ADDIS ABABA UNIVERSITY SCHOOL OF COMMERCE

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ANALYZING THE INFLUENCE OF SERVICE QUALITY ON CUSTOMERS SATISFACTION: THE CASE OF ADDIS ABABA LIGHT RAIL TRANSIT SERVICE

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Analyzing the Influence of Service Quality on Customers Satisfaction: The Case of Addis Ababa Light Rail Transit Service

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The Department of Marketing Management.

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CERTIFICATION

This is to certify that this thesis work entitled, "Analyzing the Influence of Service Quality on Customers Satisfaction: The Case of Addis Ababa Light Rail Transit Service" submitted in partial fulfillment of the requirements for the award of the degree of Masters of Marketing Management to the School of Commerce, Addis Ababa University, through the Department of Marketing Management done by Yirgalem Fanta Negeri, ID No. GSR/0507/09 is an authentic work carried out by him under our guidance. The matter embodied in this thesis has not been submitted earlier for award of any degree or diploma to the best of our knowledge and belief.

Approved by Board of Examiners:

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Chairman, Department Graduate Committee	Signature	Date
_____	_____	_____
Advisor	Signature	Date
_____	_____	_____
Internal Examiner	Signature	Date
_____	_____	_____
External Examiner	Signature	Date

ABSTRACT

This study was to analyze the influence of service quality on customer satisfaction using SERVQUAL model with regards to public transportation, specifically the Addis Ababa Light Rail Transit Service. In this study, level of customer's satisfaction is examined by the SERVQUAL method comprised five dimensions namely reliability, assurance, tangibility, empathy and responsiveness to wards service quality, the gap between passengers' perceptions and expectations of service quality was examined with the help of the GAP (SERVQUAL) model that was established by Parasuraman, Zeithaml and Berry and also the impact of service quality dimensions on customer satisfaction was analyzed. The research methodology is descriptive and explanatory designs in nature. The researcher used convenient sampling method in order to select the sample from the population. A total of 331 questionnaires were collected from customers. The data analysis was conducted through statistical techniques such as descriptive statistics, and inferential statistics using SPSS version 20. The finding indicates that service quality gap is wider in reliability, responsiveness, empathy, and assurance and tangible in descending order. Based on the result of the correlation, it shows that reliability, assurance, responsiveness, empathy and tangibility are positively and moderately correlated with customer satisfaction and also the multiple regression results revealed that all the five SERVQUAL dimensions and Overall Service Quality influence passenger's satisfaction. According to the result Overall service quality, followed by assurance, responsiveness, reliability, tangibility and empathy are positively influence passengers satisfaction in descending order with beta value of.766, 0.168,0.166, 0.152, 0.150 and 0.138 respectively in AALRT service. Furthermore, 68.8 % of the variations in customer satisfaction are explained by service quality dimensions in AALRT service. Based on the findings of the study, the researcher forwarded some recommendations to AALRT service corporate management. The corporate management should work on all the service quality dimensions to improve and maintain its passenger satisfaction.

Key Words: Service Quality, Customer Satisfaction, Customer Gap, Expectation, Perception.

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Declaration

I, Yirgalem Fanta , declare that the study entitled " Analyzing the Influence of Service Quality on Customers Satisfaction: The Case of Addis Ababa Light Rail Transit Service." is the result of my own effort in research undertaking. The study has not been submitted to any Degree or Diploma in any College or University. It is submitted to the partial fulfillment of the requirement of the Masters of Arts in Marketing Management.

Yirgalem Fanta .....

Signature and Date

Statement of Certification

This is to certify that Yirgalem Fanta carried out his research on the topic entitled "Analyzing the Influence of Service Quality on Customers Satisfaction: The Case of Addis Ababa Light Rail Transit Service." under my supervision. This work is original in nature and is suitable for submission for the award of Degree of Master of Marketing Management.

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Advisor: Hailemariam Kebede (PhD Candidate)

Table of Contents

Contents **Pages**

CHAPTER FOUR

DISCUSSION AND ANALYSIS

LISTS OF FIGURES

LIST OF TABLE

ACRONYMS

LRT = Light Rail Transit

AALRT = Addis Ababa Light Rail Transit

OAQS = Over All Service Quality

SERVQUAL = Service Quality model

P = Perception

E = Expectation

SPSS = Statistical Packages for Social Sciences

ERC = Ethiopian Railways Corporation

CHAPTER ONE

INTRODUCTION

This chapter contains background of the Study, statement of the problem, research questions, and objective of the study, significance of the study, scope of the study, limitations of the study, definition of terms and organization of the study.

1.1 Background of the study

A good service quality of public transport can provide a reliable service to the customers for which make them happy. Customer satisfaction and service quality are one the basic opportunities which help to run, to improve business and profit of the company especially to save loyalty of its customers. It's very important for companies to know how to measure consumer's perspective in order to better understand their needs hence satisfy them. Service quality improvements aim at satisfying customer's requirements in a better way by creating and distributing value to the customers. Over the last few years, companies have gradually focused on service quality and customer satisfaction. This strategy is very profitable for both companies and customers, particularly for transport agencies and passengers. An improvement of the supplied service quality can attract further users (Eboli and Mazzulla, 2007).

Service quality is an approach to manage business processes in order to ensure full satisfaction of the customers which will help to increase competitiveness and effectiveness of the industry. (Rahaman et al., 2011). Quality refers to something done by human beings at a very high level of excellence, oftentimes in the sense of works of perfection as being distinctive from inferior performance (Sheetal and Harsh, 2004). Quality in service is very important especially for the growth and development of service sector business enterprises. Parasuraman et al., (1985) noted that the key strategy for the success and survival of any business institution is the deliverance of quality services to customers. Companies providing high service quality as perceived by their customers,

tend to be the most profitable companies. On the other hand, poor service has been identified as the primary reason why customers switch to competitors. In service giving organizations all staff or employees must be customer orientated and interact with customers to satisfy their needs in order to increase customer satisfaction and there must be service commitment from employees and support from all levels of management. Therefore, it is important for managers and employees who provide goods or services that they must constantly keep track of information about the company's wellbeing as far as meeting its customers' needs are concerned (Dayang and Francine, 2010).

Travelers make rational choices of the transit they use, each choosing the one that serves him or her best, although best may be viewed differently by each traveler, therefore, in recent years, the attention of most public transport companies has to be shifted from the supply side, which focus on service provision, to the demand side, in which one of the goals is the improvement of the service quality. Achieving and sustaining a high level of customer satisfaction is a key part of a transit agency's efforts to increase public transit ridership, especially regular Light Rail transit. To achieve these goals transport agencies must measure their performance. In order to measure the transportation service quality performance companies should know several attributes or characteristics that have impacts on service quality and satisfaction.

Various papers point to the existence of several categories of attributes that have a greater or lesser impact on service quality and satisfaction. Philip and Hazlett, (1997) propose a model with a hierarchical structure, based on three classes of attributes: pivotal, core and peripheral attributes. This model was subsequently contrasted for the rail transportation industry by Tripp and Drea, (2002), who checked that the core attributes (e.g. the service announcements, seat comfort, rest room and café car) exerted the greatest influence on the passengers' satisfaction levels. The UNE-EN 13186 (2003) standard classifies the service characteristics into basic (e.g. punctuality, safety), proportional (e.g. comfort, cleanliness) and attractive (e.g. contactless cards, navigators), depending on how compliance and non-compliance affects customer satisfaction. The Transit Capacity and Quality of Service Manual (TRB, 2004) groups attributes into availability factors, which

are more important to passengers (e.g. timetables, service coverage, information), and comfort and convenience factors, less important for passengers (e.g. service appearance, overcrowded, fare). Eboli and Mazzulla, (2008) empirically demonstrated the existence of two categories of attributes (basic and not basic) from the preferences showed by users. Basic attributes compromise service quality when their level is low (e.g. punctuality, frequency, service coverage) and non-basic attributes (e.g. cleanliness, driver courtesy) are considered secondary service characteristics that affect service quality if they are present, but do not compromise it if they are absent.

With regard to reliability, (Tyrinopoulos and Antoniou, 2008) comment that the goal of public transport agencies should be develop a service in which public transport users perceive service frequency and trip time as being implicitly guaranteed. These authors place a great emphasis on increasing passenger perception of reliability rather than developing goals based on frequency and travel time that do not involve the perception of the passenger. The reliability of transit service can be defined as passengers' assurance of getting to their destination at the promised time, or the allowance of extra time for frequent schedule irregularities. The safety and security concerns customer's perception of safety and security at transit stops, on-board, vehicles, and walking to and from the transit stop and security against crime. Customer must be able to find information when and where transit service is provided and how to use the transit and the reason of dalliance. Comfort refers to passenger's personal comfort while transit is used.

1.2 Background of the organization

For more than a century, Ethiopia was served by an international meter gauge railway, from Addis Ababa to the Red Sea port of Djibouti City in Djibouti. That decades-old railway, the Ethno-Djibouti Railway and its rolling stock of similar age was eventually lacking spare parts and was finally closed down over a number of years after the end of the 20th century.

Addis Ababa Light Rail Transit is one of the four electrified standard gauge railway lines: the Addis Ababa Light Rail, the Addis Ababa–Djibouti Railway, the Awash–Hara

Gebeya Railway and the Hara Gebeya–Mek'ele Railway which is mostly in planning and construction stage. All railways in Ethiopia are planned, built, owned and operated by an Ethiopian state-owned enterprise, the Ethiopian Railways Corporation (ERC), which was established in 2007 by Regulation No. 141/2007. The Addis Ababa Light Rail Transit (LRT) project is a modern transportation system designed to improve mass transit options and reduce congestion in Ethiopia's capital. The project was launched by the Ministry of Transportation in 2008 and received 85 percent of its funding from a loan by the Export-Import Bank of China. When fully operational, the LRT system will be able to transport 60,000 passengers per hour through two lines connecting the city on a north–south and east–west axis. The first of these lines a 17-kilometer north–south section connecting industrial areas and the city center was completed in 2015 and has carried approximately 50 million passengers in its first two years of operation. The network runs entirely on electricity supplied by hydropower dams across the country. Studies estimate that the network will reduce 1.8 million tons carbon dioxide emission by 2030 (C40 Cities 2016).It is Sub-Saharan Africa's only light rail system outside of South Africa, and it was awarded the C40 Cities Award in the -transportation category in 2016 for its commitment to clean energy. The award is sponsored by Bloomberg Philanthropies and BYD, a Chinese automobile manufacturer, and recognizes innovative city programs to tackle climate change. According to the project plan the Railways have fitted for elevator, at grade and below grade, and as per the plan its reliability factor is over 98% that means initial injection of light rail is 41 trains with 286 passenger carrying capacity for each train, the headway is 6min initially and can be reduced to 90 seconds at ultimate capacity.

Ethiopian Railways Corporation's Vision and Mission Statements

Mission

- To support the fast growing economy of the country through constructing modern railways infrastructure which is cost effective and that transports bulk freight within short period of time,
- To support passenger railways transport services and enhance public mobility.

Vision

To see modern railways infrastructure and services and an efficient railways company that supports Ethiopia's endeavor in building a globally competitive economy, that uses electricity and connect the country development centers and links with ports of neighboring countries.

1.3. Statement of the problem

Services are becoming major driving force behind many country's economies. Service quality is the decisive factor for any service organization to create the difference and obtain competitive advantage.

Quality changes the nature of business competition and, perhaps more than any other factor. Quality is considered to be main determinant of customer's satisfaction in both manufacturing and service quality. Now a day's customer satisfaction has become the most important indicator of the level of success for operation of any business. As customer perception plays a significant role in order to measure service quality of the service provider and hence the performance of the organization. It is also evident from the literature that superior quality of service helps to gain customer satisfaction, loyalty, increased market share and thus increased productivity and performance (Hadikoemoro, 2002 and Yoon et al., 2004).

Rajeswari and Santa Kumari, (2004) summarized that service quality of rail transport is regarded as critical indicator that would enhance its customer's satisfaction and also revealed the essentiality of continuous, comprehensive, lengthy intentional performance and attempts to fill the service gaps .

Shefali and Nandan,(2010) identified the actual determinants of customer satisfaction with quality of service provided on railways platforms as factors that passenger consider important at railway platform are behavior of staff, porters, parking staff, and quality of the information system. This implies that railway staff must be trained in such a way that their "soft" skills are enhanced.

Murambi and Bwisa, (2014) concluded that travel time, punctuality, clear information, good staff behavior and assured board security are attributes that attract and satisfy customers to shuttle transport. And also it is indicated that frequent departures and clear information were positively and significantly related to overall customer satisfaction of shuttle transport. So it is recommendable that, shuttle owners should invest their resources on improving quality of services delivered. Safety issues were found by Smith and Clark (2000) as a constraint for people to choose public transport as travel mode of choice.

Adreassen (1995) conducted a survey among public transport users in Norway. As a result, he argued that in order to keep market share, public transport should provide service for different type of customers. Improvement of service quality will lead to increasing customer satisfaction because of higher degree of congruence between supply and demand.

To improve service quality organization need to make the best use of information they already have on quality of service and they need to regularly collect and use feedback from service users (Filipa et al.,2010). In order to determine the satisfaction levels of customer, service quality study should be examined, as service quality has a strong correlation with customer satisfaction, (Cronin et al.,2000; Wong et al.,2002).

Therefore the problems and challenges of public transport are very important to note. Public transport must be able to deliver maximum performance, so as to give satisfaction to the users of public transport. Based on the description above analysis of satisfaction with the performance of urban public transport is very important to do research, so as to know the strengths and weaknesses of public transport services. The analysis of performance satisfaction of public transport is expected to provide a strategy to improve the performance of transit oriented towards satisfaction of public transport users.

Even if, Addis Ababa Light Rail transit service has unique characteristics, like large capacity, high safety level in a train trip, and free from traffic jam, etc., there are some other factors which can be mentioned as a quality problem, such as waiting time (time is

money), luck of information in case of delays, seating probability (a comfortable journey increases the attractiveness of the train), safety (the social safety at stations and in trains) , and at some areas ticket offices are far from stations etc.

Thus, the present study is initiated to analyze the influence of service quality on customer satisfaction in the context of Addis Ababa Light Rail Transit using the SERVQUAL model.

Also, providing quality services is one of the main targets when it comes to management with respect of customer satisfaction in the business environment of today, meaning it is a very important topic. Besides to these, the reason "why is it necessary to examine the level of service quality in a given organization" is in this world of competition the only way a firm can survive is by being the best and being the best in the service industry i.e. being able to provide the best quality service.

1.4 Research Questions

1.4.1 Main Research Question

The main research question is, is there any significant relationship between service quality and customer satisfaction in Addis Ababa Light Rail Transit service?

1.4.2. Sub Research Questions

1. What is the level of customer's satisfaction towards the service quality dimensions of the SERVQUAL, in Addis Ababa Light Rail Transit Service?

2. What is the difference of gap between the customer's expectation and perception towards service quality in Addis Ababa Light Rail Transit Service?

3. Which service quality dimension is most important for customers to satisfy their need in Addis Ababa Light Rail Transit Service?

1.5 Objectives of the study

1.5.1 General Objective

The general objective of the study is to examine the influence of service quality on customer satisfaction in the case of Addis Ababa Light Rail Transit Service.

1.5.2 Specific Objectives

In order to achieve general objective of the study, the following specific objectives are set:

- To examine the gap between customers' perceptions and expectations of service quality in Addis Ababa Light Rail Transit.
- To assess the level of customers' satisfaction in Addis Ababa Light Rail Transit.
- To identify the main service quality dimension that affects customer satisfaction in Addis Ababa Light Rail Transit.

1.6 Significance of the study

The importance of this study is to determine the relationship between service quality and customer satisfaction in public transport, particularly in Addis Ababa Light Rail Transit Service with respect to the service quality dimensions. A research like this is essential to examine and improve service delivery and design, because it will provide management with data that they can use in making inferences about the customers (Wilson et al., 2006).

The following points are considered as the major significance of the study. The findings of the study provided important information to AALRT service provider which will be valuable to point out and minimize problems and it gives professional feedback for the service provider that helps to create improved system of customer satisfaction and to achieve the required services and related objectives. In addition, the study can create an opportunity for the researcher who is interested in conducting studies in the area.

1.7 Scope of the study

The aim of this research is to investigate the link between service quality and customer satisfaction with Light Rail Transit Service in Addis Ababa that runs in the directions of North-South Line, from Menelik II to Kality line and East-West Line from Ayat to Torhailoch. In this study quantitative and explanatory research design were used and data was collected through self administered questionnaire and the respondents were the customers.

1.8 Limitations of the study

Addis Ababa city has a wide range of public transport, but the study was conducted to evaluate the service quality and customer satisfaction of the Light Rail Train transport. This is because of the limitation of resources especially with respect to Finance and Time. And the convenience sampling technique which is one of the non-probability sampling technique type was used that may limit and bias the result of the study not to be generalized. The other one was unavailability of empirical and theoretical research on the area of light rail transit service that helps to the researcher to compare the findings with previous one and to use as a secondary data. Thus the findings of this study may not give a general picture of the quality of the transportation industry in Ethiopia. But it can contribute to further study on quality of the transportation industry in Ethiopia.

1.9 Definitions of Terms

Transportation:-is the act of moving something from one place to another (Wessel, 2012).

Service:-is any activity or benefit that one party can offer to another which is essentially intangible and does not result in the ownership of anything (Kotler et.al, 1999).

Quality:-degree to which a service satisfies customers by meeting their needs, wants, and expectation.

Customer Satisfaction:- is the measure of degrees at which customer is satisfied or meets his /her expectation by the consumption of product or service. Customer satisfaction can also be defined as personal feelings of pleasure or disappointment by making a comparison between service perceived performance and its outcome in relation to customer expectation (Kotler, 2000).

Service quality:- is the result of customer comparison between expected services and the perceptions how these services were performed (Zeithaml et al.,1990).

Customer expectations: - are beliefs about a service that serve as standards against which service performance is judged Zeithaml et al., (1988).

Customer perceived:-service quality can be defined as a global judgment or attitude relating to the superiority of a service relative to competing offerings Parasuraman et al., (1988).

SERVQUAL:- is an instrument for measuring service quality, in terms of the discrepancy between customers and expectation regarding service offered and the perception of the service received; respondents are required to answer questions about both their expectation and their perception Parasuraman et a1., (1985)

Tangibles: - are physical facilities, equipments, and staff appearance. (Parasuraman et al., 1988)

Reliability: - reliability is defined as ability to perform the promised service dependably and accurately (Parasuraman et al., 1988).

Responsiveness:-is willingness to help customers and provide prompt service (Parasuraman et al., 1988).

Assurance: - is knowledge and courtesy of employees and their ability to inspire trust and confidence (Parasuraman et al., 1988).

Empathy: - is caring, individual attention the firm provides its customers (Parasuraman et al., 1988)

1.10 Organization of the study.

This research report organized in to five chapters. The first chapter includes introduction that contains background of the study, statement of the problem, research question, and objectives of the study, significance of the study, scope of the study, limitations of the study and definitions of terms .Chapter two contains review of related literature. Chapter three explains research methodology which consist description of the study, research approach, research design, population and samples, data sources and types, data collection procedures, ethical consideration and data analysis. Chapter four is dedicated to data presentation, analysis and interpretation and Chapter five, the last chapter contains conclusion and recommendation.

CHAPTER TWO

LITERATURE REVIEW

Introduction

This part of the research tries to show the theoretical and empirical literature about service quality and customer satisfaction, the conceptual framework and hypothesis of the study.

2.1. Theoretical Framework of the study

2.1.1. Service

A service is an act or performance offered by one party to another .Although the process may be tied to a physical product, the performance is essentially intangible and does not normally result in ownership of any of the factors of production (Keller and Kotler, 2006). According to (Kotler et al.,1999, pp.646) "Service is any activity or benefit that one party can offer to another which is essentially intangible and does not result in the ownership of anything". Whereas Zeithaml et al., (2006) defined services as deeds, processes and performance.

Admittedly, the distinction between goods and services is not always perfectly clear. Despite the confusion, the following definition should provide a sound staring point in developing an understanding of the differences between goods and services. In general, goods can be defined as objects, devices, or things, whereas services can be defined as deeds, efforts, or performances (Berry, 1980).

2.1.2. Characteristics of Services

Services can be explained with its own characteristics which determine their uniqueness. From the main characteristics intangibility, heterogeneity, and inseparability are those which declared by Parausaman (1985), but Buttle (1986); Kotler et al. (1999) expressed it

four by adding the characteristic of its perishability. The main characteristics of services in which any company must consider when designing a marketing programmers are:

• Variability

As services involve people in production and consumption, there is considerable potential for variability. Service variability means that the quality of services depends on who provides them, as well as when, where and how they are provided. As such, service quality is difficult to control. Even the quality of a single employee's service varies according to his or her energy and frame of mind at the time of a single customer contact. For example, two services offered by the same solicitor may not be identical in performance (Kotler et al., 1999).

• Intangibility

Service intangibility means that senders cannot be readily displayed, so they cannot be seen, tasted, felt, and heard or sine lied before they are bought. Because service offerings lack tangible characteristics that the buyer can evaluate before purchase, uncertainty is increased. To reduce uncertainty, buyers look for 'signals' of service quality. They draw conclusions about quality from the place, people, equipment, communication material and price that they can see. Therefore, the service provider's task is to make the service tangible in one or more ways. Whereas product marketers try to add intangibles (e.g., fast delivery, extended warranty, after sales service) to their tangible offers, service marketers try to add tangible ques suggesting high quality to their intangible offers (Kotler et al., 1999).

•Perishability

Service perishability means that service cannot be stored for later sale or use. The perishability of services is not a problem when demand is steady. However, when

demand fluctuates, service firms often have difficult problems. Service firms can use several strategies for producing a better match between demand and supply. On the demand side, differential pricing- that is, chagrining different prices at different times- will shift some demand from peak periods to off-peak periods.On the supply side, firms can hire part-time employees to serve peak demand. Peak-time demand can be handled more efficiently by rescheduling work so that employees do only essential tasks during peak periods (Kotler et al.,1999).

•Inseparability

Service inseparability means that services cannot be separated from their providers, whether the providers are people or machines. If a person provides the service, then the person is a part of the service. The other features of the inseparability of services are that other customers are also present or involved. The implication for management would be o ensure at all times that customers involved in the service do not interfere with each other's satisfaction (Kotler et al., 1999). Services are economic activities that create value and provide benefits for customers at specific times and places, as a result of bringing about a desired change in or on behalf of the recipient of the service.

2.1.3. Quality

According to Reid and Sanders, there is no sole definition for quality. For some quality is Performance to standards while for others it is meeting or satisfying the customer's needs. The Quality of a product or service is the fitness of that product or service for meeting or exceeding its intended use as required by the customer (Anil Kumar and Suresh, 2009).

Dr. Ram Naresh Roy, (2005) defined quality as the totality of features and characteristics of a product or service that bear on its ability to satisfy stated or implied needs.

Some of the definition of quality by different authors is stated below;

• Quality is a subjective term for which each person has his or her own definition (Feigenbaum, 1983),

• According to Parasuraman, quality is Zero defects-doing it right the first (Zeithaml and Berry,1985).

2.1.4. Service Quality

Service quality is a concept that has aroused considerable interest and debate in the research literature because of the difficulties in both defining it and measuring it with no overall consensus emerging on either (Wisniewski, 2001).

Some important definitions of service quality are listed below:

Parasuraman and Zeithaml(2006): define service quality as the degree and direction of discrepancy between customers' service perception and expectation.

Parasuraman et al. (1985):service quality is the ability to satisfy customers needs which is intangible, of great variety, and cannot be stored or separated.

Parasuraman et al. (1985,1988):Service quality is determined by the differences between customer's expectations of service provider's performance and their evaluation of the services they received.

Asubonteng et al., (1996): Service quality can be defined as the difference between customers' expectations for service performance prior to the service encounter and their perceptions of the services received.

Gefan (2002): Service quality as the subjective comparison that customers make between the quality of the service that they want to receive and what they actually get.

2.1.5. Importance of Service Quality

In an extremely competitive marketplace, it is commonly known that providing high-quality service is the key to gaining an advantage which in turn increases customer

satisfaction levels (Ryu et al., 2011). An organization is strongly distinguished from competitors by offering high quality service. Service quality is vital in organizations because it enhances customer value and serves as a competitive advantage in a competitive environment.

2.1.6. Service Quality Measurements (SERVQUAL model)

Always there exist important questions: why should service quality be measured? Measurement allows for comparison before and after changes, for the location of quality related problems and for the establishment of clear standards for service delivery. Edvardsen et al., (1994) state that, in their experience, the starting point in developing quality in services is analysis and measurement.

The SERVQUAL approach, which will be used in this study, is the most common method for measuring service quality. Clearly, from a Best Value perspective the measurement of service quality in the service sector should take into account customer expectations of service as well as perceptions of service. It is apparent that there is a little consensus of opinion and much disagreement about how to measure service quality (Robinson,1999). One service quality measurement model that has been extensively applied is SERVQUAL model developed by Parasuraman et al., (1985, 1986, A Shahin, 1988,1991,1993,1994; Zeithaml et al., 1990). SERVQUAL as the most often used approach for, measuring service quality has been to compare customers' expectations before a service encounter and their perceptions of the actual service delivered (Gronroos,1982; Lewis and Booms, 1983; Parasuraman et al.,1985).

The SERVQUAL instrument has been the predominant method used to measure consumers' perceptions of service quality. It has five generic dimensions, (van Iwaarden et al., 2003).

In growth of services in the last decades, many researchers have recognized the need to develop measures of service quality. One of the most often used measures is the SERVQUAL based on extensive research in generic determinants of perceived service

quality (Parasuraman, Berry et al., 1985; 1988; 1991; 1993; 1994). Zeithaml et al., 1990).Their model claims that the consumer evaluates service quality experience as the outcome of the gap between expected and perceived quality (Service quality = Perception – Expectation). The model emphasizes on the key requirements for a service provider delivering the expected service quality.

Parasuraman and Zeithaml, (2006) defined service quality as the degree and direction of discrepancy between customers' service perceptions and expectations. Thus if the perception is higher than expectation, then the service is said to be of high quality. Likewise, when expectation is higher than perception, the service is said to be of low quality. Realizing that there was not enough literature to produce a rigorous understanding of service quality and its determinants, Parasuraman et al., (1985) conducted an exploratory investigation to formally delineate service quality. Their investigation was composed of interviews with executives from four types of service businesses (i.e. retail banking, credit card, securities brokerage, and production repair and maintenance) as well as a number of focus groups composed of individuals who have recently received services from those businesses. One of the results of this investigation was the identification of five determinants of service process quality. Parasuraman et al., (1985) listed them as follows:-

Tangibles: "the appearance of physical facilities, equipments, personnel". Reliability: "the ability to perform the promised service dependably and accurately". Responsiveness: "the willingness to help customers and to provide prompt service" Assurance: "the knowledge and courtesy of employees and their ability to inspire trust and confidence". Empathy: "the caring, individualized attention the firm provides its customers".

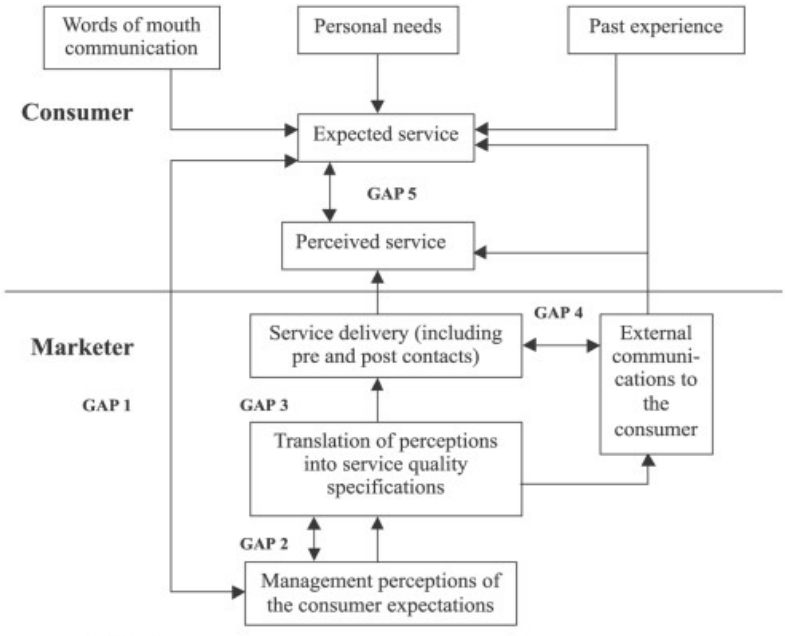
SERVQUAL was developed to measure quality across a wide-range of services. It measures a gap between what customers anticipate about service quality from the suppliers of the service, and their actual performance evaluation of that particular service supplier. As demonstrated by Jemmasi et al.,(2011) in terms of the equation: Servqual = Factors (Performance – Expectations) the SERVQUAL dimensions capture how consumers distinguish performance, based on these

dimensions. Liu & Yen, (2010, p.1531) state that "Through repetitive surveys and analyses, Parasuraman et al., (1988) established dimensions into five, including (1) tangibles, (2) reliability, (3) responsiveness, (4) assurance, and (5) empathy."

2.1.7 A model of Service Quality (The GAPs Model)

It is important to manage the gap that exists between expectations and perceptions on the part of the management, customers and employees. As indicated in figure 2.1, the most important gap is gap 5, that is, between customer expectation of services and their perceptions of service quality delivered. To manage this, the service provider must close the other 4 gaps that inhibit the delivery of service quality. The gap measurement is the significant tool. The SERVQUAL model further concentrates on five gaps for measuring service quality and customer satisfaction as demonstrated in the figure below (Siddiqi & Omar, 2011).

Figure 1: GAP model



Source: Parasuraman *et al.* (1985)

Figure 2.1 The gaps model of service quality Adapted from Parasuraman, A., Zeithaml, V. and Berry, L.1985.'A conceptual model of service quality and its implication for future research', Journal of Marketing, p.44.

Basically, the service quality model was derived from the magnitude and direction of five gaps as follows:

- Gap 1 (Understanding): the difference between consumer expectations and management perceptions of consumer expectations. This gap will appear when the company does not know or do not understand what is expected by consumers. Leaders of the service provider may fail to understand what forms of service so that consumers can be expected to provide good quality service (Zeithaml et al., 1990).
- Gap 2 (Service Standards): the difference between management perceptions of consumer expectations and service quality specifications. This gap occurs when the head of service provider know what consumers want but cannot or do not want to develop a system that consumer willingness to disclose. This gap can occur for several reasons, namely: commitment to quality service that is less, the lack of perceptions about the likelihood that occurred, the lack of standardization of the task, and there is no goal setting (Zeithaml et al., 1990).
- Gap 3 (Service Performance): the difference between service quality specifications and the service actually delivered. This gap occurs when a service provider needs to understand that consumers should be given as well as to understand the service quality specifications, but employees cannot or do not deliver the service quality specifications. This gap occurs when consumers interact with the employees (Zeithaml et al., 1990).
- Gap 4 (Communications): the difference between service delivery and what is communicated about the service to consumers. This is because what the service provider promised to the consumer through the external communication media was not appropriate. While the promise delivered by the service provider hopeswill improve the consumer as well as this is used as a standard of quality service which must be received by the consumer (Zeithaml et al., 1990).
- Gap 5 (Service Quality): the difference between customer expectations of service quality and customer perceptions of the organization's performance. This gap

shows the difference of quality between the expected with what is received. Quality is expected to hope that consumers will be received from the company.

Service received is what consumers feel when they receive services from the company. When consumers get more than they expected then the consumers feel satisfied, but if the consumers received less than they expected then the consumers are not satisfied (Zeithaml et al., 1990).

Based on the Service Quality Model, gap 2 or service standards gaps occur due to differences between management perceptions of consumer expectations and service quality specifications. The design of service standards aims to find out what benchmark the quality of service standard that is applied by the management service providers. If the management does not have service standards, so they need to do the design standard of service quality. The design of service standards aims to find out what causes the gaps occur (Zeithaml et al., 1990).

Further in gap 3, the role in standard delivery of the service also must be paid attention to. The service standard was made as the guide in the operation of a service that was the realization from hope of the consumer on this service. If this consumer expectation was different from the application of the service standard, then the matter that possibly happened furthermore was the emergence complained from the consumer on dissatisfaction of the services that was given (Zeithaml et al., 1990).

2.1.8. Customer Satisfaction

Customer satisfaction is a critical issue in the success of any business system, traditional or online (Ho and Wu, 1999).In a turbulent commerce environment in order to sustain the growth and market share, companies need to understand how to satisfy customers, since customer satisfaction is critical for establishing long-term client relationship (Patterson et al., 1997). It is evidenced by the fact that over the last few years, customer satisfaction surveys have become in many financial institutions. Thus, a fundamental understanding of factors impacting customer satisfaction is of great importance to commerce. Furthermore, the need for research in customer satisfaction has been accentuated by the

increasing demand for the long-term, profitability of dotcom companies and traditional companies (Pather et al., 2002).

To understand satisfaction, we need to have a clear understanding of what is meant by customer satisfaction. Customer satisfaction is defined as a result of a cognitive and affective evaluation, where some comparison standard is compared to the actually perceived performance. If the perceived performance is less than expected, customers will be dissatisfied. On the other hand, if perceived performance exceeds expectations, customer will be satisfied (Lin, 2003).

Relationship between satisfaction and service quality service quality is the key to measure user satisfaction (Pitt et al., 1995).

Few scholarly studies, to date, have been undertaken to identify quality dimensions and detailed aspects of services and their relationships with customer satisfaction (Zeithaml et al., 2002; Yang and Fang, 2004). One of the more widely used instruments for assessing customer satisfaction is SERVQUAL developed by Zeithaml et al., (1988). Researchers have paid much attention to the close relationship between service quality and customer satisfaction (Bitner et al., 1990; Parasuraman et al., 1985; Parasuraman et al., 1988).

SERVQUAL is widely recognized and used ,and it is regarded as applicable to a number of industries, including the transpiration industries.

Most researchers agree that satisfaction is an attitude or evaluation that is formed by the customer comparing their pre-purchase expectations of what they would receive from the product to their subjective perceptions of the performance they actually did receive (Oliver, 1980) .

Several authors have defined satisfaction in different ways; some of them are listed below:

- Satisfaction is a person's feeling pleasure or disappointment resulting from comparing a product's perceived performance (out-come) in relation to his or her expectation Kotler, (2000,p.36).
- Customer satisfaction is a collective outcome of perception, evaluation and psychological reactions to the consumption experience with a product/service Yi, (1990).
- Satisfaction is a function of consumer's belief that he or she was treated fairly Hunt (1991, pp. 110).

2.1.9. Significance of Customer Satisfaction

The more the competition, the higher the necessity to keep customers satisfied (Mandal,et al.,2013). It is, therefore, important to understand factors that might affect customersatisfaction in the transportation sector to ensure the continued existence of the business. It is also crucial to study the dimensions of customer satisfaction. It is thus important to understand the ranges of customer expectations and consequences which need to be assessed.

2.1.10. Customer Expectation

Parasuraman, et al., (1988) defined expectations as desires or wants of consumers, i.e., what they feel a service provider should offer rather than would offer. Zeithaml and Betner ,2003 define customer expectations as beliefs about service delivery that function as standards or reference points against which performance is judged. This indicates that customers have something in their mind about the service delivery by the company so that customers can compare their perception of performance. Since the decider for service quality are customers; companies need to deliver services which able to equate their perception from their expectation to exceed their expectation this will results in customer satisfaction and delight respectively to do this service provider need to properly identify and understand the Expectations of customers first. "Being wrong about what customer want can mean losing a customers also mean expending money, time and other resources on things that do not count to the customer" (Ibid.)

How do buyers form their expectations? Kotler, (2006) suggested that buyers form expectations from past buying experience, friends and associate advice, and marketers and competitors information and promises. If marketers raise expectations too high, the buyer is likely to be disappointed. However, if the company sets expectation too low, it will not attract enough buyers (although it will satisfy those who do buy). Some of today's most successful companies are raising expectations and delivering performance to match. When General Motors launched the Saturn car division, it changed the whole buyer-seller relationship with a New Deal for car buyers. There would be a fixed price (none of the traditional haggling); a 30- day guarantee or money back; and salespeople on salary, not on commotion (none of the tradition hard sells).

2.1.11. Customer perceived quality

Parasuraman, et al., (1988) defined perceived quality as a global judgment or attitude, relating to the superiority of the service. Perceived quality is viewed as the degree of discrepancy between consumers' perceptions and expectations. In the services marketing literature, perceptions are defined as consumers' beliefs concerning the service received (Parasuraman et al., 1985) or experienced service (Brown and Swartz, 1989).

Overall perception of service Zeithaml, (1988: 14) defined these consumer-based definitions of perceived value as 'the consumer's overall assessment of the utility of a product based on perceptions of what is received and what is given. Customers' perception of service performance could be defined as perceived service quality as global judgment, or attitude to the superiority of the service. It is the performance element of service quality measure.

2.1.12. The relationship between customer satisfaction and service quality

Most researchers suggest that a high level of service quality should be delivered by the service provider to achieve a high level of customer satisfaction as service quality normally considered an antecedent of customer satisfaction (Cronin et al.,2000; Anderson et al.,1994; Cronin and Taylor, 1992) .

It has been proven from past researchers on service quality and customer satisfaction that Customer satisfaction and service quality are related from their definition to their relationships with other aspects in business. According to Kuo, 2003 service quality and customer satisfaction have positive relationship. Some authors have agreed to the fact that the service quality determines customer satisfaction. Parasuraman, et al., (1985) in their study, proposed that when perceived service quality is high, then it will lead to increase in customer satisfaction.

Although service quality and customer satisfaction are related concepts, they are not actually the same thing. Many researchers believe that customers' perception about quality are based on long –term, cognitive evaluations of a company's service delivery ,where as customer satisfaction is a short term emotional reaction to a specific service experience.

2.2. Empirical Review

2.2.1. Customer Satisfaction in Transpiration Industry

Sureshchandar et al., (2002) carried a study to find out the link between service quality and customer satisfaction, from their study, they came up with the conclusion that, there exist a great dependency between both constructs and that an increase in service quality is likely to lead to an increase in customer satisfaction. Also, they pointed out that service quality is more abstract than customer satisfaction because, customer satisfaction reflects the customer's feelings about many encounters and experiences with service firm while service quality may be affected by perceptions of value (benefit relative to cost) or by the experiences of others that may not be as good.

Geetika and Nandan (2010) conducted a study on railway platform in India. The study intended to identify the features for passenger satisfaction on railway platforms. After grouping some factors together, the study came up with five factors which were considered to be the most important for determining passenger's satisfaction in railway platforms. The factors suggested were: refreshments, behavior of the operating staff,

information system and efficiency, basic facilities, and safety satisfaction. This study employs similar approach to assess the passenger's perception on five service quality dimensions, however the focus is on whether route type influence passenger satisfaction.

Kai and Jen (2006) conducted a study on passengers perceived service quality on city bus in Tai Pei in China. The aim of the study was to understand passenger's perception and expectation towards quality of services provided. They developed four service quality dimensions which are: interaction with passengers, tangible services equipment's, convenience of the service and operating management support. Kai and Jen (2006), recommended that using the assessment of four dimensions management can detect whether the services quality is acceptable by passengers or not. In that case five service quality dimensions used to understand passenger's satisfaction perception between two routes.

Eboli and Mazulla (2007) investigated service quality attributes important for customer satisfaction with a bus transit service in Cosenza, Italia. Respondent were asked to rate the importance and satisfaction with 16 service quality attributes (bus stop availability, route characteristic, frequency, reliability, bus stop furniture, bus overcrowding, cleanliness, cost, information, promotion, safety on board, personal security, personnel, complains, environmental protection and bus stop maintenance). The result shows that the latent variable important for global customer satisfaction is service planning which is reflected in reliability, frequency, information, promotion, personnel and complaint.

Friman et al., (2001) conducted a mail survey to investigate factors affecting customer satisfaction in public transport service in Sweden. The results showed that overall cumulative satisfaction related to attribute specific cumulative satisfaction and remembered frequencies of negative critical incidents for instance the driver behaves unexpectedly bad or the bus is leaving before scheduled departure time. Smith and Clark (2000); Ambak et al., 2009 found that safety issue as a constraint for people to choose public transport as travel mode of choice.

According to Lau, Cheung, Lam and Chu, (2013) the five SERVQUAL dimensions, empathy, tangibility, responsiveness, reliability, and assurance were found to be significant predictors of customer satisfaction. The willingness of service providers to assist and provide prompt services to customers is very important to customer evaluation, which shows the responsiveness of the employees. Customers are satisfied with the personal services provided and service personnel who understand their needs. Data demonstrate that customers are quite satisfied with the services provided by shipping lines as promised and the security level of the transaction process.

Eboli and Mazzulla (2007) measured customer satisfaction in the context of bus service on various factors including availability of shelter and benches at bus stops, cleanliness, overcrowding, information system, safety, personnel security, helpfulness of personnel, and physical condition of bus stops. TCRP Report 100 identifies the following elements at bus stations for efficient service: shelters, waiting rooms and seating, doorways, stairways, escalators, signage and information displays, public address systems, and passenger amenities (including shelters, benches, vending machines, trash receptacles, lighting, phone booths, art, and landscaping). In a study on Internet banking, consumers gave the highest weight to the quality of service while selecting a particular bank (Geetika et al. 2008).

To summarize, knowledge from previous researches, since public transport is still an alternative as a travel mode of choice for many people, public transport operator must improve their services to accommodate wide range of customers need and expectation by trying to satisfy and retain the potential customer and to attract prospect customers.

Public transport: Generally, public transport can be described as the type of transport services operating in a specific route and that can be used by general public. Public transport has been defined by different scholars. Example; (White, 2002) defined it as a type of transport which includes all modes available to the public, scheduled and non-scheduled which are providing transport services, irrespective of ownership. Public transport can be defined as a viable substitute to private car use (Holmgren, 2007). It

includes any means of transport which a person can share with other majorities. Ships, Trains and Airplanes are the ones of the public transport forms which carries passengers from one place to another place, from one continent to other continents. In this study Rail transport is termed as a public transport because it carries many passengers from one place to another place on a land.

2.2.2. Public Transport in Addis Ababa

Transpiration is important for people nowadays. They have to go from one place to other places. In order to support people's needs to move from one place to another place easily and quickly, we need the existence of means of transportation and their supported facilities. There are three types of transportations worldwide; these are land transportation, air transportation, and water transportation.

According to Gebeyehu and Shin-eiTakano,(2007) in the city of Addis Ababa, the dominant public transportation modes are city buses and taxis. Although buses have 30 seats each, they have a caring capacity of 100 people in a crowded situation. Taxis caring capacity from four (small taxis) to 12 persons (large taxis). Car ownership among residents is very low, so the majorities depend on buses and taxis for day to day mobility. Walking is the main means of transportation for a number of residents. Unlike other cities in the country, bicycle use is insignificant because of topographic inconveniences. Buses provide 40 percent of the public transport in the city; taxis account for 60 percent.

Today in the city of Addis Ababa there are many different private and public transportation like Sheger bus, Alliance bus, meter taxis, light rail transit etc. Because the growth of economy and population is very fast there is a high movement from place to place. This study evaluated the quality of the service which has been delivered by Addis Ababa Light Rail Transit since 2015.

2.3. Conceptual Framework

The conceptual framework (Figure 2.2) explains the underlying process, which is applied to guide this study. Based on the findings in the literature review, the following

conceptual model could be drowning. The conceptual framework of factors affecting quality of customer service is examined as illustrated below. As discussed above, the SERVQUAL model is suitable for measuring service quality and customer satisfaction in transportation industry using the service quality dimensions. The same dimensions are used to measure both service quality and customer satisfaction because the assumption is that both are related (Parasuraman et al., 1985).

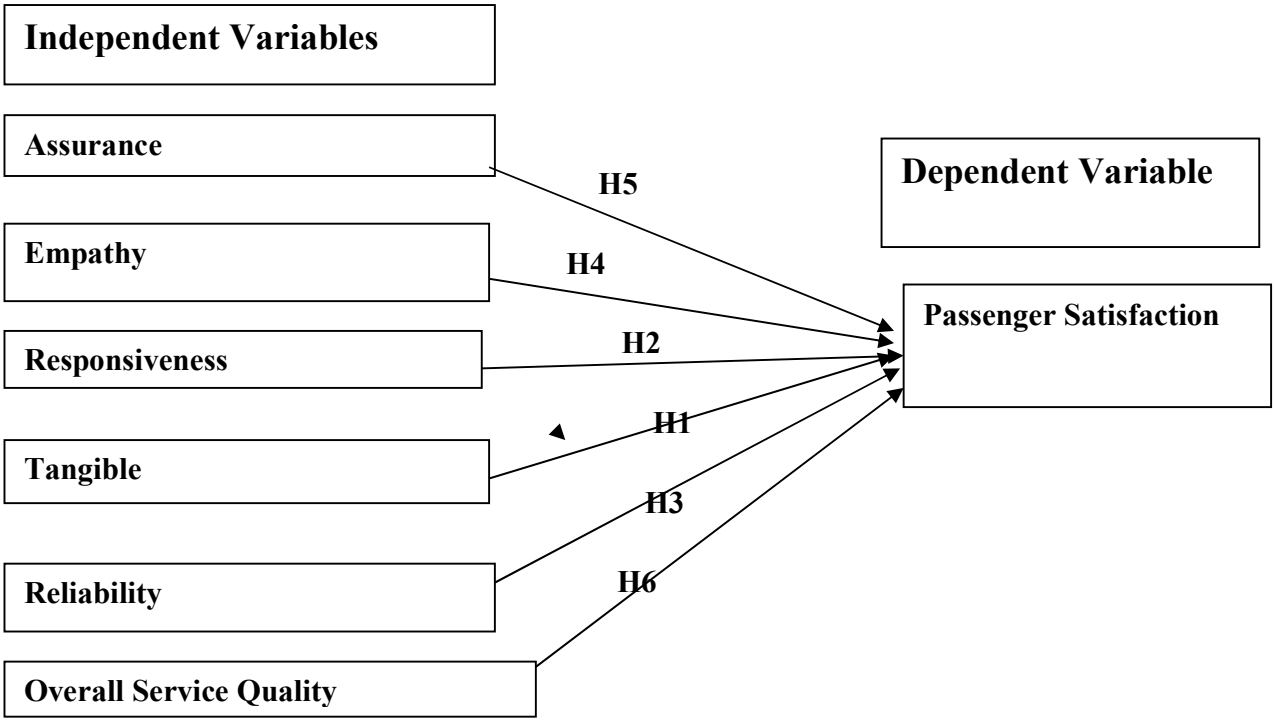


Fig.2.2 Factors contributing to Customer Satisfaction (Modified Parasuraman,1985 concentration)

2.4. Research Hypothesis

Literatures suggested that there is relationship between customer satisfaction and service quality. Higher service quality leads to higher customer satisfaction thus service quality is an important antecedent of customer satisfaction (Cronin and Taylor, 1992). Since tangibles, responsiveness, reliability, empathy and assurance are determinants of service

quality they can also influence customer satisfaction .Based on review literature the following hypotheses are formulated

H1: There is a positive and significant relationship between tangibility and passenger satisfaction in Addis Ababa Light Rail Transit Service.

H2: There is a positive and significant relationship between responsiveness and passenger satisfaction in Addis Ababa Light Rail Transit Service.

H3: There is a positive and significant relationship between reliability and passenger satisfaction in Addis Ababa Light Rail Transit Service.

H4: There is a positive and significant relationship between empathy and passenger satisfaction in Addis Ababa Light Rail Transit Service.

H5: There is a positive and significant relationship between assurance and passenger satisfaction in Addis Ababa Light Rail Transit Service.

H6: There is a positive and significant relationship between Overall service quality and passenger satisfaction in Addis Ababa Light Rail Transit Service.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Description of study area

The overall objective of the study is to analyze the influence of Service Quality on Customer Satisfaction in the case of Addis Ababa Light Rail Transit Service. This chapter presented the research approach, research design, target population and sampling size, sample techniques, sources and type of data, data collection procedure, ethical consideration and data analysis method.

3.2. Research Approach

A quantitative method was selected and used in this study. A research that focuses primarily on the construction of quantitative data follows a quantitative method (Kent, 2007, p. 10). The reason for this choice of method was from my ontological position of objectivism, my epistemological position of positivism and my research approach which is deductive (Bryman and Bell, 2003, p. 25).

3.3 Research Design

Churchill (1999) categorized research design into explorative research, descriptive research or explanatory research. Explanatory research is a type of research design which deals with finding the relationship between two variables. Descriptive research based on time is divided into two categories: cross sectional research and longitudinal research. Cross sectional research is the type of research whereby data is collected only once with a specified sample (Frankfort-Nachmias and Nachmias, 1996).

Descriptive research design are usually structured and specifically designed to the characteristics described in a research question, hypotheses, derived from the theory, usually server to guide the process and provide a list of what need to be measured (Hair et al.,2003).

The objective of descriptive research is to portray an accurate profile of person, events of situation. It is necessary to have a clear picture of the phenomena on which researcher wish to collect data prior to the collection of the data (Saundres et al., 2003).

Description refers to the process of defining, classifying, or categorizing phenomena of interest. Descriptive research is useful because it can provides important information regarding the average number of a group (Geoffrey Marczyk et al.,2005).Specifically, by gathering data on a large enough groups of people, a researcher can describe the average member, or the average performance of a member, of the particular group being studied.

An explanatory research tries to establish relationship that exists between variables. It aims at identifying how one variable affects the other; it seeks to provide an empirical explanation to the causality and causes and effects relationship between one or more variables (Saunders et al., 2000, & Malhotra 2006). They are also used when the purpose of the study is to answer 'why' in a given context. Lastly, research may be exploratory where a study is conducted to explore and find out what is happening or to seek new insights about a phenomenon in a new light" (Robson, 2002). Mostly, it is used when a researcher wants to have a deeper understanding of a situation or a problem, or where the area of study is so new or vague that it becomes critically important to examine unknown variable that may affect a particular phenomenon. It, therefore, involves the use of methods like searching for library materials, asking for expert's opinion, and conducting a focus group interviews.

This study employed quantitative techniques and used both explanatory and descriptive purposes. Firstly, the study was descriptive as it seeks to describe in detail the state of customer satisfaction and service quality and the gap between customer expectation and customer perception in AALRT Service. Secondly, an explanatory method was selected since it seek to determine the relationship between the service quality dimensions variable with customer satisfaction and how service quality dimension affect the overall customer satisfaction in AALRT Service

3.4. Research Population and Sample

3.4.1. Target Population

Population is defined the totality of cases that confirm to some designated specifications. It can also be called a 'study population' which refers to the aggregation of elements from which a sample is actually selected (Churchill, 2001). For the purpose of this study the target population was the customers of Addis Ababa Light Rail Transit Service that runs in the directions of North-South Line, from Menelik II to Kality line and East-West Line from Ayat to Torhailoch who has been using the services and statistically unlimited population. So, the target population for the study is infinite.

3.4.2. Sample Size

The sample size of this study was determined by using the formula developed by (Kothari, 2004).

$$n = \frac{z.^2\ p\ .q}{e^2}$$

Where:-Population is infinite;

e =0 .05 (since the estimate should be within 5% of the true value);

z = 1.96 (as per table of area under normal curve for the given confidence level of 95%).

p =0 .5 and q =1-0.5

$$n = \frac{(1.96)^2.\ (0.5).(1-0.5)}{(0.05)^2}$$

= 0.9604 ÷ 0.0025

= 384 Sample size

According to Kothari (2004) sampling design and procedures involves the decision to the type of sample and technique to be used in selecting the items for sample. However, due to limited time and financial resources, the study was limited to a sample of 384 respondents. The sample was collected from passengers of AALRT service.

3.4.3 Sampling Techniques

According to Saunders et.al, (2009) there exist two types of sampling: Probability sampling where the chances of each case being selected from the total population is known, usually equal for all cases and is a technique in which every unit in the population has a chance (non-zero probability) of being selected in the sample, and this chance can be accurately determined.

In this study data was collected using non-probability sampling technique which is convenience sampling technique. A Convenience sampling is a technique in which a sample is drawn from that part of the population that is close to hand, readily available, or convenient (Bhattacherjee,2012). Convenience sampling was employed in the study because the population was too large and it was impossible to include every individual, and the respondents were included based on their convenient accessibility and proximity to the researcher.

3.5 Data Source and Types

The study used both primary and secondary data collection method. Primary data was collected through questionnaires that were distributed directly to the corporate passengers or customers. In the secondary data, about the relationship between customer satisfaction and service quality data was collected from books, journals of service marketing, journals of marketing research, articles, websites; prior research works and Companies written documents that help the researcher to enlarge the knowledge in the topic under study.

Nominal data level measurement was used to categorize male and female respondents using a number 0 for female and 1 for male and ordinal data level measurement was applied in this study to give meaningful order to ordinal variables like for educational

levels. Frequencies, percentages and also Interval scale data levels measurement were used to make arithmetic assumptions about the degree of differences between values or to compute statistical measurement such as the average mean, standard deviation, the Pearson correlation coefficient and Multiple Regression.

3.6 Data Collection Procedure

The research is conducted using the SERVQUAL instrument. The primary data have been collected using a well-developed, structured and verified scale questionnaire. A structured questionnaire was constructed taking into account SERVQUAL dimensions such as Tangibles, Reliability, Responsiveness, Assurance and Empathy, The structured questionnaire is divided in three categories. Part 1, is about the personal information of the respondents, which included the age, gender, educational background and frequency of travelling. Part 2, is about questions in relation to assessment of customers expectation and perception, this research instrument is designed based on the five dimensions of SERVQUAL model and consisting 25 attributes or items with modification. Part 3, is about overall service quality and overall customer satisfaction each consists one question.

The questionnaire has been distributed to the passengers hand to hand from April 10, 2018 to 17, and 2018.The respondents have been asked to give their degree of satisfaction on the predetermined attributes of service quality on a 5-point Likert scale ranging from 1=strongly disagree to 5=strongly agree.

3.7 Method of Data Analysis

The data that is gained from the questionnaires were analyzed and interpreted using statistical package for social science (SPSS) version 20. As result, descriptive and inferential analyses were conducted by employing different methods. In descriptive statistics mean values, frequencies and standard deviations of the respondent's answers were computed. In inferential Cronbach's Alpha test takes place to assure reliability of the items. Pearson correlation and multiple linear regressions analysis were also used to analyze the relationship and the impact between the dependent and independent variables.

3.7.1 Validity and Reliability

Reliability. Reliability will be conducted to assess data quality. A reliability test is used to assess consistency in measurement items (Cerri, 2012). In this study Cronbach's alpha was used to measure the internal consistency of the measurement items. A value of Cronbach alpha above 0.70 can be used as a reasonable test of reliability. I this study Cornbach's alpha for the independent variables (Tangibility, Reliability, Responsiveness, Empathy and Assurance) was found to be 0.775. Therefore the five dimensions of service quality were found to be high in their internal consistency and thereby in measuring the dimensions of interest.

Validity . Validity refers to the credibility or believability of the research. It is concerned with whether the findings are really about what they appear to be about (Sounders et. al., 2003). The validity of scientific study increases using various sources of evidence (Yin, 1994). Validity defined as the extent to which data collection methods accurately measure what they were intended to measure (Sounders et. al., 2003). In order to achieve this objective the researcher was taken different steps to ensure the validity of the study, from this was:

• Data was collected from the reliable sources, from those target population respondents who have good understanding and experiences in using the service of AALRT service.

•Survey questions were prepared based on previous empirical research review and literature review to ensure result validity.

3.8 Ethical Consideration

The study is free from bias as the researcher used data from customers which was collected according to their willing. To keep the confidentiality of customers they were not invited to write their name and address and to assure the confidentiality. According to Saunders et al., (2001, p.130) "Ethics refers to the appropriateness of your behavior in relation to the rights of those who become the subject of your work, or are affected by it". Moreover, no information was modified or changed, hence information was presented as collected and all the literatures collected for the purpose of this study were appreciated in the reference list.

CHAPTER FOUR

DATA ANALYSIS AND DISCUSSION

4.1 Introduction

In this chapter a respondent profile, a gap analysis, descriptive analysis, correlation analysis and regression analysis of findings were discussed.

The questionnaire was planned to distribute to AALRT passengers of the two lines based on the criteria that is mentioned in the methodology section.

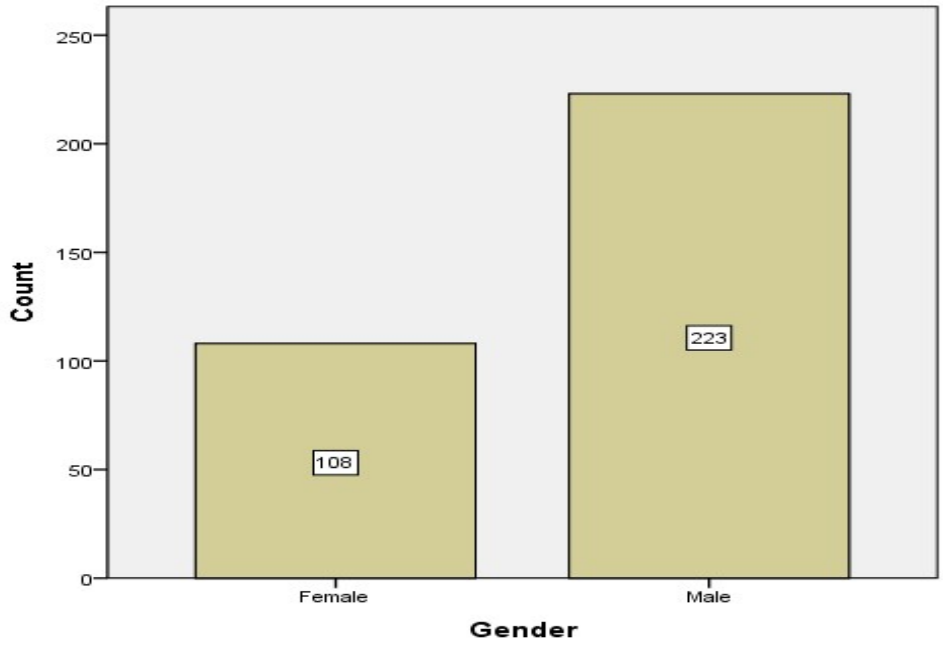
A total of 384 out of 331 questionnaires (86.19% of the response rate) were collected back and used for data analysis purpose. The questionnaires distribution period was from (April 10, 2018 to 17, and 2018). The data was analyzed using SPSS version 20.

4.2 Respondents Profile

To find out general background of passengers of AALRT service, the respondents were asked their Gender, Age, Educational Status and Frequency of travelling.

From the 331 respondents 223 (67.4 %) were male and 108 (32.6 %) percent of the respondents were female. This shows that, from the overall sample size the large number of the respondents are male and the small number are female. The result obtained from the structured questionnaires is represented on the figure below.

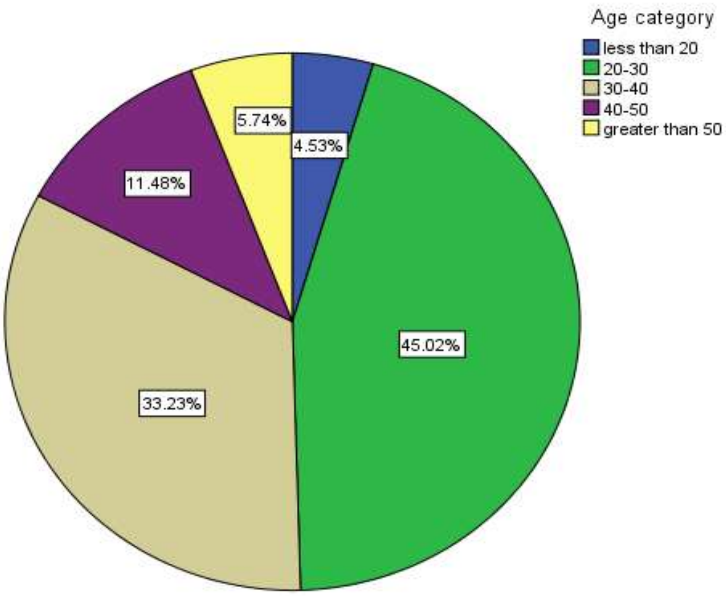
Figure 4.1 Gender profiles of Respondents



Source: Researcher's survey data (2018)

Figure 4.2 Age Category profile of Respondents

When we look at age category 45.0 % (149) respondents were from 20-30 years old whereas 32.2 % (110) were from 30 to 40 years and 11.5 % (38) were from 40-50 years old. 5.7 % (19) were above 50 and the remaining 4.5 % (15) of the respondents are less than 20 years old. This shows that, from the overall sample size the largest number of the respondents are from age 20-30 and the smallest number are less than 20 years old. The result obtained from the structured questionnaires is represented on the chart below.



Source: Researcher's survey data (2018)

Regarding educational level, 42.9 % (142) of the respondents are degree holders, 29.0 % (96) are diploma holders, 17.2 % (57) have finished high school, 7.3 % (24) have master's degree and the remaining 3.6 % (12) have certificate. This shows that, from the overall sample size the largest number of the respondents are degree holders and the smallest number of the respondent 3.6 % (12) have certificate .The result obtained from the structured questionnaires is represented on the table below.

Table 4.1 Educational Status of Respondents

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	High school	57	17.2	17.2	17.2
	certificate	12	3.6	3.6	20.8
	Diploma	96	29.0	29.0	49.8
	Degree	142	42.9	42.9	92.7
	Masters	24	7.3	7.3	100.0
	Total	331	100.0	100.0	

Source: Researcher's survey data (2018)

Regarding the frequency of travelling as we can observe from the table 4.2 below the largest group of respondents 85.8 % (284) have more than five times the travel of frequency the second group, 5.1 % (17) have five times whereas 3.3 % (11), 3.0 % (10), 1.5 % (5), 1.2 % (4) three times, two times, four times and first time of frequency of travel respectively. This shows that, from the overall sample size the majority of the respondents have travelled more than five times. The result obtained from the structured questionnaires is represented on the table below.

Table 4.2 Travel Frequency of Respondents

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	first time	4	1.2	1.2	1.2
	two times	10	3.0	3.0	4.2
	three times	11	3.3	3.3	7.6
	four times	5	1.5	1.5	9.1
	five times	17	5.1	5.1	14.2
	more than five	284	85.8	85.8	100.0
	Total	331	100.0	100.0	

Source: Researcher's survey data (2018)

Table 4.3 Cronbach's alpha test for independent variables

Dimension	Cronbach's Alpha	No. of Items
Tangibles	.644	5
Reliability	.811	5
Responsiveness	.838	5
Assurance	.806	4
Empathy	.776	6
Total Scale Reliability	**.775**	**25**

Source :Researcher's survey data (2018)

Reliability analysis was calculated to test whether the scale used in the study is internally consistent. As sited by (Hailu 2013) according to George and Mallery (2003) Cronbach‟s Alpha result which is greater than 0.70 is acceptable. From data analysis the Cronbach‟s Alpha for this study is 0.775 which is acceptable according to the standard set by George and Mallery, this indicates that there is internal consistency between the items and measures the dimension of the variables

4.3 Descriptive Statistics

4.3.1 Service Quality Expectation and Perception Gap Analysis

To measure perceived and expected service quality by the customer of AALRT service, all respondents were simply asked to show the extent to what they felt or have experienced about the travel of the company.

The minimum and maximum responses of this study are ranging from 1 to 5 for all the variables used in the descriptive statistics section , the mean value represents the average of all customer response on certain dimensions while, standard deviation shows how diverse the responses of the respondents are meaning, if the standard deviation shows smaller number it indicates that the response of the respondents shows close opinions and when the standard deviation is high it indicates the response of the respondents shows high variation.

The research and analysis at AALRT service in this thesis is based on gap 5 in the SERVQUAL model, to analyze the gap between customers expectation and perception, in addition to this the level of passengers' satisfaction and the influence of service quality on customer satisfaction are analyzed by counting scores that are given by the modified SERVQUAL model. The method is used for all 25 features with the purpose of measuring different passengers expectations and perceptions.

The findings of the study show that the difference between expectation and perception as shown in the below tables. For each statement there is the mean expectation (E) and perception (P) value and quality value calculated the formula is SQ =P-E

Where SQ = Service Quality P = perception E = Expectation

Consequently, if perception exceeds expectation (P>E), service quality level is very satisfactory, if perception equals expectation (P=E), is satisfactory. If expectation exceeds perception (P < E), service quality is poor. (Ilhaamie 2010; reported by Khodayar et al.2011).

The descriptive statistics computed under every dimension is presented below

4.3.1.1 Tangibles Dimension

Here we can see the expectations and perceptions about the specific features and also the difference between the expectations and perceptions. The tangibility dimension involves equipment, visually appealing physical facilities, the in liniment of physical facilities with the type of services provided, if the Employees appear neat and adequate shed for passengers. The idea supported by Parasuraman et al.(1988).

Table 4.4 Tangibles Dimension Statistics

Attributes	N	Expectation		Perception (P)		Gap (P-E)
		Mean	Std. Deviation	Mean	Std. Deviation	
Service provider should equipped with modern technology	331	4.14	.912	3.34	1.104	-0.8
Physical facilities of service provider should be visually appealing	331	3.79	1.229	3.16	1.146	-0.63
Employees will be dressed and appear neat	331	4.40	.855	3.63	1.135	-0.77
The appearance of the physical facilities will be in line with the type of services provided.	331	4.08	1.009	3.23	1.124	-0.85

Service provider should have adequate shed for passengers	331	4.04	1.153	2.80	1.151	-1.24
Overall Tangibles average mean.		**4.09**		**3.23**		**-0.86**

Source: Researcher's survey data (2018)

Table 4.4 above indicated that the overall passenger's satisfaction of perception towards tangibility is at high level compare the other statement (3.63) and the lowest rank level is (2.80). Passenger's expectation of tangibility service dimension was ranked at the highest level (4.40) and the lowest rank is (3.79). All the score of Tangibility statements in the expectation column is very high than score in the perception column with overall mean score is 4.09 and 3.23 respectively. So the difference is -0.86. This implies that passengers of AALRT service are not satisfied by perceived Tangibles service quality because their perception is less than what they expect from the company. If expectations are greater than performance, then perceived quality is less than satisfactory and a service gap happen. This does not necessarily means that the service is of low quality but rather customer expectations have not been met hence customer dissatisfaction occurs and opportunities arise for meeting customer expectations (Parasuraman et al., 1985) .

4.3.1.2 Reliability Dimension

Reliability is connected to keeping promises and dependability. This dimension includes, showing a sincere interest in solving problem, give right service on time and providing the service at the time the company promise to do so. Performing the service dependably and accurately is paramount to service customers, has been strongly supported by research, (Parasuraman et al.1988).

Table 4.5 Reliability Dimension Statistics

Attributes	N	Expectation		Perception (P)		Gap (P-E)
		Mean	Std. Deviation	Mean	Std. Deviation	
When the Service provider promises to do something by a certain time, it will do so.	331	3.91	1.150	2.87	1.064	-1.04
When a customer has a certain problem, Service provider will show a sincere interest in solving it.	331	3.92	1.285	2.85	1.177	-1.07
Service provider should be dependable.	331	4.08	1.065	3.14	1.164	-0.94
Service provider should provide its services at the time it promise to do so.	331	4.14	.974	3.37	1.158	-0.77
Service provider Train always arrives at the destination on time	331	3.93	1.291	2.70	1.245	-1.23
Overall Reliability average mean.		**4.00**		**2.99**		**-1.01**

Source: Researcher's survey data (2018)

Table 4.5 above indicated that the overall passenger's satisfaction of perception towards reliability is at high level compare the other statement (3.37) and the lowest rank level is (2.70). Passenger's expectation of reliability service dimension was ranked at the highest level (4.14) and the lowest rank is (3.91). All the score of Reliability statements in the expectation column is very high than score in the perception column with overall mean score is 4.00 and 2.99 respectively. So the difference is -1.01. This implies that passengers of AALRT Company are not satisfied with perceived Reliability service quality. The train should always arrive at the destination on time, the service provider should be problem solving and keeping their promise because their perception is less than what they expect from the company.

4.3.1.3 Responsiveness Dimension

This factor concerns to what extent communication with the staff is clear and helpful. This dimension touch subjects as information about the service, giving prompt service, employee's willingness to help the customers and that the employees never are too busy to respond to requests from customers.

Table 4.6 Responsiveness Dimension Statistics

Attributes	N	Expectation		Perception (P)		Gap (P-E)
		Mean	Std. Deviation	Mean	Std. Deviation	
Keeping customers informed about when services will be performed.	331	4.06	1.210	3.19	1.336	-0.87
Prompt services to passengers.	331	4.30	3.353	3.17	1.140	-1.13
Willing to help passengers.	331	4.00	1.042	3.05	1.188	-0.95
Employees will be not too busy to respond to passengers	331	3.83	1.203	2.89	1.274	-0.94
Communication with staff is clear and helpful	331	4.05	1.176	3.03	1.306	-1.02
Overall Responsiveness average mean.		**4.05**		**3.07**		**-0.98**

Source: Researcher's survey data (2018)

Table 4.6 above indicated that the overall passenger's satisfaction of perception towards responsiveness is at high level compare with the other statement (3.19) and the lowest rank level is (2.89). Passenger's expectation of Responsiveness service dimension was ranked at the highest level (4.30) and the lowest rank is (3.83). All the score of Responsiveness statements in the expectation column is very high than score in the perception column with overall mean score is 4.05 and 3.07 respectively. So the difference is -0.98. This implies that passengers of AALRT service are not satisfied with perceived Responsiveness service quality. Employees should not be too busy to respond

to passengers, Communication with staff should be clear and helpful, staff should have willing to help passenger, because their perception is less than what they expect from the company.

4.3.1.4 Assurance Dimension

The Assurance dimension of service quality refers to the knowledge and courtesy of employees and their ability to inspire confidence including: competence, courtesy, credibility and safety. Parasuraman et al.,(1988).

Table 4.7 Assurance Dimension Statistics

Attributes	N	Expectation		Perception (P)		Gap
		Mean	Std. Deviation	Mean	Std. Deviation	(P-E)
The behavior of employees will instills confidence in passengers	331	4.13	.999	3.19	1.192	-0.94
Customers will feel assured that service requests are duly (properly) followed.	331	3.78	1.163	2.77	1.154	-1.01
Customers feel safe and secure in their transit actions in the train and at station.	331	4.01	1.037	3.07	1.273	-0.94
Employees will have the knowledge to answer passengers' questions.	331	4.02	1.113	3.12	1.174	-0.90
Overall Assurance average mean.		**3.09**		**3.04**		**-0.05**

Source: Researcher's survey data (2018)

Show the table 4.7 above that overall expectation towards assurance is the highest level compares the perception 3.09 and 3.04 respectively. So the difference is -0.05. This implies that passengers of AALRT service is not satisfy with service provider, so the service provider should maintain assurance for service requests are duly (properly) followed, for safety and security, and service provider will be expected to give

passengers individual attention and knowledge, because the overall perception and expectation mean score value is negative score.

4.3.1.5 Empathy Dimension

This dimension of service quality relates to the level of carrying and individualized attention that personnel provide to customers (Parasuraman et al.,(1988)).

Table 4.8 Empathy Dimension Statistics

Attributes	N	Expectation		Perception (P)		Gap (P-E)
		Mean	Std. Deviation	Mean	Std. Deviation	
Service provider knows what the needs of their customers are.	331	3.59	1.305	2.41	1.170	-1.18
Service provider has their passenger's best interest at heart.	331	3.57	1.197	2.43	1.116	-1.14
Getting information about the facilities and services of the train companies is easy	331	4.10	1.074	3.23	1.289	-0.87
A Service provider has operating hours convenient to all its customers.	331	3.93	1.185	2.89	1.176	-1.04
Employees who deal with passengers in a caring fashion	331	4.06	1.133	3.16	1.290	-0.9
Easy to find and access the ticket	331	4.44	.953	3.70	1.334	-0.74
Overall Empathy average mean.		**3.95**		**2.97**	**-0.98**	

Source :Researcher's survey data (2018)

Table 4.8 above indicated that the overall passengers satisfaction of perception towards Empathy is high level compare the other (3.70) and the lowest rank level is (2.41) .Passenger's expectation of Empathy service dimension was ranked at the highest level (4.44) and the lowest rank is (3.57). All the score of Empathy statements in the expectation column is very high than in the perception column with overall Mean scores

is 3.95 and 2.97 respectively. So the difference is -0.98. Among all the above empathy attributes, a high gap is scored specifically in the attribute of, 'Service provider knows what the needs of their customers are, "Service provider has their passenger's best interest at heart and "A Service provider has operating hours convenient to all its customers" attributes with a gap score of -1.18, -1.14 and -1.04 respectively. As we can see the result of Empathy perception and expectation is negative score. This implies that the service provider does not understand passenger's needs that passengers are not satisfied with the service provided.

4.4 Overall Gap analysis of Service Quality Dimensions

Table 4.9 Mean score and Standard Deviation for Service Quality Dimensions

Service quality dimension	Mean		Gap (P-E)	Rank
	Perception (P)	Expectation(E)		
Overall Tangible	3.23	4.09	-0.86	5th
Overall Reliability	2.99	4.00	-1.01	1st
Overall Responsiveness	3.07	4.05	-0.98	2nd
Overall Assurance	3.04	3.09	-0.95	4th
Overall Empathy	2.97	3.95	-0.98	2nd
Overall average mean	**3.06**	**4.02**	**-0.96**	

Source: Researcher's survey data (2018)

As it is shown on table 4.9, among the five dimension of service quality, Reliability dimension has the highest score with a gap of (-1.01) followed by Responsiveness and Empathy both with a gap of (-0.98), Assurance (-0.95) and Tangible (-0.86) in descending orders.

In addition, all the gaps across SERVQUAL dimensions are found to be statistically significant with ($p < 0.01$).

The above data reveal that, overall perception of service quality of the five dimensions customers are more neutral about the levels of the overall perceived service quality, scores a medium value of (3.06). Though the customers feel neutral about the levels of service quality, there is still a gap between customer's perception and expectation of service quality in AALRT service.

This further Indicates that, the passengers' perceptions fall short of their expectations with a gap score of -0.96. In other words, the levels of service quality that the passengers receive are lower than their minimum tolerable expectation, i.e. there is a certain degree of dissatisfaction in AALRT service. Thus AALRT service should give due emphasis to Reliability, Responsiveness and Empathy as they contribute higher value to customer dissatisfaction. Moreover, the other dimension like Assurance and Tangible shall not left over as it contribute less to customer dissatisfaction rather the service provider should further exceed their customers need in order to consistently satisfy their need. This answers the second research question.

4.5 Overall Customer Satisfaction towards Service Provided by AALRT.

According to (Churchill and Surprenant, 1982) "customer satisfaction is an outcome of purchase and use resulting from the buyers' comparison of the rewards and costs of the purchase in relation to the anticipated consequences". Customer satisfaction facilitates the measure of how service and products provided by company meet customer expectation. To protect and gain market shares, organizations need to outperform competitors by offering high quality product or service to ensure satisfaction of customers (Tsoukatos and Rand, 2006).

Descriptive statistics analysis of customer satisfaction depicted below in table 4.10 shows that the overall levels of satisfaction with respect to the service quality provided by AALRT service are, 8.8 % are strongly dissatisfied, 13.6 % dissatisfied, whereas 38.4 %

of them were indifferent about the service quality while, 29.6 % of them were satisfied. These shows that, the overall levels of AALRT service is performing not so bad but still it has a lots of things to improve on the strongly dissatisfied, the dissatisfied and the indifferent about the service quality passengers. Since, they are neither satisfied nor dissatisfied about the current levels of service quality. This answers the first research question.

Table 4.10 Overall customer satisfaction toward service Provided by AALRT service.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Dissatisfied	29	8.8	8.8	8.8
	Dissatisfied	45	13.6	13.6	22.4
	Neutral	127	38.4	38.4	60.7
	Satisfied	98	29.6	29.6	90.3
	Strongly Satisfied	32	9.7	9.7	100.0
	Total	331	100.0	100.0	

Source: Researcher's survey data (2018)

4.6 Correlation Analysis

A correlation coefficient is a very useful means to summarize the relationship between two variables with a single number that falls between -1 and +1 Field (2005). His classification of the correlation coefficient (r) is as follows: 0.1-0.29 is weak; 0.3-0.49 is moderate; and > 0.5 is strong.

Correlation coefficient says nothing about which variable causes the other to change. Although it cannot make direct conclusion about causality, we can take correlation coefficient a step further by squaring it (Andy, 2005). The correlation coefficient squared

known as the coefficient of determination, R^2) is a measure of the amount of variability in one variable that is explained by the other.

Dancey and Reidy (2004) states that a correlation result which is 0 indicates zero correlation, a result between 0.1 and 0.3 indicates a weak correlation among variables, a result which is between 0.4 and 0.6 shows a moderate correlation, a result between 0.7 and 0.9 indicates a strong correlation among variables while a result which is equal to 1 indicates a perfect correlation

According to Marczyk,et al., (2005).A Correlation coefficient is very useful means to summarize the relationship between two or more variables. A single number called a correlation coefficient (r), correlations provide information about the direction of the relationship (either positive or negative) and the intensity of relationship (-1.0 to +1.0). Correlation coefficient ranges from -1.0 to +1.0. Correlation analysis with Pearson's coefficient (r) was conducted on all variables in this study to analysis the relationship between variables. Correlation about the variables, are they related or not. With regard o the direction of a correlation, if two variables tend to move in the same direction, they would be considered to have a positive or direct relationship. Alternatively, if two variables move in opposite directions, they are considered to have a negative or inverse relationship. According to, Marczyk et al., (2005), if Pearson's correlation coefficient (r) is between .01 to .03 are considered small, correlations of .30 to .70 are considered moderate, correlations of .70 to .90 are considered large, and correlations of .90 to 1.00 are considered very large.

Correlation analysis was conducted to investigate the relationship between SERVQUAL dimensions with customer satisfaction. The relevance of various dimensions of service quality, which have been measured in the present study, was determined by calculating the correlation coefficient 'r' values. The values for correlation coefficient 'r' of all the dimensions of service quality namely; Tangibility, Reliability, Responsiveness, Assurance, and Empathy precisely indicate the relationship between the SERVQUAL dimensions and customer satisfaction.

In this study the pearson's correlation coefficient suggested by marczyk, et., (2005), that is, if pearson's correlation coefficient (r) is between .01 to .03 are considered small, correlation of .30 to .70 are considered moderate, correlation of .70 to .90 are considered large, and correltion of .90 to 1.00 are considered very large ,was applied to determine the strength of the linear relationship between two variables. The correlation coefficient will be between -1.0 and +1.0.

Table 4. 11 correlation between tangibility and customer satisfaction

		Tangible	Overall Customer Satisfaction
Tangible	Pearson Correlation Sig. (1-tailed) N	1 331	.312** .000 331
Overall-Customer Satisfaction	Pearson Correlation Sig. (1-tailed) N	.312** .000 331	1 331

**. Correlation is significant at the 0.01 level (1-tailed).

Source: Researcher's survey data (2018)

Based on the result from Table 4.11 Pearson's correlation exhibits that there is a significant and positive relationship between tangibility and Customer Satisfaction with value of r = .312, P < 0.01. In addition to this, this value indicates that the tangibility of the passenger maintains moderate correlation relationship with the passenger's satisfaction in the context of Addis Ababa Light Rail Transit service. So tangible has positive relation with the underlying construct.

Table 4. 12 correlation between responsiveness and customer satisfaction

		Responsiveness	Overall Customer Satisfaction
Responsiveness	Pearson Correlation Sig. (1-tailed) N	1 331	.511** .000 331
Overall-Customer Satisfaction	Pearson Correlation Sig. (1-tailed) N	.511** .000 331	1 331

Correlation is significant at the 0.01 level (1-tailed).

Source: Researcher's survey data (2018)

Based on the result from Table 4.12 Pearson's correlation exhibits that there is a significant and positive relationship between Responsiveness and Customer Satisfaction with value of r = .511, P < 0.01. In addition to this, this value indicates that the Reliability of the passenger maintains moderate correlation relationship with the passenger's satisfaction in the context of Addis Ababa Light Rail Transit service. So Responsiveness has positive relation with the underlying construct

. **Table 4. 13 correlation between Reliability and customer satisfaction**

		Reliability	Overall Customer Satisfaction
Reliability	Pearson Correlation Sig. (1-tailed) N	1 331	.438** .000 331
Overall-Customer Satisfaction	Pearson Correlation Sig. (1-tailed) N	.438** .000 331	1 331

Based on the result from Table 4.13 Pearson's correlation exhibits that there is a significant and positive relationship between Reliability and Customer Satisfaction with value of r = .438, P < 0.01. In addition to this, this value indicates that the Reliability of the passenger maintains moderate correlation relationship with the passenger's satisfaction in the context of Addis Ababa Light Rail Transit service. So reliability has positive relation with the underlying construct.

Table 4.14 Correlations between Assurance and Customer Satisfaction

		Assurance	Overall Customer Satisfaction
Assurance	Pearson Correlation	1	.417**
	Sig. (1-tailed)		.000
	N	331	331
Overall Customer Satisfaction	Pearson Correlation	.417**	1
	Sig. (1-tailed)	.000	
	N	331	331

**. Correlation is significant at the 0.01 level (1-tailed).

Source: Researcher's survey data (2018)

Based on the result from Table 4.14 Pearson's correlation exhibits that there is a significant and positive relationship between Assurance and Customer Satisfaction with value of r =. 417, P < 0.01. In addition to this, this value indicates that the Assurance of the passenger maintains moderate correlation relationship with the passenger's satisfaction in the context of Addis Ababa Light Rail Transit service. So Assurance has positive relation with the underlying construct.

Table 4.15 Correlations between Empathy and Customer Satisfaction

		Empathy	Overall Customer Satisfaction
Empathy	Pearson Correlation	1	.376**
	Sig. (1-tailed)		.000
	N	331	331
Overall Customer Satisfaction	Pearson Correlation	.376**	1
	Sig. (1-tailed)	.000	
	N	331	331

**. Correlation is significant at the 0.01 level (1-tailed).

Source: Researcher's survey data (2018)

Based on the result from Table 4.15 Pearson's correlation exhibits that there is a significant and positive relationship between Empathy and Customer Satisfaction with value of $r = .376$, $P < 0.01$. In addition to this, this value indicates that the Empathy of the passenger maintains moderate correlation relationship with the passenger's satisfaction in the context of Addis Ababa Light Rail Transit service. So Empathy has positive relation with the underlying construct.

Table 4.16 Correlations between Overall Service Quality and Customer Satisfaction

		Overall Service Quality	Overall Customer Satisfaction
Overall Service Quality	Pearson Correlation	1	.766**
	Sig. (1-tailed)		.000
	N	331	331
Overall-Customer Satisfaction	Pearson Correlation	.766**	1
	Sig. (1-tailed)	.000	
	N	331	331

**. Correlation is significant at the 0.01 level (1-tailed).

Source: Researcher's survey data (2018)

Based on the result from Table 4.16 Pearson's correlation exhibits that there is a significant and positive relationship between Overall Service Quality and Customer Satisfaction with value of r = .766, P < 0.01. In addition to this, this value indicates that the Overall Service Quality of the passenger maintains large correlation relationship with the passenger's satisfaction in the context of Addis Ababa Light Rail Transit service. So Overall Service Quality has positive relation with the underlying construct.

According to the result of each table a conclusion can be made that SERVQUAL dimensions have significant impact on overall Customer Satisfaction of Addis Ababa Light Rail Transit service passengers or customers. The highest correlation is between Overall Service Quality dimension and customer satisfaction at r =.766, followed by Responsiveness and Customer Satisfaction at r =.511, Reliability and Customer Satisfaction at r = .438 and Assurance and Customer Satisfaction at r =.417 and Empathy and Customer Satisfaction at r=.376.The least correlation is seen between Tangibility and Customer Satisfaction at r=.312. The correlation between all the independent variables

variable is proved to be positive and significant, which means the improvement in any or all of the independent variables results in improvement in passenger's satisfaction.

4.7 Multiple Linear Regression Analysis

There are two basic types of regression analysis: simple linear regression and multiple linear regressions. In simple linear regression, we attempt to predict the dependent variable with a single independent variable. In multiple linear regressions, we may use any number of independent variables to predict the dependent variables.

In this study multiple linear regression analysis is used to evaluate the fitness of the linear regression models and to identify the impact of service quality dimensions on customer satisfaction, thus it answers the third research question.

4.7.1 Tangibility

From the linear regression analysis we can see that here is a positive statistical relationship between tangibility (the independent variable) and customer satisfaction (the dependent variable). As the table 4.17 below presents the coefficient of determination (R-squared) indicates the proportionate amount of variation in the response variable (customer satisfaction) explained by the independent variable (tangibility) in the linear regression model. The larger the R-squared is, the more variability is explained by the linear regression model. Thus, 34% (R^2 =.336) of the variation on customer satisfaction is explained by tangibility.

Table 4.17 Model Summary for Tangibility

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.580[a]	.336	.326	.877	.336	32.887	5	325	.000

a. Predictors: (Constant), Tangible

Source: Researcher's survey data (2018)

On the coefficient table we find the beta value which measures of how strongly each independent variable influences the dependent variable. Thus a unit increase in tangibles leads to 0.150 increases in customer satisfaction other things being constant. Therefore the more the AALRT service invests on its visually appealing physical facilities, equipment, technology and appearance of its employees the more it satisfies its customers.

Table 4.18 Coefficients for Tangibility

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Colinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
(Constant)	1.035	.223		4.635	.000		
Tangible	0.140	.048	.150	2.939	.383	.806	1.252

a. Dependent Variable: Overall Customer Satisfaction

Source: Researcher's survey data (2018)

4.7.2 Reliability

From the linear regression analysis we can see that here is a positive statistical relationship between reliability (the independent variable) and customer satisfaction (the dependent variable). Thus 34 % (R^2=.339) of the variation on customer satisfaction is explained by the independent variable reliability.

Table 4.19 Model Summary for Reliability

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.582[a]	.339	.329	.875	.339	33.289	5	325	.000

Predictors: (Constant), Reliability

Source: Researcher's survey data (2018)

On the coefficient table we find the beta value which measures how strongly each independent variable influences the dependent variable. Thus a unit increase in reliability leads to 0.152 increases in customer satisfaction other things being constant. The AALRT service should invest to enhance its ability to perform the promised service dependably on time and should show a sincere interest in solving passengers' problem so that the satisfaction level of its customers increases.

Table 4.20 Coefficients of Reliability

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
1), (Constant) Relia	1.117	.175		6.389	.000		
bility	.139	.053	.152	2.618	.034	.613	1.648

a. Dependent Variable: Overall Customer Satisfaction

Source: Researcher's survey data (2018)

4.7.3 Responsiveness

From the linear regression analysis we can see that there is a positive statistical relationship between responsiveness (the independent variable) and customer satisfaction (the dependent variable). Thus 43 % (R^2 =.430) of the variation on customer satisfaction is explained by the independent variable responsiveness which indicates a high level effect on customer satisfaction.

Table 4.21 Model Summary for Responsiveness

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.656[a]	.430	.421	.812	.430	49.065	5	325	.000

Predictors: (Constant), Responsiveness

Source: Researcher's survey data (2018)

On the coefficient table we find the beta value which measures of how strongly each independent variable influences the dependent variable. Thus a unit increase in responsiveness leads to 0.166 increases in customer satisfaction other things being constant. Therefore the more the AALRT service invests on enhancing its employee's ability to have willingness to help customers, to give prompt services to passengers, informing passengers the time on which services will be performed, to make clear and helpful communication with passengers and be responsive to customer's enquiry; the more the customer is satisfied.

Table 4.22 Coefficients for Responsiveness

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	.986	.149		6.630	.000		
	Responsiveness	.142	.0489	.166	2.927	.014	.556	1.825

a. Dependent Variable: Overall Customer Satisfaction

Source: Researcher's survey data (2018)

4.7.4 Assurance

From the linear regression analysis we can see that there is a positive and statistically significant relationship between assurance (the independent variable) and customer satisfaction (the dependent variable). Thus 30 % (R^2 =.296) variation level of customer satisfaction is explained by the independent variable assurance.

Table 4.23 Model Summary for Assurance

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.544[a]	.296	.288	.902	.296	34.302	4	326	.000

Predictors: (Constant), Assurance

Source: Researcher's survey data (2018)

On the coefficient table below we find the beta value which measures how strongly each independent variable influences the dependent variable. Thus a unit increase in assurance increases customer satisfaction by 0.168 other things being constant. Therefore the more the AALRT service invests on enhancing its employee's knowledge, their ability to instill confidence to serve customers and their skill to make secured and safe feeling in passengers the more the customer is satisfied.

Table 4.24 Coefficients for Assurance

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
(Constant)	1.372	.167		8.215	.000		
Assurance	.152	.054	.168	2.869	.216	.603	1.671

Dependent Variable: Overall Customer Satisfaction

Source: Researcher's survey data (2018)

4.7.5 Empathy

From the regression analysis we can see that there is a positive and statistically significant relationship between empathy (the independent variable) and customer satisfaction (the dependent variable). Thus 33% (R^2 =.326) variation level of customer satisfaction is explained by the independent variable empathy.

Table4.25. Model Summary for Empathy

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.571[a]	.326	.314	.885	.326	26.152	6	324	.000

Predictors: (Constant), Empathy

Source: Researcher's survey data (2018)

On the coefficient table we find the beta value which measures of how strongly each independent variable influences the dependent variable. Thus a unit increase in empathy

leads to 0.138 increases in customer satisfaction other things being constant. Therefore the more the AALRT knows the needs of passengers, has passengers' best interest at heart, make easy to get information, and dealing with passengers in a caring fashion, the more the customer is satisfied.

Table 4.26 Model Coefficients for Empathy

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
(Constant)	1.009	.186		5.425	.000		
Empathy	.119	.050	.138	2.479	.245	.633	1.595

Dependent Variable: Overall Customer Satisfaction

Source: Researcher's survey data (2018)

From the regression analysis we can see that there is a positive and statistically significant relationship between Overall Service Quality (the independent variable) and

customer satisfaction (the dependent variable). Thus 59.7% (R^2 =.597) variation level of customer satisfaction is explained by the independent variable Overall Service Quality

Table 4.27 Model Summary for Overall Service Quality

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.772[a]	.597	.594	.684

a.Predictors: (Constant), Overall Service Quality

Source: Researcher's survey data (2018).

On the coefficient table below we find the beta value which measures how strongly each independent variable influences the dependent variable. Thus a unit increase in Overall Service Quality increases customer satisfaction by 0.772 other things being constant. Therefore the more the AALRT service invests on enhancing its overall service quality the more the customer is satisfied.

Table 4.28 Model Coefficients for Overall Service Quality

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.391	.185		2.106	.037
	Overall Service Quality	.873	.055	.772	15.765	.000

a. Dependent Variable: Overall Customer Satisfaction

Source: Researcher's survey data (2018).

4.8 The Research Hypothesis Analysis

Based on the result of each table found under multiple linear regression analysis and Overall Multiple Regression Analysis conclusion can be made whether the independent variables are significant or not on passengers satisfaction of Addis Ababa Light Rail Transit service. The ANOVA test is noticed that F value of 25.747 is significant at 0.000

levels. Therefore, from the result, it can be concluded that with 68.8 % of the variance (R-Square) in independent variables tangibility with sig. 0.383 is insignificant; reliability with sig. 0.034 is significant, responsiveness with sig. 0.014 is significant; assurance with sig. 0.216 is insignificant; empathy with sig. 0.245 is insignificant and Overall service quality with sig. 0.000 is significant on dependent variable of satisfaction level of passenger and the model adopted appropriately measure the construct. Generally, tangibility with sig. 0.383 is statistically insignificant to dependent variable (passenger satisfaction); reliability with sig. 0.034 is significant to dependent variable (passenger satisfaction); responsiveness with sig. 0.014 is significant to dependent variable (passenger satisfaction); assurance with sig. 0.216 is insignificant to dependent variable (passenger satisfaction); empathy with sig. 0.245 is insignificant to dependent variable of satisfaction level of passengers and Overall service quality with Sig. 0.000 is significant on dependent variable of satisfaction level of passenger.

Summary of Research Hypothesis

The hypothesis designed for this study was based on the following assumptions:

•H1: There is a positive and significant relationship between tangibility and passenger satisfaction in Addis Ababa Light Rail Transit Service.

•H2: There is a positive and significant relationship between responsiveness and passenger satisfaction in Addis Ababa Light Rail Transit Service.

•H3: There is a positive and significant relationship between reliability and passenger satisfaction in Addis Ababa Light Rail Transit Service.

•H4: There is a positive and significant relationship between empathy and passenger satisfaction in Addis Ababa Light Rail Transit Service.

•H5: There is a positive and significant relationship between assurance and passenger satisfaction in Addis Ababa Light Rail Transit Service.

•H6: There is a positive and significant relationship between Overall service quality and passenger satisfaction in Addis Ababa Light Rail Transit Service.

Accordingly, the result was summarized on the fowling table:

Table 4.29 Summary of Research Hypothesis

Hypothesis	Independent Variable	Dependent Variable	Sig.	Significant or insignificant	H accepted or rejected
H1:There is a positive and significant relationship between tangibility and passenger satisfaction in Addis Ababa Light Rail Transit Service	Tangible	Passenger satisfaction	0.383	Insignificant	Accepted
H2: There is a positive and significant relationship between responsiveness and passenger satisfaction in Addis Ababa Light Rail Transit Service.	Responsiveness	Passenger satisfaction	0.014	Significant	Accepted
H3: There is a positive and significant relationship between reliability and passenger satisfaction in Addis Ababa Light Rail Transit Service.	Reliability	Passenger satisfaction	0.034	Significant	Accepted
H4:There is a positive and significant relationship between empathy and passenger satisfaction in Addis Ababa Light Rail Transit Service.	Empathy	Passenger satisfaction	0.245	Insignificant	Accepted
H5:There is a positive and significant relationship between assurance and passenger satisfaction in Addis Ababa Light Rail Transit Service.	Assurance	Passenger satisfaction	0.216	Insignificant	Accepted
H6:There is a positive and significant relationship between Overall service quality and passenger satisfaction in Addis Ababa Light Rail Transit Service.	Overall Service Quality	Passenger satisfaction	0.000	Significant	Accepted

Source: Researcher's survey data (2018)

4.9 Overall Multiple Regression Analysis

As it can be seen from table 4.29 and 4.30 there is a positive and statistically significant relationship between the independent variables (responsiveness, reliability and Overall service quality) and the dependent variable (Passenger Satisfaction) and also there is a positive and statistically insignificant relationship between the independent variables (tangibility, assurance and empathy) and the dependent variable (Passenger satisfaction). Thus 68.8 % (R^2 =.688) variation on customer satisfaction is explained by the independent variables.

Table4.30 Model Summary for Service Quality Dimensions

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.829[a]	.688	.661	.622	.688	25.747	26	304	.000

a. Predictors: (Constant), Tangibility, Reliability, Responsiveness, Assurance, Empathy and
Overall Service Quality

Table 4.31 ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	258.907	26	9.958	25.747	.000[b]
	Residual	117.577	304	.387		
	Total	376.483	330			

a. Dependent Variable: Overall Customer Satisfaction

b. Predictors: (Constant), Tangibility, Reliability, Responsiveness, Assurance, Empathy and Overall Service Quality.

Table 4.31, the ANOVA test, it is noticed that F value of 25.747 is significant at 0.000 level. Therefore, from the result, it can be concluded that with 68.8 % of the variance (R-Square) in customer satisfaction is significant and the model appropriately measures the

construct. The remaining 31.2% are other extraneous variables that can affect customer satisfaction.

The Impact of Service Quality Dimensions on Customer Satisfaction

Before interpreting the beta coefficient it is important to evaluate the model in terms of the issue of multicoliniarit. Multicollinearity refers to a situation in which there is an exact (or nearly exact) linear relation among two or more of the input variables, (Hawking, 1983) cited by (Ranjit, 2012).

The issue has been addressed by the outcome of both the variance inflation factor (VIF) and the tolerance level. If the tolerance values is less than 0.2 may merit further investigation where as if the VIF value is greater than 10 may merit further investigation. As it can be seen from the table these requirements are not invalidated in my result and there is no issue of multicolinearity.

The impact of, tangibility, reliability, responsiveness, assurance and empathy on customer satisfaction with AALRT service are 0.150, 0.152, 0.166, 0.168 and 0.138, respectively.

Based on the below table by examining the beta weight of data analysis result, the finding shown that Assurance followed by Responsiveness, Reliability, Tangible and Empathy were making relatively larger contribution to the prediction model. In general customer satisfaction is primarily predicted by higher level of assurance, responsiveness, reliability, tangible and empathy in AALRT service. From this, AALRT service should give due emphasis on those dimensions which have a higher statistical Beta value.

Table 4.32 Multiple Regression result of service quality dimension and overall customer satisfaction.

Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
(Constant)	1.104	.186		5.425	.000		
Tangible	.140	.048	.150	2.939	.383	.806	1.252
Reliability	.139.	.053	.152	2.618	.034	.613	1.648
Responsiveness	.142	.048	.166	2.927	.014	.556	1.825
Assurance	.152	.054	.168	2.869	.216	.603	1.671
Empathy	.119	.050	.138	2.479	.245	.633	1.595
Overall Service Quality	.871	.040	.766	21.592	.000	1.000	1.000

R= .829[a], R^2 = .688 F= 25.747

Dependent Variable: Overall Customer satisfaction

*Significance at 0.001 levels

The coefficient table for service quality dimensions indicates the beta values of the independent variables. From this the regression equation is derived as:

Regression Equation

Y = a + bX1 + bX2 + bX3 + bX4…

CS = 1.104+ 0.150TAN + 0.152REL + 0.166RES + 0.138EMP + 0.168ASS +0.766OASQ

Where, CS = Customer Satisfaction

TAN = Tangibility

REL = Reliability

RES = Responsiveness

EMP = Empathy

ASS = Assurance

OASQ= Overall Service Quality

Based on literature review service quality in general consists of five distinct dimensions: tangibles (Physical facilities, equipment, and appearance of personnel), reliability (ability to perform the promised service dependably and accurately), responsiveness (willingness to help customer and provide prompt service), assurance (knowledge and courtesy of employees and their ability to inspire trust and confidence), and empathy (caring, individualized attention the firm provide its customer) Sureshchandar et al., (2002). The result shows that the absence of these mentioned service quality components has its own negative impacts on customers' satisfaction on public transport sector.

CHAPTER FIVE

SUMMERY OF FINDINGS, CONCLUSION AND RECOMMENDATION

5.1 Introduction

The objective of this thesis was to examine the influence of service quality on customer satisfaction in the case of Addis Ababa Light Rail Transit service. A total of 384 questionnaires were distributed to passengers of the two routes (lines) of AALRT service. The work took a time of two weeks from April1 10, 2018 to 25,2018. Out of the distributed questionnaires 331 were collected and a response rate of 86.19 % is achieved. As a result, the total response rate is sufficient for the ongoing analysis.

5.2 Summary of Findings

To summarize the findings of the study:

The data can be summarized as most of the respondents are male (n=223, 67.4 %) as compare to female respondents (n=108 32.6 %).The other demographics characteristics of respondents indicate that most of the respondents are within the age group of 20-30 (n=149, 45.0 %) and also most of the respondents are degree holder (n=142, 42.9 %). Travelling habits of the respondent indicates that most of the respondent is familiar with AALRT Service (n=284, 85.8%) travelled more than five times.

The study used Cronbach's alpha on the independent variables to determine the reliability of the instrument used. George and Mallery (2003) has suggested 0.70 as the acceptable level for reliability measure. There exists a high level of internal consistency among the 25 items of AALRT Service Quality constructs. While measured using Cronbach's alpha a 0.775 result was obtained which indicates the existence of high reliability among items of AALRT Service Quality and this implies that a better Service Quality can be provided by AALRT service, fulfilling all dimensions concurrently.

Descriptive statistics were used to illustrate the main features of a data set in quantitative terms. The passengers were not satisfied by the service quality of AALRT service. The result showed that the overall mean score of perception (3.06) is lower than expectation (4.02) in all dimensions, yielding a negative SERVQUAL gap. Hence, passengers (customers) do not meet perception and expectation service. When it is separated to five dimensions of service quality, reliability (-1.01), has the greatest difference between average expectation and average perception (E >P) followed by responsiveness (-0.98), empathy (-0.98) both having scored the same value, assurance (-0.95) and Tangibility (-0.86).

From the mean result of all dimensions we can say that passengers of AALRT service are neither satisfied nor dissatisfied with the service provider. Accordingly when we look at the overall regression result 68.8% of variation in customer satisfaction is explained by the service quality dimensions which imply that 31.2% of variation in customer satisfaction is explained by other variables.

The result of frequency distribution of overall customer satisfaction, AALRT service quality is somewhat neither satisfactory nor dissatisfactory, since 8.8 % of the respondents were strongly dissatisfied, 13.6 % of the respondents were dissatisfied and 38.4 % of the respondents were neutral.

The correlation analysis findings indicate that there is a significant and positive relationship between all the six dimensions of AALRT service quality and customer satisfaction. The highest correlation is between Overall Service Quality dimension and customer satisfaction at r =.766, followed by Responsiveness and Customer Satisfaction at r =.511, Reliability and Customer Satisfaction at r = .438 and Assurance and Customer Satisfaction at r =.417 and Empathy and Customer Satisfaction at r=.376.The least correlation is seen between Tangibility and Customer Satisfaction at r=.312. Overall service quality dimensions have moderately relationship with passenger's satisfaction. Overall service quality dimensions have relationship with customer satisfaction means if the overall service quality dimensions increase, the passenger satisfaction also increase.

The linear regression results in table 4.31 showed that the six perceived service quality dimensions explained 68.8 % of the passenger satisfaction toward the AALRT service ($F= 25.747$, $P < 0.01$), there by confirming the fitness of the model. In this research, some of the service quality dimensions such as reliability, responsiveness and overall service quality has significantly contributed in determining passenger satisfaction whereas assurance, tangibility and empathy insignificantly contributed in determining passenger satisfaction. Overall service quality, followed by assurance, responsiveness, reliability, tangibility and empathy are positively influence passengers satisfaction in descending order with beta value of.766, 0.168,0.166, 0.152, 0.150 and 0.138 respectively.

5.3 Conclusion

The customer gap is evaluated on the bases of five service quality dimensions names Tangibility, Reliability, Responsiveness, Assurance and Empathy. One of the focuses of this study was the gap between passengers' expectation and their perception of the AALRT service. The result showed that the overall mean score of perception (**3.06**) is lower than expectation (**4.02**) in all dimensions, yielding a negative SERVQUAL gap. Hence passengers do not meet perception and expectation service. From five service quality dimensions finding of the study show that the difference between expectation and perception is highest and the first negative gap is reliability followed by the second responsiveness and empathy with the same negative gap values.

Also this study is conducted to find out the level of passengers or customer's satisfaction towards the service quality dimensions of the SERVQUAL, in Addis Ababa Light Rail Transit Service. The satisfaction level result showed that 8.8 % are strongly dissatisfied, 13.6 % dissatisfied, whereas 38.4 % of them were indifferent about the service quality while, 29.6 % of them were satisfied.

Finally the finding has shown the service quality dimension that is most important for customers to satisfy their needs in Addis Ababa Light Rail Transit Service. Based on the beta weight of data analysis result, the impact of Empathy, Tangible, Reliability, Responsiveness, Assurance and Overall Service Quality on passenger's satisfaction with AALRT service are 0.138, 0.150, 0.152, 0.166, 0.168 and 0.766 respectively in

ascending. As a result Overall Service Quality has dominant effects on passenger satisfaction and Empathy has least influence towards AALRT service users

5.4 Recommendation

Based on the result of the analysis the following recommendation is given which help the AALRT Service in service delivery system in order to narrow the gap might exist between customer perception and expectation and so as to increase customer satisfaction and delight them.

Reliability: passengers were not satisfied with the quality of service in AALRT service, both for reliable and sincere. A suggestion for futher improvement is that faster service in terms of train arrival at the destination on time, having interest in problem solving, and keeping their promise. And if there are problems during working hours, they should be solved quickly in order to avoid delays.

Responsiveness: passengers were not satisfied with service responsiveness of AALRT service. The service provider should first pay attention to this dimension because it relates directly to passengers. The service provider employees should not be too busy to respond to passengers, staff communication with passengers should be clear and helpful and staff should have willing to help passenger. Also the head of the corporation may use the strategy of "putting the right man in the right job" in the recruitment process.

Empathy: customers were not satisfied with the quality of AALRT services. It is important that a service provider knows what the needs of their customers are, it should have their passenger's best interest at heart and should have employees who deal with passengers in a caring fashion.

Concerning to the satisfaction level of AALRT service, the overall levels of AALRT service is performing not so bad but still it has lots of things to improve on the strongly dissatisfied, the dissatisfied and the indifferent about the service quality passengers. Since, they are neither satisfied nor dissatisfied about the current levels of service quality. As the service quality dimensions represent 68.8 % of the variation in passenger's satisfaction the service provider should work on all the service quality dimensions to

improve and maintain its passenger satisfaction. Accordingly AALRT corporate should be customer centric and management's focus area should emanate from the customer's need.

The independent variables, Assurance, Responsiveness, Reliability, Tangibility and Empathy posses the highest effect on customer satisfaction. Based on this results, the researcher recommend that AALRT should focus on Assurance, Responsiveness, Reliability, Tangibility and Empathy considering the impact level of each dimensions to improve and maintain its passenger satisfaction.

5.5 Recommendation for Future Research

This study took a look at AALRT service generally. It would further be interesting to conduct more focused research in different types of transportation services, such as taxes in Addis Ababa and out of Addis Ababa and long route public buses etc. My study adopted Parasuraman's SERVQUAL model to analyze the influence of service quality on customer satisfaction for transportation industry. It would be further interesting to conduct research regarding this model in different Ethiopian industries. In addition, it would be further interesting to conduct research about how passengers compare transportation in each five factors of SERVQUAL model. Furthermore, as the study uses a quantitative research method, it becomes bases for future researcher to see the implication of the result in qualitative or using both methodologies.

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Appendix I

Addis Ababa University

School of Commerce

Questionnaire to customers

Dear respondent,

This questionnaire is developed by post graduate student of the Addis Ababa University School of Commerce in order to analyze the influence of service quality on customer satisfaction in Addis Ababa Light Rail Transit. The data will be used only for academic purpose your response is not forwarded to other 3rd party and it is kept confidential, please answer each questionnaire with no fear of consequence. Thank you in advance for your active participation and your cooperation. No need of writing your name.

Part I: Direction: Please put a check mark (√) on the appropriate box.

1. Gender Male ☐ Female ☐

2. Age Below 20 yrs ☐ 20 – 30 yrs ☐

30-40 yrs ☐ 40-50 ☐ Over 50 yrs ☐

3. Educational level High school ☐ Certificate ☐ Diploma ☐

Degree ☐ Masters ☐ Above ☐

4. Frequency in travelling with Addis Ababa Light Rail Transit Company

First time ☐ 2 times ☐ 3 times ☐

4 times ☐ 5 times ☐ more than 5 times ☐

Part II: SERVQUAL ITEMS

The tables below show a list of statements related to your experience as a customer of Addis Ababa Light Rail Transit Company please indicate your expectations and your perceptions of a service provided by Addis Ababa Light Rail Transit Company. I am interested in a number that reflects you're felling regarding the expectations and the perceptions rating on scale of 1 to 5, by making a circle in the box. Questions number 1-25 each statement is ranked as follows:

Strongly Agree (S.A) Agree (A) Neutral (N) Disagree (D) strongly disagree (S.D)

5 4 3 2 1

S.N.	Service quality dimensions	Level of Expectation					Level of Perception				
		S.A	A	N	D	S.D	S.A	A	N	D	S.D
	Tangibles										
1	Service provider should have equipped with modern technology.	5	4	3	2	1	5	4	3	2	1
2	The physical facilities (such as TV, DVD player, etc) of the Service provider should be visually appealing.	5	4	3	2	1	5	4	3	2	1
3	Employees will be well dressed and appear neat.	5	4	3	2	1	5	4	3	2	1
4	The appearance of the physical facilities will be in line with the type of services provided.	5	4	3	2	1	5	4	3	2	1
5	Service provider should have adequate shed for passengers	5	4	3	2	1	5	4	3	2	1
	Reliability										
6	When the Service provider promises to do something by a certain time, it will do so.	5	4	3	2	1	5	4	3	2	1
7	When a customer has a certain problem, Service provider will show a sincere interest in solving it.	5	4	3	2	1	5	4	3	2	1
8	Service provider should be dependable.	5	4	3	2	1	5	4	3	2	1

9	Service provider should provide its services at the time it promise to do so.	5	4	3	2	1	5	4	3	2	1
10	Service provider Train always arrives at the destination on time	5	4	3	2	1	5	4	3	2	1
	Responsiveness										
11	Keeping customers informed about when services will be performed.	5	4	3	2	1	5	4	3	2	1
12	Prompt services to passengers.	5	4	3	2	1	5	4	3	2	1
13	Willing to help passengers.	5	4	3	2	1	5	4	3	2	1
14	Employees will be not too busy to respond to passengers request promptly.	5	4	3	2	1	5	4	3	2	1
15	Communication with staff is clear and helpful	5	4	3	2	1	5	4	3	2	1
	Assurance										
16	The behavior of employees will instills confidence in passengers	5	4	3	2	1	5	4	3	2	1
17	Customers will feel assured that service requests are duly (properly) followed.	5	4	3	2	1	5	4	3	2	1
18	Customers feel safe and secure in their transit actions in the train and at station.	5	4	3	2	1	5	4	3	2	1
19	Employees will have the knowledge to answer passengers' questions.	5	4	3	2	1	5	4	3	2	1
	Empathy										

20	Service provider knows what the needs of their customers are.	5	4	3	2	1	5	4	3	2	1
21	Service provider has their passenger's best interest at heart.	5	4	3	2	1	5	4	3	2	1
22	Getting information about the facilities and services of the train companies is easy	5	4	3	2	1	5	4	3	2	1
23	A Service provider has operating hours convenient to all its customers.	5	4	3	2	1	5	4	3	2	1
24	Employees who deal with passengers in a caring fashion.	5	4	3	2	1	5	4	3	2	1
25	Easy to find and access the ticket	5	4	3	2	1	5	4	3	2	1

Part III. OVERALL SERVICE QUALITY AND CUSTOMER SATISFACTION

Overall, there is a good service quality provided by Addis Ababa Light Rail Transit.

Strongly Satisfied	Satisfied	Neutral	Dissatisfied	Strongly Dissatisfied
5	4	3	2	1

Overall, how satisfied are you with the service provided by Addis Ababa Light Rail Transit.

Strongly Satisfied	Satisfied	Neutral	Dissatisfied	Strongly Dissatisfied
5	4	3	2	1

Thank You for Taking Your Time To Fill This Questionnaire!!!.

Appendix II

አዲስ አበባ ዩኒቨርሲቲ ንግድ ሥራ ት/ቤት

በድህረ ምረቃ ትምህርት ዘርፍ የገበያ ስራ አመራር ትምህርት ክፍል

ለተገልጋዮች (ለደንበኞች) የተዘጋጀ መጠይቅ

ውድ የተከበራችሁ የአዲስ አበባ ቀላል ባቡር አገልግሎት ተጠቃሚዎች፤

ይህ መጠይቅ የተዘጋጀው በአዲስ አባበ ዩኒቨርሲቲ ንግድ ሥራ ት/ቤት ድህረምረቃ ተማሪ ሲሆን አላማውም የአዲስ አበባ ቀላል ባቡር ድረጅት ለደንበኞች የሚሰጠው የአገልግሎት ጥራት በተጓጉች እርካታ ላይ ያለውን ጫና ለማወቅ ታስቦ ነው፡፡ ፡ እባክዎ ይህንን መጠይቅ በትክክል ይሙሉ ምክንያቱም የእርሶ በቀናነት፤ በታማኝነት እና ጊዜዎትን መስዋዕት ማድረግዎ ለእኔ ጥናት መሳካት ከፍተኛ ድርሻ አለው፡፡ የሚሰጡት መረጃ ለትምህርት አገልግሎት የሚውል ሲሆን የእርሶ መልስ ለሌላ ሶስተኛ ወገን የማይሰጥ ነው፡፡ እንዲሁም ከዚህ መጠይቅ የሚገኘው መረጃ በሚስጥራዊነት የሚያዝ ነው፡ ፡ ስም መጥቀስ አያስፈልግም፡ ፡

መመሪያ 1፡ -እባክዎ በተቀመጡት ባዶ ቦታዎች ውስጥ እርስዎን በሚገልጽ ቦታ ላይ መልስዎን በ(√) ምልክት ያስቀምጡ፡ ፡

<u>የግል መረጃ</u>

1. ፆታ ወንድ ☐ ሴት ☐

2. እድሜ 20 ዓመት በታች ☐ 20 – 30 ዓመት ☐

30-40 ዓመት ☐ 40-50 ዓመት ☐ 50 ዓመት በላይ ☐

3. የ ትምህርት ደረጃ ሁለተኛ ደረጃ የተማረ ሰርቴፊኬት ☐ ዲፕሎማ ☐

ድግሪ ☐ 2ኛ ድግሪ /ማስትሬት ድግሪ ☐ በላይ ☐

4. በአዲስ አበባ ቀላል ባቡር የተጠቀሙት የጉዞ መጥን

ለመጀመሪያ ጊዜ ☐ ለሁለተኛ ጊዜ ☐ ለሶስተኛ ጊዜ

☐ ለአራተኛ ጊዜ ☐ ለአምስተኛ ጊዜ ☐ ከአምስት ጊዜ በላይ ☐

ክፍል ሁለት ፡ የ አገ ልግሎት ጥራት መገለጫዎች

በአዲስ አበባ ቀላል ባቡር አገልግሎት ደንበኝነት ባሎት ልምድ ላይ በመመስረት በአዲስ አበባ ቀላል ባቡር ስለሚያገኙት አገልግሎት ስላሎት ቅድመ ግምት እና ያገኙት አገልግሎት በቅደም ተከተል ደረጃ ይስጡ፡ከዚህ በታች የመገለጫዎቹ ዝርዝሮች ቀርበዋል፡፡

ስለ አዲስ አበባ ቀላል ባቡር አገልግሎት ስላሎት ቅድመ ግምት እና ያገኙት አገልግሎት በቁጥር ለማወቅ ፍላጎት ስላለኝ ከ 1-5 ባሉት መመዘኛዎች አስተያየትዎን በሚገልጽ ቁጥር ላይ ያክብቡ፡፡

ከቁጥር 1-25 እያንዳንዱ መገለጫ እንደሚከተለው ደረጃ ተሰጥቶታል፡፡

በጣም እስማማለሁ (በ.እ) እስማማለሁ (እ) በመካከለኛ (በመ) አልስማማም (አል) በጣም አልስማማም

5 4 3 2 1

ተ.ቁ	የአገልግሎት ጥራት ገጽታዎች	የሚጠብቁት አገልግሎት					ያገኙት አገልግሎት				
		በ.እ	እ	በመ	አል	በ.አ	በ.እ	እ	በመ	አ ል	በ.አ
	ተጨባጭ ሁኔታዎች (Tangibles)										
1	አገልግሎት ሰጪው የዘመኑ ቴክኖሎጂ ያፈራቸውን መሳሪያዎች ይኖሩታል	5	4	3	2	1	5	4	3	2	1
2	አገልግሎት ሰጪው ዘንድ ያሉ የሚታዩ መገልገያዎች ለእይታ የሚስቡ ናቸው ለምሳሌ፡- ተሌቪዥን የ“DVD|” ማጫወቻ ወ.ዘ.ተ	5	4	3	2	1	5	4	3	2	1
3	ሰራተኞቹ ንጹሁ ልብስ ለብሰውና ንጹህ ሆነው ይቀርባሉ	5	4	3	2	1	5	4	3	2	1
4	የመገልገያዎቹ አቀራረብ በሚሰጠው አገልግሎት መሰረት ይሆናል	5	4	3	2	1	5	4	3	2	1
5	አገልግሎት ሰጪው ተገልጋዩ ከፀሀይ እና ከዝናብ የሚከለልበት በቂ መጠለያ ይኖረዋል	5	4	3	2	1	5	4	3	2	1

	ታማኝነት (Reliability)										
6	አገልግሎት ሰጪው በአንድ በተወሰነ ጊዜ አንድ ነገር ለማድረግ ቃል ከገባ ቃሉን በተግባር ያውላል	5	4	3	2	1	5	4	3	2	1
7	አንድ ተሳፋሪ ችግር ካጋጠመው አገልግሎት ሰጪው ችግሩን ለመፍታት ቀና ፍላጎት ያለው መሆኑን ያሳያል	5	4	3	2	1	5	4	3	2	1
8	አገልግሎት ሰጪው ሊመኩበት የሚችል ይሆናል	5	4	3	2	1	5	4	3	2	1
9	አገልግሎት ሰጪው በመጀመሪያ ጊዜ ትክክለኛ አገልግሎት ይሰጣል	5	4	3	2	1	5	4	3	2	1
10	አገልግሎት ሰጪው ባቡር ሁልጊዜ መዳረሻው ላይ በሰዓት ይደርሳል	5	4	3	2	1	5	4	3	2	1
	□□□ □□□ **(Responsiveness)**										
11	□□□□□□ □□□ □□□□□□ □□□□□□□ □□ □□□□□ □□□□□□□ □□□□□	5	4	3	2	1	5	4	3	2	1
12	□□□□□ □□□□□□□ □□□□ □□□□□□ □□□□	5	4	3	2	1	5	4	3	2	1
13	□□□□□ □□□□□□□ □□□□□ □□ □□ □□□□□ □□□□	5	4	3	2	1	5	4	3	2	1
14	□□□□□ □□□□□□□□ □□□ □□□□□ □□□□□ □□□ □□ □□□□□□□□	5	4	3	2	1	5	4	3	2	1
15	□□□□□□ □□ □□□□□□ □□□□ □□□ □□ □□□ □□	5	4	3	2	1	5	4	3	2	1
	□□□□ **(Assurance)**										
16	□□□□□□ □□□□ □□□□□ □□□ □□□□ □□□□□□ □□□□□	5	4	3	2	1	5	4	3	2	1
17	□□□□□□ □□□□□□□ □□□□□□□ □□□□□ □□□□□ □□□□ □□□□□□□□□ □□□□ □□□□□ □□□□	5	4	3	2	1	5	4	3	2	1

18	□□□□□ □□□□ □□□□□□□ □□□□ □□□□	5	4	3	2	1	5	4	3	2	1
19	□□□□□ □□□□□□□□ □□□ □□□□□ □□□□ □□□□□□	5	4	3	2	1	5	4	3	2	1
	□□□□ □□□□□□ **(Empathy)**										
20	□□□□□□ □□□ □□□□□□□ □□□ □□□□□□ □□□□	5	4	3	2	1	5	4	3	2	1
21	□□□□□ □□□□□□□□ □□ □□□□□ □□□□	5	4	3	2	1	5	4	3	2	1
22	□□ □□□ □□□□□□ □□□ □□□□ □□□ □□□□	5	4	3	2	1	5	4	3	2	1
23	□□□□□□ □□□ □□□□ □□□□□□ □□ □□□ □□□ □□□ □□□□□	5	4	3	2	1	5	4	3	2	1
24	□□□□□ □□□□□ □□□□ □□□□□□ □□□	5	4	3	2	1	5	4	3	2	1
25	□□□□ □□□ □□□□ □□□ □□□□	5	4	3	2	1	5	4	3	2	1

□□□ □□□ □ □□□□□ □□□□□ □ □□ □□□□ □□□ □□□ □□□□

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1.2 □□□□□□ □□□□□□ □□□ 5 4 3 2 1

□□ □□□□□□□ □□□ □□ □□

1.3 □□□□□□ □□□□□ □□□□□ 5 4 3 2 1

□□□□□□ □□□□□□□□

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Appendix III

Statistical out put

Reliability Overall Service Quality

Cronbach's Alpha	N of Items
.863	2

Reliability test oftangible

Cronbach's Alpha	N of Items
.644	5

Reliability test of reliability

Cronbach's Alpha	N of Items
.811	5

Reliability test of responsiveness

Cronbach's Alpha	N of Items
.838	5

Reliability test of assurance

Cronbach's Alpha	N of Items
.806	4

Reliability test of empathy

Cronbach's Alpha	N of Items
.776	6

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.580[a]	.336	.326	.877	.336	32.887	5	325	.000

Predictors: (Constant), Tangible

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	1.035	.223		4.635	.000		
	Tangible	0.140	.048	.150	2.939	.383	.806	1.252

Dependent Variable: Overall Customer Satisfaction

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.582[a]	.339	.329	.875	.339	33.289	5	325	.000

Predictors: (Constant), Reliability

Coefficients[a]

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
(Constant)	1.117	.175		6.389	.000		
Reliability	.139.	.053	.152	2.618	.034	.613	1.648

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.656[a]	.430	.421	.812	.430	49.065	5	325	.000

Coefficients[a]

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
(Constant)	.986	.149		6.630	.000		
Responsiveness	.142	.0489	.166	2.927	.014	.556	1.825

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.544[a]	.296	.288	.902	.296	34.302	4	326	.000

Predictors: (Constant), Assurance

Coefficients[a]

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
(Constant)	1.372	.167		8.215	.000		
Assurance	.152	.054	.168	2.869	.216	.603	1.671

Dependent Variable: Overall Customer Satisfaction

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.571[a]	.326	.314	.885	.326	26.152	6	324	.000

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	1.009	.186		5.425	.000		
	Empathy	.119	.050	.138	2.479	.245	.633	1.595

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.772[a]	.597	.594	.684

a. Predictors: (Constant), Overall Service Quality
Source: Researcher's survey data (2018).

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.391	.185		2.106	.037
	Overall Service Quality	.873	.055	.772	15.765	.000

b. Dependent Variable: Overall Customer Satisfaction

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.829[a]	.688	.661	.622	.688	25.747	26	304	.000

a. Predictors: (Constant), Tangibility, Reliability, Responsiveness, Assurance, Empathy and Overall Service Quality

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	258.907	26	9.958	25.747	.000[b]
	Residual	117.577	304	.387		
	Total	376.483	330			

a. Dependent Variable: Overall Customer Satisfaction
b. Predictors: (Constant), Tangibility, Reliability, Responsiveness, Assurance, Empathy and Overall Service Quality.