula (2012)	

		the waiting area		
		Freedom to use mobile phone in a waiting area	Yeddula (2012)	
		Wi-Fi or internet access for waiting customers	Yeddula (2012)	
		Free drinks and snacks for waiting customers	Yeddula, (2012).	
Independent Variable 4	Waiting Time Guarantee	Expected waiting time information	Mbawuni and Nimako (2018)	7-point Likert scale; 1 being the lowest to 7 being the highest
		Feedback on service progress	Mbawuni and Nimako (2018)	
		Completing service on time	Mbawuni and Nimako (2018)	
		Apology for service delay	Mbawuni and Nimako (2018)	
		Explaining delay to customer	Mbawuni and Nimako (2018)	
		Compensation for delay	Mbawuni and Nimako (2018)	
Dependent Variable	Perceived Service Quality	Tangibility	Parasuraman et al (1988)	7-point Likert scale; 1 being the lowest to 7 being the highest
		Reliability	Parasuraman et al (1988)	
		Responsiveness	Parasuraman et al (1988)	
		Assurance	Parasuraman et al (1988)	
		Empathy	Parasuraman et al (1988)	

Source: Researcher's construct (2022)

3.10 Data Processing and Analysis

Data analysis refers to the computation of certain measures along with searching for patterns of relationship that exist among data groups (Kothari, 2004). The data gathered from the respondents for this study were verified, classified and coded prior to analysis. Then, the data were loaded to SPSS for statistical analysis. Prior to performing regression analysis, factor analysis was employed to reduce the number of factors into a small number of measured variables. From there, multiple linear regression was done to find out whether the independent variables predicted a given dependent variable. In the process, the data were subjected to the statistical tests of significance to determine with what validity the data indicated the reached conclusions.

However, in order to assess whether independent variables (predictors) explain the dependent variable (criterion) under regression analysis, few assumptions had to be considered. These included the linearity of relationships between variables, multivariate normality and no or little multi-collinearity. During analysis, the researcher used various tools to test these assumptions as explained in the chapter that follows.

3.11 Ethical Considerations

Paying attention to ethical matters is required throughout the research process; from data collection, storage, analysis, reporting as well as sharing findings (Creswell, 2018). In this study, all necessary ethical codes of conduct, rules and principles of conducting research were adhered to. Before starting the data collection exercise, the researcher obtained an official research clearance letter from the University to serve

as an introduction to organizations intended for data collection. Further, the researcher ensured voluntary participation of both the banks and the customers through letting them check the consent statements before starting responding to questionnaires. Moreover, the collected data were handled with high level of privacy and confidentiality.

CHAPTER FOUR

PRESENTATION AND DISCUSSION OF FINDINGS

4.1 Overview

As stated in the first chapter of this report, the main objective that formed the basis for this research was to determine the relationship that exists between waiting lines management strategies and perceived service quality. To achieve this objective, the study was guided by four specific objectives which focused on determining the extent by which the comfort of waiting area, the discipline of waiting lines, the engagement of customers during wait, and the waiting time guarantee influences customer's perception of service quality. Now, this chapter presents the information on the well analysed findings and their appropriate interpretations as obtained from the collected data, as well as in depth discussion of the findings to show how they compare and contrast from other relevant previous studies.

4.2 Response Rate

The response rate refers to the ratio of the number of collected questionnaires to that of distributed questionnaires times 100 percent. Keeping in mind that this study required a minimum sample of 246 respondents, the researcher distributed more questionnaires so that the sample size requirement is met. During data collection, 300 questionnaires were distributed and 256 were collected back from the respondents. This makes it 85.3% response rate. The questionnaires in this study were distributed by both manual handling and electronic online sharing, i.e., Google forms shared

through WhatsApp. Poor response from respondents who received questionnaires electronically seems to have influenced this value of response rate.

4.3 Characteristics of Respondents

In describing the sample, four demographic attributes were collected from the respondents, namely; gender, age, educational level and banking experience. Out of 256 respondents of this study, 96 (37.5%) were females and 160 (62.5%) were males. Over 80% of the respondents were aged between 20 and 40 years old while the remaining age groups formed less than 20% of the sample size. It is very interesting to note that this figure reflects on the social media usage by age groups as the higher response rate concentrated on age groups with higher levels of social media usage according to Barnhart (2022), keeping mind that a large number of questionnaires were distributed electronically through social media, i.e., WhatsApp. Also, over 90% of the respondents had attained at least a college level education. This implies that the responses to questionnaires were the product of rational analytical minds as the level of education can, arguably, influence thinking and analytical abilities of an individual. Furthermore, 98% of all respondents had at least one-year experience with banking services, with more than 85% having a more than 5-year experience, which enhances the researcher's confidence in the respondents' actual perception of service quality in banks, as most of them have had enough time to develop their own view of quality of service they receive from their banks. The details of each of these attributes are presented in Table 4.1 below.

Table 4. 1 Characteristics of Respondents

Gender

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Female	96	37.5	37.5	37.5
	Male	160	62.5	62.5	100.0
	Total	256	100.0	100.0	

Age

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Under 20 years	1	.4	.4	.4
	20-29 years	59	23.0	23.0	23.4
	30-39 years	156	60.9	60.9	84.4
	40-49 years	30	11.7	11.7	96.1
	50-59 years	8	3.1	3.1	99.2
	Above 60 years	2	.8	.8	100.0
	Total	256	100.0	100.0	

Educational Level

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Primary	4	1.6	1.6	1.6
	Secondary	15	5.9	5.9	7.4
	College	71	27.7	27.7	35.2
	University	166	64.8	64.8	100.0
	Total	256	100.0	100.0	

Banking Experience

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Under 1 year	5	2.0	2.0	2.0
	1-3 years	13	5.1	5.1	7.0
	3-5 years	20	7.8	7.8	14.8
	5-10 years	72	28.1	28.1	43.0
	Over 10 years	146	57.0	57.0	100.0
	Total	256	100.0	100.0	

Source: Field data, 2022

4.4 Sample Composition

As explained under section 3.6 in chapter three, this study focused on only four banks operating in Ruvuma region, namely CRDB, NBC, NMB and TCB. The data revealed that NMB customers constituted a largest part of (45.1%) of the sample, followed closely by CRDB which constituted 38.5% of the sample. The compositions of the remaining banks were 10.2% and 6.3% for NBC and TCB respectively. The data tallies exactly with figures of market share of bank customers in Tanzania according to Ernst and Young (2020), whereby NMB leads with largest customer base followed closely by CRDB, with NBC and TCB following from a distance. It should be noted that the total sample for this study was 256 respondents, but the total responses for this attribute totals 364. This is because some respondents were customers of multiple banks.

The composition of the sample according to banks of respondents is shown in Table 4.2 below.

Table 4. 2 Respondents by bank

Respondents' Bank Frequencies

		Responses		Percent of Cases
		N	Percent	
Bank of Respondents[a]	CRDB	140	38.5%	57.4%
	NBC	37	10.2%	15.2%
	NMB	164	45.1%	67.2%
	TCB	23	6.3%	9.4%
Total		364	100.0%	149.2%

a. Dichotomy group tabulated at value 1.
Source: Field data, 2022

4.5 Preliminary Analyses

Before stepping into actual analysis, there were a manual editing of the collected data to ensure the fulfilment of the conditions and criteria provided in the questionnaire. Thereafter, the data were verified, classified, coded and loaded to SPSS for analysis.

The preliminary statistical tool applied on the collected data was factor analysis. Factor analysis refers to the statistical technique of reducing large number of latent constructs (characters that cannot be measured directly, e.g. religiosity, beauty, mind-set, perception, etc.) into a fewer number of underlying variables (Field, 2009).

This study involved a lot of underlying constructs represented by the questionnaire questions on which the data were collected. Thus factor analysis was important in order to reduce the large number of questionnaire dimensions into fewer measurable factors. To begin with, Kaiser-Mayer-Olkin (KMO) measure of sampling adequacy and Bartlett's Test of Sphericity were undertaken to verify the data and justify the application of factor analysis. The results are as shown in the Table below.

Table 4. 3 KMO and Bartlett's test

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.937
Bartlett's Test of Sphericity	Approx. Chi-Square	4672.887
	Df	253
	Sig.	**.000**

Source: Field data, 2022

From the Table 4.3 above, KMO value was 0.937 which signifies that there were enough respondents and sufficient underlying correlations for each variable that suits

factor analysis for the collected data set. According to Field (2009), KMO test takes its value from 0 through 1. A value close to 1 portrays that the patterns of correlations are relatively compact and therefore factor analysis would yield distinct and reliable factors. Further, Bartlett's test yielded a value of 4672.887 and an associated level of significance of 0.000 suggesting that the correlation matrix has significant correlations among the variables which favours the use of factor analysis.

After verifying that the collected data suits factor analysis, the analysis was then performed using a principal component analysis and Varimax rotation in SPSS. The results, as exhibited by Table 4.4 below, yielded four factors, loading each questionnaire item on its respective factor with the acceptable minimum factor loading criteria of > 0.5. Specifically, the seven questionnaire items that measured the comfort of waiting area were loaded to that respective factor with the factor loading criteria ranging from 0.529 to 0.821. Six questionnaire items that measured the discipline of waiting lines were loaded to that factor with the factor loading criteria ranging from 0.577 to 0.678. Customer engagement during wait was measured by five items on the questionnaire which were all loaded on it with the factor loading criteria ranging from 0.581 to 0.911. Lastly, waiting time guarantee was measured by six questionnaire items which were all loaded on it with the factor loading criteria ranging from 0.829 to 0.888.

Table 4. 4 Factor analysis results

Rotated component matrix[a]

Item	Component			
	1	2	3	4
Comfort of Waiting Area				
Queues in the waiting area	.632			
Comfortable seats in a waiting area	.529			
Uncongested waiting area	.714			
Neat waiting area	.790			
Well ventilated and lit waiting area	.821			
Comfortable indoor temperature	.691			
Attractive waiting area	. 802			
Discipline of Waiting Lines				
Physical barriers that guides queue formation and flow		.577		
Receptionists guiding queue formation and flow		.599		
Signage and signaling systems		.675		
Queuing without standing in line		.678		
Customer's freedom of movement		.666		
Queue discipline (FIFO)		.584		
Customer Engagement During Wait				
TV or radio in a waiting area			.581	
Magazines, newspapers, leaflets to read in a waiting area			.613	
Freedom to use mobile phones in waiting area			.519	
Drinks and snacks in a waiting area			.725	
Provision of free Wi-Fi			.911	
Waiting Time Guarantee				
Informed about expected waiting time				.858
Feedback on process progress when needed				.859
Completing service on time				.888
Apology for delay				.888
Explanation for delay				.831
Compensation for delay				.829

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 8 iterations.

Source: Field data, 2022

To check as to whether there was internal consistency of the items that measured the same variable and verify if the Likert items were really measuring the same

underlying constructs, scale reliability tests were done for each variable during the analysis. Cronbach's alpha was employed for this purpose; to ascertain the internal consistency for items of each variable. The results are as summarized in Table 4.5 below.

Table 4. 5 Reliability test for internal consistency

Reliability Statistics

Predictor	Cronbach's Alpha	N of Items
Comfort of waiting area	.756	7
Discipline of waiting line	.873	6
Customer engagement during wait	.806	5
Waiting time guarantee	.958	6
Perceived Service Quality	.872	5

Source: Field data, 2022

As shown in Table 4.5 above, the comfort of waiting area was measured by 7 items and had Cronbach's alpha of 0.76 which indicates good internal consistency among the seven items. With Cronbach's alpha of 0.87, the discipline of waiting line had high internal consistency among the 6 items that measured it. For customer engagement during wait the Cronbach's alpha was 0.81 which indicates high internal consistency among 5 items that composed it. Also, there was a very high internal consistency among 6 items that represented waiting time guarantee, with Cronbach's alpha of 0.96. Lastly, the dependent variable of the study, perceived service quality, had the Cronbach's alpha of 0.87 which indicates high internal consistency for this variable.

4.6 Description of the Dependent and Independent Variables

Based on the specific objectives, this study had four independent variables that predicted the dependent variable. The four independent variables are the comfort of

waiting area (coded as COMFT), the discipline of waiting line (coded as DISCP), the customer engagement during wait (coded as ENGT), and the waiting time guarantee (coded as GUART). Each of these variables was measured by a number observable items on a 7-point Likert scale in a questionnaire, whereby by the respondents were assessed on the extent by which each item indicated the level of quality of service received from the bank in their view. In ensuring consistency and validity of the measurements, the scale was similar in each Likert item (question) ranging from 1 (poorest quality) to 7 (best quality).

On the other hand, the dependent variable of this study was Perceived Service Quality, coded as PSQUAL to ease the analysis exercise. This variable was measured by five observable quality characteristics of service as suggested by Parasuraman et al (1988), which are tangibility, reliability, responsiveness, assurance and empathy. Similarly, the items were measure on a 7-point Likert scale whereby each value on the scale indicated the extent by which the customer agreed with each characteristic as a measure of service quality. According to Rotter (1990), Likert scale is an appropriate and highly acceptable measurement scale for measuring behavioural constructs such as perception which is actually what was being assessed in this study.

4.7 Descriptive Analysis

Prior to regression analysis which is the main tool of analysis for the collected data in this study, descriptive statistics were determined for each independent variable to describe their individual contribution to customers' perception of quality of service received from the bank. The results are presented in the subsections that follow.

4.7.1 Descriptive Statistics for the Influence of the Comfort of Waiting Area on Perceived Service Quality

To determine the extent by which the comfort of waiting area influences customer's perception of service quality, the respondents were asked to give their perception of the influence of seven attributes of the waiting area selected from the literature on service quality. From the results, customers attributed five of the seven attributes to good service quality and perceived the remaining two as poor service quality. The five factors with good service quality attribution were neat waiting area (m=6.07), well ventilated and lit waiting area (m=6.06), attractive waiting area (m=6.01), comfortable seats in the waiting area (m=5.50) and comfortable indoor temperature (m=5.39). On the other side, the factors with poor service attribution were long queues in a waiting area (m=3.17) and congestion in a waiting area (m=2.55). The results are summarized in Table 4.6 below.

Table 4. 6 Comfort of waiting area variable descriptive statistics

	N	Minimum	Maximum	Mean	Std. deviation
Neat waiting area	256	1	7	6.07	1.377
Well ventilated and lit waiting area	256	1	7	6.06	1.320
Attractive waiting area	256	1	7	6.01	1.353
Comfortable seats in a waiting area	256	1	7	5.50	1.735
Comfortable indoor temperature	256	1	7	5.39	1.548
Long queues in a waiting area	256	1	7	3.17	1.935
Congestion in a waiting area	256	1	7	2.55	1.897
Valid N (listwise)	256				

COMFT (M=5.62, S.D=0.98)

Source: Field data, 2022

To attain the overall perception of customers towards the influence of the comfort of waiting area on service quality, the mean value and standard deviation measures were used. With the mean value of 5.62 (S.D=0.98) out 7, the results indicated that the comfort that customers get in the waiting area in terms of the seven measure attributes used has significant impact on the perceived service quality.

4.7.2 Descriptive Statistics for Influence of the Discipline of Waiting Lines on Perceived Service Quality

The discipline of waiting line was defined by six attributes over which the respondents' opinions were collected focusing on how each of the factors influenced their view of service quality. The results revealed that customers attributed all six factors with good quality of service with the mean values ranging from 5.41 to 6.00 as shown in Table 4.7 below.

Table 4. 7 Discipline of waiting lines variable descriptive statistics

	N	Minimum	Maximum	Mean	Std. deviation
FIFO queue discipline	256	1	7	6.00	1.475
Queuing without standing in line	256	1	7	5.83	1.695
Signage and signaling systems	256	1	7	5.79	1.597
Receptionists guiding queue formation and flow	256	1	7	5.68	1.621
Freedom of movement	256	1	7	5.55	1.666
Physical barriers guiding queue formation and flow	256	1	7	5.41	1.599
Valid N (listwise)	256				

DISCP (M=5.71, S.D=1.26)
Source: Field data, 2022

The overall mean value for all six factors that composed the Discipline of Waiting Line variable was 5.71 out of 7 with S.D of 1.26. This indicates that the presence of these factors in banks positively and strongly influenced the perception of quality of service received by the researched customers.

4.7.3 Descriptive Statistics for Influence of the Customer Engagements during Wait on Perceived Service Quality

Customer engagement during wait was comprised of five items that banks could provide to customers in the waiting room to keep them engaged with something meaningful while waiting for service. Respondents' opinions were collected reflecting on how each of these component items influenced their view of service quality. The results, as summarized in Table 4.8 below, shows that only three items had strong positive influence on customers' perception of service quality, while the remaining two had somewhat neutral effect slightly skewed towards good service quality. The three items with good service quality attribution were provision of TV or radio in a waiting area (m=5.92), provision of free Wi-Fi in a waiting area (m=5.90), and providing customers with something to read like magazines, newspapers, or books (m=5.51). Conversely, providing free drinks or snacks to waiting customers (m=4.86) and giving customers the freedom to use their mobile phones (m=4.17) had somewhat an indifferent influence on customers' perception of service quality.

Table 4. 8 Engagement of customers during wait variable descriptive statistics

	N	Minimum	Maximum	Mean	Std. deviation
TV or radio in a waiting area	256	1	7	5.92	1.282
Provision of free wi-fi	256	1	7	5.90	1.807
Something to read (magazines, newspapers, etc)	256	1	7	5.51	1.701
Free drinks and snacks	256	1	7	4.86	2.246
Freedom to use mobile phones	256	1	7	4.17	2.046
Valid N (listwise)	256				

ENGT (M=5.11, S.D=1.34)
Source: Field data, 2022

The findings revealed the mean and S.D values for this variable (Engagement of Customers during Wait) to be 5.11 and 1.34 respectively. This is to say that the five used attributes for this variable collectively relates to perceived service quality. In other words, when customers are engaged into some meaningful activities like watching TV, reading a magazine or provided free Wi-Fi to surf the internet on their personal devices while waiting for service, they tend to associate that with good service quality.

4.7.4 Descriptive Statistics for Influence of the Waiting Time Guarantee on Perceived Service Quality

To determine the extent by which waiting time guarantee influences customer's perception of service quality, customers' responses were collected on the six aspects that constituted waiting time guarantee variable. The results, as summarized in Table 4.9 below, indicates that the respondents perceived the presence of each of the six aspects in the banks as good service quality with the mean values ranging from 5.44 to 5.91.

Table 4. 9 Waiting time guarantee descriptive statistics

	N	Minimum	Maximum	Mean	Std. deviation
Completing service on time	256	1	7	5.91	1.789
Explanation for delay	256	1	7	5.73	1.820
Feedback on process progress	256	1	7	5.73	1.768
Apology for delay	256	1	7	5.66	1.947
Information about expected waiting time	256	1	7	5.48	2.019
Compensation for delay	256	1	7	5.44	2.101
Valid N (listwise)	256				

GUART (M=5.66, S.D=1.73)
Source: Field data, 2022

Results from Table 4.9 above indicate the overall mean value of 5.66 and S.D of 1.73 for this variable. From the figures it can be argued that informing customers about expected waiting time, completing service on time, explaining the delays, feedback on process progress, and apology and compensation for delays collectively influence customers perception of service quality in a strong positive way.

4.8 Regression Analysis

Regression technique was appropriate for this study. This is because it can effectively show the relationships between variables, the magnitude and direction of that relationship, and predict the value of dependent variable based on the available data of independent variables. And since this study had multiple factors predicting the dependent variable, the multiple linear regression was employed.

At this point, it should be noted that the size of the sample has a direct impact on the statistical power of significance testing in multiple regression. In order to detect a significant coefficient of determination (R-square) at a specified significance level

with multiple regression technique, a certain sample size is required. As a rule of thumb, there should be at least 20 times more cases than independent variables (Ho, 2014). Thus, since this study incorporated four independent variables, the sample size of 256 cases was more than enough, as only 80 cases would suffice at the minimum.

4.8.1 Testing the Assumptions of Multiple Linear Regression

Prior to full employment of regression analysis, a few tests were done to test the assumptions of the multiple linear regression model as explained below

4.8.1.1 The Assumption of Normality

Normality assumption aims checking whether the collected data are normally distributed so as to justify the use of linear regression model in making valid inferences. In this regard, the normal P-P plots were generated so as to test this assumption. The close examination of SPSS output shown by Figure 4.1 below indicates that the residuals are normally distributed as they highly follow the diagonal normal distribution line. Thus, linearity can be assumed for the collected data.

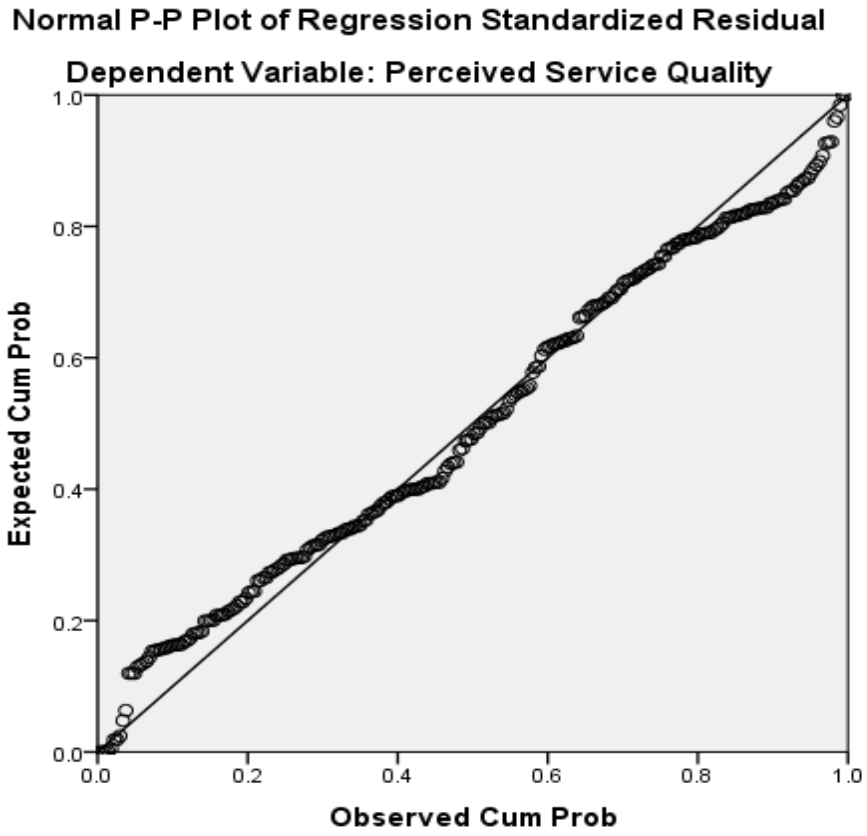

Figure 4. 1 The normal P-P plot

Source: Field data, 2022

4.8.1.2 The Assumption of Linearity

To test the assumption of linearity, the scatter matrix was generated to determine whether each independent variable of this study related linearly to the dependent variable. The close examination of the scatter matrix as depicted by Figure 4.2 below reveals an acceptable level of linearity between each of the independent variables (COMFT, DISCP, ENGT and GUART) and the dependent variable (PSQUAL).

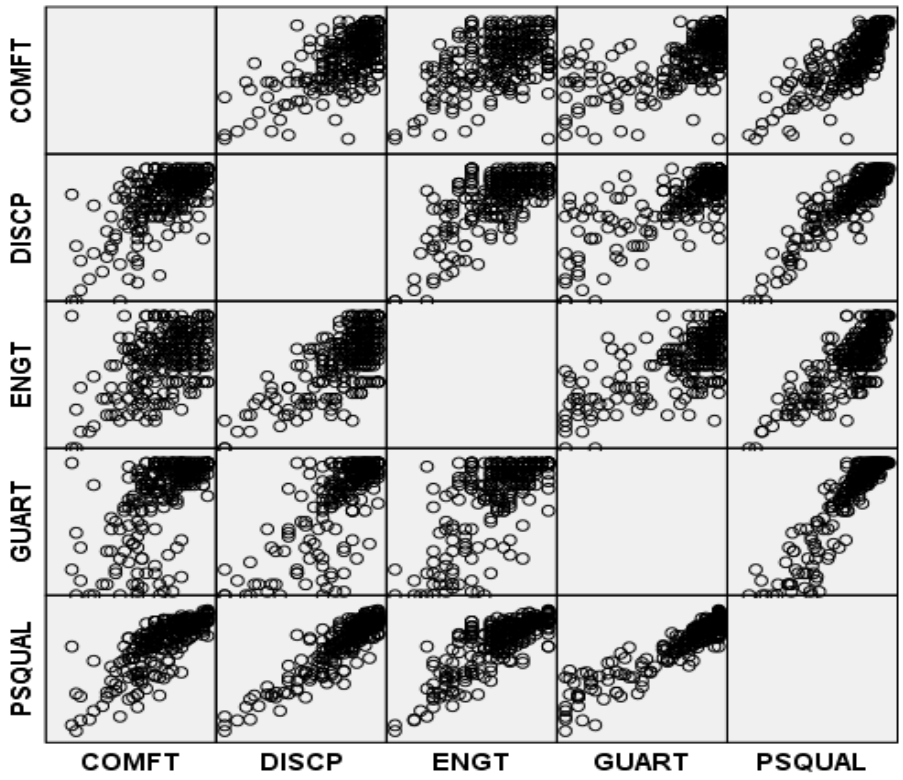

Figure 4. 2 The scatter matrix

Source: Field data, 2022

4.8.1.3 The Assumption of Multicolliniarity

Multicolliniarity attempts to check the relationship among the independent variables of the study. Using the multiple regression model to determine the unique contribution of independent variables to the dependent variable, it is of paramount importance to avoid extreme multicollinearity (i.e. high level of correlation among predictor variables) and singularity (perfect correlation among predictor variables).

Multicollinearity can be detected by examining the tolerance and variance inflation factor (VIF) values in the regression coefficients table. According to Ho (2014), the data have no multicollinearity when the tolerance values are greater than 0.1 and VIF values are less than 10 for all predictor variables. Therefore, looking at VIF and

tolerance values in Table 4.12 (regression coefficients table), the researcher was confident that independent variables of this study had less correlation among themselves, hence free from multicollinearity and singularity threats.

4.8.2 Multiple Linear Regression Results

The multiple linear regression output from SPSS was as indicated by the Tables 4.10, 4.11 and 4.12 below. The results in the model summary table (Table 4.10 below) show that R-square for this study's regression model was 0.711. This indicates that the strength of the model was convincingly adequate to predict the dependent variable of this study using the identified independent variables. This value of R-square implies that about 71% of the variance in the perceived quality of service received by the studied customers from the commercial banks can be explained by the four independent variables of this model.

Table 4. 10 Model summary

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.843[a]	.711	.706	.44054

Predictors: (Constant), GUART, COMFT, ENGT, DISCP[a]
Dependent Variable: Perceives Service Quality[b]

Source: Field data, 2022

Further, the analysis of variance (ANOVA) test as shown by Table 4.11 below signifies that the regression model for this study was statistically significant; meaning there was a statistically significant difference between the four independent

variables sufficient to collectively predict the dependent variable, F(4, 251) = 429.897, p < .05.

Table 4. 11 ANOVA test

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	333.727	4	83.432	429.897	.000[b]
	Residual	48.713	251	.194		
	Total	382.440	255			

a. Dependent Variable: Perceived Service Quality
b. Predictors: (Constant), GUART, COMFT, ENGT, DISCP

Source: Field data, 2022

After determining the strength and the statistical significance of the regression model of this study as a whole, the results in the regression coefficients table (Table 4.12) below can then be used to test the hypotheses of the study and establish individual impact of each independent variable on the dependent variable, hence answering the specific objectives of this study.

Table 4. 12 Regression coefficients

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	β			Tolerance	VIF
1	(Constant)	.037	.172		.217	0.002		
	COMFT	.266	.038	.262	7.761	.000	.544	1.838
	DISCP	.201	.038	.238	6.306	.000	.328	3.053
	ENGT	.174	.030	.205	7.335	.000	.460	2.174
	GUART	.248	.028	.317	9.010	.000	.333	3.002

a. Dependent Variable: Perceived Service Quality

Source: Field data, 2022

Hypothesis testing and the findings on each of the specific objectives of this study, together with the discussion of the findings are covered in the sections that follow.

4.9 The Influence of the Comfort of Waiting Area on Perceived Service Quality

The first objective of this study was to determine the extent by which the comfort of waiting area influences customer's perception of service quality. To achieve this, the following hypothesis was formulated.

H1: Comfort of the waiting area has a significant positive influence on perception of quality of service received by commercial bank customers.

To test this hypothesis, *H1*, the dependent variable, PSQUAL, was regressed on an independent variable COMFT. The results indicated COMF has a significant positive impact on PSQUAL ($\beta = 0.262$, $t = 7.761$, $p < 0.001$). Hence H1 was supported. This implies that an increase in the level of comfort that a customer get in the waiting area while waiting for service raises the level of perceived service quality for the customer.

These results are well supported by the study by Bielen and Demoulin (2007) which concluded that the comfort in the waiting room, seating availability in the waiting room and the appearance and decor of the premises are the critical attributes of the waiting environment which influences not only waiting time satisfaction, but also the overall evaluation of the service. Also, the study by Chien and Lin (2014) came out with conclusions similar to this research. In their work, Chien and Lin (ibid) tried to examine different effects of environmental elements on the perceived waiting time and customer emotions, and concluded that when the waiting environment is looking

neat, uncongested, attractive, and with appropriate temperature and seating for relaxation, it becomes a comfortable place for waiting customers and could positively contribute to making them satisfied with waiting periods and service quality. Further, the findings match with another study by Pruyn and Smidts (1998) which concluded that a pleasant environment promotes positive feelings within the consumers. This, in turn, positively influences the affective response to the wait, a known component of waiting time satisfaction.

4.10 The Influence of the Discipline of Waiting Lines on Perceived Service Quality

In the second objective of this study, the researcher wanted to determine the extent by which the discipline of waiting lines influenced customer's perception of service quality in the studied banks. To answer this objective, the following hypothesis was formulated.

H2: Discipline of the waiting lines has a significant positive influence on perception of quality of service received by commercial bank customers.

To test this hypothesis, *H2*, the dependent variable, PSQUAL, was regressed on an independent variable DISCP. The results indicated that the COMF significantly and positively predicted the PSQUAL ($\beta = 0.238$, $t = 6.306$, $p < 0.001$). Hence H2 was supported. This implies that the more the customers are served in the order of their arrival (FCFS), the more they will perceive the quality of service received as good.

These results match the findings of the study by Kamau (2012) on waiting lines management and customer satisfaction in Kenyan commercial banks. In her study,

Kamau (ibid) found out that maintaining the queue discipline minimizes perceived waiting time and leads to customers' satisfaction. She further identified that management of queue discipline can be effectively attained by the bank through application of approaches like providing direction in terms of dedicated terminals in self-service, having receptionist to help in guiding queue formation and flow, using physical barriers aimed at guiding queue formation, adopting automatic queue measurement systems and allowing customers' freedom of movement while keeping their spot in a queue. The results are further supported by the study by Malambo (2022) on customer satisfaction among financial institutions in Zambia where he concluded that in order to have faster processes and satisfy customers in this digital banking era, there is a need for banks to invest more in robust reliable systems including introduction of queue management systems. Also, Nadiri (2016) concluded that first-come-first-served principle is among the critical approaches to maintaining queue discipline which creates a sense of perceived justice among customers as well as significantly affecting their perception of service quality.

4.11 The Influence of the Customer Engagement on Perceived Service Quality

The third objective of this research was to determine the extent by which the engagement of customers during wait influences customer's perception of service quality. To achieve this objective, the following hypothesis was formulated.

H3: Engagements of customers during wait has a significant positive influence on perception of quality of service received by commercial bank customers.

This hypothesis, *H3*, was tested by regressing the dependent variable, PSQUAL, on the independent variable ENGT. The results supported H3 by indicating that ENGT

was the significant and positive predictor of PSQUAL ($\beta = 0.205$, $t = 7.335$, $p < 0.001$). This means, the more the customers are engaged with something worthwhile like watching TV, reading a magazine or provided with free Wi-Fi to surf the internet on their personal devices while waiting for service, the more they will perceive the quality of service received as good.

Multiple other studies had already have findings that supports the findings of this research. In their study on consumer perception and evaluation of waiting time, Antonides et al (2002) proposed various fillers such as music, news bulletins, and magazines as customer engagement techniques which significantly reduce perceived waiting time for customers waiting for services. Also, Yeddula (2012) found out that customers would like to involve in some sort of activities while waiting for service than sitting idle. In his study, Yeddula (ibid) observed that over 60% the clients were either reading something (magazine, paper or book), watching TV or talking to other person while waiting for service and it significantly affected their overall view of service in a positive way. Yeddula (ibid) further showed that the addition of more new activities in the waiting area helped to make the clients remain interested and entertained while waiting for their turn which improved perceptions of patients towards quality of service they received. Moreover, Lee et al (2012) found strong support that customer engagement activities have a positive effect on customer waiting perceptions and service satisfaction experience. In their study, Lee et al (ibid) concluded that filler interfaces like music, news and videos are a way of shortening the perceived waiting time and helping waiting customers to have positive moods and feelings instead of being concerned about the issue of having to wait of service. Further, the study by Mbawuni and Nimako (2018) identified the strong

positive relationship between mind-engagement strategies and waiting time satisfaction in banking context. Their study concluded that the more banking organisations develop effective mind-engagement fillers, the more their customers will be positively influenced to be satisfied with waiting time as well as the overall service quality which in turn can help to avoid customer switching and disloyalty behaviors. Examples of such fillers, in the words of Mbawuni and Nimako (ibid) are appropriate music, menu information, newspapers, TV shows, movies, and bites and drinks like water, coffee, candies, and chocolates for customers' consumption during their wait.

4.12 The Influence of the Waiting Time Guarantee on Perceived Service Quality

The fourth, and the last, specific objective of this study was to determine the extent by which waiting time guarantee influences customer's perception of service quality. To answer this objective, the following hypothesis was formulated.

H4: Waiting time guarantee has a significant positive influence on perception of quality of service received by commercial bank customers.

To test this hypothesis, *H4*, the dependent variable, PSQUAL, was regressed on an independent variable GUART. The results indicated GUART had a significant positive impact on PSQUAL ($\beta = 0.317$, $t = 9.010$, $p < 0.001$). Hence H4 was supported. This implies that, the more the customers are guaranteed on the amount of time required to wait for service, the more they will perceive the quality of service received as good.

The findings of the study by Lee and Lambert (2006) on the impact of waiting time on evaluation of service quality and customer satisfaction supports the results of this study. Their study showed that the discrepancy between expected reasonable waiting time and perceived waiting time influenced service quality and customer satisfaction as it established the negative correlation between the length of perceived waiting time and service quality. This implies that when customers expect or are guaranteed a certain amount of waiting time but then perceives they have waited for longer than expected reasonable waiting time, they will eventually be dissatisfied and regard service as poor; vice versa, they will perceive the service received as good. Another important study which matches the findings of this study was conducted by Mbawuni and Nimako (2018) in Ghana commercial banks. Their study established waiting time guarantee as significantly influencing consumer waiting time satisfaction. The study further argued that customers would always want to be informed about the time required to complete the service they need and are always satisfied when service is completed within promised or expected time. When guaranteed time is not met the service quality is tarnished, and it can be redeemed when the bank or service providers compensates the customers or offers sincere apology for delay, as apologies and compensations provides a form of value of time wasted during the wait. In addition to that, customers require service providers to give reasons explaining the delay and give appropriate feedback to waiting customers on the progress of service waited for when needed.

CHAPTER FIVE

CONCLUSIONS AND RECOMMENDATIONS

5.1 Overview

This is the last chapter of this report. It intends at summarizing the outcomes and providing conclusions drawn from the findings of this research work with respect to the objectives of the study. Moreover, it hands down insightful recommendations to service providers on waiting line management in order to enhance customers' perception of quality of service they offer. The chapter winds up by proposing areas for further research.

5.2 Conclusions

This study sought to determine the relationship that exists between waiting lines management strategies and perceived service quality for selected commercial banks in Tanzania; Ruvuma region to be specific. To accomplish this, four waiting line management strategies were identified, well investigated, the data collected about them and critically analyzed to determine how they individually and collectively influence the perceived service quality. The findings are well presented and discussed under section 4.8 with its subsequent subsections in the previous chapter. Under this section, the conclusions are made for each specific objective of the study which all combines to accomplish the general objective of the study as explained below:

5.2.1 To Determine the Extent by Which the Comfort of Waiting Area Influences Customer's Perception of Service Quality

For the first specific objective of this study, the researcher wanted to determine the

extent by which the comfort of waiting area influenced customer's perception of service quality. Questions were formulated to assess the impact of seven aspects that compose waiting area comfort on customers' perception of service quality. After collecting data and analyzing them accordingly, the findings revealed that customer's perception of quality is highly affected by the level of comfort that customers find in the waiting area. In other words, when customers are provided with comfort in the area where they wait for service, they view the service received as good. Conversely, when customers are uncomfortable while waiting for service, they perceive the service received as poor. To be precise, customers are more satisfied with service quality when the waiting area is neat, well ventilated, well lit, and generally attractive with comfortable seats. Further, customers perceive service quality as good when the waiting area is uncongested and has comfortable indoor temperature. The study also found that long queues in the waiting area stains customer's perception of quality of service received from the bank.

5.2.2 To Determine the Extent by Which the Discipline of Waiting Lines Influences Customer's Perception of Service Quality

Secondly, this study aimed at determining the extent by which the discipline of waiting lines influenced customer's perception of service quality. After analysis of data collected on questions that measured this objective, it can be obviously concluded that the proper management of queue discipline has significant positive influence on customers perception of quality of service received from the researched banks. Precisely, the customers showed that when they are attended in accordance with the order of their arrival (i.e. FCFS), they tend to regard the bank's services as

good quality-wise. Also, the findings cements that the presence of signage and signaling systems, the presence of receptionists, and the presence of physical barriers aimed at guiding queue formation and flow in the bank enhances customers' perceived service quality. Moreover, the results showed that customers would prefer the freedom of movement from the waiting line without losing their spot in the queue, as well as the possibility queuing without being physically standing in a line, such as using number cards whereby they are called to attend the counter when their number's turn is reached.

5.2.3 To Determine the Extent by Which the Engagement of Customers during Wait Influences Customer's Perception of Service Quality

Thirdly, this study wanted to determine the extent by which the engagement of customers during wait influenced their perception of service quality. Generally, it can be concluded that customers associates certain customer-engagement activities with good service quality. The results of this study affirmed that when there is a TV to watch, or radio to listen to, or free Wi-Fi for internet access, or reading materials such as books, magazines, newspapers, or leaflets in the waiting area for customers to engage with while waiting for service it positively influences their perception of quality of service they receive from a particular bank. However, for this study, a few customer engagement activities showed negligible influence towards customers' perception of quality received. For instance, the availability of free drinks like water, coffee, soda or tea and free snacks like candies, chocolates or biscuits for customers' refreshment during their wait for service didn't show much influence on how customers viewed the quality of service they received. Similarly, the results suggest

that customers' perception of service quality was almost unmoved by the provision of freedom to use mobile phones in the waiting area during the wait for service.

5.2.4 To Determine the Extent by Which the Waiting Time Guarantee Influences Customer's Perception of Service Quality

Finally, the fourth objective of the study aimed at determining the extent by which the waiting time guarantee influenced customer's perception of service quality. From the results, it can be ascertained that waiting time guarantee significantly influences perceived service quality for customers. Actually, this variable had the strongest influence on customers' perception of service quality of the four that were investigated in this study. Specifically, the findings showed that when customers are informed about the amount of time it is expected to take waiting for service they want, and then the service is completed within the expected or promised time, the customers tend to highly perceive the bank's service quality as good. However, if the bank does not complete the service within the promised or expected time, then customers' perception of service quality would be determined by whether the bank provides explanation of the reasons that caused the delay together with apologizing to customers and/or providing them with compensation for the time wasted during their delayed wait. In addition, the researched customers exhibited that their perception of service quality was influenced by reception of feedback from the service provider on the progress of service being waited for.

5.2.5 To Determine the Relationship That Exists Between Waiting Lines Management Strategies and Perceived Service Quality

Conclusively, all four specific objectives of this study were collectively aiming at determining how the waiting lines management strategies related to perceived

service quality for selected commercial banks in Ruvuma, Tanzania. As it was earlier illustrated in the conceptual framework (figure 2.1), the specific objective originated from the four independent variables that were used to predict the dependent variable in this study. The findings resulting from a careful analysis of the collected data, affirms all four independent variables as the significant predictors of the dependent variable. This is to say, customer's perception of quality of service received from the bank is closely and strongly linked to the level of investment or attention the bank pays into management of the waiting lines. Arguably, as well proposed by Katz et al. (1991), appropriate management of customers' wait experiences may be almost as effective as reducing the wait time itself. Precisely, even when the waiting time is not reduced, customers would perceive the bank's service quality as good when they are provided with comfortable waiting experience; or when the queuing discipline is maintained in service provision; or when they are engaged with some meaningful activities while waiting for service than being left idle; or when they are guaranteed about the amount of time required for service completion, which encompasses completing the service on time or responding in such a way that shows concern for customer's wasted time in case of delay, such as providing a sincere apology or compensation.

5.3 Recommendations

Based on the findings and conclusions of this study, several recommendations can be made to banking service providers in order to improve the customers' perception of quality of services they offer.

Firstly, the banks should pay special attention to the premises where customers wait for their service. It is unfortunate that for many banks, the waiting areas are both inappropriate and uncomfortable places to stay for so long. Banks need to distinguish between waiting areas and other places that customers use in the service process because customers spend most of their time at the bank in the waiting areas. Therefore, these areas should be designed and laid out in such a way that they provide comfort to customers even when they are supposed to wait for longer periods of time.

Secondly, the service providers in banks should ensure the queue discipline is maintained at all times in the service provision process by attending the customers in the order that they arrive for service. For efficiency in maintenance of waiting line discipline, the banks should not hesitate spending on investing in the facilities and tools that can easily assist them to manage the queues so easily and effectively. These can include electronic queue management systems, proper signage and signaling systems and physical barriers aimed at guiding queue formation and flow. Moreover, during the high traffic periods, the banks can consider addition of temporary or part time workforce and train them to assist in proper reception and guiding customers to arrange and flow smoothly in waiting lines in accordance with the order of their arrival for service.

Thirdly, bank managers should ensure the waiting areas are packed with customer engagement activities and facilities to distract customers and shift their focus from the fact that they are waiting. However, these activities and facilities should be

customized to suit the nature of customers of a particular bank. Installation of facilities like television, radio, Wi-Fi and reading materials like books, magazines and newspapers can make a good attempt to begin with.

Lastly, and most importantly, banks should pay close attention towards accomplishing customers' services in a timely manner. The banks should develop the habit of informing customers on expected waiting time for service completion on arrival and then commit themselves to work so hard to accomplish the service in the specified time. This seems to have a great impact on customers' evaluation of quality of services offered by the banks. Also, if it fails to accomplish the service in the promised time, the bank should commit itself to ransom customer's wasted time through strategies like apologies and compensations. Moreover, it is appropriate that the banks develop the tendency of providing updates and feedbacks to waiting customers about the progress of the service being waited for.

5.4 Recommendations for Further Research

The intention of this study was to examine the relationship that exists between waiting line management and perceived service quality. However, it was not possible to incorporate all the possible variables in this study that could predict perceived service quality. Only four variables, namely the comfort of waiting area, discipline of waiting line, customer engagement during wait and waiting time guarantee were involved. Therefore, it is suggested that further studies be carried out investigating the similar subject incorporating variables that were not covered by this study. For

instance, further the studies may investigate how the use of ATM machines, internet banking and mobile banking influences perceived service quality.

Based on the reviewed literature, it seems that this is the first study in Tanzania focusing on the issue of waiting lines management in banks, and in the service industry as a whole. Albeit, the scope of this study was very small focusing on only four bank branches operating in Ruvuma region. It is, thus, suggested that more studies be conducted to further investigate the waiting lines problem in a wider context in Tanzania service firms and determine how it affects the perception of customers on service quality. The scope can be expanded in terms of nature of organisations being researched to include organisations like supermarkets, hospitals, airports and many more, or in terms of research area to include other regions like Dar es Salaam, Mwanza, Dodoma, Mbeya, Tanga and so forth.

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APPENDICES

APPENDIX: QUESTIONNAIRE

SECTION I: Introduction

Hello!

I am Lambert Fulgence Muliro, pursuing Master of Project Management at the Open University of Tanzania. Currently, I am conducting a research titled "**Linking Waiting Line Management and Perceived Service Quality; A Case of Selected Commercial Banks in Tanzania".**

I kindly request you to complete this questionnaire as per instructions given on each section so as to enable me gather the necessary information required for successful completion of this study. Remember, there are no right or wrong answers. The intention of this questionnaire is just to capture your experience and opinion on waiting lines and quality of service in your bank. Please note that the information you are giving will be used only for the purpose of this study and treated with complete confidentiality.

Your participation is very important for this study, but voluntary. If you wouldn't like to participate, you can just return the questionnaire unfilled. Filling this questionnaire will hardly spend 10 minutes.

Would you like to participate in this study? **Yes** ☐ **No** ☐

SECTION II: Biographic Information

(Check the box for your answer)

1. Select your sex:
   ☐ Female

- ☐ Male

2. Select your age group:
   - ☐ Below 20 years old
   - ☐ 20-29 years old
   - ☐ 30-39 years old
   - ☐ 40-49 years old
   - ☐ 50-59 years old
   - ☐ 60 years old and above
3. What is your highest level of education?
   - ☐ Never attended school
   - ☐ Primary education
   - ☐ Secondary education
   - ☐ College education
   - ☐ University education
4. What is the name of your bank?
   - ☐ CRDB
   - ☐ NBC
   - ☐ NMB
   - ☐ TCB
   - ☐ I don’t use bank services at all
5. For how long have you used banking services?
   - ☐ I don’t use bank services at all
   - ☐ Less than a year
   - ☐ 1-3 years
   - ☐ 3-5 years
   - ☐ 5-10 years
   - ☐ More than 10 years

SECTION III: Theme of the Study

(By a scale of 1-7, show to what extent the following criteria indicate the quality of banking services by checking the relevant box; where 1 indicates the lowest level of quality and 7 indicates the highest level of quality).

Objective 1: <u>Influence of the Comfort of Waiting Area on Perceived Service Quality</u>

		1	2	3	4	5	6	7
6	Presence of long queues in the waiting area							
7	Presence of comfortable seating in the waiting area							
8	Congestion in the waiting area							
9	Neat waiting area							
10	Well lit and ventilated waiting area							
11	Comfortable indoor temperature							
12	Attractive waiting area (i.e. design, colors and wall decorations, etc)							

Objective 2: <u>Influence of the Discipline of Waiting Lines on Perceived Service Quality</u>

		1	2	3	4	5	6	7
13	Presence of physical barriers guiding queue formation and flow							
14	Presence of receptionists guiding queue formation and flow							
15	Presence of signage and signaling systems guiding queue formation and flow							
16	Queuing without physically being in a line (i.e. using number cards)							
17	Freedom of movement from the line while keeping a spot in a queue							
18	Maintaining queue discipline (i.e. First Come, First Served)							

Objective 3: <u>Influence of the Engagement of Customers during Wait on Perceived Service Quality</u>

		1	2	3	4	5	6	7
19	Presence of TV or radio to watch or listen in the waiting area							
20	Presence of magazines, newspapers or leaflets to read in the waiting area							
21	Freedom to use mobile phone in a waiting area							

22	Provision of free drinks and snacks for waiting customers							
23	Provision of free Wi-Fi or internet access for waiting customers							

Objective 4: <u>Influence of the Waiting Time Guarantee on Perceived Service Quality</u>

		1	2	3	4	5	6	7
24	Being informed on expected waiting time for service completion							
25	Getting feedback on service progress when necessary							
26	Completing service on promised or expected time							
27	Apology from the bank/service provider for a delay of service beyond promised or expected time							
28	Explanation on reasons for service delay by the bank/service provider							
29	Compensation from the bank for delay of service beyond promised or expected time							

SECTION IV: The Dependent Variable: *Perceived Service Quality*

(By a scale of 1-7, show the extent to which you think the bank should posses the features described by the following statements by checking the relevant box; where 1 indicates that you strongly disagree and 7 indicates that you strongly agree).

		1	2	3	4	5	6	7
30	*Tangibility:* The bank should have up-to-date equipments, visually appealing physical facilities and well dressed up employees							
31	*Reliability:* The bank should be dependable in terms of serving their customers on time							
32	*Responsiveness:* The bank should always be willing to help customers and respond to their requests promptly							
33	*Assurance:* The employees of the bank should be polite and supportive to customers in such a way that customers trust them and feel safe in their transactions							
34	*Empathy:* The employees of the bank should be try to understand the needs of their customers and give them personal attention							

Thank you so much for your time!