ST. MARY UNIVERSITY
SCHOOL OF GRADUATE STUDIES

SERVICE QUALITY AND PASSENGER SATISFACTION
THE CASE OF LIGHT RAIL TRANSPORT IN ADDIS ABABA

By:

MeskeremTerefe

January 2018

Addis Ababa, Ethiopia

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A thesis Submitted to St. Mary's University, School of Graduate studies in partial fulfillment of the requirements for the award of the degree of Master of Arts in marketing management

January 2018

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_____	_____
Dean, Graduate studies	
_____	_____
Advisor	
_____	_____
External examiner	
_____	_____
Internal Examiner	

Statement of Certification

This is to certify that MeskeremTerefe has carried out her research work on the topic entitled service quality and passengers satisfaction in the case of light rail transport in Addis Ababa. The Thesis is guided under my supervision and is suitable for submission for the award of Master's Degree in Marketing Management.

_____

Advisor: Dr. Workneh Kassa

Date: _____

DECLARATION

I, the undersigned, declare that this thesis is my original work, prepared under the guidance of Dr.Workneh Kassa. All sources of material used for the thesis have been duly acknowledged. I further confirm that the thesis has not been submitted either in part or in full to any other higher learning institutions for the purpose of earning any degree.

MeskeremTerefe   _____

Name   Signature

St. Mary's University, Addis Ababa . . . January, 2018

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Acknowledgments

First and foremost, I would like to express my gratitude to God for his abundant grace that I am able to be what I am today.

My warmest gratitude and appreciation goes to my advisor, Dr.Workneh Kassaa sincere appreciation and special thanks go to the respondents for their kind assistance and support throughout the data collection process of this research.

My greatest thanks go to my family for always being by my side and encouraging me. Last but not least, I wish to give a special thanks to my husband Yonas Demissa for his great help as well as encouragement. I also send my sincere thanks to many other friends who supported and helped me a lot in collecting survey and during my study.

LIST OF ACRONYMS

ERC   Ethiopian Railway Corporation

DGR   Directorate General of Railway

LRT   Light rail transit

SERVQUAL Service quality

SPSS   Statistical Package for Social Sciences

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ABSTRACT

In any business–to-customer (B2C) type of environment, satisfying a customer is the ultimate goal and objective. This is perhaps due to the fact that managers sometimes do not really understand of what actually goes on in a customer's mind. As such, this predicament has provided as a challenging task to most business conglomerates that places strong emphasis on customer satisfaction. The general objective of this study is to determine the relationship between service quality and passengers satisfaction and also to investigate passenger's expectation and perception about ERC service quality. It is also clear from this research that passenger's service has impact on service quality perception and passenger's satisfaction. In this research, the SERVQUAL instrument developed by Parasuraman (1985) has been applied in designing the questionnaire by using five dimensions of service quality: tangibility, reliability, responsiveness, assurance, and empathy. Questionnaires are distributed to 392 passengers and 364 questionnaire returned. The questionnaire aimed to determine the level of passengers' expectation and perception towards the service quality of the LRT. The results revealed that the responsiveness and tangibility dimensions raised the highest level of expectation, whereas the responsiveness, tangibility, and reliability dimensions fulfilled the highest level of perception. The study also investigates the dimensions and their levels of service quality that have significant effect on passenger's satisfaction in LRT. The findings showed that the dimensions of service quality such as tangible, reliability, responsiveness, assurance, and empathy are positively correlated to passenger's satisfaction. Data collected from respondents are analyzed by using qualitative analysis, descriptive, correlation, and regression analysis.

Keywords: SERVQUAL, tangibility, reliability, responsiveness, assurance, empathy and Passenger's satisfaction

CHAPTER-ONE

INTRODUCTION

1.1 Background and Area of the Study

In today's fast changing competitive world, providing a superior service quality through an adequate and a strong focus on customer (Chiara G., 2007), is one of the key factors enabling firms to gain a lasting competitive advantage in winning the market. For this, nowadays marketers, according to R. Ladhari (2011), are trying to focus more on a continuous monitoring and evaluation of service quality, involving various innovative offerings and service developments, which have a direct influence on customer's service experiences. Because, for instance, better service quality increases perceived service value and satisfaction improves the service provider's customer retention and financial performance and also enhances a firm's corporate image (Nguyen and Leblanc, 1998).

According to Piercy (1995) in the service industry keeping current customers and developing relationships with new ones is a key business strategy. If customers are satisfied with a product, service or brand, they will be more likely to continue to use it and to tell others of their favorable experience with it. If they are dissatisfied however, they will be more likely to switch brands and complain to management and tell everyone else they meet. This indicates that, satisfaction of customers also happens to be the cheapest means of promotion and advertisement.

Thus, service quality is defined as customer perception of how well a service meets or exceeds their expectations (Czepiel, 1990). Service quality can be measured in terms of customer perception, customer expectation and customer satisfaction (Sachdev and Verma, 2004). Ekinci (2003) indicates that the evaluation of service quality leads to customer satisfaction. Rust and Oliver (1994) define satisfaction as the "customer fulfillment response," which is an evaluation as well as an emotion-based response to a service.

Therefore, transport plays great roles for satisfaction of society and economic growth of nations. Transportation in general, among other modes and road transport in particular is the most widely used transport sector all over the world. It also provides a base for local, national, regional and international flow of goods and passengers (Asnake 2006).

In Addis Ababa, which is the capital city of Ethiopia and the seat for African Union transport service is being delivered to the public through publicly owned Anbessa City Bus, public bus and different privately owned vehicles, such as small buses and taxis.

In addition to the above transportation means light rail also play a significant role in Addis Ababa because it has unique characteristics it has large capacity, high speed, low cost and high safety level. However, as per the researcher's observation this effort is not mostly met, So this research tried to address the service quality and passenger's satisfaction in the light rail transport in Addis Ababa and it will determine which dimension of the service quality has a significant effect on the passengers level of satisfaction.

Ethiopia is one of the first African countries to build and owe railway infrastructure in the beginning of early 20th century with the initiative of Emperor Menelik II and with the assistance of France. The rail line was 784 km in length stretching from the port of Djibouti to the capital city of Ethiopia. (http://www.train-francoethiopien.com/histoire_en.php).The previous railway line which ran from the port of Djibouti to the capital city Addis Ababa served well but it was not able to cope with the growing demand, due to road transport development and its inadequacy to serve its purpose it lost its traffic and halts the service.

Railway as one of the transportation modes in Addis Ababa is regulated and authorized by Ministry of Transportation Government of Ethiopia (ERC).It was established in 2015 by regulation No. 141/2007. The ministry delegates the task to Directorate General of Railway (DGR). DGR responsibilities consist of area related to railway such as infrastructure, vehicle, traffic, operational and maintenance standard, and regulation. DGR tasks consist of relationship to the operator that are making agreement, negotiation, set regulation and standard, performance evaluation and maintaining relationship between government, people, and operator. There are three Directorates inside the DGR; Directorate of Railway Traffic and Transport handles all related subject with traffic, network operational, timetable, and services, Directorate of Railway Safety and Vehicle handles all related subject with railway safety and vehicle performance. The Directorates have direct coordination with the operator as the railway service provider. The vision of LRT is to establish mass transportation for passengers which is reliable, secure, safe, trustworthy and affordable. The missions are to improve railway as public transportation, backbone of light rail transport, and as pioneer in creating integrated transportation.

Now after over 100 years of the Ethio-Djibouti rail line establishment ERC built a 17-kilometre (11 mi) line running from the Addis Ababa to industrial areas in the south of the city construct of the double track electrified light rail transit project in December 2011 through government funding and investment loan. The construction taking three years, by two Chinese companies: namely Shenzhen Metro group and China Railway group Ltd. The first company is responsible for the management while the latter is for the maintenance. (http://www.erc.gov.et/)

The operation began revenue service on September 20, 2015. From North –South and East-West line began operation on November 10, 2015. Each train was planned has a capacity to carry 286 passengers and the Fares cost is 2-6 Ethiopian birr and tickets are bought at orange colored kiosks next to each station. This will enable the light rail transit to provide a transportation service to many passengers per day and per direction. There are Forty one trains that are available for the operation which is stretching from Ayat village to Torhailoch, and passing through Megenagna, Meskel Square, Legehar and Mexico Square. The north-south line, which is 16.9 kilometers (10.5 mi) in length, passes through Menelik II Square, Merkato, Lideta, Legehar, Meskel Square, Gotera and Kality and they are marked with different colors so that passengers can identify them easily. Trains with green and white color provide service from East –West and trains with blue and white color run from North to South direction.

1.2 Statement of the Problem

In the global competitive environment delivering quality service is considered as an essential strategy for success and survival. The fundamental corporate objectives of business organizations are profitability, growth, image and vitality. All these fundamental objectives will be realized only when we recognize and value the importance of customers and providing them quality customer service(kotler, 2000).

Railway is one of public transport mode of land transportation which plays a great role for passengers (customers). Railways have a key position in society and also played an important role in the industrialization and development of the modern world. Railways as mass public transport mode have unique characteristics. It can carry passengers in the amount of mass at a relatively less expensive cost. It is also energy efficient, land saving, high safety level, comfortable, adaptive to technology development, and free from traffic jam. Those characteristic makes railway primary public transportation.

The transport sector in Ethiopia has undergone enormous growth in recent years. According to ERC the numbers of passenger's whom use light rail transport are increasing rapidly. However, the rapid increase of passengers challenged the overall quality of the service such as: waiting time for ticket, punctuality (on time departure & on time arrival), safety, cleanliness and comfort. The main reason for this is population of Addis Ababa is increasing significantly and the size of the city is expanding horizontally. As the number of population increases the number of passengers using light rail transport also increases. To accommodate the increasing numbers of passengers, transport service is expected to expand. However, the supply of transport service is not proportional to the demand and a huge gap is observable between the demand and supply as it can be witnessed from the long queues waiting for transportation at every corner of the city.

So far there exists no previous research concerning the service quality and passenger's satisfaction regarding to LRT therefore, this study will has immense value for ERC.

As a result of the day to day observation of above problems the researcher motivated to conduct this study therefore, the intention of this research is to assess the service quality on passenger's satisfaction in the case of LRT in Addis Ababa by using SERVQUAL model.

1.3 Research Question

This study has tried to answer the following research questions.

- What is the level of passenger's satisfaction in the LRT?
- What are the passenger's expectation and the actual service of LRT?
- What are the factors that affect passenger's satisfaction?

1.4 Objective of the Study

This study has general and specific objective which as follows.

1.4.1 General Objectives

The general objective of the study is to evaluate the service quality and passenger's satisfaction in Addis Ababa light rail transport and to find out factors that have significant influences on passenger's satisfaction towards the service.

1.4.2 Specific Objectives

In assuring that the above general objectives can be achieved, there are few specific objectives that need to be accomplished in the case of LRT.

These specific objectives are the following:

- To assess the level of passengers satisfaction about light rail transport.
- To identify the gap between the expectations and actual services received by passengers toward LRT.
- To examine factors that affects the passenger's satisfaction.

1.4   Research Hypothesis

The researcher develops the following hypothesis for the study.

Hypothesis 1

Ha1: Tangibility would have a positive and significant effect on passenger's satisfaction.

Hypothesis 2

Ha2: Reliability would have a positive and significant effect on passenger's satisfaction.

Hypothesis 3

Ha3: Responsiveness would have a positive and significant effect on passenger's satisfaction.

Hypothesis 4

Ha4: Assurance would have a positive and significant effect on passenger's satisfaction.

Hypothesis 5

Ha5: Empathy would have a positive and significant effect on passenger's satisfaction.

1.5 Significance of the Study

➢ There is no works that has been carried out on service quality and passenger's satisfaction in Addis Ababa light rail transport therefore, the study adds up the knowledge base in this area

➢ It identified the strengths and weaknesses of the service delivered by the ERC and its effect on passenger's satisfaction

➢ It may give them an idea of where they are currently in terms of their service quality and what they should do in the future.

➢ The finding of this research can be used as a reference material for further investigation with more sample size, time and resource assigned. Hopefully, it can also be helpful for initiate and encourage other researchers to conduct further study in the subject.

1.6 Scope of the study/ Delimitation

The research is concern on service quality and passenger's satisfaction in the case of light rail transport in Addis Ababa.

Due to the large number of passenger's (respondent), time and other constraints this study is geographically limited from Ayat village to Stadium therefore, the results of this study could not be generalized and further research needs to be conducted in order to expand the result of the other areas. In addition to this the researcher only uses the five variables of SEVERQUAL model which are tangibility, reliability, responsiveness, assurance and empathy.

1.7 Organization of the Research

This study is organized into five chapters. The five chapters are comprised of; Introduction, Review of Related Literature, Research Design & Methodology, Results and Discussion and, Summary, conclusions & recommendations.

The first chapters provide a general introduction of the study including background of the study, background of organization, statement of the problem, research question, hypothesis of the study, objectives of the study, significance of the study and scope of the study.

Chapter two covers the literature relevant to the study. It includes Theoretical review, Empirical review & conceptual frame work.

Chapter three elaborates the research design & methodology. It includes Introduction, research approach, Research design/type, Sampling design, Sources of data, Data collection methodology, Data Collection instrument, Data analysis methods, Validity &reliability and Research ethics is used in the study.

Chapters four summarize the findings of the study and discuss them on detail. Finally chapter five presented the findings of the research summaries, conclusion and recommendations. Appendices and references are also in closed at the end.

CHAPTER TWO

LITERATURE REVIEW

This chapter talks about the detailed theoretical concepts that the researchers believe they provide a good back ground to carry out the research work. Concepts like service, customer satisfaction, and service quality are the main focuses.

2.1 Theoretical Literature

2.1.1 Definition of terms

Variables conceptual definitions are presented as follows; Tangibility: physical facilities, equipment, and appearance of personnel. Reliability: ability to perform the promised service dependably and accurately. Responsiveness: willingness to help customers and provide prompt service. Assurance: knowledge and courtesy of employees and their ability to inspire trust & confidence. Empathy: caring individualized attention the firm provides to its Customers (Zeithaml et al, 1990).

Customer satisfaction: Is the consumer's response to the evaluation of the perceived discrepancy between prior expectations (or some other norm of performance) and the actual performance of the product/service as perceived after its consumption (Tse and Wilton, 1988).

Service: Is a process consisting of a series of more or less intangible activities that normally, but not necessarily always, take place in interactions between the customer and service employees and/orsystems of the service provider, which are provided as solutions to customer problems (Gronroos, 2000).

Service Quality: It is any intangible act or performance that one party offers to another that does not result in the ownership of anything (Kotler& Keller, 2009).

SERVQUAL: is an instrument for measuring service quality, in terms of the discrepancy between customers' expectation regarding service offered and the perception of the service received (Oliver, 1980).

2.1.2 Definition of Service

Service is any intangible act or performance that one party offers to another that does not result in the ownership of anything (Kotler & Keller, 2009). He affirms the view that "services are intangible, inseparable, variable and perishable and also added that services normally require more quality control, supplier credibility, and adaptability". According to Gronroos (2000) services are "activities or series of activities of more or less intangible nature that normally, but not necessarily, take place in interactions between customer and service employees and/or physical resources or goods and/or systems of the service provider, which are provided as solutions to customer problems".

"A service is an activity which has some element of intangibility associated with it which involves some interaction with customers or with property in their possession, and does not result in a transfer of ownership. A change in condition may occur and production of the service may or may not be closely associated with a physical product." In simple terms "Services are deeds, processes, and performances" (Zeithaml and Bitner, 2003).

2.1.3 Characteristics of Services

According to Bitner et al. (1993) service has four characteristics: intangibility, inseparability, heterogeneity and perish ability.

A. Intangibility of Services

It refers to the fact that services cannot be seen, tasted, felt, heard, or smelled before they are bought. For this reason, customers try to evaluate the quality of a service by looking at tangible components such as the place, people, price, equipment, and communications apparent (Armstrong & Kotler, 2011).

B. Inseparability of Services

Service isgenerally produced and consumed simultaneously usually the provider and consumers are present when the service is being provided, so both are part of the service process. This means that the employee providing theservice becomes part of the service, in most cases, the customer is also present at

the time of providing the service. Therefore, the provider-customer interaction becomes important in determining the outcome of the service (Armstrong & Kotler, 2011).

C. Perish ability of Services

The notion of perish ability reflects services cannot be stored and carried forward to a future time period and suggest that services are time dependent and time important which make them very perishable. The issue of perish ability is primarily the concern of the service producer and that the consumer only becomes aware of the issue when there is insufficient supply and they have to wait for the service (Bitner et al.,1993).

D. Heterogeneity of Services

It refers to the fact that the quality of services depends on who provides them as well as when, where, and how they are provided (Armstrong & Kotler, 2011). This means that the quality of a service provided is not just determined by the company but by the service provider too. Therefore, understanding the role of service providers is crucial to understand perceptions of service quality.

Intangibility

Service cannot seen, tested felt or smelled before purchase

Inseparability

Service cannot separated from their provider

Service

Heterogeneity

Quality of services depends on who provides them and where, when and how

Perish ability

Service cannot be stored for later sale or use
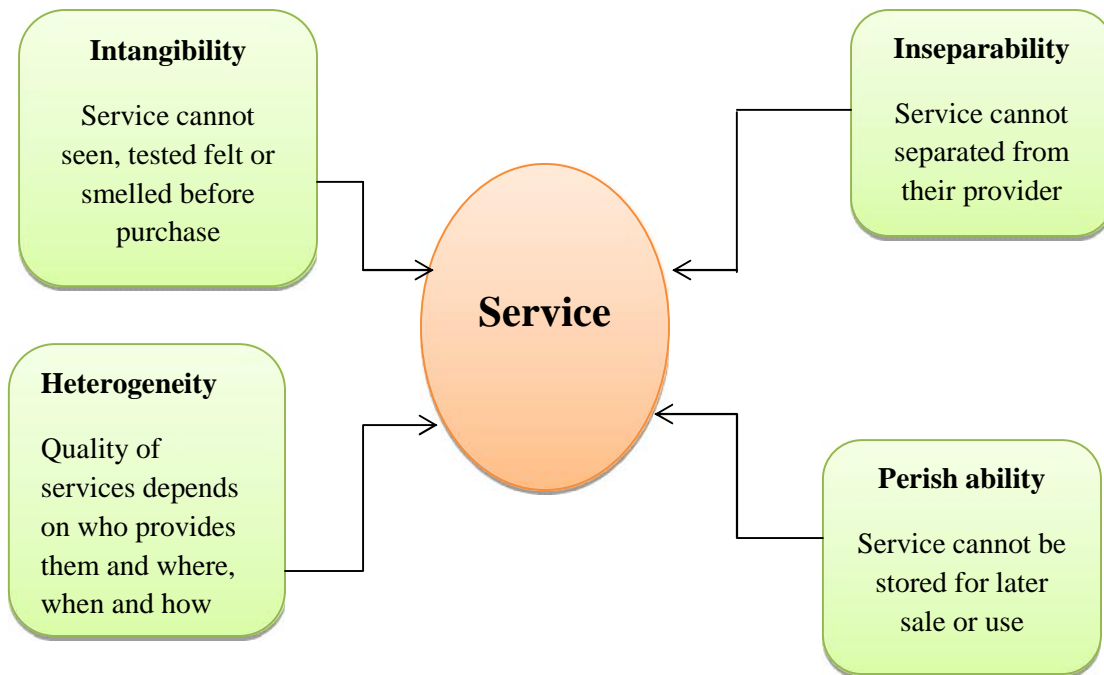
Figure 1: The service characteristics

Source: (Kotler and Armstrong, 2006:258).

2.1.4 Service Quality

A service is an activity or series of activities of more or less intangible nature. It normally, but not necessarily, takes place in interactions between customers and service employees and/or physical resources or goods and/or systems of the service provider (Shahin, 2006). For services, the assessment of quality is made during the service delivery process.

Service quality has become the major strategic value-adding driver for the firm in achieving sustainable competitive advantage (Devlin, Gwynne and Ennew, 2002). It is generally accepted that service quality is more difficult for the customer to conceptualize for measurement and evaluation than goods quality. According to Boothe(as cited in Pitt etal,1991) most researchers now concur that service quality involves a comparison by the customer of service expectations with actual performance perceptions, and that only the customer is able to make that specific service definition. It is thus deduced that service quality is a measure of how well the service level delivered matches customer expectations. Expectation has been defined as something one would expect to happen or get while perception has been defined as seeing or noticing what has happened. It is therefore deduced that the difference between the two forms the conceptual basis and definition for service quality. Pitt et.al (1991) further emphasizes the necessity for this service quality delivery to conform to expectations on a consistent basis.

According to the research of Parasuraman et al. (1988) clearly supports the conception that service quality, as perceived by consumers, stems from a comparison of what they feel service firms should offer with their perceptions of the actual performance of firms providing the service. Based on this notion, Parasuraman et al. (1988) claim that perceived service quality is the degree and direction of discrepancy between consumers" perceptions and expectations. The same authors caution about the varying interpretations of the definition of expectations as used by the service quality literature and the consumer satisfaction literature. Service quality expectations are based on the notion of what a consumer feels a service provider should offer (desires or wants) and can be construed as predictions rather than what they would offer (satisfaction association). According to Van Pham and Simpson (2006) various factors are thought to influence consumer expectations. From their related studies, they claim that there are conflicting findings to determine the role that frequency of use plays in forming expectations but acknowledge that this aspect requires further investigation.

Providing excellent service quality is widely recognized as a critical business requirement (Voss et al, 2004). It is 'not just a corporate offering, but a competitive weapon' (Rosen et al, 2003) which is essential to corporate profitability and survival (Newman & Cowling, 1996). However, service quality, particularly within the Services sector, remains a complex concept and there is little consensus as to the drivers for effective delivery (Voss etal, 2004).

2.1.5 Service Quality Models

If we want to manage something, it should be measured first. Without measurement, managers cannot be sure of whether service quality gaps exist or not and of course, measurement is needed to determine whether goals for improvement are being met after changes have been implemented (Christopher et al., 1992).

Measuring service quality has been one of the most persistent topics in management literature. This is because the need to develop valid instruments for the systematic evaluation of firms" performance from the customer point of view; and the association between perceived service quality and other key organizational outcomes, which has led to the development of models for measuring service quality(Cronin et al., 2010).

2.1.6 SERVQUAL Model

The SERVQUAL model was first introduced by Parasuraman and colleagues in1985 in the United States. Since its inception SERVQUAL has become a popular method for measuring service quality (Bojanic and Rosen ,1993).Service quality is defined as the result of the comparison that customers make between their expectations about services and their perceptions of the manner in which service has been performed (Gronroos, 1990).

It involves measuring both customer perceptions and expectations of service along key service quality dimensions. Examining differences or gaps between the desired level of services and that actually delivered reveals where improvements in the service mix are required. In the original paper Parasuraman et al. (1985) identify the 10 core components of service quality as reliability (consistent performance and dependability),responsiveness (willingness /readiness to serve), competence (possessing knowledge and skills),access(approachability and ease of contact), curtsy (politeness, consideration and friendliness of staff), communication (updating and listing to customers), credibility (trustworthy and reputable,

with customer interest and listing to customers), security(freedom from danger and risk), customer knowledge (understanding needs and personalized attention), as well as tangibles (facilities and physical features). In subsequent research Parasuraman et al. (1988), the service dimensions are collapsed into five categories tangibles, reliability, responsiveness, assurance, and empathy. These five attributes are described as follows:-

Tangiblity:-refer to the appearance of physical facilities, personnel, and communication materials. All of these provide physical representations or images of the service that customers, particularly new customers, will use to evaluate quality.

Reliability:- means ability to perform the promised service dependency and accurately. Reliability is a significant factor of product quality in addition to good personal service, staff attitude, knowledge and skills (Walker, 1990). "It is found that service reliability is the service "core" to most customers and managers should use every opportunity to build a "do-it-right-first" attitude" (Berry et al,1990).

Responsiveness:-Zeithaml et al. (1990) defined responsiveness as the interests shown in providing prompt service to customers when required. Further, it is researched that willingness or readiness of employees to provide the required customer service without any inconvenience at any time will strongly influence the level of customer satisfaction (Parasuraman et al., 1988). This dimension emphasizes attentiveness and promptness in dealing with customer requests, questions, complaints, and problems. To truly distinguish themselves on responsiveness, companies need well-staffed customer service departments as well as responsive font-line people in all contact positions.

Assurance:- is defined as employees' knowledge and courtesy and the ability of the firm and its employees to inspire trust and confidence. This dimension is likely to be particularly important for services that the customer perceives as involving high risk and/or about which they feel uncertain about their ability to evaluate outcomes. Trust and confidence may be embodied in the person who links the customer to the company. In such service contexts the company seeks to build trust and loyalty between key contact people and individual customers.

Empathy: means the ability to take care of customer's attention individually in providing service to customers (Iwaarden et al., 2003). Further, it is researched that understanding customer expectations better than competitors in providing the required customer service at any time without any inconvenience will strongly influence the level of customer satisfaction (Parasuraman et al., 1988).

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Convenient working hours, individualized attention, better understanding of customer's specific needs, enhanced communication between management and customers will have a positive outcome on customer satisfaction.

2.1.7 The Gap Model

A gap is created when the perceptions of the delivered service is not as per the expectations of the customer. This gap is addressed by identifying and implementing strategies that affect perceptions, or expectations, or both. Zeithaml(1990). Parasuraman (1988) stated that SERVQUAL had been designed to be applicable across a broad spectrum of services and the format could be adapted to fit specific needs and that it would be most valuable when used to track service quality trends periodically. They proposed that the SERVQUAL model could be extended to measure gaps in quality and could therefore, be used as a diagnostic tool to enable management to identify service quality shortfalls. The gap score is calculated by the perception statements being deducted from the expectation statements. If any gap scores turn out to be positive then this implies that expectations are actually being exceeded. This allows service managers to review whether they need to re-deploy resources to areas of underperformance. The SERVQUAL instrument ascertains the level of service quality based on the five key dimensions and also identifies where gaps in service exist and to what extent.

This gaps are **GAP1**:(the positioning gap) managers' perceptions of consumers' expectations and the relative importance consumers attach to the quality dimensions**(GAP 2)**(the specification gap) the difference between what management believes the consumer wants and what the consumers expect the business to provide,**GAP 3** (Not delivering to service standards) This refers to the the difference between the service provided by the employee of the business and the specifications set by management, **GAP 4**(the communication gap) the promises communicated by the business to the consumer do not match the consumers' expectations of those external promises, **Gap 5** (the perception gap): difference between consumer's perception and expectation of the services.

Fig 2: Gap Analysis Model

Word of mouth communication	Personal needs	Past experience

Consumer

Expected service

Gap 5

Perceived service

Marketer

Service delivery

Gap 4

External communication to consumer

Gap 1   **Gap 3**

Translation of perception in to service quality specification

Gap 2

Management perception of the consumer expectation
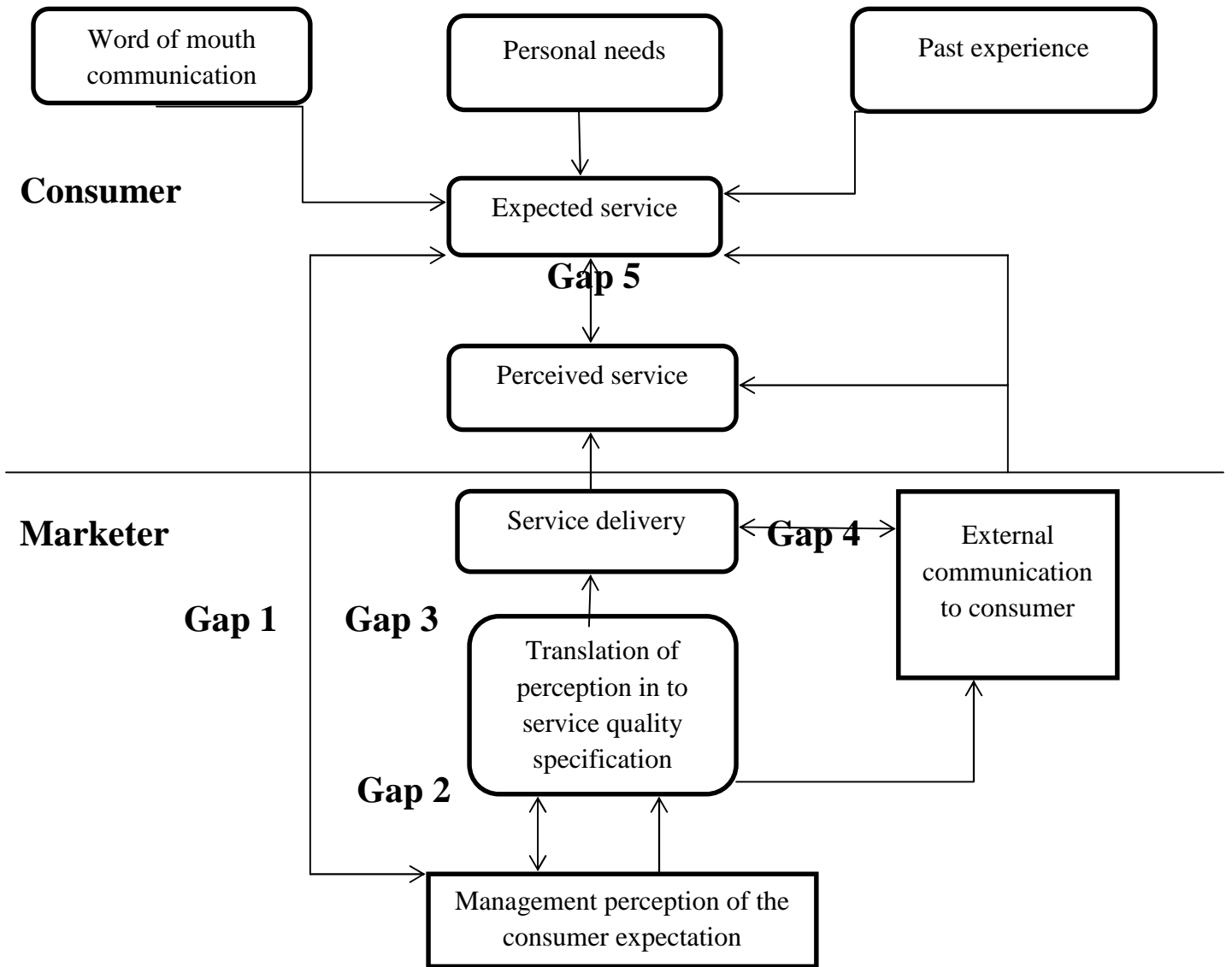
Source: Parasuraman et.al (1985)

2.2 Customer Satisfaction

Customer satisfaction is an ambiguous, abstract and confusing concept. Customer satisfaction refers to the extent to which customers are happy and delighted with the products and services provided by a business. In other words satisfaction is the state of mind felt by a person who experienced a performance of product or service that has fulfilled his or her expectations. Satisfaction is thus a combination of relative level of expectations and perceived performance. Customer Satisfaction with a purchase depends on the product and service real performance relative to customer expectations. A Customer might experience various degrees of satisfaction, if product's/service actual performance short of expectations, the customer is dissatisfied. If performance of product and services matches expectations the customer is satisfied (Kotler and Armstrong, 2002).

Customer satisfaction is post consumption evaluative judgments concerning a specific product or service. It is the result of an evaluative process that contrasts pre-purchase expectations with perceptions of performance during and after the consumption experience (Berry and Parasuraman, 1991).

Oliver (1981) defines customer satisfaction as a customer's emotional response to the use of a product or service. Anton (1996) offers more elaboration: "customer satisfaction as a state of mind in which the customer's needs, wants and expectations throughout the product or service life have been met or exceeded, resulting in subsequent repurchase and loyalty".

According to Hung (1977), "…. satisfaction is a kind of stepping away from an experience and evaluating it … One could have a pleasurable experience that caused dissatisfaction because even though it was pleasurable, it wasn't as pleasurable as it was supposed to be. So satisfaction / dissatisfaction isn't an emotion, it's the evaluation of the emotion".

In this competitive marketing industry, customer satisfaction is considered as the fundamental of success. Satisfying customers is one of the main objectives of every business. Businesses recognize that keeping current customers is more profitable than having to win new ones to replace those lost since it cost the company a lot of money. Management and marketing theorists emphasize the importance of customer satisfaction for a business success (Kennedy and Schneider, 2000).

Good customer satisfaction has an effect on the profitability of nearly every business. For example, when customers receive good service, each will typically tell nine to ten people. However, customers

who receive poor service will typically relate their dissatisfaction to between fifteen and twenty others Naik et al. (2010). Therefore, customer satisfaction is an asset that should be monitored and managed just like any physical asset.

The satisfaction judgment is related to all the experiences made with a certain business concerning its given products, the sales process, and the after- sale service. Whether the customer is satisfied after purchase also depends on the offer's performance in relation to the customer's expectation. Customers form their expectation from past buying experience, friends" and associates" advice, and marketers" and competitors" information and promises (Kotler, 2010).

Higher customer satisfaction leads to greater customer loyalty which in turn leads to higher future revenue. As a result, many market leaders are found to be highly superior-customer-service orientated. They have been rewarded with high revenue and customer retention as well. For that reason, organizations in the same market sector are forced to assess the quality of the services that they provide in order to attract and retain their customers. Because satisfied customers are a key to long-term business success (Zeithaml et al., 1996).

2.2.1 Factors Affecting Customer Satisfaction

From the studies carried out in many countries, factors like: service quality, expectation and perceived value, are the key constructs affecting the customer's satisfaction with train services. Studies also point out that customer satisfaction results ultimately in price, clarity of the service and customer loyalty. Therefore, building customer relationship is a backbone for all organizations in general, and companies in service industries in particular issues like: customer satisfaction, service quality, customer perception and customer expectation, are the main concerns of nowadays service companies, which improves organization's performance and translates into more profits.

2.2.2 Customer Expectation

Expectations play an important role in the satisfaction formation. The extent to which a product or service fulfills a customer's need and desire may play an important role in forming feelings of satisfaction because of the impact of confirmation or disconfirmation that have on satisfaction. Consumers expect to be delivered quality products and services; therefore companies try to offer quality products and services. The term expectations really matters to companies because they want to know

what customers' expectations are. The term "expectations" has different uses, in the satisfaction literature, it is viewed as a prediction made by a consumer about what is likely to happen during an exchange or transaction. According to Oliver (1981) "… expectations are consumer-defined probabilities of the occurrence of positive and negative events if the consumer engages in some behavior".

In the contrast, in the service quality literature it is defined as desires and wants, what a service provider should offer rather than would offer. Customers form their expectations from their past experience, friends' advice, and marketers' and competitors' information and promises (Kotler, 2000). Therefore, perceived service quality is viewed as the difference between consumers' perceptions and expectations for the service provided. Organizations in order to keep expectations from rising, they have to perform services properly from the first time (Parasuraman et al. 1988). Thus, customer expectations for the service are likely to rise when the service is not performed as promised. Expectations serve as reference points in customer's assessment of performance (Cronin& Taylor, 1992). Thus, ERC can increase passenger's satisfaction by decreasing expectations.

2.2.3 Customer Perception

Chiara G. et al (2007) defines perception as follows:

"Perception is process in which a person selects, arrange and interpret stimuli, these stimuli are filtered and adjusted to become one's own view of the world. Even though exposed to the same thing, in the same environment, two persons will never experience the same. We live in a world today where we daily are exposed to millions of different stimuli; different smells, sounds, tastes, sights and textures. Our brain takes in and processes only a small number of all these stimuli.

Customer satisfaction is determined by the customers' perceptions and expectations of the quality of the products and services. In many cases, customer perception is subjective, but it provides some useful insights for organizations to develop their marketing strategies. Providing high level of quality service has become the selling point to attract customer's attention and is the most important driver that leads to satisfaction. Therefore, customer perception and customer satisfaction are very closely linked together, because if the perceived service is close to customer's expectations it leads to satisfaction. Satisfied

customers provide recommendations; maintain loyalty towards the company and customers in turn are more likely to pay price premiums (Reichheld, 1996).

There are also different factors which is influence the passengers satisfaction directly or in directly.

- **Price**: The price is based on the value customers perceive to get from the product and what they are willing to pay for it. So, an appropriate ticket price, in connection with the service offered, can encourage the use of light train.
- **Journey time**: It is the time required for the vehicle to move from the origin to destination. Journey time savings can lead to reductions in vehicle operating costs.
- **Reliability:** Reliability is the ability to be relied on. So it's a very important factor when choosing the mode of transport used. The higher the reliability of a system, the more it sells, which can be applied to light rail systems; Is the ability to provide services promised to the right (accurately) and the ability to be trusted (dependably), mainly to provide services in a timely manner (on time), in the same manner in accordance with the schedule that has been promised, and without making mistakes each time
- **Cleanliness of trains and stations:** The cleanliness of stations and trains are aspects that are considered necessary and mandatory for passengers.
- **Convenience and comfort:** It comprises accessibility, waiting time, interchangeability between services, travel expenditure, ease of payment, and availability and accuracy of information and comfort is related with personal comfort feeling, such as "appropriate climate control (air conditioner, heater), comfort of seat, and comfort of ride". The more comfort they feel, the more consideration to use public transport (Iles, 2005).
- **Appearance and Comfort.** Appearance includes cleanliness and neatness of vehicle and station. Appearance condition can either attract customer or instead unwilling to use transit.
- **Ticketing service:** Possibility of accessing all the necessary information concerning the passenger's journey; ticketing information.
- **Safety and security**: This refers to the safety and security of luggage and self, which have been identified as determinants of customer satisfaction in the transportation sector (Eboli and Mazzulla as cited inGeetika 2010).

- **Capacity**: It can impact train service availability. During rush hours trains often experience overload in capacity. It means, for people who have not get in the train, the service is not available.

- **Information provision:** Information is a vital factor. Passengers need information in order to get reliable service. Operator should inform any information to the passengers through any possibilities.

2.2.4 Service Quality and Customer Satisfaction

Customer satisfaction and service quality are quite often used interchangeably, which has caused confusion. While both concepts are related and appear to be merging, there are still gaps in the understanding of the two constructs, their relationship to each other, and their antecedents and consequences (Gwynne, Devlin, and Ennew, 1998). A distinction needs to be made between both. According to Cronin and Taylor (1992), this distinction is important to both managers and researchers alike, because service providers need to know whether their objective should be to have consumers who are satisfied with their performance or to deliver the maximum level of perceived service quality." Oliver (1981) takes the view that satisfaction is "the emotional reaction following a disconfirmation experience." Getty and Thompson (1994) define it as a "summary psychological state experienced by the consumer when confirmed or disconfirmed expectations exist with respect to a specific service transaction or experience."

The most commonly used representation of customer satisfaction is the disconfirmation approach (Ramaswamy, 1996), in which satisfaction is related to the variation between a customer pre-purchase expectations and their post purchase perceptions of the actual service performance. According to disconfirmation theory, the extent of satisfaction or dissatisfaction that a customer has with a particular service is determined by the difference between the customers' expectations of performance and the actual perceived performance of the service (Oliver, 1996). Any difference between them is referred to as disconfirmation. If the service experienced is better than expected, then positive disconfirmation or high levels of satisfaction will result. If, however, the service performance falls short of what was expected, then negative disconfirmation or dissatisfaction will result. Confirmation or zero disconfirmation results when perceived performance just meets the customer's expectations or when the service experience is much as expected in the customers.

Parasuraman et al (1988) defined service quality and customer satisfaction as follows: Service quality is a global judgment, or attitude, relating to the superiority of the service, whereas satisfaction is related to a specific transaction. Satisfaction is a post consumption experience which compares perceived quality with expected quality, whereas, service quality refers to a global evaluation of a firm's service delivery system.

Siddiqi (2011) described that all the service quality attributes are positively related to customer satisfaction and customer satisfaction is positively related to customer loyalty in the transport sector. Furthermore, Daniel O. Auka (2012) also stated that high quality of service will result in high customer satisfaction and increase loyalty.

2.3 Empirical Reviews

Research on services quality has currently received special attention from marketing researcher. Some research conducted on quality services and its effect on customer satisfaction and their results are summarized as follow:-

There are many research works done related with this study. However the researcher tries to see three of them which are more related to the topic. The titles with their objectives and major findings are discussed below to have an insight about these studies.

The first one is MBA thesis done by (Vincent Buluma, 2012) with the title of Service quality and passenger satisfaction in Rift valley railways corporation – Kenya. The main purpose of the study is to examine the effect of service delivery process and service quality on satisfaction of passengers with the following specific objectives: To establish customer expectations, perceptions in rift valley commuter transport in Kenya to determine the level of passenger satisfaction on service quality dimensions and service quality gap in rift valley commuter transport in Kenya and To determine the relationship between service quality and passenger satisfaction in rift valley commuter transport. The result showed that factors that influence passenger's satisfaction are the reliability of the system, the punctuality of the transport, the price of it and the time of journey needed to go from one point to another. Additionally, Safety, Pick pocketing, overcharging facilitates by overcrowding and lack of supervisor is important factors. Kenya Department for Transport (2012) reported that young people (mostly male) involved in assaulting behavior, theft, vandalism and criminal damage are a problem for train transport users. Lastly

he recommends information provision, a simple ticketing service and a helpful staff, can attract more passengers' to use train transport.

The second one is service science program thesis done by Lars Haglund (2010) with the title of analysis of train passenger response on provided service. The specific objectives are to determine the service quality attributes that have significant influences to customer satisfaction towards PT KAI Services for short distance train (Commuter class), and long distance train (Business class, and Executive class), in order to know factors that affect customer satisfactions towards provided services and the desire to make a complaint and to gat effective mechanism to handle passenger's complaints for PT KAI. He was collected data via field survey in the station that located in Jakarta and the research shows several findings. First, there are six factors of service quality attributes that have significant influences on passenger's satisfaction towards PT KAI services for commuter class (Information, Appearances, Service coverage, Tangible, Safety & security, and Cost), seven factors for business class (Travel time, Information, Scheduling, Comfort, Tangible, Safety & security, and Service coverage), and also seven factor for executive class (Appearances, Safety & security, Information, Comfort, Tangible, Travel time, and Cost). Second, while the commuter class passengers complain on the Safety & security attribute, for business class it is the information that influences the desire to complain. Meanwhile for executive class, passengers are mostly satisfied with the service given by PT KAI.

The last one is MBA thesis done by Geetika (2010) with the title of determinants of customer satisfaction on service quality: a study of railway plat forms in India. The main purpose of the study is to examine the impact of service quality on passenger's satisfaction and have depth interviews to find out dissatisfying factors and customers reported that waste time, too crowded, lack of comfort, time uncertainty, unreliability, long waiting times, lack of flexibility, long walking time, punctuality and information were important factors causing dissatisfaction.

2.4 Conceptual Frame Work

The aim of this section is to summarize the idea about past literature and to bring out the contributions for this study area. Thus this part starts with the idea generated and the contribution follows. The general idea from the past literature is that there is a relationship between customer satisfaction and service quality; also that service quality could be evaluated with the use of SERVQUAL scale. The model has been proven to be the best model to measure service quality in service sectors especially with the customer perspective. This idea generates an assumption that the five dimensions of SERVQUAL model could have a direct relationship with passenger's satisfaction.
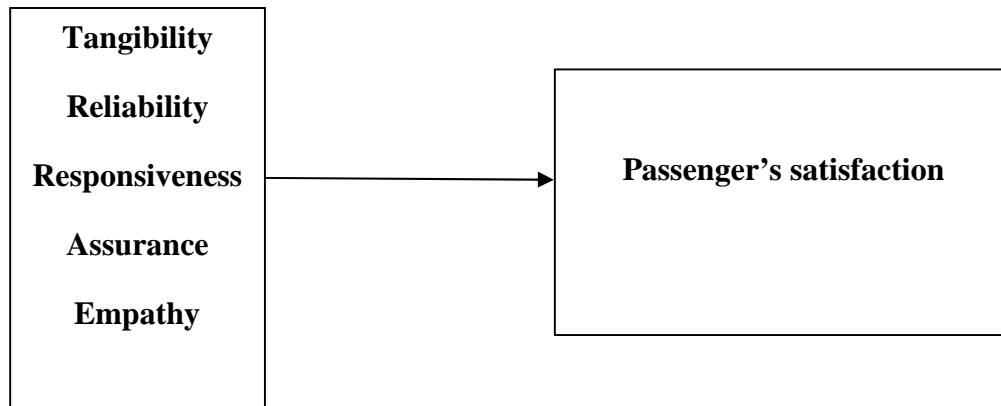
Fig 3: Service quality and customer satisfaction model.

Source: Parasuraman et al., (1988).

CHAPTER THREE

RESEARCH DESIGN AND METHODOLOGY

3.1 Introduction

This part of the research deals with over all approach of the research methodology and it includes research design sample size, sampling techniques, data collection tools, source of data, and data analysis method that the study were used.

3.2 Research Approach

This study has followed quantitative research approach using survey design in order to determining the relationship between variations of independent and dependent variables. The reason for choosing quantitative research approach was to meet the purpose of examining how an independent variable affects a dependent variable.

3.2.1Research Design

To investigate research objective and research questions both descriptive research and explanatory study is utilized in the study. The reason behind using descriptive research design is because the researcher is interested in describing the existing situation under study. Creswell(1994) stated that the descriptive method of research is a technique of gathering information about the present existing condition. This research design is a fact finding study with adequate and accurate interpretation of findings. This study also used explanatory research design to explaining, understanding, predicting and controlling the relationship between variables.

3.2.2 Sampling Design

3.2.2.1 Target Population

Population is "the entire group of people, events, or thing of interest that the researcher wishes to investigate" (Sekeran, 2001). The target population of the study will be Addis Ababa passengers whom use light rail transport specially passengers whom travel from Ayat village to stadium.

3.2.2.2 Sampling Technique

Creswell (1994) define that it is the way of drawing inference about a population without studying the entire population under study. It is also advantageous in time consuming and cost saving. Thus, the researcher selects passengers who use LRT from Ayat to Stadium by using purposive sampling method.

Finally, after determining the region the researcher employed convenience sampling technique to distribute questionnaire for the respondent. The rationale behind employing convenience sampling method is because all passengers are not available in the LRT at the same time and it is not possible to contact everyone who may be sampled.

3.2.2.3 Sample Size

Sample size is actually the total number of units which are to be selected for the analysis in the research study. Passenger's whom travel from Ayat to Stadium was selected for collecting data.According to ERC an average of 20.000 passengers travel from Ayat to Stadium every day therefore, in order to determine sample size; the researcher used formula for calculating the required sample size which is developed by Taro Yamane (1967). It is calculated as follows.

$$n= \frac{N}{1+N (e) 2}$$

$$n=\frac{20,000}{1+20,000(.05)2} =392$$

Where: n is the sample size

N is the population size (20,000)

e is sampling error (0.05)

3.2.3 Sources of Data

The study used both primary and secondary source of data. Based on the nature, scope, objectives and availability of time and resource, the researcher used questionnaires and secondary data source like books, documents, existing research papers, journals and publication, websites, ERC reports and other relevant journal.

3.2.3.1 Primary Data

Primary data has been collected by the administered questionnaires distributed to the respondents.

3.2.3.2 Secondary Data

The secondary data will be collected from publication including books, journals, and researches that have relevant for this study.

3.2.4 Data Collection Methods

The study was based on both primary and secondary data sources. It was begun by secondary data analysis through the detailed review of related literature and survey questionnaire was used as the main data gathering instrument for this study. (Appendix A) questionnaire were prepared and distributed to the sample that was selected from passengers of LRT. After the data is collected; it is necessary to utilize statistical techniques to analyze the data. The survey data was processed using SPSS to be analyzed and presented.

3.2.5 Data Analysis Method

The collected data has to be changed and interpreted in to meaningful information, figure and statement. So it was analyzed, processed and interpreted according to the nature of data. Statistical Package for Social Science (SPSS) software version 20 was employed to analyze and present the data through the

statistical tools used for this study, namely descriptive analysis, correlation and multiple regression analysis.

A. Descriptive Analysis

The descriptive statistical results were presented by tables, frequency distributions and Percentages to give a condensed picture of the data. This was achieved through summary of statistics, which includes the means and standard deviations values which are computed for each variable in this study.

B. Pearson Correlation Analysis

In this study Pearson correlation coefficient was used to determine the relationships between service quality dimension (Tangibility, reliability, responsiveness, assurance and empathy) and passenger's satisfaction.

C. Multiple Regression Analysis

Multiple regression analysis was used to investigate the effect of service quality dimensions (Tangibility, reliability, responsiveness, assurance, empathy) and passenger's satisfaction.

Regression functions

The equation of multiple regressions on this study was generally built around two sets of variable, namely dependent and independent variables. The basic objective of using regression equation is to make the researcher more effective at describing, understanding, predicting, and controlling the stated variables.

Regress customer satisfaction on the service quality dimensions

$$Y = \beta_{01} + \beta_{12}X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + e$$

Where Y is the dependent variable- passenger's satisfaction

Tangible $=X_1$, reliability $=X_2$, responsiveness $=X_3$, assurance $=X_4$ and empathy$=X_5$ are the explanatory variables (or the regresses). β_{01} is the intercept term- it gives the mean or average effect on Y of all the variables excluded from the equation, although its mechanical interpretation is the average value of Y when the stated independent variables are set equal to zero. β_1, β_2, β_3, β_4 and β_5 refer to

the coefficient of their respective independent variable which measures the change in the mean value of Y, per unit change in their respective independent variables: e is the error term of the regression equation.

3.2.6 Validity and Reliability

3.2.6.1 Validity

Siddiqi and Kazi, O., (2011)defined the validity as "the degree to which a measure accurately represents what is supposed to". In order to increase the validity of the study, the questions is formulated in easy and understandable way, in addition data collected by quantitative method also enhance the validity of the study.

3.2.6.2 Reliability

Siddiqi and Kazi, O., (2011) defines reliability as the extents to which a variable or a set of variables is consistent in what it is intended to measure. To increase the reliability of the study, questionnaires are designed in the form of close ended questions and it was tested by advisor to determine its clarity.

This study used cronbach"s alpha to test the reliability of questioner. The findings show that Cronbach"s alpha for all dimensions of service quality are above 0.70 which indicates a high level of internal consistency for all items.

Table .1 Result of reliability analysis for the questionnaire

Dimension of service quality	Number of attribute	Cronbach's alpha	
		Expected	Perceived
Tangibility	4	0.748	0.802
Reliability	3	0.720	0.747
Responsiveness	3	0.797	0.764
Assurance	3	0.771	0.780
Empathy	5	0.832	0.832
Overall reliability analysis	18	0.904	0.864

3.2.7 Research Ethics

Since the researcher was used the data from passenger's which was collected through questionnaire, permission was obtained from the passenger's. To maintain the confidentiality of the information provided by the respondents, the respondents were instructed not to write their names on the questionnaire and assured of that the responses would be used only for academic purpose and kept confidential. The researcher also ensured that the respondents were aware of the objectives of the research and their contribution to its completion. One other ethical measure exercised by researcher is treating the respondents with respect and courtesy Sekeran, U. (2003). This was done so that the respondents will be at ease and are more likely to give candid responses to the questionnaire. There were also ethical measures that have been followed in the data analysis. To ensure the integrity of data, the researcher checked the accuracy of encoding of the survey responses. This was carried out to ensure that the statistics generated from the study are truthful and verifiable Sekeran, U. (2003).

CHAPTER FOUR

DATA PRESENTATION AND INTERPRETATION

4.1 Introduction

This chapter, present a discussion of the final results and the processes through which the results were obtained. In addition to this, background information of respondents is also presented. Finally, the statistical methods of analysis were discussed, which included a descriptive analysis, a correlation analysis, and a multiple regression analysis with the help of SPSS version 20. The interpretation of the data is presented next to each summarized data.

4.2 Questionnaire Distribution

Table 2: Questionnaire Distribution

	Correctly filled and Returned	Not correctly filled	Not returned	Total
Number	364	15	13	392

Source: survey result 2017

In the table 1 above, 392 copies of questionnaire were distributed, 364 were returned, while 28 were not returned.

4.2.1 Background Information of Respondents

The demographic characteristics of the respondents include gender, age, level of education and employment type. This aspect of the data analysis deals with the analysis personal data on the respondents of the questionnaires. The table below shows the details of characteristics of the respondents and their percentage.

Table 3: Characteristics of the respondents

Characteristics		Frequency	Percent (%)
Gender	Male	189	51.9
	Female	175	48.1
Age	Below 30	200	54.9
	30-39yrs	115	31.6
	40-49yrs	35	9.6
	50yrs & above	14	3.8
Educational level	Primary School	73	20.1
	Secondary School	118	32.4
	Diploma	118	32.4
	First Degree	55	15.1
Occupation	Student	100	27.5
	Employed	206	56.6
	Unemployed	58	15.9

Source: Own survey, (2017)

From the 364 respondents (51.9%) are male and (48.1) percent of the respondents are female. In terms of age, 31.6 % of the respondents are between 30 to 40 years old whereas 54.9% are below 30 years, 9.6 % are from 40 to 49 years the remaining 3.8% are above 50. Regarding educational level, half of the respondents 15.1% are degree holders, 32.4% are diploma holders 32.4% have finished high school; the remaining 20.1% have finished primary school. Regarding the occupation characteristics of the respondents, majority of the passengers were employees; who accounts to 56.6 percent, followed by students which accounts to 27.5 percent, and finally unemployed respondents were accounts to 15.9 percent.

4.3 Analysis the data based on the five dimensional SERVQUAL model:

Parasuraman (1988) proposed that customers' perception of service quality is based on the comparison of their expectation of customers (what they feel service providers should offer) with their perceptions of the performance of the service provider. In this paper the gap score analysis enables to find out how

consumers perceive service quality in LRT and helps to identify what dimensions of service quality they are satisfied with. According to Parasuramanet al., (1985) the higher (more positive) the perception (P) minus expectation (E) score, the higher the perceived service quality and thereby leading to a higher level of customer satisfaction. In this regard, the gap scores are calculated based on the difference between the consumers' perceptions and expectations of services offered by LRT.For each dimension, the SERVQUAL scale provides a score for customer expectations(E) and a score for customer perceptions (P) of service quality. The differences between the two scores on each dimension are called gap scores. The key to optimizing service quality is to maximize these gap scores and the associated gap equation (Gap score = P – E).

Table 4 : Service Tangible Dimension

Tangibility	Expectation		Perception		Gap
	Mean	Std. Deviation	Mean	Std. Deviation	P –E
The station and train appears clean and neat.	4.02	.903	3.35	1.091	–0.67
The staffs dress properly.	4.18	.966	3.74	1.063	–0.44
The station is modern.	4.25	.924	3.48	1.003	–0.77
Physical facilities at the station and on train are appealing.	3.74	1.110	3.60	1.059	–0.14
Averagemean score	4.04	0.975	3.54	1.054	–0.5

Source: Survey result (2017)

As stated in literature part, tangible aspect of service dimension will be reflected in the physical evidence such as tools, equipment and appearances of providers. According to the results in table 3, the highest average of the answer for expectation are referred to the (The station is modern.), which was 4.25. The least average of the answer scores are related to the (The station and train appears clean and neat.) with rate of 4.02. Thus passengers were expecting more in terms of modern lookingwhereas; they had weak expectation in relation with attractiveness of the physical facilities at the station and on the train.

Regarding to perception the highest average of the answer are referred to the (The staffs dress properly.), which was 3.74. The least average of the answer scores are related to the (The station and train appears clean and neat.) with rate of 3.35. Thus passengers were expecting more in terms of modern looking

whereas; they had weak expectation in relation with attractiveness of the physical facilities at the station and on the train. The difference between expectations and perceptions in this dimension is calculated to -0.67, -0.44, -0.77 and -0.14 respectively. As we can see, overall tangibles show a negative result which means that the perception is less than the expectations. Thus it is possible to generalize those passengers expectation and perception of LRT are not balanced in relation with tangibility dimension. Mean they could not get the service as they expect before.

Table 5: Service Reliability Dimension

Reliability	Expectation		Perception		Gap
	Mean	Std. Deviation	Mean	Std. Deviation	P-E
Train service given on time	4.15	.851	3.37	1.167	-0.78
Information about the status of the train is always updated during travel	4.18	.896	3.33	1.134	-0.85
There is a complaint handling system	4.17	.908	3.09	1.150	-1.08
Average mean score	3.88	0.885	3.54	1.15	-0.34

Source: Survey result (2017)

Passengers measure the reliability of the LRT by considering consistency of performance, uniformity of service encounter, honoring promises and performing the service correctly at the first encounter. As illustrated in the table 5, the highest average of the answer for expectation are referred to the (Information about the status of the train is always updated during Travel), which was 4.18. The least average of the answer scores are related to the (Train service given on time.) with rate of 4.15. Thus passengers were expecting more in terms of updating information whereas; they had weak expectation in relation with service given on time.

Regarding to perception the highest average of the answer are referred to the (Train service given on time), which was 3.74. The least average of the answer scores are related to the (There is a Complaint handling system) with rate of 3.09. The difference between expectations and perceptions in this dimension is calculated as -0.78, -0.85 and -1.08. As we can see the above table show a negative result which means that the perception is less than the expectations. As we can see, overall reliability show a negative result which means that the perception is less than the expectation. Thus it is possible to

generalize those passengers expectation and perception of LRT are not balanced in relation with reliability dimension. Mean they could not get the service as they expect before.

Table 6: Service Responsiveness Dimension

Responsiveness	Expectation		Perception		Gap P-E
	Mean	Std. Deviation	Mean	Std. Deviation	
The passenger's safety secured both on the station and train.	4.03	.954	3.26	1.145	-0.77
Service is always offered promptly.	4.06	.998	3.33	1.074	-0.73
Staffs are always willing to help in caring fashion.	4.12	.874	3.31	1.162	-0.81
Average mean score	4.07	2.826	3.3	1.127	-0.77

Source: Survey result (2017)

As stated in the literature, responsiveness dimension is concerned with the willingness, readiness of employees and the preparedness of the firm to provide a service to satisfy the needs and desires of customers. As per the result obtained from the customers in the table 6 above the highest average of the answer for expectation are referred to the (Staffs are always willing to help in caring fashion.), which was 4.12. The least average of the answer scores are related to the (The passenger's safety secured both on the station and train.) with rate of 4.03. Thus passengers were expecting more in terms of staffs are always willing to help in caring fashion whereas; they had weak expectation in relation with the safety.

Regarding to perception the highest average of the answer are referred to the (Service is always offered promptly.), which was 3.33. The least average of the answer scores are related to the (The passenger's safety secured both on the station and train.) with rate of 3.26. The difference between expectations and perceptions in this dimension is calculated to -0.77, -0.73 and -0.81 and -0.14 respectively. As we can see, that the passengers were not at all satisfied with the quality described in this dimension.

Table 7: Service Assurance Dimension

Assurance	Expectation		Perception		Gap P-E
	Mean	Std. Deviation	Mean	Std. Deviation	
Staff are courteous	4.14	1.024	2.25	.617	-1.89
Customers are promptly informed whenever there is delay	4.01	.958	2.29	.632	-1.72
Staffs are knowledgeable when answering questions.	4.17	.976	2.25	.572	-1.92
Average mean score	4.10	0.986	2.26	0.6	-1.84

Source: Survey result (2017)

Politeness of employees, customers informed whenever there is delay, personal behavior of employee and adequate knowledge of employee are satisfying assurance dimension of service quality. The details of the information obtained from respondents are summarized in the above table 7.According to the results in table 7, the highest average of the answer for expectation are referred to the (Staffs are knowledgeable when answering questions.), which was 4.17. The least average of the answer scores are related to the (customers are promptly informed whenever there is delay) with rate of 4.01. Thus passengers were expecting more in terms of the staff's knowledge whereas; they had weak expectation in relation with updating information where ever there is delay.

Regarding to perception the highest average of the answer are referred to the (Customers are promptly informed whenever there is delay), which was 2.29. The least average of the answer scores are related to the (Staff are courteous) with rate of 2.25.The difference between expectations and perceptions in this dimension is calculated to -0.77, -0.73 and -0.81 and -0.14 respectively. As we can see, that the passengers were not at all satisfied with the quality described in this dimension. Thus it is possible to generalize those passengers expectation and perception of LRT are not balanced in relation with assurance dimension. Mean they could not get the service as they expect before.

Empathy	Expectation		Perception		GAP P-E
	Mean	Std. Deviation	Mean	Std. Deviation	
Train operates in hours which are convenient to most passengers.	3.49	1.02	2.60	.759	-0.89
There is availability of enough seating on the train and station.	3.72	1.113	2.47	.751	-1.25
The train journey ride is comfortable.	3.63	1.16	2.52	.752	-1.11
The ticketing process is simple.	3.74	1.161	2.49	.753	-1.25
It is affordable travel to all sections of the society.	3.70	1.154	2.52	.780	-1.18
Average mean score	3.42	1.121	2.75	0.6	-0.67

Table 8: Service Empathy Dimension

Source: survey result (2017)

A service provider who tries to put himself in the position of its customers to understand customers need, and then providing what they want in a convenient way have the potential to satisfy its customers on empathy dimension of service quality. As stated in the table above the highest average of the answer for expectation are referred to the (The ticketing process is simple.), which was 3.74. The least average of the answer scores are related to the (Train operates in hours which are convenient to most passengers.) with rate of 3.49. Thus passengers were expecting more in terms of the ticketing whereas; they had weak expectation in relation with train operates in hours which are convenient to most passengers.

Regarding to perception the highest average of the answer are referred to the (It is affordable travel to all sections of the society.), which was 2.52. The least average of the answer scores are related to the (There is availability of enough seating on the train and station.) with rate of 2.47. The difference between expectations and perceptions in this dimension is calculated to -0.89, -1.25, 1.11, -1.25 and -1.18 respectively. Thus it is possible to generalize those passengers expectation and perception of LRT are not balanced in relation with assurance dimension. Mean they could not get the service as they expect before.

4.4 Overall Passengers Satisfaction toward Service Quality

Table: 4.10 Overall means score of passenger's satisfaction on service quality and the gap between passengers' expectation and perception

Dimensions	Mean		Gap (P-E)
	Perception	Expectation	
Tangibility	3.54	4.04	-0.5
Reliability	3.54	3.88	-0.34
Responsiveness	3.3	4.07	-0.77
Assurance	2.26	4.1	-1.84
Empathy	2.75	3.42	-0.67
Average score	3.07	3.90	-0.82

Source: own survey 2017

Table 4.10 shows that overall satisfaction of expectation on the five dimensions is high level (3.90) which is significant. The result of customers expectation shows that responsiveness dimension is at the high level (4.07) followed by tangibility (4.04), assurance (4.1), reliability (3.88), and empathy (3.42) in descending orders. Most passengers expect the employee to be effective in responsiveness, tangibility and reliability respectively-passengers expectation is high regarding these dimensions.

The table also indicates that overall satisfaction of perception on the five dimensions is at a low level (3.07). Like that of their expectations most passengers perceived tangibility the most important dimension at (3.54), followed by responsiveness (3.3), empathy (2.75) and assurance (2.26) in the descending order. In this study, tangibility dimension was the most vital factor in which both the passengers' expectation and perception are very high as compared with the other dimensions. The SERVQUAL gap is calculated between the mean score of expectation and perception. The findings of the study show the difference between expectation and perception as shown in table above 4.10.

Table 4.10 also demonstrates the gap between passengers' expectation and perception. The study shows that assurance has the highest gap score of -1.84 and reliability has the least gap score of -0.34.Generally, ERC has to understand and exceeded passengers' expectation of service quality in all dimensions. On a five-point scale, the mean scores of customers' perceived service quality of the LRT is

3.07 indicate that passengers' perceive that quality of service being offered by ERC is quite low which imply that the passengers of the LRT are not satisfied.

4.6 Pearson Correlation Analysis

According to Grönroos, C. (2000), the relationship is expressed by value within the range -1.00 to + 1.00 as Pearson product–moment indicates. Pearson correlation is +1 in the case of a perfect increasing (positive) linear relationship (correlation), -1and1 in all other case indicating the degree of liner dependency between variable. To determine the relationship between service quality dimensions (tangibility, reliability, responsive, assurance, and empathy) and passenger's satisfaction, Pearson correlation was computed. Table 11, presents the results of Pearson correlation on the relationship between service quality dimension and passengers satisfaction.

Table 11: Correlations results of service quality dimensions and customer satisfaction

Service quality dimension's	Passengers satisfaction
Tangibility Pearson correlation Sing. (2-tailed) N	.126* .000 364
Reliability Pearson correlation Sing. (2-tailed) N	.734** .000 364
Responsiveness Pearson correlation Sing. (2-tailed) N	.677** .000 .364
Assurance Pearson correlation Sing. (2-tailed) N	.126* .000 364
Empathy Pearson correlation Sing. (2-tailed) N	.761** .000 364

Source: SPSS Correlation result output, 2017

According to the Table 11, there is a significant positive relationship between the five dimensions of service quality and passengers satisfaction, the highest correlation is between empathy and passengers satisfaction (0.761) followed by responsiveness (0.734), and reliability (0.677). The weakest correlation is between assurance (0.126) and tangibility (0.121) with passenger's satisfaction whereas the strongest correlation is between empathy and passenger's satisfaction. In general, if correlation is positive between two or more variables that is, when service quality dimensions and customer satisfaction is positively related; delivering better service quality ensures higher customer satisfaction. Accordingly, the most important service quality dimension that affects passengers satisfaction is empathy, which goes to prove that empathy perceived as a dominant service quality followed by responsiveness; This indicates improvement in those dimension have significant effect on passengers satisfaction levels with the same analogy improving staffs knowledge, over all behavior and way of delivering service also have significant effect. Even if, tangibility and assurance have weakly correlated improving these dimensions has also effect on passenger's satisfaction.

4.7 Multiple Regression Analysis

Multiple regression analysis was employed to examine the effect of customer service quality dimensions on passenger's satisfaction. The following subsections present the results of multiple regressions analysis.

4.7.1 Tests for the Multiple Linear Regression Model Assumptions

In order to make the data ready for analysis and to get reliable results from the research, the model stated previously was tested for five multiple linear regression model assumptions. Among them the major ones are: test for hetero scedasticity, autocorrelation, multi collinearity, normality and constant variable. Accordingly, the following sub-section presents the tests result.

Assumption one: the errors have zero mean (E ( ) = 0) or constant variable

The first assumption states that the average value of the errors should be zero. According to Sekeran, U. (2003) if the regression equation contains a constant term, this pre assumption will never be breached. Therefore, since from the regression result table the constant term (i.e. 0) was included in the regression equation; this assumption holds good for the model.

Assumption two: homoscedasticity (variance of the errors is constant ($Var(\mu_t) = \sigma^2 < c$)

Heteroskedasticity is a systematic pattern in the errors where the variances of the errors are not constant. When the variance of the residuals is constant it is referred as homoscedasticity, which is desirable. To test for the absence of heteroscedasticity white test was used in this study. In this test, if the p-value is very small, less than 0.05, it is an indicator for the presence of heteroscedasticity (Sekeran, U 2003).

But from table 12 presents' three different types of tests for heteroscedasticity and p-values of all the three tests are considerably in excess of 0.05 it's a clear indicator that there is no evidence for the presence of heteroscedasticity. Hence, the model passes the second test.

Table 12 :Heteroskedasticity Test: white test

F-statistic	0.991454	Prob. F(6,357)	0.4308
Obs*R-squared	5.965954	Prob. Chi-Square(6)	0.4270
Scaled explained SS	4.998490	Prob. Chi-Square(6)	0.5440

Assumption three: covariance between the error terms over time is zero (cov (ui, uj) = 0)

This assumption states that covariance between the error terms over time or cross-sectional, for that type of data is zero. That is, the errors should be uncorrelated with one another. If the errors are not uncorrelated with one another it is an indicator for the presence of auto correlation or serial correlation (Brooks 2008).

According to Brooks (2008), presence/absence of autocorrelation is by using the Breusch–Godfrey test (shown in table 13). The result of the statistic labeled "obs*R-squared", which is the LM test statistic for the null hypothesis of no serial correlation shows a p-value of 0.0573 (which is greater than 0.05) which indicates the absence of autocorrelation.

Table13. Breusch-Godfrey Serial Correlation LM Test

Breusch-Godfrey Serial Correlation LM Test:

F-statistic	2.135395	Prob. F(5,352)	0.0608
Obs*R-squared	10.71592	Prob. Chi-Square(5)	0.0573

Assumption four: Normality

A normal distribution is not skewed and is defined to have a coefficient of kurtosis 3. Jarque-Bera formalizes this by testing the residuals for normality and testing whether the coefficient of skeweness and kurtosis are zero and three respectively. Normality assumption of the regression model can be tested with the Jarque- Bera measure. If the probability of JarqueBera value is greater than 0.05, it's an indicator for the presence of normality (Brooks 2008).

The normality tests for this study as shown in figure4 the kurtosis is close to 3, skewness close to 0 and the Jarque-Bera statistic has a p-value of 0.585695 which is well over 0.05 implying that the data were consistent with a normal distribution assumption.

Fig 4 Normality Test result

Series: Residuals	
Sample 1 364	
Observations 364	
Mean	1.26e-16
Median	-0.004987
Maximum	1.424245
Minimum	-1.515881
Std. Dev.	0.597916
Skewness	0.031600
Kurtosis	2.742028
Jarque-Bera	1.069911
Probability	0.585695
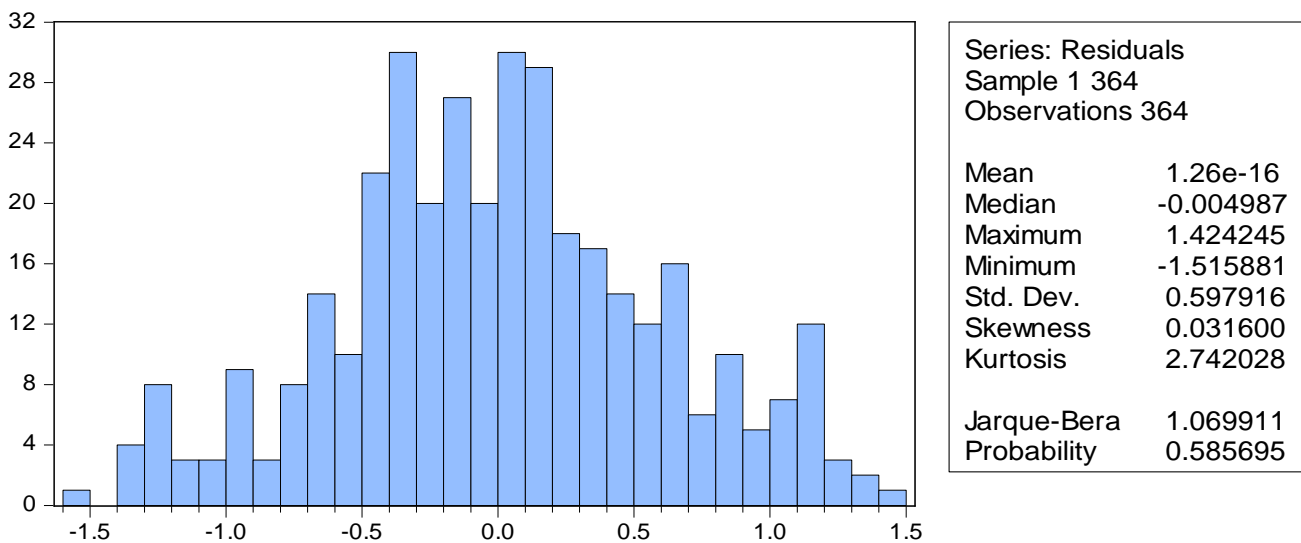
Assumption five: Multicollinearity Test

According to (Churchill and Iacobucci 2005), multicollinearity is concerned with the relationship which exists between explanatory variables. When there exists the problem of multicollinearity, the amount of information about the effect of explanatory variables on dependent variables decreases and as a result, many of the explanatory variables could be judged as not related to the dependent variables when in fact they are. Many authors have suggested different level of correlation to judge the presence of multicollinearity. While (Hair, et al. 2006) argued that correlation coefficient below 0.9 may not cause serious multicollinearity problem. (Malhotra 2007) stated that multicollinearity problem exists when the correlation coefficient among variables is greater than 0.75. This indicates that there is no consistent agreement on the level of correlation that causes multicollinearity.

Therefore, in this study correlation matrix for four of the independent variables is shown below in table 14 The result of the estimated correlation matrix shows that the highest correlation of 0.746 which is between responsiveness and Reliability. Since there is no correlation above 0.75 and 0.9 according to (Malhotra 2007) and (Hair, et al. 2006) respectively, it can be concluded that there is no problem of multicollinearity.

Table 14: Correlation matrix between explanatory variables Multicollinierity

	Tangibility	Reliability	Responsiveness	Assurance	Empathy
Tangibility	1				
Reliability	.138**	1			
Responsiveness	.733**	.746**	1		
Assurance	.175**	.119*	.185**	1	
Empathy	.743**	.101	160**	.362**	1

Table 15: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.811a	.657	.652	.623

The above table shows that there was a significant (adjusted R^2= 0.652, p <0.05) Relationship between the independent variables (i.e. tangibility, reliability, responsiveness, assurance and empathy) and the dependent variable (passenger's satisfaction).ANOVA test was also conducted as shown in the table16 below:

Table 16: ANOVA Table

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	266.083	5	53.217	137.167	.000b
	Residual	138.893	358	.388		
	Total	404.975	363			

a. Dependent Variable: overall passengers satisfaction
b. Predictors: (Constant),empathy, reliability, responsiveness, tangibility and assurance

From the ANOVA table 16 shows that accepting at least one of the service quality dimensions (tangibility, reliability, responsiveness, assurance, and empathy) had significant effect on the passenger's satisfactions of ERC.

Table 17: Coefficients of Independent variable

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
(Constant)	1.603	.760		2.108	.036
Tangibility	.048	.030	.122	2.850	.034
Reliability	.349	.059	.352	1.476	.041
Responsiveness	.021	.058	.211	.885	.000
Assurance	.347	.156	.166	2.223	.027
Empathy	.459	.065	.443	8.633	.000

Source: SPSS Regression results output, 2017

Based on the table 17, show the standardize beta coefficient, which tell us the unique contribution of each factor to the model. A high beta value and a small p value ($<.005$) indicate the predictor variable has made a significance statistical contribution to the model. On the other hand, a small beta value and a high p value ($p >.005$) indicate the predictor variable has little or no significant contribution to the model (Chiara G. et al (2007). Table 17 also indicate that tangibility, reliability, responsiveness, assurance and empathy dimension of service quality have a positive and significant effect on passenger's satisfaction at 95% confidence level. The significant service quality factors have been included for the establishment of the function. The established regression function is:

Y=1.603+0.122X1+ 0.352X2+0.211X3+0.166X4+443X5

Hypothesis testing is based on standardized coefficients beta with 95% confidence level to test either the hypotheses are rejected or not.

Hypothesis 1

Ho1: Tangibility would not have a positive and significant effect on passenger's satisfaction.

Ha1: Tangibility would have significant effect on passenger's satisfaction.

The results of multiple regressions, as presented in table 14 above, revealed that tangibility has a positive and significant effect on passengers satisfaction with a beta value (Beta = 0.122), at 95% confidence level ($p < 0.01$). The beta value (0.122) shows as one-unit increase in tangibility there will be

12.2% increase in passenger's satisfaction. Therefore, the researcher may reject the null hypothesis and accepting the alternative hypothesis. This indicates that tangibility has a positive and significant effect on passenger's satisfaction.

Hypothesis 2

Ho1: Reliability would not have a positive and significant effect on passenger's satisfaction.

Ha2: Reliability would have significant effect on passenger's satisfaction.

The results of multiple regressions, as presented in table 14 above, revealed that reliability has a positive and significant effect on passengers satisfaction with a beta value (Beta = 0.352), at 95% confidence level ($p < 0.01$). The beta value (0.352) shows as one-unit increase in reliability there will be 35.2% increase in passenger's satisfaction. Therefore, the researcher may reject the null hypothesis and accept the alternative hypothesis.

Hypothesis 3

Ho1: Responsiveness would not have a positive and significant effect on passenger's satisfaction.

Ha3: Responsiveness would have significant effect on passenger's satisfaction.

The results of multiple regressions, as presented in table 14 above, revealed that responsiveness has a positive and significant effect on customer satisfaction with a beta value (Beta = 0.211), at 95% confidence level ($p < 0.01$). The beta value (0.211) shows as one-unit increase in responsiveness there will be 21.10% increase in passenger's satisfaction. Therefore, the researcher may reject the null hypothesis and accepting the alternative hypothesis. This indicates that Responsiveness has a positive and significant effect on passenger's satisfaction.

Hypothesis 4

Ho1: Assurance would not have a positive and significant effect on passenger's satisfaction.

Ha4: Assurance would have a significant effect on passenger's satisfaction.

The results of multiple regressions, as presented in table 14 above, revealed that assurance has a negative and significant effect on customer satisfaction with a beta value (Beta = 0.166), at 95% confidence level ($p < 0.01$). The beta value (0.166) shows as one-unit increase in assurance there will be 16.6% in increase passenger's satisfaction. Therefore, the researcher may reject the null hypothesis and

accepting the alternative hypothesis. This indicates that assurance had a positive and significant effect on passenger's satisfaction in the case of the light rail service satisfaction.

Hypothesis 5

Ho1: Empathy would not have a positive and significant effect on passenger's satisfaction.

Ha5: Empathy would have significant effect on passenger's satisfaction.

The results of multiple regressions, as presented in table 14 above, revealed that empathy has a positive and significant effect on passengers satisfaction with a beta value (Beta = 0.443), at 99% confidence level ($p < 0.01$). The beta value (0.443) shows as one-unit increase in empathy there will be 44.3% increase passenger's satisfaction. Therefore, the researcher may reject the null hypothesis and accepting the alternative hypothesis. This indicates that empathy had a positive and significant effect on passenger's satisfaction.

Generally, the impacts of "Tangibility", "Reliability", "Responsiveness", "Assurance", and "Empathy" on passengers' satisfaction with the LRT are .443, 352, 211, 166 and .121 respectively, in their descending order indicating that empathy has the highest impact on passenger's satisfaction.

Table 18 shows summarized the overall passenger's satisfaction significance with the five service quality dimensions.

Table 18: Summary of the Overall outcome of the Research Hypothesis

Hypotheses	Result	Reason
Ha1: Tangibility would have appositive and significant effect on passenger's satisfaction.	Accepted the hypothesis	= 0.122p<0.05
Ha2: Reliability would have a positive significant effect on passenger's satisfaction.	Accepted the hypothesis	=0.352, p<0.05
Ha3: Responsiveness would have a positive significant effect on passenger's satisfaction.	Accepted the hypothesis	=0.211, p<0.05
Ha4: Assurance would have a positive and significant effect on passenger's satisfaction.	Accepted the hypothesis	=0.166, p<0.05
Ha5: Empathy would have a positive and significant effect on passenger's satisfaction.	Accepted the hypothesis	=0.443, p<0.05

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

This chapter deals with the summary of findings, conclusions drawn from the findings and the recommendations forwarded for improvement in services delivery process of ERC. The recommendation covers the importance of improving on those dimensions in which the ERC got inferior score and also to keep working on the superior scored dimensions. The chapter is presented under the headings: summary of findings, conclusions, and recommendations.

5.1. Summary of Findings

The main objective of the study was to assess service quality and passenger's satisfaction the case of light rail transport in Addis Ababa. SERVEQUAL model is used to investigate the relationship between the service quality dimensions and passenger's satisfaction. The data obtained from the respondents was analyzed using various statistical tools.

- From the 364 respondents (51.9%) are male and (48.1) percent of the respondents are female. In terms of age, 31.6 % of the respondents are between 30 to 40 years old whereas 54.9% are below 30 years, 9.6 % are from 40 to 49 years the remaining 3.8% are above 50. Regarding educational level, half of the respondents 15.1% are degree holders, 32.4% are diploma holders 32.4% have finished high school; the remaining 20.1% have finished primary school. Regarding the occupation characteristics of the respondents, majority of the passengers were employees; who accounts to 56.6 percent, followed by students which accounts to 27.5 percent, and finally unemployed respondents were accounts to 15.9 percent.

- The study indicated that among the various service quality dimensions the average score of expectations are 3.9 and the overall perception score is 3.07. The score shows a -0.82 difference. That means that the expectations are higher than the perceived service quality. The passengers have the highest expectations about the ability the willingness to help and giving good information (responsiveness) 4.07,followed by the knowledge and behavior of the personnel (assurances) at an average point of 4.1, physical aspects (tangibles) 4.05, to provide good service at the time it is promised (reliability), 4.04 and at last individual attention (empathy) 3.42.Responsiveness is therefore considered the most important dimension of service quality and

tangibles and reliability are considered the least important dimensions. When it comes to gap score assurance has the highest gap score of -1.84 and reliability has the least gap score of -0.34.

- The correlation result shows that there was positive and significant relationship between the service quality dimensions of tangibility, reliability, responsiveness, assurance and empathy and passenger's satisfaction the highest correlation is between empathy and passengers satisfaction (0.761) followed by responsiveness (0.734), and reliability (0.677). The weakest correlation is between assurance (0.126) and tangibility (0.121) with passenger's satisfaction whereas the strongest correlation is between empathy and passenger's satisfaction.

- The multiple regression results showed that passenger's satisfaction is dependent on tangibility, reliability, responsiveness, assurance and empathy. The findings of this study also indicated that empathy was the most important factor to have positive and significant effect on passenger's satisfaction, followed by reliability, responsiveness, assurance and tangibility.

5.2. Conclusions

Both practitioners and academics measure service quality and try to identify those areas that need improvement in order to gain a competitive advantage. Therefore, the study makes an attempt to compare different methods that help ERC managers to decide upon those service quality aspects that need improvement and further investment. In addition, the researcher has examined the relationship between five service quality dimensions and customers' satisfaction in LRT and tried to identify which dimension has the highest impact on customers' satisfaction and which need improvement.

The customer gap is evaluated on the basis of five service quality dimensions encompassing Tangibility, Reliability, Responsiveness, Assurance and Empathy. Based on these five service quality dimensions questionnaire is conducted. The questions posed are all pertaining to service quality attribute aiming to explore the respondents expected and perceived service evaluations in all aspects of the service delivery of the LRT.

This study focused further on the gap between passengers' expectation and their perception of the LRT. The results showed that the overall mean score of perception (4.17) is higher than expectation (4.08) in all dimensions, yielding a negative SERVQUAL gap. Hence, passengers are not satisfied with all dimensions of service quality. Moreover, all dimensions portray negative gap values which signify that the expectation exceeds the actual perceived service in addition, the larger mean gaps in service quality were observed in assurance (-1.84), responsiveness (-0.77), empathy, (-0.67) and tangibility (-0.5), the least gap score being reliability. The result indicated that passengers perceive the services given by LRT far below their expectations.

There is positive correlation between the five service quality dimensions with passengers satisfaction in addition ,the highest correlation is between empathy and passengers satisfaction (0.761) followed by responsiveness (0.734), and reliability (0.677). The weakest correlation is between assurance (0.126) and tangibility (0.121) with passenger's satisfaction. Accordingly, the most important service quality dimension that affects passenger's satisfaction is empathy, which goes to prove that empathy perceived as a dominant service quality followed by reliability.

The impacts of "Tangibility", "Reliability", "Responsiveness", "Assurance", and "Empathy" on passengers' satisfaction with the LRT are .443, 352, 211, 166 and .121 respectively, in their descending order indicating that empathy has the highest impact on passenger's satisfaction.

5.3. Recommendations

Based on the findings of this study, the following recommendations are proposed to help improve service quality to the ERC.

- In order to continuously adapt the proposed service proposition to the changes in customer needs and attitude, surveys like the one conducted in the study should be performed by the ERC. Hereby, the management will obtain an up-to-date understanding of the passenger's attitude, where the internal feedback to the respective employers will guide the implementation of any improvement program.

- To keep passengers secured, the level of overcrowding should be considered while train are operated and staffs should made passenger's aware to keep themselves from thief and ERC should also work in cooperation with the police especially at high demand routes and stations.

- To avoid queue disturbance it is better if ERC start electronic tickets because the system will make the payment system more easy and convenient.

- Station should build with adequate seating capacity in order to passengers wait the train patiently and their comfort can be improved easily in addition to this adequate indicator information which includes the direction of train, timetable and route fare should be posted at station. Indicator of information should also be posted on the side of train.

- On Communication, in many occasions, passengers are never informed whenever there is a delay and they are kept at the station until so late before they are either informed that the train will be late or has broken down thus won't be able to depart. Ethiopian Railways Corporation must be informing the passengers at the point of ticketing in order to make decisions whether to wait or find other means, this way, the passengers will feel valued and Ethiopian railways corporation that has their best interest at heart. From observation, there are instances where some trains are withdrawn without prior communication to passengers should endeavor to always inform their passengers whenever there is a plan to withdraw any train.

- By introducing above mentioned gap analyses, the management will be able to leverage findings from the present passenger's gap analysis, and ensure a holistic approach to the service quality dimensions assessment.

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APPENDIX A

Research question

Questionnaire on service quality and customer satisfaction:

The case of light rail transport in Addis Ababa

Dear passengers:

I am a graduate student at St Mary's university. Currently, I am conducting a research study on service quality and passengers satisfaction in light rail transport in Addis Ababa for the completion of my masters in marketing management.

Your genuine response is highly valuable for the study and there are no identified risks from participation in the survey. The survey is anonymous. Participation is completely voluntarily.

Dear passenger's, this questionnaire is intended to gather information about Service quality and passengers satisfaction and other related issues in light rail. The information that you provide in this questionnaire will be kept confidential and be used only for academic purpose.

Please fill free to contact me for further information at any time through;

Phone: 09 13100365

E-mail: make.terefe1@gmail.com

PART I

General Information

Please circle the number which is applicable to you.

1. Gender

   1. Female   2. Male

2. Age

   1. 18-25   2. 26-35   3. 36-45   4. Above 46

3. Highest education level

   1. High School   2. Diploma   3.Degree   4.MA &above

4. Occupation

   1. Student   2. Employed   3. Unemployed

PART II

EXPECTATIONS AND PERCEPTION ON THE QUALITY OF SERVICE

This part concerns your expectations and perception on the level of service quality. Please show the extent to which you think the railway transport should possess the features described by each statement. Do this by circle numbers '1' means Strongly disagree, '2' Disagree, '3' Neutral, '4' Agree and '5'Strongly agree.

Dimension of service quality	Please indicate the extent to which you agree with the following statements	Level of expectation					Level of perception				
		1	2	3	4	5	1	2	3	4	5
Tangibility	The station appears clean and neat.	1	2	3	4	5	1	2	3	4	5
	The train and the Station is fitted with ICT	1	2	3	4	5	1	2	3	4	5
	Information given at the station and on timetable is clear	1	2	3	4	5	1	2	3	4	5
	Physical facilities at the station and on train are appealing	1	2	3	4	5	1	2	3	4	5
Reliability	Train service given on time	1	2	3	4	5	1	2	3	4	5
	The train when going to stop in every station they updated the passengers during travel.	1	2	3	4	5	1	2	3	4	5
	They inform any failure ahead of time	1	2	3	4	5	1	2	3	4	5

Responsiveness	The passenger's safety secured both on the station and train.	1	2	3	4	5	1	2	3	4	5
	Service is always offered promptly.	1	2	3	4	5	1	2	3	4	5
	Staffs are always willing to help in caring fashion.	1	2	3	4	5	1	2	3	4	5
	There is complaint handling system.	1	2	3	4	5	1	2	3	4	5
Assurance	Staff are courteous	1	2	3	4	5	1	2	3	4	5
	Customers are promptly informed whenever there is delay	1	2	3	4	5	1	2	3	4	5
	Staffs are knowledgeable when answering questions.	1	2	3	4	5	1	2	3	4	5
Empathy	There is availability of enough seating on the train and station	1	2	3	4	5	1	2	3	4	5
	The train journey ride is comfortable	1	2	3	4	5	1	2	3	4	5
	The ticketing process is simple	1	2	3	4	5	1	2	3	4	5
	It is affordable travel to all sections of the society	1	2	3	4	5	1	2	3	4	5
		1	2	3	4	5	1	2	3	4	5
Passengers overall satisfaction		Strongly agree		Agree		Neutral			Disagree		Very disagree

	1	2	3	4	
Your overall satisfaction with the light rail transport					

Thank you for taking the time to fill this survey!!!!

በቅድስተማርያምዩኒቨርሲቲየድህረምረቃፕሮግራም

ለባቡሩተጠቃሚዎችየተዘጋጀመጠይቅ

ዉድተሳፋሪዎች፤

እኔበአሁ ኑሰዓትበቅድስተማርያምዩኒቨርስቲየድህረምረቃ(MarketingManagement)ተማሪስሆንየመመረቂያጥና ቴንምበአዲስአበባባላልባቡርትራንስፖርትችግሮችንናየደንበኞችእርካታዙሪያጥናታዊፅሁፍበማዘጋጀትላይእገኛለሁ፡፡

የዚህጥናትዋናአላማየአዲስአበባባቡርተጠቃሚዎችችግሮችንመዳሰስናእንዲሁምበገልግሎትፕራላይየሚታዩችግሮ ችንበመረዳትለተጠቀሰውችግርመፍትሄመፈለግነው፡፡ይህመጠይቅምበአዲስአበባየባቡርአገልግሎትፕራትእናየደንበኞ ችእርካታዙሪያለሚዘጋጀውጥናትግብዓትየሚሆንጥሬመረጃዎችየሚሰበሰቡበትነው፡፡በመሆኑምበዚሁመጠይቅላይለ ተቀመጡጥያቄዎችየምትሠጡቸውመልሶችለጥናቱ ዉጤታማነትናተቼባጭነትከፍተኛአስተዋፅኦያለውመሆኑንበመገ ንዘብእንድትሞሉኝበአክብሮትእጠይቃለሁ፡፡

እዚህላይየተመለከቱትመረጃዎችለትምህርታዊአላማብቻየሚውሉበመሆናቸውየመላሾችሚስጥራዊነትየተጠበቀመሆ ኑንእያረጋገጥኩመጠይቁንበነፃነትናበታማኝነትእንድትሞሉእጠይቃለሁ፡፡

ለትብብርያበቅድሚያበጣምእመሰግናለሁ

ማስታወሻ:- 1.የእርስዎንስምመፃፍአያስፈልግዎትም

2. ለጥያቄዎቹተገቢነውየሚሉትንመልስያክብቡበት

ክፍል 1

የግልመረጃ

መጠይቁንየሚሞላውግለሰብመሰረታዊመረጃ፡፡

ለሚከተለትጥያቄዎችተገቢነውየሚሉትንመልስበማክበብይመልሱ፡፡

1. ጾታ:-   1. ወንድ   2. ሴት

2. ዕድሜ   1.18-25   2. 26- 35   3. 36-45   4. ከ46 በላይ

3.የትምህርትደረጃ፦ 1. አንደኛደረጃ2. ሁለተኛደረጃ3. ዲፕሎም   4 ዲግሪናከዚያበላይ

4. ስራ፦   1. ተማሪ   2. ሰራተኛ   3. ስራፈላጊ

ክፍል 2

ይህክፍልየእርስዎንአገልግሎቱንከመጠቀምዎበፊትናከተጠቀሙበኋላያገኙትአገልግሎትበተጨባጭምንእንደሚመስል የሚዳስስነው።።

እባከዎአግባብይሆናልበሚሉትየመልስቁጥርላይያክብቡ።።በዚህምመሰረት፦

1. ማለትበፍፁምአልስማማም 2. ማለትአልስማማም   3. ማለትለመወሰንያስቸግረኛል 4. ማለትተስማምቻለሁ
5. ማለትበጣምእስማማሁማለትይሆናል።።

የአገልግሎትጥራትመመዘኛዎች	አገልግሎቱንከመጠቀምዎበፊት					አገልግሎቱንከተጠቀሙበኋላ				
	1	2	3	4	5	1	2	3	4	5
ተጨባጭነት										
የተሳፋሪዎችየባቡርመጠበቂያቦታንፁህነው?	1	2	3	4	5	1	2	3	4	5
የባቡርሠራተኞችአለባበሳቸዉጥሩናንፅህ ናቸዉንየጠበቁናቸዉ ?	1	2	3	4	5	1	2	3	4	5
ባቡሩናየተሳፋሪዎችመቀመያመናፀዊነው	1	2	3	4	5	1	2	3	4	5
በባቡሩናየባቡሩመጠበቂያታዎችፅዱታቸ ዉየሚስብነው?	1	2	3	4	5	1	2	3	4	5

ታማኝነት										
ባቡሩበተጠበቀውሰዓትሁሌምይደርሳል ?	**1**	**2**	**3**	**4**	**5**	**1**	**2**	**3**	**4**	**5**
በጉዞወቅትየባቡሩመረጃዎችለተሳፋሪዎች ይነገራል ?	**1**	**2**	**3**	**4**	**5**	**1**	**2**	**3**	**4**	**5**
የባቡሩሠራተኞችማንኛዉንምብልሽትበቅ ድሚያያሳዉቃል ?	**1**	**2**	**3**	**4**	**5**	**1**	**2**	**3**	**4**	**5**
ተጠያቂነት										
የተሳፋሪዎችደህንነት በ ባቡሩውስጥእናበተሳፋሪዎችየባቡርመጠበ ቂያቦታይጠበቃል?	**1**	**2**	**3**	**4**	**5**	**1**	**2**	**3**	**4**	**5**
ባቡሩየሚገባዉንአገልግሎትበሰአቱይሰጣ ል ?	**1**	**2**	**3**	**4**	**5**	**1**	**2**	**3**	**4**	**5**
ሠራተኞቹደንበኞችንለመርዳት (ለማገልገል) ፍላጎትአላቸዉ ?	**1**	**2**	**3**	**4**	**5**	**1**	**2**	**3**	**4**	**5**
በራስመተማመን										
ሠራተኞቹትህትናአላቸዉ ?	**1**	**2**	**3**	**4**	**5**	**1**	**2**	**3**	**4**	**5**
ሠራተኞቹደንበኞችንለማስተናገድበቂእዉ ቀትአላቸዉ?	**1**	**2**	**3**	**4**	**5**	**1**	**2**	**3**	**4**	**5**
የባቡሩሠራተኞችተተግቢእዉቀትያላቸዉና ማንኛዉንምጥያቄመመለስየሚችሉናቸዉ ?	**1**	**2**	**3**	**4**	**5**	**1**	**2**	**3**	**4**	**5**
የሥራባለቤትነት										
ባቡሩበአመቺየሥራሰዓትለተሳፋሪዎችአገ ልግሎትይሰጣል?	**1**	**2**	**3**	**4**	**5**	**1**	**2**	**3**	**4**	**5**
በባቡሩውስጥእናባቡሩመጠበቂያቦታውስ ጥበቂየተሳፋሪዎችመቀመጫአለ?	**1**	**2**	**3**	**4**	**5**	**1**	**2**	**3**	**4**	**5**

የባቡሩ ጉዞ ምቹት አለው?	**1**	**2**	**3**	**4**	**5**	**1**	**2**	**3**	**4**	**5**
የትኬት አቆራረጥ ዘዴው ለተሳፋሪዎች ምቹ ናቸው ልነው?	**1**	**2**	**3**	**4**	**5**	**1**	**2**	**3**	**4**	**5**
በየትኛውም የኖሮደረጃያለ ሥውባቡሩንም ጠቀምይችላል?	**1**	**2**	**3**	**4**	**5**	**1**	**2**	**3**	**4**	**5**
የደንበኛች እርካታ	**1**	**2**	**3**	**4**	**5**	**1**	**2**	**3**	**4**	**5**
በአጠቃላይ ተሳፋሪዎች በባቡሩ ላይ ያላቸው ደስተኛነት?	**1**	**2**	**3**	**4**	**5**	**1**	**2**	**3**	**4**	**5**