EVALUATION OF SERVICE QUALITY IN AVIATION INDUSTRY USING AIRQUAL MODEL: THE CASE OF ETHIOPIAN AIRLINES PASSENGER SERVICE

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Evaluation of Service Quality in Aviation Industry using AIRQUAL Model: The case of Ethiopian Airlines Passenger Service

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DECLARATION

I, Admassu Moges, hereby declare that this thesis entitled subject **"Evaluation of service quality in the aviation industry using the AIRQUAL model: the case of Ethiopian Airlines passenger service"** submitted by me, for the award of the Degree of Masters of science in Management ; with the specialization in Quality Management and Organizational Excellence ,is my original work and it has never been presented in any university .All sources and materials used in this thesis have been appropriately acknowledged.

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Date: December, 2021 Date: _____

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COLLEGE OF BUSINESS AND ECONOMICS

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"Evaluation of service quality in aviation industry using AIRQUAL model: the case of Ethiopian airlines passenger service".

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ABBREVIATIONS AND ACRONYMS

AIRQUAL	Air Service Quality
AT	Airline Tangibles
CS	Customer Satisfaction
E	Empathy
EAL:	Ethiopian Airlines
I	Image
IATA:	International Air Transportation Association
P	Personnel
SERVPERF	Service Performance
SERVQUAL	Service quality
SPSS	Statistical Package for Social Science
TT	Terminal Tangibles

ABSTRACT

The main purpose of this study was to analyze the relationship between customer satisfaction and service quality in Ethiopian Airlines using AIRQUAL model. The study followed a quantitative research approach and a mix of descriptive and explanatory research design. A cross sectional data sourced from primary sources was deployed in this study. In order to collect the desired data a sort of structured close-ended survey questionnaire was used as instrument of data collection. Convenience-sampling technique was used to select the sample respondents. Out of the distributed 404 questionnaires about 385 were received back properly filled properly making the questionnaire response rate 95 percent. The descriptive analysis result depicted that there is high level of service quality and that is positively related to customers' satisfaction in Ethiopian Airlines. However, in-flight entertainment availability and number of shops in the airport didn't satisfy Ethiopian Airlines customers. In the other hand the regression analysis result also revealed that all the explanatory variables namely; terminal tangibility (TT), empathy (E) and image (I), Personnel (P) and Airline tangibility (AT) have a strong positive and statistically significant effect on the dependent variable Customer Satisfaction (CS). In the other hand personnel as one of the independent variables concluded to has been identified to has significant negative effect on customer satisfaction in the case of organization. The research concludes that Ethiopian Airlines are satisfied with its service. Finally, the study recommended that Ethiopian Airline should facilitate inclusive (including brail) infotainment opportunities in the flight service. Moreover, it is also concluded that terminal tangible (TT) is the most important factor in positively influencing customer satisfaction followed by empathy (E) and image (I), while personnel as one of the independent variables concluded to have significant negative effect on customer satisfaction in the case of organization.Therefore, in order to improve its service quality and enhance customers' satisfaction Ethiopian Airline need to work service quality and enhance customers satisfaction.

Key words: Airline Tangibles, Terminal Tangibles, Customer Satisfaction, Empathy, personnel, Image, Service quality.

CHAPTER ONE

INTRODUCTION

This section of the study presents the background of the study, statement of the problem, research objective, research question, significance of the study, scope of the study, limitation of the study and organization of the paper.

1.1 Background

In today's market rivalry world, addressing required service quality is essential for the airlines' existence, profitability, competitiveness and sustained growth. Accordingly,delivering high quality services to customers has become a compitative marketing requirement for air transporters. In this competition world, air company need ways to keep essential service items and minimize efforts spent on less important service items while still maintaining passenger perceptions of airline service quality (Liou, et.al. 2011). Globalization has made it even more necessary for everyone to be everywhere at any time. For example, IATA (2007) specified that in 2006,2.1 billion people embarked on schedule flight. Strong economists noted that international passenger demand grow by 5.9%. The airline wants to increase market share and improve financial performance in domestic and foreign market so must focus on service quality (Albrecht and Zemke 1995). A necessary consequence is that airlines need to have a valid and reliable measure to better understand the variable likely to have a bearing on the service quality offered by their organization (Ibid). Because service quality is a multi-dimensional phenomenon influenced by context, (Ghobadian et al., 1994), there is a strong need for a useful framework to aid in evaluating the quality of services that airlines provide to passengers.

Service quality assessment is one of the most important measurement methods for business to consider their customers' expectations and desires by measuring their experiences and satisfaction with the services they receive (Ali et.al, 2015). The concept of customer satisfaction and its implications in various industries have been somewhat intangible due to the complex nature of people's perceptions and evaluations (Amin and Nasharudin, 2013). Customer loyalty is much more difficult to achieve in the services industry.With a vision of service quality improvement guideline in mind,airlines will boost quality in key areas and quickly adapt to

changing customer demands,increasing their chance of success competition or even surviving in today's business circumstances. Passengers' interactions with such human and non-human resources during the pre-flight, in-flight, and post-flight production processes effects on its assessments of the service and on the service it perceives and it has received (Combs and Swan, 1971).

The effects of Air Service Quality (AIRQUAL) dimensions of airline service quality have not been fully inspected in previous airline service studies especially in the case of Ethiopian Airlines. Offering high quality service leads to differentiating airline image from challengers and assists in retaining existing passengers and fascinating passengers from other airlines. The introduction of its empirical context by highlighting why it is particular interest to study service quality in Ethiopian Airline and why the researcher choose to use the AIRQUAL model for the study. This clearly guides to stating the research questions and research objectives in order to have a roadmap for the study.The end product of Ethiopian airline passage services is a critical offer to its customers and the main performance pointer on its Service Quality. Airline Service Quality is a key factor along with the competing airlines in a highly competitive environment. Therefore, service quality enhancement is the main points that determines survival of Ethiopian Airline itself.

The Ethiopian Airline is fronting a number of challenges and opportunities since service quality has grown to be a strategic issue for marketing professionals and academics alike. The pressures that most airlines come up under quality service deliverance for their customers. Service quality measurement is vital for strategic planning (Hammasi et al, 1994). Despite the fact that many acadamics have focused on service quality,there are still problems that need to be addressed.One of such controversial issues has to do with service quality measurement and how the process and outcome of it can be practical to marketing strategies. The study related to service quality and customer satisfaction in the airline business has been growing in interest because the delivery of high service quality is crucial for airlines existence and competitiveness.In the airline industry ,a variety of researchers have applied theories and methods related to service quality.However, most past airline service studies have concentrated on the effect of airline service quality at the aggregate construct level, relying mostly on customer satisfaction and service quality to describe customer judgments of services.

Though, in this study, customer service towards service quality is focused on Ethiopian Airline. By applying the measurements of service quality like airline tangibles, terminal tangibles, personnel, empathy and image, the researchers identified the dimension of service quality that affects the customer service. This dimension serves as the most critical dimension for Ethiopian Airlines. By conducting this study, the information and results have practical implications for Ethiopian Airline managers as they can manage company resources to make enhancement for customer service. To this end, there is no scientific study report on the evaluation of service quality in aviation industry using AIRQUAL model in the case of Ethiopian airlines passenger service. Here in this paper, the existing practices of service quality and customer satisfaction in Ethiopian airlines are studied.

1.2 Statement of the problem

To continue a competitive and profitable business in the airlines industry,they need to understand the importance of service quality and customer satisfaction (Biljana and Jusuf, 2011). With the ever increasing competition in the aviation service industry, the delivery of high level of service quality by the airline companies became a marketing strategy for recent decades in particular (Miller, 1993). Consequently, different airlines began to offer various benefits or incentive such as frequent flyer programs, in an effort to construct and maintain the loyalty of customers (Ibid). As different studies stated, a firm that continually delights its consumers enjoys improved customer retention and profitability as a result of increased client loyalty (Wicks and Roethlein, 2009).Other factors,such as promotion,price,and product quality ,are also important.other than service quality that determine customer satisfaction the interest of the research is to undertake a study on service quality alone. It is due to service quality has been proven to be the best factor of customer satisfaction when it comes to service sectors (Janet, 2011). There are different writings that suggest the problems in the service quality of Ethiopian airlines. Besides from passengers feed backs which has been written at customer care departments concerning the airline service quality provided indicate that the airline lacks in area such as: quality of cleanness of the aircraft interior, in-flight meal, customer service and personnel interactions and irregularity handling. The study believes in this highly competitive market environment considering a wide range of airline customers that can choose from major competing airlines like Emirates, Egypt Air, Turkish, Lufthansa, Saudi Airline, Qatar Airways etc and also low cost airlines like Fly Dubai which offer different service packages. Therefore, at this time there must give more attention on

the quality of service providing of an airline. Thus, this research seeks to quantify the effects of service quality provided by Ethiopian airlines. It has also tried to look in to how the quality of service has affected the level of customer satisfaction in today's extremely competitive market.

Different studies revealed brand image, service quality, loyalty, perceived quality, and customer satisfaction as the main factors to improve airlines' performance. However, there are few studies to research the crossover effect of service quality on customer's satisfaction. There are also few studies that studied service quality evaluation by using the AIRQUAL model. Since the SERVQUAL model has more limitation on evaluating the Airline service quality the researcher preferred to apply AIRQUAL model which is very suitable performance indicator of passengers' satisfaction and quality of services delivery by Ethiopian. Empirical studies on service quality evaluation based on AIRQUAL model is scares, therefore, this study expected to fill the gap in this regared.

1.3 Research Objectives

1.3.1 General Objectives

The purpose of this study is to assess the relationship of the factors that affect customer's satisfaction and service quality in Ethiopian Airlines using airline tangibles, empathy, terminal tangibles, personnel and image factors.

1.3.2 Specific Objectives

The specific objectives are:

1. To study the airline tangibles towards customer satisfaction in service quality of Ethiopian Airlines.
2. To examine terminal tangibles towards customer satisfaction in service quality of Ethiopian Airlines.
3. To assess the effect of personnel towards customer satisfaction in service quality of Ethiopian Airlines.
4. To determine the effect of empathy on customer satisfaction in service quality of Ethiopian Airlines.
5. To analyze the effect of Ethiopian Airline Image that can affect airline service quality and customer satisfaction.

1.4 Research Questions

1. To what extent does the airline tangible affect customer's satisfaction in Ethiopian Airlines?
2. In what ways the terminal tangibles affect customer's satisfaction in Ethiopian Airlines?
3. How does empathy affect service quality and customers satisfaction in Ethiopian Airlines?
4. How do personnel affect service quality and customer satisfaction in Ethiopian Airlines industry?
5. What are the effects of Ethiopian Airline Image towards the airline service quality and customer satisfaction?

1.5 Significance of the Study

The outcomes of this study are expected to answer the relationship of the factors that affects customer satisfaction and service quality in Ethiopian Airline. The researcher believes that this study will contribute a lot to Ethiopian Airlines to implement its legal obligations and responsibilities towards service quality and customer satisfaction. The finding clearly shows problems in practicing customer satisfaction and service quality activities in Ethiopian Airline. Thus, the findings and recommendations of the study will suggest towards the better way of implementing service qualities in achieving the airlines success in customer satisfaction practices. The research finding provides realistic endorsements for the problem. Therefore, primarily, the study offers possible recommendations for Ethiopian Airlines. It will also serve as a reference for other researchers who conduct their study in related cases.Because it identifies the issue , it will highly guide concerned governmental and non-governmental bodies to focus on the seriousness of the problem especially service quality and customer satisfaction.

1.6 Scope of the study

The study carried out in Ethiopian Airlines which is found in Bole Sub City, Addis Ababa, Ethiopia. The study mainly focused on evaluating the relationship of the factors that affects the customer satisfaction and service quality in Ethiopian Airline. Ethiopian Airlines provides different services to different customers. These services include passenger transport service, cargo transport service, training service, maintenance repair and overhaul (MRO) services. This research is however limited to passenger transport services. Since this is the main source of

revenue for the airline and where fierce competition among the airlines worldwide exists. Thus, concerning sampling, the data was gathered from Ethiopian Airlines international passengers and documents. Apparently, the respondents were selected and organized by convenience sampling techniques. The study can't access all the literatures concerning customer satisfaction and service quality because it was too much.

1.7 Limitation of the study

In this study, the study has faced financial constraints, inability to access nearby public library, time, inconsistency of network and electric power, the pandemic covid-19 virus crisis, shortage of resources and materials etc. The financial and material resource needed for a large sample size for this study were inadequate. Customers of the airline those who have no flight at the time of the data collection were not considered. The time frame was very limited which limits in-depth treatment of the research topic which have been done by increasing the number of samples from all Ethiopian Airlines airport stations outside Addis Ababa.

AIRQUAL scale was lack of validity because it doesn't follow all the necessary steps needed to validate an instrument, Because of the broad nature of this area of study,it was not possible to access all the literature concerning customer satisfaction and service quality dimensions because it would have been very voluminous. Nevertheless, AIRQUAL model is utilized to measure airline service industry in Ethiopian Airline but this scale is lack of validity because it does not follow all the necessary steps needed to validate an instrument. Because of this problem the AIRQUAL cannot be applied in other airlines.

Even though there are several variables that affect customer satisfaction like consumer behavior and environmental factors in addition to the five variables of service quality dimension, they were not covered under this study.

1.8 Organization of the Paper

The remainder of this thesis is divided into the following sections: Chapter two presents review of related literatures, research model and framework. Chapter Three entertains the methodology of the study. This includes study area and period, research approach, research design, source of data, sampling size, sampling techniques and procedure, data collection tools and procedures, reliability and validity, operational variables, data processing, methods of data analysis, ethical considerations and result dissemination. The data analysis and interpretations are discussed in chapter four. Chapter five presents' discussions, concludes and gives recommendations based on the major findings. bibliography and appendices are also included at the end of this analysis.

CHAPTER TWO

LITERATURE REVIEW

This chapter deals with review of related literature that explains the about the concept of service quality and customer satisfaction, characteristics of service, service quality, Customer's expectation and satisfaction, factors influencing airline service quality, service process attributes, service quality models and conceptual frame work.

2.1 The Concept of Service Quality

Different academics have given different definitions for service and service quality based on their different perspectives. Among these Zeithaml and Bitner (2003) have defined service simply deeds, processes and performances in any sector. In addition, Lovelock and Wright (1999) have presented two approaches to capture the essence of the word service. In the first approach, a service is characterized as an act or performance provided by one party to another, while in the second approach, services are defined as economic activities that generate value and provide benefits for customers at particular times and locations, resulting in a desired change in or on behalf of the service recipient. Kotler (2000) stated that whether the production is tied with a tangible product or not, a service is any act or performance that one party offers to another that is fundamentally intangible and does not result in the ownership of anything. Services are different from physical products and cannot be stored the purpose is to satisfy human needs and wants (Zeithaml and Bitner, 2003). Customer service is described as the act of meeting a customer's needs by providing and delivering competent, supportive, and high-quality service and assistance before, during, and after the customer's requirements are met (Paul,2015). Likewise, service quality has been defined in services marketing literature as an overall assessment of service by the customers. Customers' perceptions of service quality are thought to be based on a comparison of their previous expectations of the service and their perceptions after actual service performance (Parasuraman et al., 1985).Service quality is a customer perception that occurs when the need of service is met above average, more than just adequate. In other words, service quality refers to a service's ability to fulfill a customer's needs. It is a symbol of the customer's appreciated service. In order to gain and keep clients, you must provide excellent service. Apparently, without customers it is impossible to stay in business and without satisfied

customers it is impossible to remain profitable. Everyone in the company benefits from good service, not just the customers. Customers receive external services, while employees and departments receive internal services. As a result, excellent customer support is critical in all industries (Afshan, Sadia and Khusro, 2011).

2.2 Characteristics of service

Before a quality assessment of services can be made, a number of important characteristics of the influencing elements must be established. Firstly, it is significant to note that services are distinct from goods, as they are not physical things (Schneider & White, 2004) but processes (McLuhan, 1964). For example, we say "Airline" when we mean "Air Transportation", we say "Movie" when we mean "Entertainment Services", we say "Hotel" when we mean "Lodging Rental" etc. (Ibid). Based on these characteristics, Schneider and White (2004) emphasized that pure services cannot be seen, touched, held, or stored because they have no physical manifestation, but are considered part of a process or interaction. Berry (1980) distinguished services and goods, services are acts, deeds, performances, or efforts. Whereas, goods are articles, devices, materials, objects or things which you get after paying an equivalent amount of money for the respected goods. As a result, when a consumer purchases a tangible good, they gain its title and ownership is transferred. Alternatively, a service consumer receives only the right to be served for a specific amount of time (Kandampully, 2002). Services are characterized by intangibility, heterogeneity, inseparability (Zeithaml et al., 1985) and in some cases perishability (Hartman & Lindgren, 1993) of elements. Though, these identified four elements distinguish features of service.

2.2.1 Intangibility

Since services are defined as an intangible process, customers can only measure its quality through their own personal perception (Kandampully, 2002). Lovelock and Gummenson (2004) took it a step further by filtering this concept of a service through the intangibility aspects of physical intangibility, mental intangibility, and generality. Intangibility in the physical world The degree of visualization is referred to as mental intangibility, and the accessibility or inaccessibility is referred to as the generality dimension of intangibility. (Gummesson & Lovelock, 2004).Since research has shown that the more tangible aspects of the customer experience can act as a proxy for service quality (Berry, 1983; Zeithaml, 1988), service providers

can handle certain tangible aspects to improve the consumer's perception of service quality (Berry, 1983).Thus, intangibility necessitates a subjective engagement of the consumer in assessing the process.

2.2.2 Heterogeneity

Heterogeneous is another central element in understanding and quantifying a service. The service delivery itself is totally dependent on the staff members' skill level. As a result, businesses face an additional barrier in maintaining unbroken quality standards (Zeithaml, 1985; Bitner et al., 1994). Airline management is especially challenged so far as air travellers have direct interaction with the airline staff, which may diminish the level of service quality, especially the service perceived by its customers (Zeithaml et al., 1993). The limited access to other staff members means that these staff also needs to be excellent problem solvers, often improving to provide the best quality of service as much as possible. In this case, successful companies do their utmost effort to ensure their customer contact: while Staff members are highly trained in people skills and public relations, compared to the non-customer contact staff (Zeithaml et al., 1993). In this sense, heterogeneity indicates the varying demands and expectations of customers that staff or managers in the services production have to meet. This is due to the fact that service production and delivery involves the interaction of service personnel and customers that make delivery of services non identical in nature (Schneider and White, 2004).

2.2.3 Inseparability

As a process that it is intangible then, service is experienced the moment it is delivered (Kotler, 2003). Thus, one important feature is the inseparability of services.This means that when service is readily available, a company must work hard to maximize production utilization by consumers because no additional storage can be produced (Schneider and White, 2004).Airline managers must work hard to leave no empty seat exists as it cannot be inventoried for later use (Ibid). Similarly, a hotel management must try to fill vacant rooms as much as possible as the unfilled room's revenue cannot be recovered.

2.2.4 Perishability

According to Lovelock & Gummesson(2004) services are said to be perishable when they cannot be saved, stored for reuse at a later date and, resold, or returned in the same sense as a product. The perishability of the product is also a major problem for the makers (Hartman & Lindgren, 1993). This aspect of service comes to play especially, when an organization can't fully meet the demands of the consumers (Hartman & Lindgren, 1993). In the case of airlines, service perishability occurs when passengers wait in long lines for the registration process or in the boarding area for long periods of time (Hartman & Lindgren, 1993).

2.3 The 7- P's of service

Marketing activity is usually structured approximately the 4Ps product, price, promotion and place. However, the unique characteristics of services require the addition of three Ps people, physical evidence and process (Mudie and Pirrie, 2006).

- People – Service personnel's appearance and behavior.
- Physical evidence – everything from the appearance, design, layout of the service setting, to brochures, signage, equipment (the tangibility of the intangibility) .
- Process – The actual procedures and flow of activities, as well as how the service is transferred or delivered. Each of the three additional Ps is vital and key importance in services quality and overall image .

2.4 Service quality

According to Kotler et al., (2002) quality is the sum of a product's or service's traits and attributes that influence its capacity to meet expressed or implied needs..Kotler (2003) explains that quality should start from the prospects of customers/passengers and ends at the passengers' perception. This means that the notation of good quality perception is notbased on services provider, but based on the point of view or perception of the passenger. Hence, passenger perception of service quality is a comprehensive assessment of a service benefits.

As a result, service quality is described as the difference between the service anticipated and the customer's perceptions of the actual service provided (Parasuraman et al., 1988), and it has gotten a lot of attention in the field of services marketing research (Caro and Garcia, 2007; Wu

and KO, 2013. As a result, service quality is described as the difference between the anticipated service and the customer's expectations of the actual service given (Parasuraman et al., 1988), and in the subject of services marketing research ,it has gotten a lot of attention (Caro and Garcia, 2007; Wu and KO, 2013).That means, when different service providers in different sectors look for a very large numbers of customers, they should make their company different from other similar company by providing better service. The more similar companies run through competition the better service quality is provided for customers. Shining in service quality and opting for high customer satisfaction is the vital issue and challenge facing the contemporary service industry. Service quality is a hot topic in the public and private sectors, as well as in the business and service industries (Zahari et al., 2008). For example, Airline Service Quality is a crucial differentiator between the competing airlines around the world and especially very critical in a highly competitive environment in different Airline Companies. Therefore, Service Quality enhancement is key and relevant issue that regulates the survival of the airline. As an example the quality service and customer satisfaction of the Ethiopian Airline, is presented below.

2.4. 1 Customer Satisfaction

Consumer satisfaction is a means to measure of how well a company's goods and services meet or exceed customer expectations. Customer satisfaction is described as a sensation that customers get after they have consumed something (Westbrook and Oliver, 1991): It is seen as a key performance indicator with business and is an indicator of how successful the company is at providing products and services to the market. Customer happiness is an abstract concept that varies from person to person and product to product/service in a competitive market where businesses compete for customers.since customer satisfaction is considered a key element of business strategy (Gitman& Carl, 2005). Customer satisfaction is an emotional reaction to experiences related to specific products and services purchased, retail shops, or even molar patterns of behavior such as shopping and buyer behavior, as well as the whole market space (Yi, 1990).The expectation disconfirmation model has gained a lot of empirical attention, according to research (Parasuraman et al., 1988). Customer satisfaction may also be calculated by product or service efficiency (Churchill and Surprenant, 1982) or as a result of service quality, according to other empirical results (Anderson, Fornell and Lehmann, 1994). Customer satisfaction has

risen to the top of the priority list. The importance of customer satisfaction is derived from the generally accepted philosophy for business to be successful and profitable; it must satisfy customers (Bitner and Hubbert, 1994). Customer satisfaction also acts as a deterrent to leaving a business, allowing it to keep its customers. Several studies have shown that acquiring a new customer cost more than keeping a current one.In addition, customer satisfaction also leads to favorable word-of-mouth publicity that provides valuable indirect advertising for an organization (Fornell, 1992). Bitner and Hubbert (1994) concluded that companies could increase profitability by expanding their business and acquiring a larger market share, as well as repeat and referral business, by pleasing customers.Customer dissatisfaction with service quality, on the other hand, is one of the most important factors influencing airline market share loss (Sahar and Sajjad, 2020).Therefore, customer happiness has a direct impact on a company's success. Customer satisfaction is a client loyality so that more satisfied customers are more willing to return and purchase the same product or service.

2.4.2 Customer's Expectation

According to experience, religion, culture and environment customers have different expectations during their transportation. Customers' expectations are what they want to get out of the services.Expectations are the results of prior experience and the advertising that has already made to the public. Service expectation derived from many other sources such as personal needs, perceived service alternatives, customer self- perceived service role, service promises, word of mouth communication, past experience and situational factors beyond the control of the service provider (Parasurman, Zeithaml, & Berry 1985). Similarly, Miller added that customer's expectation may be based on previous product experiences, learning from advertisements and word-of-mouth communication. Furthermore, Zeithaml et al. (1990) said that customer service expectations are based on a number of factors, including the client's own pre-purchase beliefs as well as the opinions of others. Customers may have varying expectations depending on their previous experiences with a product or service. Anderson, Fornell, and Lehmann (1994), who investigated Swedish enterprises, claimed that expectations and customer satisfaction had a positive and significant link.Parasuraman, Zeithaml, and Berry (1988) state that service quality is an antecedent of customer satisfaction but Bitner (1990); Bolton and Drew (1991) suggested that satisfaction is an antecedent of service quality. Even though, both have

different views on the issue, they similar in striving on the outcome in bringing customer satisfaction by improving the service quality.

Airline industry is highly competitive travelling sector in the world and customers are most important stakeholders in the travelling process. Besides, Airlines must exert utmost effort in enhancing service quality, flight safety and other types of relevant services to increase customer satisfaction. Different scholars have stated customer satisfaction in different ways for similar reason which makes the industry profitable and sustainable in the market. Satisfaction plays a key role in the service industry and especially in the travel and hospitality industry (Chang and Chang, 2010). Customer satisfaction is one of the airlines' most significant tactics. Gardner et al., 2004. According to the above both scholars, they both mainly focus on the customer satisfaction mainly in the Airline industry. Because of the advantages it provides to businesses, customer satisfaction has become a primary intermediary goal in service operations (Ranaweera and Prabhu, 2003).Satisfaction could be the pleasure derived by someone from the consumption of goods or services offered by another person or group of people or it can be the state of being happy with a situation (Jenet, 2011). Saha and Theingi (2009) discovered a substantial association between airline service quality and passenger satisfaction in the airline industry, suggesting that the higher the perceived service quality, the higher the passenger satisfaction (Lau et al., 2011). As a result the company will become more profitable and can be competitive in the market. On the contrary, when a customer is not satisfied, he or she is more likely to switch to another airline and not to recommend the airline to friends or family members (Abdullah et al., 2007). Consequently, there will be a reduction of customers and leads the company to become less competitive and its existence in the market will be at stake.

Customer is the key and most important aspect to success for each company economical and commercial activity. A successful company reputation is based on that the company’s long term relationships with customers. Customer satisfaction as an individual perception which is resulted from continual comparisons between company actual performance and customers expected performance (Kisang and Han, 2008). Satisfaction is an overall customers or passengers attitude towards a service provider to the difference between what passengers expect and what they receive.

Customer’s satisfaction in airline service operations has become critically important for sustainable operation. One solution for airlines to gain customer satisfaction is to have high-quality, stable services.To enhance passenger satisfaction, airline service quality has received more attention (Dennett et al., 2000). According to studies, the quality of airline service has an impact on passenger happiness and, as a result, on their purchase. Passenger pleasure and airline service quality are linked (Meysam and Ghasemali, 2016).To this respect, service quality is considered as a critical dimension of competitiveness by enhancing passenger satisfaction to remain competitive and sustainable in the industry. Thus, providing distinguished service quality and high passenger satisfaction is the key and most important issue the airlines service industry in particular. Passenger satisfaction refers to how well a service meets or exceeds a customer's expectations.

Similarly, Abdolah et al. (2007) found a positive association between satisfaction and potential airline use, as well as the likelihood of recommending it to others. In other words, if passangers are enjoyed and satisfied with the services provided they recommend others to use that particular Airline. As a result, passenger satisfaction in the airline business is critical in determining airline service efficiency and maintaining customer relationships (Archana, and Subha, 2012; Lau et al, 2011; Abdolah et al, 2007).

According to Cronin and Taylor (1992), practitioners often evaluate the efficiency of the company's business processes to determine the determinants of overall satisfaction/perceived service quality. They conclude that evaluations of a service provider's results tend to be followed by judgments of service quality and satisfaction. In several cases, it seems that service quality and satisfaction can be viewed as a single entity. According to Kotler (2003), satisfaction is a person's description of feeling satisfied or dissatisfied as a result of contrasting a product's perceived output to its anticipated performance. If the customer's expectations are not met, he or she will be disappointed or unhappy.If the performance is able to meet what is expected and stated, then the customer will feel satisfied. If the performance can exceed what is expected and stated, then the customer will feel very satisfied. Customer satisfaction or discontent is a reaction to a perceived misalignment between expectations and service delivery.Customer satisfaction is determined by customer preferences and service quality.

2.4.3 The relationship between Service Quality and Customer Satisfaction

Most scholars agree that a high level of service quality should be provided by the service provider in order to achieve a high level of customer satisfaction, as service quality is usually considered an antecedent of customer satisfaction (Cronin, Brady, and Hult, 2000).The precise relationship between satisfaction and service quality, on the other hand, has been presented as a complex question, with debate over the distinction between the two constructs and the casual direction of their relationship (Brady, Cronin and Brand, 2002).The misunderstanding surrounding the distinction between the two constructs, according to Parasuraman, Zeithaml, and Berry (1994), can be due in part to practitioners and the common press using the words interchangeably, making theoretical distinctions difficult. The function of service quality and satisfaction has been interpreted in a variety of ways (Cronin and Taylor, 1992; Zeitham, Parasuraman). As a result, perceived service quality is a broad judgment or attitude about the service's superiority. Cronin and Taylor (1992) discovered empirical evidence for the hypothesis that perceived service quality leads to satisfaction, proposing that service quality is an antecedent of consumer satisfaction. Consumer contentment showed to have a higher influence on purchase intent than service quality, leading to the conclusion that service businesses' strategic focus should be on complete customer satisfaction programs.

2.5 Factors influencing Airline service quality

Finding out where customer loyalty lies is another way to deal with customer satisfaction and service efficiency. The following service quality factors were described by Silvestro and Johnston (1990):

- Dissatisfactions or hygiene considerations (what is expected by customer, but will not be a source of satisfaction, e.g. clean service facilities)
- Enhancing factors, also known as satisfiers – (factors that leads to customer satisfaction but failure to deliver does not cause dissatisfaction)
- Dual threshold factors(if such factors are failed to deliver, will cause customer dissatisfaction .However, if supplied above a certain threshold, it will result in contentment..)

Table 2.1: Factors influencing airline service quality

Stage	Service Attributes
Pre-flight services	a) Reservation and Buying Ticket b) Airport Services ➢ Ground staff availability ➢ Signs at airport c) Check in services ➢ Lines at airport ticket counters ➢ Waiting in queue at the boarding gate, and Baggage handling d) On-time departure e) Image ➢ Airline reputation ➢ Type and brand of air craft, availability of different classes f) Security procedures g) Ticket price ➢ Availability of discounts h) Schedule ➢ Frequency of flights and Nonstop flights ➢ Flight cancellation
In flight services	a) Cabin staff service ➢ Attentiveness of service ➢ Courtesy toward passengers ➢ Friendliness of staff ➢ Efficiency and Professionalism ➢ Willingness to "offer" service b) Food Quality ➢ Quality and Quantity of meals ➢ Consistency of meal standard c) Air plane Characteristics ➢ Seat and width pitch ➢ Modem looking equipment ➢ Cabin comfort and attraction
Post Flight Services	➢ On-time arrival, Waiting for baggage, and Lost baggage ➢ Airline responsibility for delayed passenger ➢ Complain system

Source: Referedby the Author based on Khatib, F. (1998)

2.6 Service process attributes

Ticket Purchase: Tickets purchasing happens mostly online or through travel agencies. According to Carlzon (1987) the key aspect of service experience called 'moment of truth' was the first encounter of the customer with the company's front line employees (or, more precisely, first 15 seconds of it). The customer can book flight through phone call. The introduction of online booking process became much easier for passengers since it can give information which is available 24/7 though customers have the ablity to freely choose a varieties of offers.

Pre-flight Services: Even though it varies based on the type of airlines**,** different airlines have a number of services offered before the flight. For example, they sent email or text message reminder before the flight or when the online check-in is open (usually 36 or 24 hours before the flight). In addition, several airlines, such as Finnair, allow passengers to check their luggage a day ahead of time (Taloussanomat, 2012). Furthermore, utilities such as parking lots are critical. It should be easy for a passenger to find parking lot and conveniently get to the airport from there and ease of other transportation options is also valuable. Vienna International Airport, for example, provides simple transportation to and from the airport, with two types of trains, buses to a variety of sites within Vienna, and comprehensive taxi services (ViennaAirport.com, 2012).

Check-in: it is over-the-counter face-to-face interaction and at this moment most of the airlines are doing by applying new technologies. The regular check-in is still available in addition to options to check-in online, via text message or via check-in machines at the airport. However, such infrastructure changes have an impact on service quality perceptions as well as service performance expectations (Chang & Yang, 2008).

Airport Services*: concerning this issues* Rendeiro & Cejas (2006) stated that airport infrastructure affects customer perception of service quality. It occur after check-in and end at the boarding. Safety checks, duty-free shopping, meal facilities, and other services are available at the airport.sometimes, there may or may not be airline lounge or only airport own lounges. It may also include such services as tourist information, currency exchange kiosks, connections to nearby hotels, etc. Airports may also communicate with customers through channels such as email or Facebook to remind them of delays or possible lines.

Departure: On-time departure / arrival is the key to success, and punctuality is one of the most crucial service qualities (Tiernan et al., 2008; Gilbert & Wong, 2003).Carlzon (1987) claims that passengers assess punctuality based on the time of departure rather than the time of arrival. As a result, on-time departure and arrival is a critical component of an airline's service efficiency (Gilbert & Wong, 2003). However, delays do occur, and many of them are beyond a carrier's direct control (e.g. bad weather).

Onboard Services: It is considering in-flight shopping and developing technology that led to introduction of interactive audio and video entertainment system. On its intercontinental flights, for example, KLM provides a wide range of entertainment options, including music, TV shows, language classes, books, and games (KLM.com, 2012/1). Short-haul flights typically have few entertainment options, but some airlines do offer things like free newspapers, in-flight magazines, and online shopping.

Arrival: on-time arrival is a key component of customer's perception of a good service quality. Timely departure covers the importance of timely arrival.

Post-arrival Services: These are:- lost luggage services, help upon arrival (Westwood et al., 2000), etc. Mishandled luggage (lost, broken, missing, or delayed) is a major factor (Gilbert & Wong, 2003).However, it's worth remembering that many airlines outsource their luggage handling to a third-party provider (such as local airport services or a firm that leases out service personnel) and therefore do not provide the service directly. When an airport provides baggage services, a number of factors can influence baggage delivery, including holiday seasons, peak demand, and weather.

Therefore; the carriers should understand the service delivery from the customer point of view. The airline which is giving those services needs to make sure that the delivered service meets the aviation industry standard along with customer satisfaction.

Furthermore, scholars and practitioners highlight important aspects of service quality (Gilbert & Wong, 2003; IATA, 2011).Each of the service quality dimensions has its own set of attributes. Reliability (on-time arrivals, consistent service levels), assurance (safety), facilities (check-in, airport facilities, and aircraft), employees (appearance and attitude), flight patterns (schedule and frequency), customization (individual attention to customers, anticipating customer needs), and reusability (ability to return) are the measurements.

2.7 The Relationship between Service Quality and Satisfaction

To achieve a high level of customer satisfaction, most researchers suggest that a high level of service quality should be delivered by the service provider as service quality is normally considered an antecedent of customer satisfaction (Cronin, Brady, and Hult, 2000; Anderson et al., 1994; Cronin and Taylor, 1992). However, the exact relationship between satisfaction and service quality has been described as a complex issue, characterized by debate regarding the distinction between the two constructs and the casual direction of their relationship (Brady, Cronin and Brand, 2002). Parasuraman, Zeithaml, and Berry (1994) concluded that the confusion surrounding the distinction between the two constructs was partly attributed to practitioners and the popular press using the terms interchangeable, which make theoretical distinctions difficult. Interpretations of the role of service quality and satisfaction have varied considerably (Brady et al., 2002; Cronin and Taylor, 1992; Parasuraman, Zeithaml, and Berry, 1988), they confined satisfaction to relate to a specific transaction as service quality was defined as an attitude. This meant that perceived service quality was a global judgment, or attitude, relating to the superiority of the service.

Cronin and Taylor (1992) argued against Parasuraman et al.'s (1988) categorization. Cronin and Taylor (1992) found empirical support for the idea that perceived service quality led to satisfaction and argued that service quality was actually an antecedent of consumer satisfaction. Cronin and Taylor (1992) asserted that consumer satisfaction appeared to exert a stronger influence on purchase intention than service quality, and concluded that the strategic emphasis of service organizations should focus on total customer satisfaction programs. The authors reasoned that consumers may not buy the highest quality service because of factors such as convenience, price, or availability and that these constructs may enhance satisfaction while not actually affecting consumers' perceptions of service quality. Cronin and Taylor (1994) later conceded that the directionality of the service quality - satisfaction relationship was still in question and that future research on the subject should incorporate multi-item measures.

The authors suggested restricting the domain of service quality to long-term attitudes and consumer satisfaction to transaction-specific judgments. However, Bitner and Hubbert (1994) determined that service encounter satisfaction was quite distinct from overall satisfaction and perceived quality. Adding to the debate about the distinction between service quality and

satisfaction, customer satisfaction has also been operationalized as a multidimensional construct along the same dimensions that constitute service quality (Sureshchandar, Rajendran, and Anantharaman, 2002). Despite strong correlations between service quality and customer satisfaction, the authors determined that the two constructs exhibited independence and concluded that they were in fact different constructs, at least from the customer's point of view.

Brady and Cronin (2001) endeavored to clarify the specification and nature of the service quality and satisfaction constructs and found empirical support for the conceptualization that service quality was an antecedent of the super ordinate satisfaction construct. In addition, the authors found that satisfaction explained a greater portion of the variance in consumers' purchase intentions than service quality. A reverse causal relationship has also been hypothesized between the two constructs. Rust and Oliver (1994) maintained that while quality was only one of many dimensions on which satisfaction was based, satisfaction was also one potential influence on future quality perceptions. In recent years, organizations are obliged to render more services in addition to their offers. The quality of service has become an aspect of customer satisfaction.

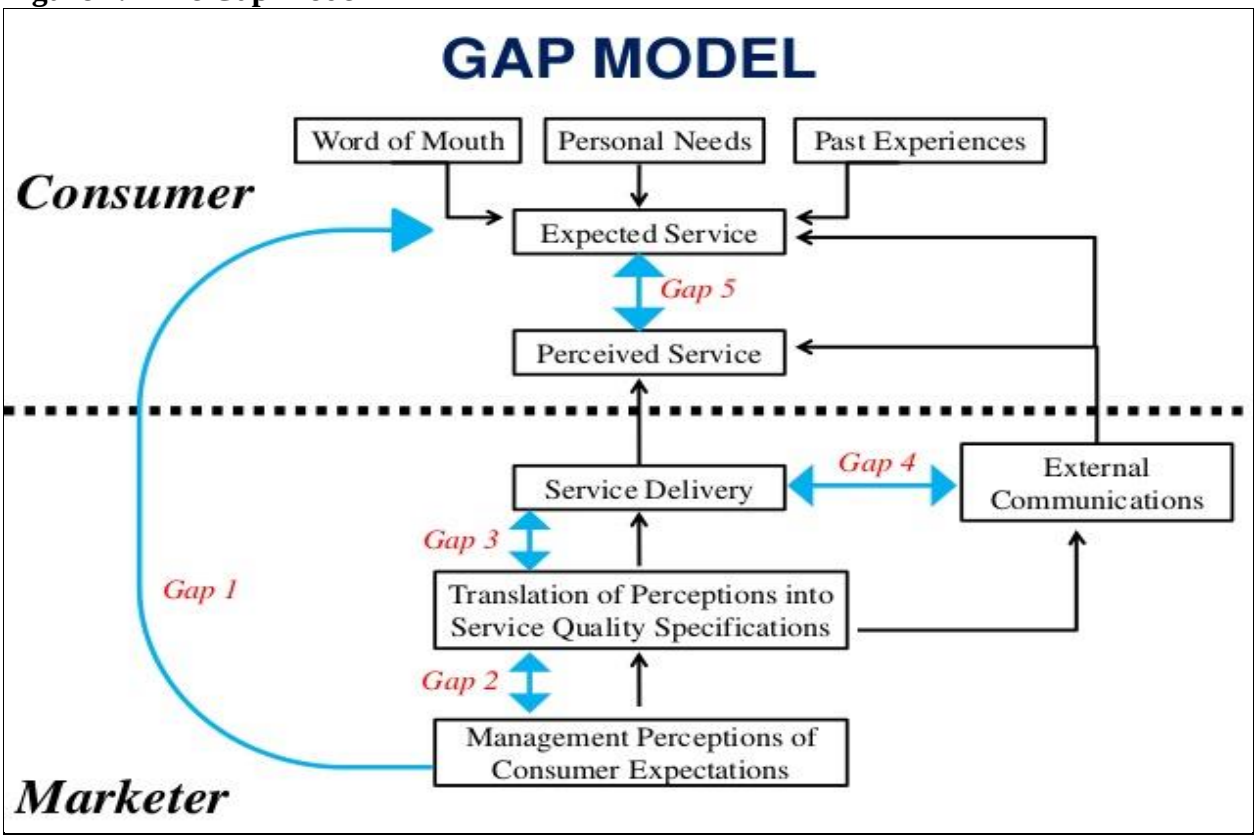
It has been proven by some researchers that service quality is related to customer satisfaction. In relating customer satisfaction and service quality, researchers have been more precise about the meaning and measurements of both satisfaction and service quality. Satisfaction and service quality have certain things in common, but satisfaction generally is a broader concept, whereas service quality focuses specifically on dimensions of service. Amidst these debates, it is clear that there is a strong relationship between service quality and customer satisfaction, it can be concluded that service quality had significant impacts on customer satisfaction. Sureshchandear et al. (2002) found that service quality and customer satisfaction were highly related.

2.8. Service Quality Models

2.8.1 Gaps Model of Service Quality

It was developed by Parasuraman, Zeithaml & Berry (1985) and includes five gaps. It mainly functions as a framework for service firms to improve their service quality (Zeithaml & Bitner, 1996).

Figure 2.1 The Gap Model



The Gap Model (Figure 1) (Parasuraman, Zeithaml & Berry, 1985).

According to Parasuraman, Zeithaml & Berry, (1985) the first gap is found between the consumer expectations and the management perceptions. The service provider might not always understand which elements determine service quality to the customer. The management and the customer may have different perceptions of the needs that the client has and how to satisfy them with a high quality service. The gap between the management perceptions and the service quality specifications is the second gap of the model The company might have problems in achieving or exceeding customer expectations because they are not totally committed to service quality or have to face resource and market constraints. A further gap can exist between the service quality specifications and the service delivery. As services are provided by the employees of a firm, the performance can vary every time. The management cannot ensure a standard of service quality even if guidelines exist for the performance of a service. The fourth gap is the discrepancy between the service delivery and the external communications. The way in which a company communicates its services, for example through media advertising, influences the customer's

expectations. If a firm promises more than it will deliver, the customer's expectations will increase but the perception of quality will be lower in the end if these expectations are not met.The last gap is between the expected service and the perceived service.The main requirement to ensure good service quality is by matching or surpassing customer expectations.

2.8.2 SERVPERF

Cronin and Taylor (1992) presented the performance based measure of service quality, SERVPERF. It is composed of the 22 perception items defined in SERVQUAL scale, and excludes any consideration of expectations.To put it another way, SERVPERF is different from SERVQUAL in that it does not evaluate gap scores because the expectations part of the pairings is not included. While expectations may have a specific impact on consumers' perceptions of service quality, Cronin and Taylor (1992) found that output minus expectations is an inadequate basis for measuring service quality. Other empirical researchers (Babakus and Boller, 1992) also provide evidence that the performance based measure is superior..Furthermore, Zeithaml, Berry, and Parasuraman (1993) agreed that performance-based assessment was preferable when the major goal of the study was to explain variance in a dependent construct.Parasuraman, Zeithaml, and Berry (1994) criticized the SERVPERF instrument, claiming that the marketing literature appears to provide considerable supporting the superiority of basic performance-based service quality indicator.They also revealed that, while the practice of measuring only expectations was common, this did not inherently suggest that performance-based measures of service quality were superior.In fact, evaluations of service quality that include client expectations yielded more information than those that solely consider impressions.

2.8.3 The criticisms of SERVPERF

This model is a variant of SERVQUAL that employs the same set of parameters as SERVQUAL. As a result, the SERVQUAL dimensions construct criticisms will continue to apply to SERVPERF.Forexample,Cunningham. However, Young and Lee (2004) state that SERVPERF has failed to measure airline industry-specific dimensions of service quality because of using the same SERVQUAL dimensions and items.

2.8.4 SERVQUAL Model

According to this model, quality is defined as the gap between customers' expectations and perceptions, in which customer will perceive quality positively only when the service provider meets or exceeds expectations. Based on disconfirmation concept Hussein Abdel Wahab Abdel Rady (2018) designed two questionnaires one for scoring items based on expectation and one for scoring items based on perception. Then they compared customers' outlooks to actual service performance with the marks extracted from the two questionnaires. They recommended expected service is shaped by word-of-mouth communications, personal needs, and past skill.

As Sultan and Simpson (2000) and Shanka (2012) stated in the airline circumstance, SERVQUAL has been used by various researchers to measure the effects of service quality.Similarly, Hoang and Mai(2013), suggested that SERVQUAL can be used for service quality magnitudes which is then adapted or modified to fit the typical features making up that specific company.

Hussein et.al (2018) said regardless of the type of service, consumers assess service quality using similar standards which are grouped into five dimensions. These dimensions are described as follows:

(1) Tangibles. Physical facilities, equipment, staff appearance, and communications materials are all factors to consider.
(2) Reliability. Ability to deliver on promises of a trustworthy and accurate service.
(3) Responsiveness. Willingness to assist customers and provide fast service
(4) Assurance. Employees' courtesy and knowledge, as well as their ability to inspire trust and confidence
(5) Empathy. The firm's customers receive caring, individualized attention.

These five dimensions were resultant from 10 coinciding dimensions (reliability, responsiveness, customization, credibility, competence, access, courtesy, security, communication, tangibles, and understanding) which were regarded as service quality essentials proposed by Hussein et.al. (2018) empirical research.

Customer satisfaction also acts as a deterrent to leaving a business, allowing it to keep its

customers (Amin et al., 2013; Liang and Zhang, 2012).AIRQUAL construct, can produce customer satisfaction and foster expression of door. Suki (2014) claims that airline tangible has no substantial impact on customer satisfaction.This contradicts Leong's (2015) findings, which revealed that airline tangible has a major impact on customer happiness.The gaps found in the two studies' statements will be discussed in this report. In addition, the supporting journal stated that empathy has little bearing on customer satisfaction.This is feasible because consumers' perceptions are not well understood by airlines or airlines are less able to provide personal attention to each consumer.The reference journal, on the other hand, stated that empathy has a major impact on customer satisfaction. This is reinforced by Ali's (2015) study, which found that empathy is the best predictor of customer satisfaction. As a result of various discoveries from the study, the aim of this study is to see how AIRQUAL affects customer loyalty and word of mouth at Garuda Indonesia Airlines.

2.8.5. The criticisms of SERVQUAL model

According to studies that evaluated airline service quality, the most important features are civility, safety, and comfort (Elgin & Nedunchezhian, 2012; Hussain et al., 2015) For measuring service quality in the aviation business, security and safety, as well as communications, were added to the measurement of service quality. So in conclusion, to measure the level of service quality being applicable to the aviation industry, this study based on the SERVQUAL model to include the concept of ‘security and safety’ in ‘reliability’, and ‘communication’ in ‘empathy’.

The SERVQUAL approach has been utilized to evaluate service quality in the majority of past airline service quality studies.However, due to the features of airline service quality, the SERVQUAL 22-item scale representing five dimensions is not suited for measuring all aspects of airline service quality. There are both tangible and intangible aspects to an airline service.Airlines use planes to transport passengers to their destinations, and passengers receive a variety of intangible services from airlines, such as on-time performance, in-flight service, and service frequency, among other things.

2.8.6 Measuring Airline service quality (AIRQUAL model)

According to Amin et al., (2013) the purpose of a measurement model is to explain how well the detected indicators assist as a measurement instrument for the latent variables. The wide criticisms of SERVQUAL as a process-based assessment of service quality, a new measurement scale was sophisticated by A. Fananiar, F.N., Widjaja & A.P. Tedjakusuma (INSYMA, 2020) AIRQUAL. The major motivation for the creation of AIRQUAL was that previous service quality measures had been established and evaluated in a variety of ways.They explored AIRQUAL could successfully evaluate the airline service quality of airline passnger's impressions.This scale has five separate dimension: airline tangibles,terminal tangibles,personnel,empathy and image.These five parameters of the AIRQUAL instrument inquiry about various aspects of airline service.For example, the first dimension of AIRQUAL, airline tangibles, includes questions about the interior of airline aircraft, the quality of meals on board, the cleanliness of plane seats, the comfort of plane seats, and the quality of plane air conditioning (Ibid).The second dimension of AIRQUAL, Another key aspect of AIRQUAL terminal tangibles, contains questions more related to airports. Respondents are asked about the availability of shops in the airport, the availability of parking spaces in the airport, the size of the airport, the air-conditioning of the airport, the effectiveness of signage in the airport, the availability of trolleys in the airport, the efficiency of the security control system in the airport, the uniforms of the airport staff, and the comfort of the airport's waiting hall in this dimension. F.N. Widjaja, A.P. Tedjak, and A. Fananiar.The third factor of AIRQUAL, personnel, was designed to assess staff working in airlines. This dimension contains questions about employee attitude, knowledge, experience, and degree of education, personal care of staff for all customers, and airline reservations and ticketing transactions that are error-free.

The fourth component of AIRQUAL is "empathy," which addresses issues such as on-time departures and arrivals, transportation between city and airport, luggage care, airline company office locations, and the quantity of flights available to meet passengers' needs. The SERVQUAL scale has been used by a lot of people by both academics and practitioners across industries in different countries (Ali et al., 2013; Wu and Ko, 2013). Image is the final characterstics of AIRQUAL that is relevant to the airline service quality. This dimension includes questions about the availability of low-cost ticket options, ticket price consistency with

a specific service, and the airline's image. (Ali et al., 2013; Wu and Ko, 2013) investigated if the AIRQUAL could capture passenger happiness as well as other components. Both these studies (Ali et al., 2013; Wu and Ko, 2013) found that better airline service quality, as measured by AIRQUAL, has statistically significant effect on passenger satisfaction. Liang and Zhang, (2012) discovered that airline service quality ,as measured by ,had significant beneficial effect on passenger satisfaction behavioral components.

2.8.7. AIRQUAL Dimensions

2.8.7.1 Airline Tangibles

The first AIRQUAL dimension is known as airline tangibles, and it is often regarded as one of the most critical dimensions in order to please airline passengers. In this dimension, physical characteristics that can be associated with an airline's service quality, such as the quality of the airplane's equipment, the interior's clineanliness and the comfort of the seats, are mostly requested.It can be expected that the better the quality of the airline tangibles, the higher the level of customer satisfaction.

2.8.7.2 Terminal Tangibles

The services rendered at the airport are included in the terminal tangibles dimension. This dimension includes, the cleanliness of airport restrooms, the efficacy of sign systems, the availability of shops and trolleys, and a dependable security control system.According to Farooq (2018), they are considered to directly influence the airline's overall image building. In the other side, the terminal tangibles dimension and the customer's satisfaction with the airline could be independent from each other because many airlines use the same airport and thus provide the same terminal tangibles. Nevertheless, the hypothesis in this study tests the first perspective. As a result,it is assumed that the higher perceived quality of the terminal tangibles ,the higher the degree of passenger happiness.

2.8.7.3 Personnel

Personnel have an important role in the provision of a service because they are the ones that take up contact to the passengers Chen et. al, (2017). Customer contact through personnel is the main difference between manufactured products and services. The behavior of the workers has a huge

impact on the passengers experience and perception of the service and therefore shapes their quality assessment (Ibid.). Each customer-employee provides the employee with the opportunity to either satisfy or dissatisfy the traveler (Ringle, Sarstedt& Zimmermann, 2011). As a result,airline employees are an important part of the industry and can be the determination of the customers' satisfaction Chen et.al, (2017). The attitudes, behaviour, and experience of the airline staff are the primary factors that influence customers' expectations of the service quality of their contact with the airline (Ibid.).In essence, the personnel components of assesses the level of service provided to customers by contaci staff (Farooq et al., 2018).

2.8.7.4 Empathy

According to Farooq et al., (2018) empathy is an important element of service quality regardless of the industry the company functions in. The level of understanding the customers' wants and concern for their well-being shown by the personnel is an integral part of the passengers' quality evaluations (Ali et al., 2013; Wu and Ko, 2013).The AIRQUAL model items included in this dimension ask about problem-free service such as careful luggage handling, clearly communicated compensation schemes or punctuality (Alotaibi, 2015; Farooq et al., 2018). These items were also used in other studies that worked with the AIRQUAL scale. Nevertheless, it is questionable whether the items can be put together into one dimension. Despite the fact that it is unlikely, empathy has been found to be a driver for customer satisfaction in other studies (Moslehpour et al., 2017).

2.8.7.5 Image

The airline brand image apperars to be playing a relevant role in the passengers' assessment of the service quality. The way in which customer perceives the airline, for example through the image, influences the expectations that the passenger has of the flight (Elgin & Nedunchezhian, 2012; Hussain et al., 2015). Further more,a favourable brand image might bust service quality because passenger will find excuses for the negative experience that he has undergone (ibid.). Image dimension of the AIRQUAL scale contains items such as promotional offers, value for money or the overall perception of the airline's image flight (Elgin & Nedunchezhian, 2012; Hussain et al., 2015). However, the solidarity of the items should be critically reflected. For example, the belonging of value for money to this dimension can be debated about.

2.9 Empirical Literature

Service quality studies in different organizations have mostly adopted the five dimensional SERVQUAL measurement instruments (Parasuraman et al. 1985, 1988). This study focused on airline industries and the researcher review some empirical studies in the area and described below:

Sheng et.al (2001) studies 'The evaluation of airline service quality by fuzzy MCDM'. The research was carried out in Taiwan in order to overcome the issue. 450 questionnaires were sent out to licensed tour guides in 29 general travel agencies: among the 450 surveys, 211 were returned for a return rate of 47%. The reason of restricting the qualification of respondents was that the researcher wished respondents had the experience of traveling with all airlines to be evaluated. According to the study, the licensed tour guides were the most natural choices due to their frequent travels. The demographic statistics were: 21% at the age of 21–41 and 99.05% received at least high school education. The researcher found that the most concerned aspects of service quality are tangible and the least is empathy.

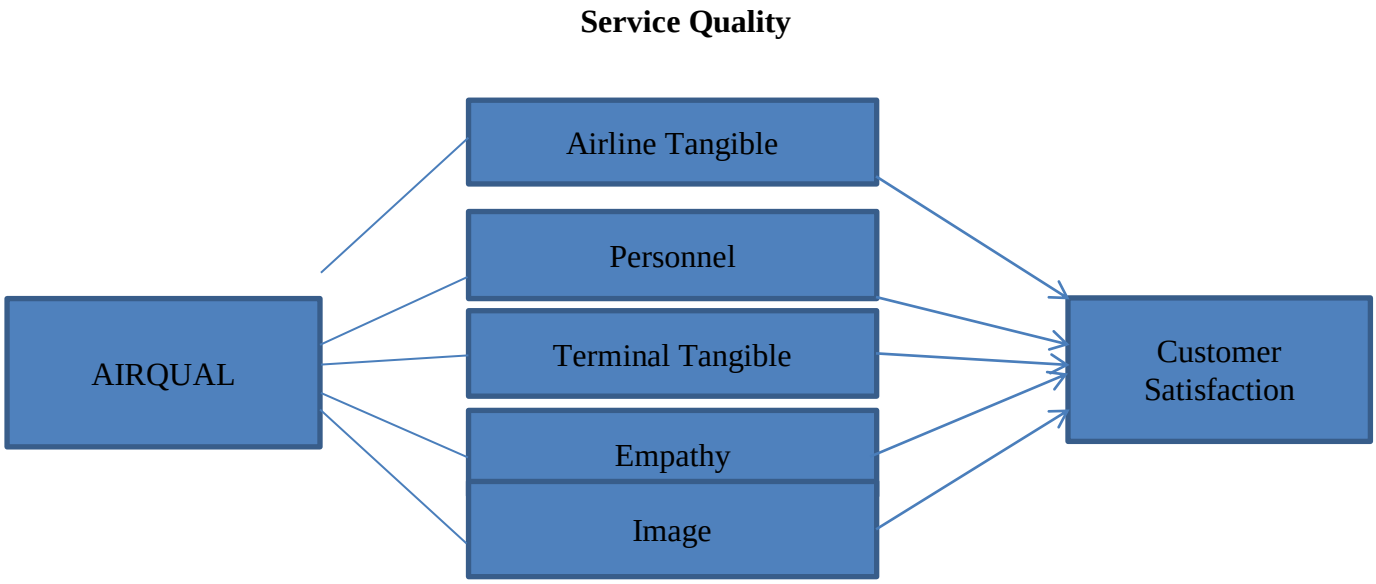
Sahar T. and Sajjad A., "Evaluation of passenger satisfaction with service quality: A sequential method applied to the airline industry" (2020)..The study's goal is to figure out how airlines can please their passengers by taking into account the wide range of pre-purchase expectations. The research proposes a novel model for identifying passengers with identical aspirations by clustering air passengers. The Kano model was used to calculate and transform the passengers' perceptions of service quality attributes in each cluster into quantitative degrees of customer satisfaction. Finally, Importance-Satisfaction Analysis was employed to finding that which service quality indicators fall into keep up the proper work.Ekaterina T. (2012) conducted research on "Measuring Customer Expectations of Service Quality: the Case of the Airline Industry". The study aims to discuss the concept of service quality and find out the different approaches to measure service quality.Customers trust basic amenities in the service process, such as information on tickets and flight schedules, contact in the event of a flight delay, and no delays in baggage delivery, according to the report. The research showed that no significant differences were found between male and female passengers, expect for one case: male respondents evaluated employees' appearance and attitude as more important compared to

female respondents. Finally, based on the close similarities between some of the attributes, it can be concluded that the respondents do not distinguish between in-flight and ground facilities, and consider the whole air travel experience.

2.10 Conceptual Framework

This study framework is adapted from AIRQUAL model presented by (Ali et al., 2013; Wu and Ko, 2013). The airline tangibles, terminal tangibles, staff, empathy, and image were all included in this model. AIRQUAL model was used to overcome the problems of the existing service quality. This study considers that the dimensions of service quality as the independent variable and customer service satisfaction as the dependent variable. In addition three control variables: gender, frequency of flight, and income from socio-economic variables were included to the framework.

Figure 2.2 Conceptual Framework



Source Ali et al., 2013; Wu and Ko, 2013

CHAPTER THREE

METHODOLOGY

A reliable study is impossible without adequate and legitimate methods. Thus, research is a process that involves the collecting, recording, analyzing and interpreting of information, and it is all about providing answers to research questions and developing knowledge (Wilson, 2014). Yin stated that research methodology is one of the most important aspects in the research process to perform the research (Yin, 2009). This chapter includes study area and period, research approach, research design, source of data, sampling size, sampling techniques and procedure, data collection tools and procedures, validity and reliability, operational variables, data processing, methods of data analysis, ethical considerations and dissemination of results.

3.1 Study Area and period

Addis Ababa is the capital city of the Federal Democratic Republic of Ethiopia with an area of 540 km2, between 9^0N latitude and 38^0 E longitudes at range of 2200-2800 meter above sea level. The study takes place in Ethiopian Airlines, which is found in Bole Sub City, 6 km southeast of the city center. Due to the Airline has been expanding its branch in multinational diversity countries/regions in the world and or Ethiopia with long years of experience in transport sector; it focuses only in Addis Ababa city, Bole International Airport. The time dimension of this study was from December 2020 to September 2021.

3.2 Research Approach

The researcher has used quantitative research approach, as it is conduct in social science in doing deductive reasoning the whole population facts from the sample. Quantitative research employed as strategies of inquiry such as experiments and surveys, and collect data on predetermined instruments that yield facts through statistical data (Ivankova & Plano Clark, 2018). In addition,Aliaga and Gunderson (2002) define quantitative analysis as “an investigation into a social problem that explains phenomena by collecting numerical data and analyzing it using mathematically based methods” e.g. in particular statistics”. Similarly, Walliman (2011) stated that quantitative research deals with data in the form of numbers and uses mathematical operations to investigate their properties. According to Aliaga and Gunderson (2002),

quantitative research that define as "an inquiry into a social phenomenon that describes phenomena by gathering numerical data and analyzing it using mathematically based methods". In most quantitative studies, we want to see how many cases of a population fall into various categories of interest (Neuman, 2014).

This quantitative methods in which descriptive research is a type of quantitative research that involves making careful descriptions of phenomena and current trends, concerned primarily with determining ‘what is going on’ (Gall, 2003:173).Thus, descriptive survey method is useful to describe the phenomena and current relationship of the factors that affects the customer satisfaction and service quality in Ethiopian Airline particularly the survey method also help the researcher to assess the practices and the challenges through the basic questions. Particularly, the factors include airline tangibles, terminal tangibles, personnel, empathy, and image.

3.3 Research Design

A research design is a study plan that specifies the procedures that must be followed by the researcher in order to achieve the research goal and test the hypotheses. Similarly, many researchers (Churchill and Iacabucci, 2005) call it a blueprint for a research to be followed in order to successfully implement the research. The major methodology driving the study is research design, which consists of different and specialized research methodologies that are most suited to address the research issue (Comack, 1996). It justifies and explains the type and technique of data collection, the information source, the sampling strategy, and the time-cost restrictions (2012, Saunders). There are three types of research design based on the study purpose: exploratory, descriptive and causal (David, 1987).The research has been explanatory as it is focused on attempting to test a causal (attributes of service quality) and effect (customer satisfaction).The hypothesis is tested and the research between variables is examined . Further, Saunders (2012) stated that quantitative research gives greater emphasis on numerical data and statistical tests to reach on conclusion that can be generalized.

According to Creswell (2003), questionnaire offers a quantitative or numeric overview of a population's patterns, behaviors, or opinions through analyzing a sample of that population. From sample results, I generalize or make claims about the population. Among the two types of survey which are cross sectional and longitudinal survey the researcher used cross sectional one.The

goal of a cross-sectional study is to determine the frequency or level of a specific future , such as a specific exposure, satisfaction or any other service-related event, in a defined population at a particular point in time. Independent and dependent variables are measured at the same point in time using a single questionnaire.Though, to achieve this research objective statistical analysis was applied to obtain the findings.As a result,the research design for this study is quantitative . This study has quantitative nature because it uses statistical tools to be able to investigate the relationship between the factors related to service quality and customer satisfaction.

3.4 Source of Data

For the analysis, the researcher used both primary and secondary data sources. Ajayi (2017:3) distinguished and listed primary and secondary data and its effect. Based on this, primary data was collected from questionnaires which contained number of closed ended questions based on the related literatures. The questionnaire respondents were international passengers of Ethiopian airlines: secondary data were collected from different documents of Ethiopian Airlines and other libraries text books, different books, organization intranet, newspaper, magazines, well previous studies, photo graphs, journals, brochures, press kits, banners, internet, event data, articles, company written documents and audio video sources. This information was collected by visiting places like libraries, offices and internet cafes. The actual data collection was made by using a self-administered questionnaire. The researcher distributed at the working time and collected the questionnaires at the same days. By considering that all of the respondents are educated, the entire questionnaires were prepared in international language, English. Moreover, participants of the study were informed about the objective of the study and they were also be notified of about the confidentiality of their response.

3.5 Sampling Techniques and Procedures

3.5.1 Sample Size for Total Population

The study used non-probable sampling design. Because of large number of the total population, convenience-sampling technique was used to select the sample respondents. According to Kothari (2004), convenience sampling occurs when a population factor is chosen for inclusion in a sample based on the ease of access. Although, non-probability sampling has problems related to selection bias, in small inquiries and researches by individuals, the sampling technique can be

adopted and can be done wisely (Ibid). Non-probable sampling, on the other hand, is a method in which a sample is taken from a part of the population that is near at hand, easily accessible, or convenient (Bhattacherjee, 2012).It's a simple, convenient, and cost-effective method, but it has one major flaw: it's not representative of the population (Churchill, 1995; Saunders et al., 2012).Thus, it used to select respondents from Bole International Airport terminal (respondents from the waiting and arrival areas where international passengers were waiting for departure and arrival). As of January, 2019 Ethiopian airlines has 125 international routes in Africa, America, Europe, Gulf, Middle East and Asia. As per data obtained from Addis Ababa airport, there was no clear figure that shows the total number of passengers, because once the passengers were used the service they might not be come again. Based on the formula of Bill Godden, (2004) for determining sample size from infinite Population (where the population is greater than 50,000). There for, the researcher used the following formula:

$$SS = \frac{Z^2 \text{ X } (P) \text{ X } (1\text{-}P)}{C^2}$$

SS = Sample Size

Z stands for Z-value (1.96 for a 95 percent confidence level)

P = Percentage of the population that made a decision (0.5)

C = Confidence interval, expressed as (0.5)

$$SS = \frac{1.96^2 \text{ X } (0.5) \text{ X } (1\text{-}0.5)}{0.5^2}$$

SS= **385**

5% non-response rate= **19**

The final sample size = **404**

Thus, four hundred four passengers who were travelled using Ethiopian airlines were participated. All convenient passengers of Ethiopian Airlines who were volunteer to participate in the study were included at the time of data collection; and those who were not volunteer passengers during the data collection were excluded from the study. In other words, the passengers who were taken as respondents from the infinite population that were international passengers of Ethiopian airlines who had been travelling at least one double-trip international

flight in the past twelve months by Ethiopian airlines. Ethiopian Airlines' overseas passengers served as the respondents.

Population characteristics in relation to geographical location there were passengers from Asia , Europe, North America, South America ,and African contenents. Concerning passngers preference class of service majority of them were economic class (moderate ticket price) and few passngers preferred business class (high ticket price). Based on accadamic background most of the travellers were educated at least finalize high school. Majority of the population were speak at least English languages but there were few passngers who spoke more than one language.
To make the sample representative the respondents were from Addis Ababa, the capital city. Bole International Airport, Addis Ababa terminal is the international travel hub for Ethiopian airlines, and passengers of all 118 international destinations in 73 countries routes. The questionnaires were distributed and collected in two week from December 20-30 /2020.

3.5.2 Sample and Sampling Techniques

The elements which had been selected in this study were the passengers/customers who were at the age category of 18 years old and above because they were able to make decision by themselves and possessed the ability to rate on the quality of service. The selected respondents were heavily rely on the services provided by Ethiopia Airlines companies and at least traveled once in a year. Travelers below 18 years old were not entitled to take part. If the passenger had never had a travel experience using Ethiopian airline before, the immediate next person was asked to fill the questionnaire. So that unsuitable candidates were disregarded and suitable candidates would be remained in this study for better accuracy and reliability in accordance to the purpose of study.

3.6 Data Collection Procedures and Tools

3.6.1 Data Collection Procedures

The secondary data was study sourced from Ethiopia Airline international passengers, and documents. Thus, different documents that were published, broad casted and online in Ethiopian Airlines website were analyzed. Similarly, questionnaires were distributed to the Ethiopian Airlines selected international passengers.

3.6.2 Data Collection Tools

3.6.2.1 Document Analysis

There are various methods of data collection usually used in different research studies. Data from two or more sources increase the research credibility. According to Wimmer and Dominick (2010) an efficient technique to investigate the content of the study is to do a content or document analysis.“ content analysis is frequently used in conjunction with other research approaches as a sort of triangulation , or the investigation of the same phenomenon using many methodologies, (Denzin, 1970, p. 291; Bowen, 2009, p. 28).”.The researcher tries to provide a "confluence of evidence that breeds legitimacy" by triangulating data. (Eisner, p. 110, 1991). One of the objectives of this study is to identify the relationship of the factors that affects the customer satisfaction and service quality in Ethiopian Airlines. Based on the research objectives, documents that are subjects of analysis were collected from already identified Ethiopia Airlines offices. Looking the documents helps to see the value of customer satisfaction and service quality. In this regard different books, organization intranet, newspaper, magazines, well previous studies, photo graphs, journals, audio video, brochures, press kits, banners, internet,event data, articles and companies written documents related to my study were purposely selected and clearly scrutinized. These documents help to increase the knowledge of the researcher in the topic under the study.

3.6.2.2 Questionnaire

Dawson (2002) described three different types of questionnaires and their application. Among these, in this research I used closed ended questionnaire: closed ended questionnaire with tables to tick. This clearly helps to gather factual and relevant data from the respondents. The closed ended questions were designed to get definite answers and were used for simplicity. The questionnaires were collected from Ethiopian Airlines passengers that were selected while traveling through Addis Ababa Airport.The research instrument is based on Ekiz et al(2006) . AIRQUAL model, which aims to minimize respondents' dissatisfaction while increasing response rate and quality.. The scale of measurement for the study is interval scale. An interval scale of measurement is based on ordered interval that are of equal length and the zero value is arbitrary. Five points Likert scale were used which include weights for Agreement: 1= strongly disagree 2= disagree 3= Neutral 4= agree 5= strongly agree.

3.7 Measurement Scale

No.	Scale	No. of Items	Source
1	Airline Tangibles	7	Nadiri ,Hussain,Ekiz,& Erdog'an,(2008), Saha & Theingi, (2009)
2	Terminal Tangibles	11	Saha & Theingi , (2009) Nadiri ,Hussain,Ekiz, & Erdogan,(2008)
3	Personnel	7	Saha & Theingi,(2009)
4	Image	4	Nadiri, Hussain, Ekiz, & Erdog˘an,(2008)
5	Empathy	8	Zeithmal et al., (1988) ,Delone and Mclean (2003); Liu & Arnet, (2000)
6	Customer satisfaction	6	Akamavi, Mohamed, Pellmann, & Xu, (2015)

3.8 Validity Analysis

Validity in research refers to how accurate an instrument is at measuring what it is trying to measure. Validity checks about the accuracy of the measures to the data through content validity, criterion related validity, constructs validity. It also concerns the extent to which the research measures what it asserts to measure without bias or distortion. Though, each attribute was derived from relevant literature to ensure the validity of the questionnaire. The questionnaire were derived from the adapted model and checked with previous related studies, inter vision group of friends and academicians. Generally, the tools were developed based on the literature review and in this study the researcher used content validity to analysis to what extent the instrument provided adequate coverage of the subject under study of the survey items. All accepted comments were included in the final version of the tools.

3.9 Reliability Analysis

Reliability is conducted to assess data quality. A reliability test is used to determine if measurement objects are consistent (Cerri, 2012).Cronbach Alpha was used to test the reliability of multi-items. This study used reliability statistics to measure the reliability of the data used in SPSS software version 24. In order to test the internal consistency of variables in the research instrument Cronbach's alpha coefficient were calculated. For this study, a Cronbach's alpha score of 0.977 or higher is considered adequate to determine reliability. The reliability in this study as assessed by coefficient alpha was found to be 0.977, as indication of acceptability of the scale for further analysis.

Table 3.1 Reliability Test Results with Cronbach's Alpha

No	**Description of the title of the questionnaires**	Number of items	**Reliability coefficient**
1	Airline tangibles	7	0.975
2	Terminal tangibles	11	0.989
3	Personnel	7	0.980
4	Empathy	8	0.982
5	Image	4	0.969
6	Customer satisfaction	6	0.971
7	**Overall reliability**	**43**	**0.977**

Source: SPSS out put

In the conducted study, for each variable Cronbach's Alpha value was tested based on the number of questions. A coefficient of 0.90 and above indicates a highly reliable instrument whereas coefficient ranging from 0.70 to 0.90 is acceptable for most instruments. Hence, the results indicated that the instrument was highly reliable with reliability coefficient (**α**= 0.977) and at least acceptable for each variable. This indicates that the instrument was trustworthy.

3.10 Operational Variables

Dependent variables:-Customer satisfaction is described as passengers' feedback on Ethiopian Airlines' service.

Table 3.2 Operational definition of independent variables

Independent variables	**Definitions and measure**	**Expected effect on passengers satisfaction**
Airline Tangibles	It is the interior part of the aircraft used by the airlines that include the quality of the plane, the cleanness of the planes toilets the cleanness of the plane seats, the comfort of the seat and the quality of the meal in the plain.	positive
Terminal tangibles	The space used or intend to be used for terminal check –in conveniences ,clieanliness of airport rest rooms, availability of airport stores,and airconditioning of the airport and other service buildings.	positive
Personnel	Is designed to evaluate employees working performance in the airlines including employees' attitude and knowledge, personal care of employees, and airline error-free reservation and ticketing transactions.	Positive
Empathy	Connected with the issue such as punctuality of the departureand arrivals, transportation between city and airport, loyalty Program, care paid to passenger's luggage.	Positve
Image	Defined by consistency of ticket price with a given service, image of airline company and availability of low price ticket Offerings.	Positive

Source: research literature review

3.11 Data Processing

In this analysis, the data was processed using both a manual and a computerized system.In the data processing procedure editing, coding, classification and tabulation of the collected data was implemented.

3.12 Methods of Data Analyses

In order to analyze the data mixed methods of data analysis was used. The document results were analyzed with simple sentence structures. It also compiled the same data together in a comprehend way to understand easily. After collecting all the necessary data, coding editing, proofreading and analyzing were made to eliminate errors and ensure consistency. This was done to make tabulation work easier. The data that gained from the questionnaires were analyzed and interpreted using statistical package for social science (SPSS) version 24. As a result, a descriptive analysis was conducted by employing different methods. Different types of graphs, tables and figures were used according to the information obtained. Then, discussion was made by triangulating the research objectives, model and the combined data.

3.13 Ethical Considerations

Most ethical issues might happen in researches protection from harm, informed consent, right to privacy, and honesty with professional. This study is ethically clear from Addis Ababa University Faculty of Business and Economics: Department of management. The researcher used the data from Ethiopian Airline passengers that was collected through questionnaire; permission was obtained from each. To maintain the confidentiality of the information provided by the respondents, the respondents were instructed not to write their names on the questionnaire and assure of the responses will be used only for academic purpose and keep confidential.

3.14 Dissemination of Results

The finding of this study will be presented to Addis Ababa University Faculty of Business and Economics: Department of management and will be disseminated to Ethiopian Airlines Library. Further effort will be made to publish the findings in reputable journals and it might be presented in national and or international conferences or workshop.

CHAPTER FOUR

DATA ANALYSIS AND DISCUSSION

This chapter of the study concerned on the analysis, interpretation and discussion of data collected through questionnaires. The chapter is constituted the questionnaire response rate, the demographic information of the respondents and the findings and discussion of the descriptive and inferential analysis.

4.1 Questioner Responses

A total of 404 questionnaires were distributed to the sampled respondents, out of it about 385 of the distributed questionnaires were collected properly filled. Accordingly, the response rate was found to be 95 percent which is adequate to come up with valid output of the study.

4.2 Demographic Information of the Respondents

The demographic information of the respondents deals with the sex, age, educational background, reason for flight, means of air ticket bought and class usually travel in by the air of the respondents.

Table (4.1) shows the discussion of the research results begins with a brief demographic profile of respondents in terms of gender, age, education background, air travel, return flights during the last 12 months, income per year in $, class of air travel, booking of tickets, and airline flying frequently. Based on the above data 216 (56.1%) of the respondents were male whereas 169(43.9%) of them were female. Likewise, most of the respondents 112(29.1%) were aged between 26- 33 years and the least of the respondents 21(5.5%) were above 50 years of age. From this analysis one can say that the majority of the respondents are youngsters. In the other side, regarding education background, the mass of the respondents 152(39.5%) qualified Bachelor' Degree while the least of the respondents 40(10.4%) qualified high school education: more than 90% of the respondents qualified diploma and above.

Table 4.1 Socio-demography of respondents

Items	**Category**	**Frequency (N=385)**	**Percentage**
Sex	Male	216	56.1
	Female	169	43.9
Age	18-25	96	24.9
	26-33	112	29.1
	34-41	86	22.3
	42-49	70	18.2
	above 50	21	5.5
History in Education	High school	40	10.4
	Diploma	24	6.2
	BA/MSC	152	39.5
	MA/MSC	120	31.2
	PHD	49	12.7
Main reason for fly	Business	250	64.9
	Leisure	48	12.5
	Medical	48	12.5
	Education	39	10.1
Means of air ticket bought	Via internet	330	85.71
	Via airline company offices	55	14.28
Class usually travel in by the air	Economic class	293	76
	Business class	77	20
	First Class	15	4

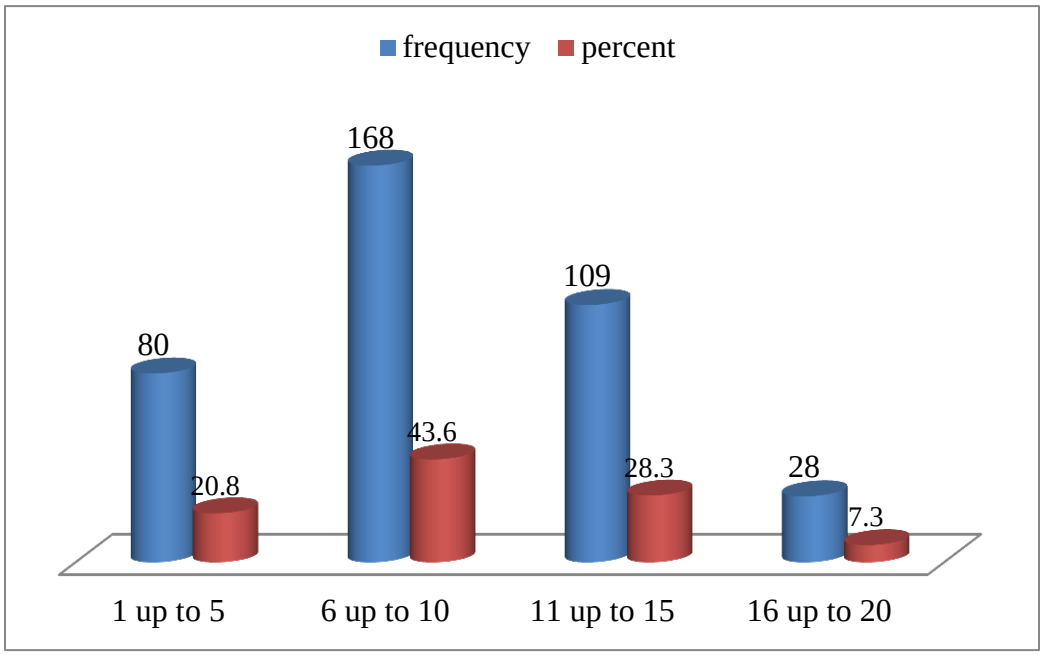
Source: research Survey

This shows that most of the Ethiopian airlines customers are literate. On the other hand, the same table shows the category and the main reason of flights services. As it can be seen from the table, from the total of 385 respondents, 250(64.9%) flies for business purpose, 48(12.5%) of respondents fly for the sake of leisure, the other 48(12.5%) of the respondents fly for medical service and the remaining 39(10.1%) fly for education purposes. Accordingly, 293(76%) usually travel in economic class, 77 (20%) in business class and 15(4%) usually travel via First class. More than 85% of the customers bought airline ticket via internet. This implies that, most of the respondents have been flying for business purposes to different countries of the world using airline ticket services.

4.3 Descriptive Statistics

This section of the study presents the result of the descriptive statistics of the document review and questionnaire data using figures and tables. The result was presented in the form of percentage, frequency, mean and standard deviation.

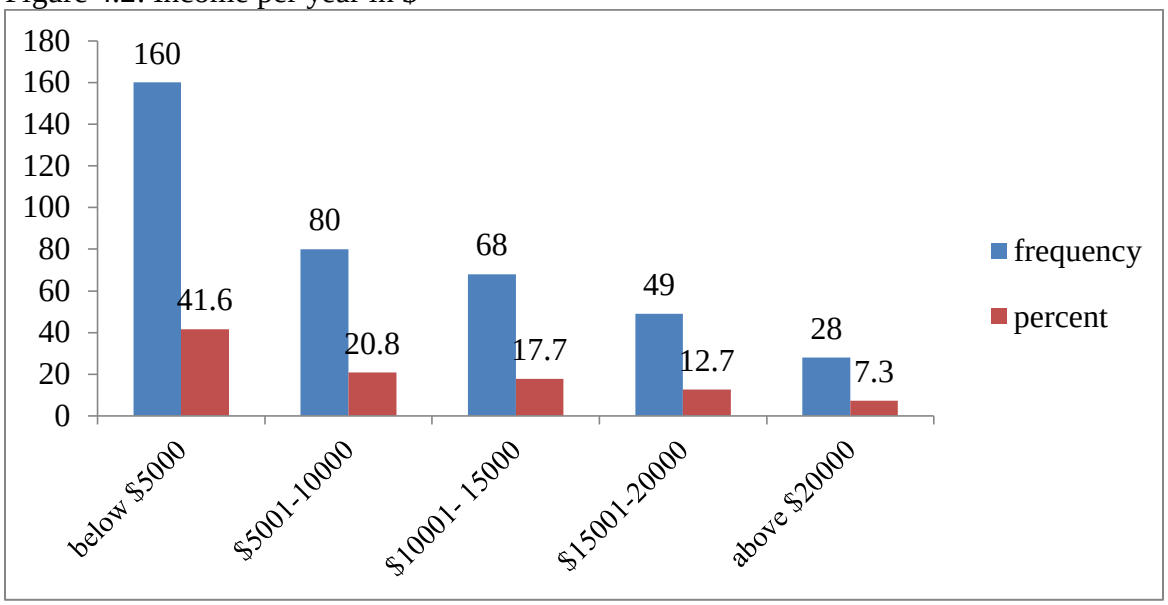
Figure 4.1: The last 12 months returns flight of customer



Source: research Survey

Figure 4.1 summarizes respondents present return flight provided for individuals in 12 months of time. About 80(20.8%) of the respondents return from 1 up to 5 time, 168(43.6%) from 6 up to 10 times, 109(28.3%) from 11 up to 15 times and the remaining 28(7.3%) from 16 up to 20 times. This data implies that most of the customers have six up to ten return flights in 12 months of time. Since in table 4.1, 64.9% of the customers fly for business these customers have more likely to fly six up to ten, which is the dominant flight return in one leap year.

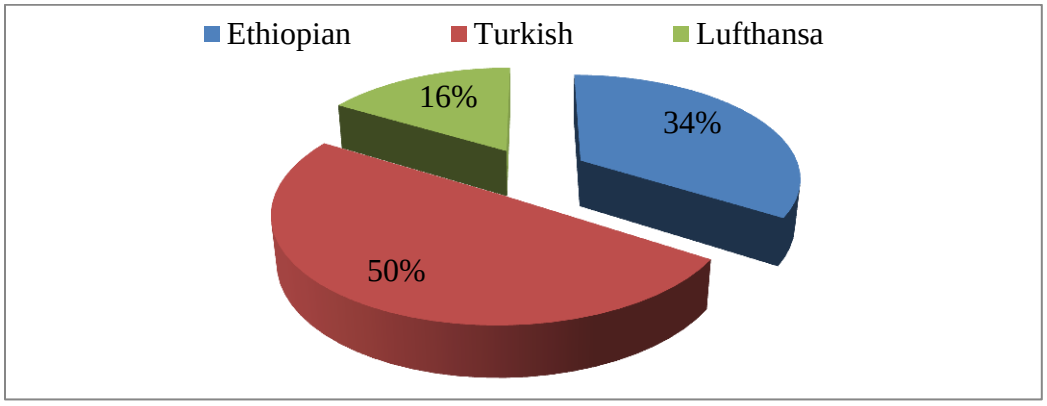
Figure 4.2: Income per year in $



Source: research Survey

Figure (4.2) shows that more than 160(41%) of the customers have below $5000 income per year. In the other side the least, 28(7.3%) of the respondents have above $20,000 income per year. The mass of the respondents have above $5000 and below $20000 income per year.

Figure 4.3: Frequently flying airlines of the passengers



Source: research Survey

Figure (4.3) shows the frequently flying airlines of the passengers to different countries of the world. Regarding this, half of the respondents (50%) preferred traveling via Turkish Airways, 34% to Ethiopian airlines and the other 16% via Lufthansa. This clearly shows that an Ethiopian airline has been their second choice of flight.

4.3.1 Determinants of service quality dimensions and customer satisfaction

The major indicators of the issues were selected and presented to respondents to be rated on a five-point rating scale from very high 5 to very low 1. For analysis purpose the mean were interpreted as: Mean 4.5 and greater was very highly practiced; mean 3.5 to 4.49 was highly practiced; mean 2.5 to 3.49 was moderately practiced; mean 1.5 to 2.49 was low, and mean less than 1.5 was very low (Shewaye ,2018) & (Zaidaton & Bagheri, 2009).

4.3.1.1 Customer satisfaction on Airline Tangibles

Table 4.2: Airline Tangibles

Airline Tangibles	**Response(N=385)**											
	SD		**D**		**N**		**A**		**SA**		**M**	**Std.d**
	F	**%**	**F**	**%**	**F**	**%**	**F**	**%**	**F**	**%**		
Ethiopian Airline' aircraft are both safe and sanitary	-	-	32	8.3	112	29.1	128	33.2	113	29.4	3.74	.904
The quality of meal services provided on a plane is excellent	-	-	32	8.3	128	33.2	153	39.7	72	18.7		
The Plane seats are very confortable	-	-	32	8.3	128	33.2	169	43.9	56	14.5		
The Plane seats are in good condition	-	-	-	-	96	24.9	176	45.7	113	29.4		
The Plane's restrooms are spotless	-	-	16	4.2	128	33.2	171	44.4	70	18.2		
During the flight, there is in-flight entertainment available (up to date magazine, newspapers, videos and films)	32	8.3	96	24.9	64	16.6	123	31.9	70	18.2		
The plane's air conditioning is of high quality	-	-	48	12.5	32	8.3	207	53.8	98	25.5		

Source: research Survey

Table 4.2 reveals the respondents' responses pertaining to airline tangibles. According to the obtained data 241(62.6%) of the respondents (the sum of agree and strongly agree) preferred Ethiopian airline due to its safe and cleanness. Similarly, 255(58.4%) of the total respondents appetite the meal service served in the plane. They also, enjoyed the plane seat comfort and neatness. Likewise, 241(62.6%) of them responded the cleanness of the toilets. Since 123(31.9%) of the respondents agreed and 70(18.2%) strongly agreed the inflight entertainments available during the flight are enjoyable and gives infotainment. However, 32(8.3%) and 96(24.9%) disagreed and strongly disagreed on the availability of the airline inflight entertainments. In the other side, 64(16.6%) of the other respondents neutralize their responses.

To some extent, this shows that Ethiopian airlines weakness in the inflight entertainment availabilities and verities. In the same items, 207(53.8%) and 98(25.5%) of the respondents agreed and strongly agreed on the quality of air conditioning in the airplane: However, 48(12.5%) of the respondents disagreed the quality of air conditioning, and 32(8.3%) of the respondents gives neutral response. This clearly shows that, even though, more than 75% of the respondents enjoyed the quality of air conditioning in the plan, some passengers couldn't enjoyed the quality of air condition in the air plane.

Apparently, most of the items resulted with a slightly higher mean than 3 indicating the agreement of the respondents on the above items, as imperative for airline tangibles quality. The highest mean values for airline tangibles emerged for the item "plane seats are clean" (M= 4.040), followed by "the aircraft is safe and clean" (M = 3.84) whereas, the lowest mean value for this construct is for followed by "quality of air-conditioning in the planes are good". In general, the overall calculated mean (M= 3.74, SD= 0.904) values revealed that there is strong and highly practiced airline tangible service quality in Ethiopian airlines.

According to different studies and the literature stated (Ali, 2010) that airline tangible includes items relating to the overall condition of the aircraft. Mainly tangible elements associated with the service quality of the airline, which comprise the quality of the equipment of the airplane, the comfort of the seats and the cleanliness of the interior are included. The finding of the research also alike the above literature.

4.3.1.2 Customer satisfaction on Terminal Tangibles

Table 4.3: Terminal Tangibles

Terminal Tangibles	Response (N=385)											
	SD		D		N		A		SA		M	Std.D
	F	%	F	%	F	%	F	%	F	%		
Passenger check-in made easy	-	-	64	16.6	96	24.9	155	40.3	70	18.2	3.67	.869
The airport is large enough to accommodate the passengers.	-	-	32	8.3	80	20.8	175	45.5	98	25.5		
The restrooms at the airport are spotless.	-	-	32	8.3	144	37.4	139	36.1	70	18.2		
The airport is well-equipped with air conditioning	-	-	16	4.2	112	29.1	159	41.3	98	25.5		
The airport has a well-organized signage scheme	-	-	32	8.3	144	37.4	139	36.1	98	25.5		
In the airport, there are plenty of trolleys to choose from.	-	-	32	8.3	144	37.4	153	39.7	56	14.5		
The security system works well	16	4.2	-	-	144	37.4	155	40.3	70	18.2		
The airport is open to people with disabilities	-	-	32	8.3	112	29.1	128	33.2	113	29.4		
The airport's waiting room is spacious and welcoming	16	4.2	-	-	144	37.4	169	43.9	56	14.5		
Employee uniform are usually attractive	-	-	16	4.2	144	37.4	169	43.9	56	14.5		
The airport has a sufficient number of shops	-	-	48	12.5	192	49.9	117	30.4	28	7.3		

Source: research Survey

According to the table (4.3) stated above most of the respondents (155, 40.3% agree: 70, 18.2% strongly agree) agreed by the Ethiopian airline convenient passenger check in service quality. In the other side, 64(16.6%) disagreed on convenient passenger check in service quality. Whereas, 96(24.9%) of the respondents either couldn't support or against the service quality. This shows that most of the airlines passengers supported the convenient of the airline service quality in passengers check in.

The size of the airport is one of the determinant factors of customer's service quality. Regarding this 273(71%, the sum of agree and strongly agree) of respondents agreed on the size of the airport to hold the passengers. As more than half (54%) of the passengers noted that the airport toilets are clean and comfortable for the customers. In the other side, 144(37.4%) of the respondents undecided their views blatantly: likely, more than 2/3 of the respondents (66.8%), 61.6%, 54.2% strongly agreed and agreed on the airport air conditioning, signage system and

trolley are abundantly available in the airport respectively. This indicates that more than 2/3 of the respondent's satisfaction in the airlines terminal service quality.

Regarding security system reliability 225(68.5%) of the respondents satisfied on the airline security system and 16(4.2%) strongly oppose the airline security system. In contrary 144(37.4%) of the respondents are neither of the two. Apparently, 131(62.6%) and 225(58.4%) of the respondents satisfied on the airline service of convenient for disable persons and awaiting area of the airport comfortableness respectively. In contrary, 48(12.5%) of the respondents disagreed, and 192(49.9%) of the respondents are neutral regarding sufficient shops in the airport.

However, 145(37.7%) which is almost 1/3 of the respondents agreed the availability of sufficient shops in the airport. Nevertheless, the overall calculated mean (M= 3.67, SD= 0.869) values revealed that terminal tangibles in Ethiopian airline is practiced highly. Hence most of the above items response is agree and strongly agree and the mean value is in the range of highly practiced, this shows that terminal tangible in Ethiopian airline is practiced highly and more than 2/3 of the customers/passengers are satisfied in the qualified service qualities.

Thus, the cumulative response supports the literature stated above. Though, the satisfactions of customers in the terminal tangible (Farooq,2018) directly supports the airline's overall image building.

4.3.1.3 Customer satisfaction on Personnel

Table 4.4: Personnel

Personnel	Response (N=385)											
	SD		D		N		A		SA		M	Std.D
	F	%	F	%	F	%	F	%	F	%		
Employee attitudes are positive	-	-	16	4.2	80	20.8	191	49.6	98	25.5	3.77	.86
Personnel have an additional response to the issue	-	-	32	8.3	112	29.1	128	33.2	113	29.4		
The employees are compassionate	-	-	32	8.3	144	37.4	125	32.5	84	21.8		
The staff is courteous and eager to assist	-	-	-	-	176	45.7	139	36.1	70	18.2		
All receives the same level of personal attention from the employees.	-	-	16	4.2	128	33.2	143	37.1	98	25.5		
Employees are patient, self-assured ,and capable	16	4.2	16	4.2	96	4.9	187	48.6	70	18.2		
Employees are courteous and go above and beyond to solve problems	-	-	16	4.2	176	45.7	123	31.9	70	18.2		

Source: research Survey

The detailed analysis of the results presented in table (4.4) reveals the respondents' responses pertaining to personnel items. In the response of the items the average score results with a mean value of 3.68 to 3.96 indicates the majority of the response tend to mark on the highest of the scale on agree to strongly agree range. This indicates most of respondent's agreeableness of the above items, as imperative for airline service quality in personnel element. The highest mean values for personnel emerged for the item is employee attitude towards customers with mean value of (M = 3.96), followed by airline personnel gives exact answers to questions (M= 3.84), whereas, the lowest mean value for this construct is for error-free reservations and ticketing transactions, followed by airline personnel aware of their duties.

As the table indicated above, all the personnel items respondents' response shows more than 50% agreeable response. This implies that personnel in Ethiopian airlines have been implemented as the customers required that shows the better service quality implementations. Furthermore, the overall calculated mean (M= 3.77, SD= 0.860) value reveals that customer satisfaction on Personnel in Ethiopian Airline is practiced highly. This clearly shows that service quality on Personnel in Ethiopian Airline is practiced highly and more than 2/3 of the passengers are satisfied in the qualified service qualities of the airlines.

The personnel performance has an important role in the provision of a service because they are the ones that take up contact to the passengers Chen et. al, (2017). Each interaction between customer and employee gives the employee the chance to satisfy or dissatisfy the traveler (Ringle et.al, 2011). Thus the result supports the literature review details. However, less than 9% of the respondents oppose the literature review (Chen et. al, (2017) on these services.

4.3.1.4 Customer satisfaction on Empathy

Table 4.5: Empathy

Empathy	Response (N=385)											
	SD		D		N		A		SA		M	Std.D
	F	%	F	%	F	%	F	%	F	%		
The flight departs and arrives on schedule	-	-	16	4.2	96	24.9	175	45.5	98	25.5	3.59	.797
Between the city and the airport, there is a convenient transportation system	-	-	-	-	208	54	121	31.4	56	14.5		
The airline takes good care of the baggage of its passengers	-	-	16	4.2	192	49.9	107	27.8	70	18.2		
There are sufficient frequencies of convenient flight services available	-	-	-	-	240	62.3	75	19.5	70	18.2		
Airline offices can be found in a variety of location	-	-	16	4.2	176	45.7	137	35.6	56	14.5		
There are sufficient flights to meet passenger demand	-	-	32	8.3	176	45.7	107	27.8	70	18.2		
It is easy to book flights on the internet	-	-	-	-	208	54	121	31.4	56	14.5		
In the event of a failure or injury, Ethiopian Airlines will compensate you	-	-	48	12.5	208	54	87	22.6	42	10.9		

Source: research Survey

Empathy is the most crucial element of service quality in the market place. Customers need empathy during their services. Passengers need problem-free service such as careful luggage handling, clearly communicated compensation schemes or punctuality (Alotaibi, 2015). The level of understanding the customers wants and concern for their well-being shown by the personnel is an integral part of the passengers' quality evaluations (Ali et al., 2013). As the table listed above the service quality and customer satisfaction on empathy items is described in different ways: as it is stated the respondents response of the items with a mean value of 3.32 to 3.92 indicates the majority of the responses have a tendency to mark on the highest of the scale on agree to strongly agree range. Regarding flight departure and arrival time, more than 71% (the sum of agree and strongly agree) of the respondents agreed the punctuation of the airline. Whereas, 16(4.2%) of the respondents disagreed and 96(24.9%) of the respondents were neutral. In relation to convenient transportation between city and airport 177(45.9%) of the respondents agreed: however, 208(54%) of the respondents response neutral. Since more than half of the respondent's response is neutral, this implies transportation system of the city to airport is not as customers needed and experience.

As the table (4.5) indicted 177(46%) of the respondents agreed that the airline pays good care to passenger's luggage. However, nearly 50% of the respondents responded neutral and 4.2% replied disagree. As it is shown in the statement, the sum of neutral disagree is above the sum of agree and strongly agree. This means that the airlines passengers couldn't satisfy on good care of passenger's luggage. Similarly, only 37.7%, 46% and 33.5% of the total respondent agreed on convenient flight services and enough frequencies of the airlines, amount of flight to satisfy passengers demand and Ethiopian Airline compensation in case of loos or damage respectively. In the same side only 45.9% (sum of agree and strongly agree) of the respondents satisfied online flight booking.

In the other side most of the other respondents responded neutral and few of the respondents disagreed on the above items. In contrary, above 50% (sum of agree and strongly agree) of the respondents agreed on airline offices in different locations: Even though, there are limitations of services in empathy, the overall calculated mean (M= 3.59, SD= 0.797) values revealed that service quality and customer satisfaction on Empathy is practiced highly. This shows that there is relatively high service quality and customer satisfaction on Empathy compared to all items.

4.3.1.5 Customer satisfaction on Image

Table 4.6: Image

Image	Response(N=385)										M	Std. D
	SD		D		N		A		SA			
	F	%	F	%	F	%	F	%	F	%		
The airline enjoys a positive reputation	-	-	16	4.2	112	29.1	159	41.3	98	25.5	3.49	.937
The airline provides a low-cost, high-quality service	-	-	64	16.6	128	33.2	123	31.9	70	18.2		
The ticket price is reasonable for the service provided	-	-	64	16.6	96	24.9	112	29.1	113	29.4		
Offering with low ticket prices are open	16	4.2	112	29.1	173	44.9	70	18.2	14	3.6		

Source: research Survey

As the table (4.6) stated above more than 2/3(66.8%, sum of agree and strongly agree) of the respondents supported the Ethiopian Airline good brand image. However, 16(4.2%) of the others disagreed and 112(29%) responded neutral. This implies that even though, the airline has

limitations in branding Ethiopian Airline image, most of the passengers preferred it. Above 50% of the respondents supported Ethiopian Airlines cost effective and very good services. However, 16.6% of the respondents disagreed and 33.2% responded neutral. Similarly, above 225 (58%, sum of agree and strongly agree) of the respondents agreed on consistency of ticket price. However, only 21.8% of the total respondents agreed on low ticket price offerings. The mass of the respondents disagreed on offering of low ticket prices. A positive brand image can improve the service quality level (Hussain et al., 2015). Thus the finding supports the literature review. Since the literature says the price of the ticket might not have an influence on how the customer perceives the company. Customers may not be influenced by ticket price rather by its brand image (Forgas et. al. (2010). Nevertheless, the overall calculated mean (M= 3.49, SD= 0.937) values reveals that service quality on image is practiced moderately. Hence, the mean value of image is less than the above service quality elements, it shows that the service quality in image items couldn't satisfy customers as customers wanted and expected.

4.3.1.6 Customer satisfaction

Table 4.7: Customer satisfaction

Customer satisfaction	Response(N=385)											
	SD		D		N		A		SA		M	Std.D
	F	%	F	%	F	%	F	%	F	%		
As a service provider ,Ethiopian Airline has met my expectation	-	-	-	-	160	41.6	183	47.5	42	10.9	3.57	.737
When I decided to fly Ethiopian Airlines, I made the right decision	-	-	-	-	160	41.6	141	36.6	84	21.8		
I am more optimistic about the business now	-	-	-	-	176	45.7	181	47	28	7.3		
The airline caters to its passengers	-	-	-	-	176	45.7	153	39.7	56	14.5		
My airline experience has exceeded my expectations	-	-	48	12.5	160	41.6	149	38.7	28	7.3		
My appreciation for Ethiopian has grown	-	-	80	20.8	160	41.6	117	30.4	28	7.3		

Source: research Survey

The analysis of the results presented in table (4.7) reveals the respondents' responses pertaining to airline Customer service satisfaction. Regarding customer satisfaction, 58.4% (sum of agree and strongly agree) of the respondents satisfied on providing Ethiopian Airline services and the right decision to choose the airline. No strongly disagree and disagree response is responded in this item: however, 160(41.6%) responded neutral. In the same items, 54.3% of the customers

satisfied and have positive attitude towards Ethiopia Airline Company. Nevertheless, 45.7% of the respondents didn't mention their attitude blatantly. As the table listed above 54.2% of the customers satisfied on the airline customer friendly approach; only 46% stated that the airline as experienced with above their expectation and 37.7% relied that their satisfaction with Ethiopian airline has increased. In contrary, 12.5% and 20.8% of the customers replied their disagreement in Ethiopian Airlines expectation and increment of their satisfaction from time to time respectively. Nevertheless, the overall calculated mean (M= 3.57, SD= 0.737) value reveals that there is high level of customers satisfaction with Ethiopian airline. This shows that customer's satisfaction towards Ethiopian Airlines is above average.

Table 4.8:**Summary of descriptive analysis of determinants of service quality dimensions and customer satisfaction**

Scale	Mean	Std. deviation	Level
Airline Tangibles	3.74	.904	High
Terminal Tangibles	3.67	.869	High
Personnel	3.77	.860	High
Empathy	3.59	.797	High
Image	3.49	.937	Moderate
Customer satisfaction	3.57	.737	High
Overall	3.63	.850	High

Source: research Survey

Table 4.8 shows that Ethiopian Airline service quality and customer satisfaction is at a high level with a mean value of (M= 3.63, SD=0.850). The overall mean score for all the items of service quality and customer satisfaction are in the range of 3.5 to 4.49 (Shewaye, 2018); except Image. The findings show that most of the respondents perceive that the service quality of Ethiopian airlines and customer satisfaction is highly practiced.

4.4 Inferential Analysis

4.4.1. Correlation analysis

Correlation analysis is used to check the strength of the relationship among various variables. In this paper, the correlation of service quality dimensions, over all service quality and level of customer's satisfaction will be analyzed. The value of correlation coefficient could take values between -1 and 1 which means the coefficient is ranging from being negatively correlated (-1) to uncorrelated (0) and to positively correlated (1). The Pearson correlation result r (ρ) indicates the magnitude of relationships in the following categorization (Dancey & Reidy, 2004): the relationship is weak if the coefficient is between 0.10 and 0.3, moderate when it is between 0.40 and 0.6 and strong when it is between 0.70 and 1.00. When the correlation analysis coefficient is equal to 1, the individual considers the correlation to be great.

Table 4.9 Correlation (Relationship among service quality dimensions and customer's satisfaction N=385)

		Airline Tangible	Terminal tangible	Personnel	Empathy	Image	Customer satisfaction
Airline Tangible	Pearson correlation	1					
	Sig.(2-tailed)						
Terminal tangible	Pearson correlation	.913**	1				
	Sig.(2-tailed)	.000					
Personnel	Pearson correlation	.865**	.917**	1			
	Sig.(2-tailed)	.000	.000				
Empathy	Pearson correlation	.933**	.920**	.911**	1		
	Sig.(2-tailed)	.000	.000	.000			
Image	Pearson correlation	.866**	.824**	.806**	.829**	1	
	Sig.(2-tailed)	.000	.000	.000	.000		
Customer satisfaction	Pearson correlation	.837**	.819**	.821**	817**	.902**	1
	Sig.(2-tailed)	.000	.000	.000	.000	.000	

** At the 0.01 stage, correlation is important (2-tailed)

Source: research Survey

As it can be seen from the above table (4.9), all service quality dimensions, airline tangibles, terminal tangibles, personnel, empathy and image have positive relationship with over all service

quality and customer satisfaction. Airline tangibles, terminal tangibles, personnel, empathy and image have high coefficient value ranging from 0.837 to 0.933 showing the existence of significant and strong relationship with over all service quality. In other words, all service quality dimensions have positive relationship with the level of customer satisfaction albeit with varying degree.

4.4.2 PLUM - Ordinal Regression

The PLUM procedure's cumulative response model simulates the likelihood of being in a lower categories or group of catagories compared to a higher set or the highest category, but the parameterization used has the linear combination of predictor variable coefficients entering the model after a multiplication by negative one, so the interpretation of the coefficients is that positive values suggest a greater likelihood of being in a higher category. As a result ,coding the dependent variable in a natural increasing order yields predictor estimates that are in the expected direction.

Table 4.10 significance value

Model of fitting information					**Goodness-of-Fit**				**Pseudo R-Square**	
Model	-2Log likelihood	Chi-square	df	Sig.		Chi-Square	df	Sig.	Cox and Snell	**.789**
Intercept only	1734.573				Pearson	246.124	225	**.159**	Nagelkerke	**1.000**
Final	.000	1734.573	5	**.000**	Deviance	334.531	225	.000	McFadden	1.000

Link function: Logit.

Source: research Survey

Thus, as the data in table (4.10) showed above, the p- value is .000 which is smaller than 0.05 which shows significant mean difference. Moreover, all models show that the Wald Chi-Square statistics of Log likelihood of ordered logit model are statistically significant indicating at least one of the covariates or independent variables affects customer satisfaction. Meaning the model is fit to the data deployed and the result is due to real relationship among the variables not by chance. The observed data is having goodness of fit with the fitted model [(0.159), p>0.05]confirm the robustness the built ordered logit model. Here R-square indicates the proportion of the variance explained by the independent variables on the dependent variables in

the regression mode. Thus the Pseudo R-Square value (.789) indicates that about 79 percent of the variation in the dependent variable is due to the vartion in the depenent variables.

Table 4.11 Regression output

Parameter Estimates								
		Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval	
							Lower Bound	Upper Bound
Threshold	[cs = 2.67]	41.398	3.365	151.357	1	.000	34.803	47.993
	[cs = 2.83]	44.674	3.445	168.119	1	.000	37.921	51.427
	[cs = 3.00]	51.537	3.948	170.361	1	.000	43.798	59.276
	[cs = 3.33]	53.627	4.080	172.803	1	.000	45.632	61.623
	[cs = 3.67]	56.789	4.272	176.692	1	.000	48.416	65.163
	[cs = 3.83]	59.854	4.442	181.585	1	.000	51.148	68.559
	[cs = 4.00]	65.172	4.767	186.934	1	.000	55.830	74.515
	[cs = 4.17]	71.700	5.370	178.282	1	.000	61.175	82.225
	[cs = 4.33]	75.250	5.608	180.026	1	.000	64.258	86.242
	[cs = 4.50]	76.763	5.628	186.062	1	.000	65.733	87.793
Location	**AT**	**1.914**	**1.288**	**2.208**	**1**	**.137**	**-.611**	**4.440**
	TT	**8.452**	**1.653**	**26.145**	**1**	**.000**	**5.212**	**11.692**
	P	**-6.212**	**1.691**	**13.500**	**1**	**.000**	**-9.525**	**-2.898**
	E	**6.928**	**1.038**	**44.527**	**1**	**.000**	**4.893**	**8.963**
	I	**4.576**	**1.166**	**15.396**	**1**	**.000**	**2.290**	**6.861**

Link function: Logit.
CS= customer satisfaction P=personnel
AT= airline tangiblilty E= empathy
TT= terminal tangiblilty I= image

Source: research Survey

Here regression analysis was conducted to determine the effect of each independent variables on the dependent variable. Accordingly, the elasticity coefficient of each independent was captured. The magnitude of the estimated elasticity coefficient (β) indicates the effect of each explanatory variable on the dependent variables while its sign indicates the direction of the effect. As the depicted in the table above terminal tangibility (TT), empathy (E) and image (I) are significant positive predicator of customer satisfaction. In the other hand Personnel (P) were found to be a negative predicator of customer satisfaction. However, airline tangiblilty showed no significtant effect on customer satisfaction.

The finding of the regression analysis attested that terminal tangible (TT) is the most important factor in influencing customer satisfaction. The result indicates that Terminal tangible (TT) has statstically significant effect on customer satisfaction with beta coefficient of **8.452** at 1 percent significant level (**P-value=000**). The interpretation is that other independent variables remain constant a unit increase in Terminal tangible (TT) increases the log odds of being at a higher

level on customer satisfaction by **8.452.** This finding is in agreement with the findings of (Scheffler,2018 and Thapa and Devkota, 2020), that confirmed the positive and statistically significant effect that Terminal tangible has on customer satisfaction.

The second most important dependent variable in affecting customer satisfaction positively was empathy (E). According to the finding empathy (E) affects customer satisfaction positively and statistically significantly with beta coefficient value of **6.928** at 1 percent significant level(P-value=.000). It can be interpreted as when other independent variable unchanged a unit improvement in empathy will leades to a **6,928** unit increase in the log odds of being at a higher level on customer satisfaction. This result is consistent with the finding of (Getachew, 2016) that attested the postive and significant of empathy on customer satisfaction and in contradiction with the finding of **(**Yonas, 2017) that it dose not have any significant effect on customer satisfaction.

Being the third important factor in affecting Customer Satisfaction positively, Image (I) has a significant positive effect on Customer Satisfaction with beta coefficient value of **4.576** at 1 percent significant (P-value=.000). Meaning other things remain unchanged for every one unit increase in Image (I), there is a predicted increase of **4.576** in the log odds of being at a higher level on customer satisfaction respectively. This result is consisten with the finding of (Getachew, 2016, Yonas, 2017, Scheffler, 2018 and Thapa and Devkota, 2020) that attested the postive and significant of Image on customer satisfaction.

In contrast personnel was found to be the most important factor in influencing customer satisfaction negatively and statistically significantly. As indicated in the regression output it has a statisticaly statistically negative effect on customer satisfaction with beta coefficient value of **(-6.212)** at 1 percent significant level **(P-value=.000)**. The negative coefficient **(value of -6.212)** shows that for every one unit increases in personnel, there is a predicted decrease of 6.212 in the log odds of being on a higher level on customer satisfaction. This result is in contradiction with the findings of (Getachew, 2016, Yonas, 2017, Scheffler,2018 and Thapa and Devkota, 2020) that attested the positive and significant of personnel on customer satisfaction. The negative sign of personnel might be due to the negative perception of the the passengers regarding employees working performance in the airlines including employees' attitude and knowledge, personal care of employees, and airline error-free reservation and ticketing transactions.

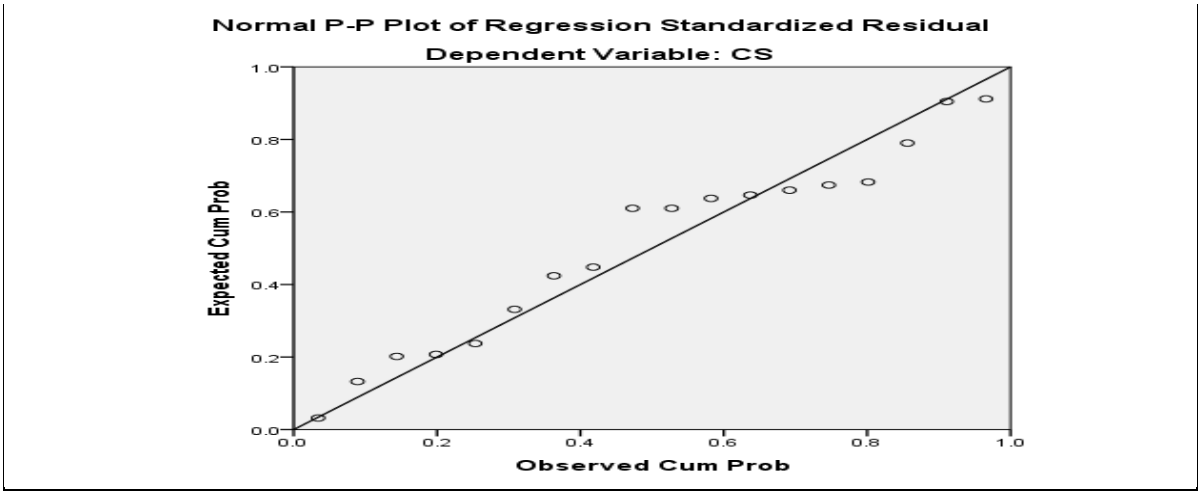
4.3.3 Diagnosis Test Result

In regression analysis it is important to conduct a diagnosis test in order avoid spurious result or output. Therefore, aiming to come up with valid result the data deployed was tested for the various assumptions to be fulfilled . In this regard test of linearity, normality, hetroscadasticity and multicollinearity were conducted on the data used in the regression analysis. The diagnosis tests result revealed that the model has passed all the tests i.e. have no heteroscedasticity, Multicollinearity, non linearity and non normality.

Linearity

In this study in order to test the linearity of the relationship between the dependent variable and the predictors , among the various methods of testing linearity scatter plot diagram with line of fit was applied. The result of scatter plot diagram with line of fit confirmed that a linear relationship existed between the dependent variable and those independent variables.

Figure 4.4 Linearity test



Source: research Survey

Normality test

The Normality Test for large sample size is: absolute skewedness value between -2 and 2 and absolute kurtosis value between -7 and 7. Thus the conduct result showed that all the variables gave a statistics result that falls between -2 and 2 and -7and 7 for both positively skewedness, and kurtosis which indicates that the variables are normally skewed and distributed.

Table 4.12 Normality test

Variables	N	Skewness		Kurtosis	
		Statistic	Std. Error	Statistic	Std. Error
Airline tangible	385	-.732	.124	-.134	.248
Terminal tangible	385	-.747	.124	.482	.248
personnel	385	-.590	.124	.104	.248
Empathy	385	.287	.124	-.882	.248
Image	385	-.550	.124	-.498	.248
Customer satisfaction	385	.101	.124	-1.197	.248

Source: research Survey

Multicollinearity

Multicollinearity occurs when two or more independent variables with the same piece of information are incorporated in the regression model. A colinearity diagnostic test was conducted using the regression analysis. Variance inflation factor (VIF) is commonly used to detect Multicollinearity. In general, a VIF greater than 10 indicates a multicollinearity problem. An examination of VIF for variables in our model showed that multicollinearity was not a potential problem.

Table 4.13 Multicolinearity

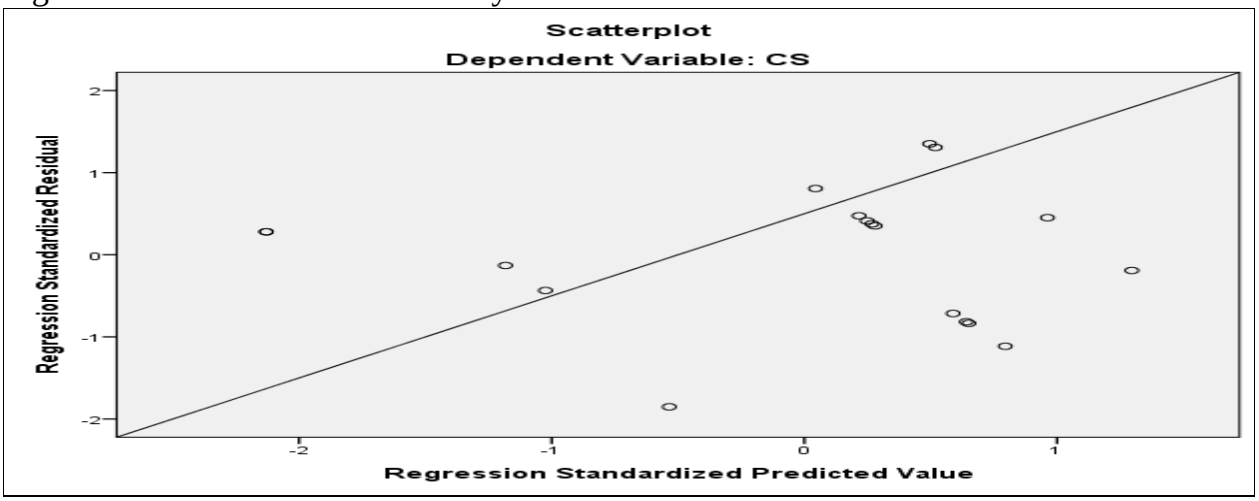
Coefficients[a]			
Model		Collinearity Statistics	
		Tolerance	VIF
1	AT	.133	7.493
	TT	.619	1.615
	P	.399	2.504
	E	.086	9.667
	I	.089	8.177
a. Dependent Variable: CS			

Source: research Survey

Homoscedasticity

This assumption of homoscedasticity is about that every disturbance has the same variance whose value is unknown, that is regardless of their size, the dispersion of the error term (disturbance) is the same. Whenever this assumption is violated the problem of heteroscedasticity will occur. As it can be seen in the Figure 4.2 below the standardized residuals are evenly distributed attesting that the data has no heteroscedasticity problem.

Figure 4.5 Test of heteroscedasticity



Source: research Survey

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

This chapter constituted with four sections. The first section of the chapter presents the summary of the findings whereas the second section comes with the conclusion drawn based on the study findings. The third section of the chapters presents the recommendations forwarded based on the findings and the conclusion drawn. Finally the fourth section deals with the direction for future studies.

5.1 Summary of Findings

The purpose of this study is to assess the factors that affect customer's satisfaction and service quality in Ethiopian Airlines using airline tangibles, empathy, terminal tangibles, personnel and image factors. Accordingly, this section presents the summary of the findings of the study .

A total of 404 questionnaires were distributed to the sampled respondents, out of it about 385 of the distributed questionnaires were collected properly filled making the response rate 95 percent.

Based on the finding 56.1% of the respondents were male whereas 43.9% of them were female. Among these most of the respondents were youngsters and more than 90% of the respondent's qualified diploma and above. From the respondents 26% of them usually travel in economic class, 45.7% in business class and 28.3% usually travel via other classes. About 85% of the customers bought airline ticket via internet and 64.9% of them fly for business purpose whereas the list 10.1% flies for education purposes. The finding implies that most (43.6%) of the customers have six up to ten return flights in 12 months of time and Ethiopian Airlines is their second choice. The dominant respondents replied that their yearly income in $ is below 5000. Most of the results of Airline tangible elements shows above 2/3 respondents agreement of Ethiopian airlines service and its quality. However, half of the respondents don't satisfied inflight entertainments availabilities during the flight. Since the better quality of the airline tangibles has the higher level of customer satisfaction, the result also showed high (M=3.74, SD=0.904) level of customer satisfaction in the airline services.

Different factors might affect customer's satisfaction in the airline industry. Among these the literature stated that terminal tangibles dimension contains the services that are provided at the airport in particular, the cleanliness of airport toilets, the availability of shops and trolleys and a reliable security control system. Regarding this, even though, 8.3% of the respondents disagreed on the neatness of the airport toilets, more than 54% of the respondents agreed and satisfied in its service. Likewise about 12% of the respondents dissatisfied on the shop service and nearly 38% satisfied however the mass of the respondents gave neutral answers. Alike shops and toilets the security system of the airport also satisfied more than 58% of the respondents. When we see the overall services of terminal tangible the result shows (M=3.67, SD=0.869) high level of service quality and customer satisfaction.

The personnel's behavior significantly influences the passengers' experience and perception of the service and therefore shapes their quality assessment. In this aspect more than half of the customers satisfied. According to the result, more than 75%, 62% and 54% of the respondents satisfied on employee's attitude towards customers, giving appropriate answers to customer questions and their empathy respectively. Regarding to employees eagerness to solve problems in detail 50% satisfied, 4.2% dissatisfied and 45.7% of the respondent's undecided their views. Thus, this mass of the respondents undecided response shows unwillingness to show their satisfaction. The overall services of personnel (M=3.77, SD=0.86) shows high level of services and customer satisfaction in Ethiopian Airlines.

Flight departure and arrival punctuality is significantly evaluated by customers. 71% of the respondents agreed on punctuality of the flight and 4.2% opposes their agreement. In the other side, 46% of them agreed on convenient transportation systems between city and airport; however, 49.9% of the respondents undecided their views. Whereas. 46% agreed, 4.2% of the respondents disagreed and 49.9% undecided on the airline care of passenger's luggage. Since the mass of the respondents response is undecided it is difficult to measure their satisfaction; however, because of the response of the respondent agreement is greater than the response of their disagreement, the researcher can say that the finding supports the literature review. Therefore, looking the overall (M=3.59, SD=0.797) shows high level of service quality and customer satisfaction in the affirmations element.

The marque image of the airline seems to play a relevant role in the passengers' assessment of the service quality. According to the finding, 66.8% of the respondents agreed on Ethiopian Airline good brand image. Thus the finding supports the literature review. In the other side, even though, above 50% of the respondents agreed on the airline cost effective and good service, consistent ticket price, only 21.8% of the respondents enjoyed availability of low ticket price offerings. To sum up, the overall (M=3.49, SD=0.937) shows moderate level of service quality and customer satisfaction.

Besides the sum of airline tangible, terminal tangible, personnel, empathy and image shows high level (M= 3.65, SD= 0.873) of service quality with (M=3.57, SD=737) of customer satisfaction (see table 4.8). Thus when we compare the two means service quality is greater than customer satisfaction in Ethiopian airlines.

All the explanatory variables namely; terminal tangibility (TT), empathy (E) and image (I), Personnel (P) and Airline tangibility (AT) have a strong positive and statistically significant association with the dependent variable Customer Satisfaction (CS).

The finding of the regression analysis attested that terminal tangible (TT) is the most important factor in positively influencing customer satisfaction followed by empathy (E) and image (I) with beta coefficient value of 8.452, 6.928, 4.576 at 1 percent statistical significant level (P-value=.000). In the other hand personnel was identified to be the most important factor in influencing customer satisfaction negatively and statistically significantly with beta coefficient value of **(-6.212)** at 1 percent significant level **(P-value=.000)**.

5.2 Conclusions

The whole attempt of this research is to assess the relationship of the factors that affect customer's satisfaction and service quality in Ethiopian Airlines. The factors include airline tangibles, terminal tangibles, personnel, empathy, and image. In order to answer the research questions and achieve the objectives, the study employed quantitative research approaches. In this regard, questionnaires with Ethiopian Airline passengers were collected and analyzed. The following conclusions have been drawn based on the study findings:

- Based on the finding, except in-flight entertainment availability there is no strongly disagreement response of customers. Even though, few customers response neutral, most the respondents response was agree and strongly agree. The response of each items shows above average (50%). The overall mean value for this dimension reveals high quality of service and customer satisfaction. Based on the finding the research can conclude that the level of satisfaction of customers in airline tangible dimension is high.
- The finding shows that except sufficient number of shops in the airport every other dimension in terminal tangible satisfied the customers. According to the result the overall mean value (M=3.67) of terminal tangible items shows high level of service quality and customer satisfaction. Thus, the research can conclude that Ethiopian Airline customers are satisfied to this extent with the quality of terminal tangible services.
- As the finding illustrated in table 4.4 almost all of the response of the personnel items shows above 60% service quality and customer satisfaction. Employees' attitude towards customers takes (75%) the prior satisfaction and employees are respectful and go further to solve problems (50%) takes the least satisfaction. Accordingly, the overall mean value (M=3.77) reveals high service quality and level of satisfaction. Though, the research can say Ethiopian Airlines customers are satisfied 60% and above.
- Empathy is one of the significant dimensions of service quality. In this regard except flight departure and arrival time (71%) punctuality and availability of airline offices in different locations (50%), the other items shows below 50% service quality and customer satisfaction. Thus, empathy dimensions needs refinement. However, the overall mean value (M=3.59) shows high level of service and satisfaction as well.
- Brand image matters the availability of customers in a market place. Here, the finding indicated average and above average service and satisfaction. In this regards, 66.8% customers responded Ethiopian Airlines good brand image. So, the airline has good image in the world since customers are from different parts of the world. However, 21.8% customers replied that the airline couldn't have low ticket price offerings. In the other side, the overall mean value (M=3.49) shows moderate level of service quality and customer satisfaction. Thus, the research can conclude that Ethiopian Airline has good brand image with expensive ticket prices. The final mean value (M=3.63) also shows high level of services and customer satisfactions in Ethiopian Airlines. Based on the

above finding and discussions, the researcher can conclude that Ethiopian Airlines is the best choice of customers in the travel world since most of them satisfied in the service quality.

Based on the correlation analysis findings its concluded that all the explanatory variables namely; terminal tangiblilty (TT), empathy (E) and image (I), Personnel (P) and Airline tangiblilty (AT) have a strong positive and statisticaly significant association with the dependent variable Customer Satisfaction (CS). As attested in the finding of the regression analysis it is concluded that terminal tangible (TT) is the most important factor in positively influencing customer satisfaction followed by empathy (E) and image (I).

In the other hand personnel as one of the independent variables concluded to has significant negative effect on customer satisfaction in the case organization.

5.3 Recommendations

Based on the findings and conclusions of the study, the following recommendations are forwarded:

- Since most of the respondents dis-agreed in-flight entertainment availabilities during the flight and since it is one of the significant factors for customers, the Ethiopian airline should facilitate inclusive (including brail) infotainment opportunities in the flight service. The Airline ought to give immediate response to customers' feedback.
- To create convenient and valid passengers check in time and use their time effectively, the ministry of transport should facilitate transportation availabilities from cities to the airport.
- Ethiopian Airlines employees ought to participate voluntarily to solve various problems to well come and well by the airline esteemed customers.
- Ethiopian Airlines passengers' should participate in commenting and problem solving activities as well as advocating Ethiopian Airlines good services to the world.
- As attested in the finding of the regression analysis it was concluded that terminal tangible (TT) is the most important factor in positively influencing customer satisfaction followed by empathy (E) and image (I). Therefore, inorder to more improve the its service quality and enhance customers satisfaction the case organization need to work hard in improving these three dimiensions of service quality.

5.4 Future Research

The writer of this research work doesn't believe that this research can satisfy the demands on service quality and customer satisfaction in Ethiopian Airlines: using airline tangibles, terminal tangibles, personnel, empathy and image factors**.** Therefore, other similar research works will satisfy more questions and demands on the area. In ahead, Ethiopian Airline can carried out additional study taking this as an input in the fulfilling of the qualified services: to increase customer satisfaction and make the airline reputable. Similarly interested researchers can extend the same topic by incorporating more variables.

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ANNEX

ANNEX

Addis Ababa University

Post Graduate Programs

Department of Management

Greetings, Participants! I am an MSC student in the school of Business and Economics at Addis Ababa University. I am working on a project to evaluate service quality in the aviation industry using the AIRQUAL Model, with an emphasis on Ethiopian Airlines' passenger service.

Confidentiality: I want to reassure you that, this research is being conducted solely for academic purposes, as approved by AAU, and that your ideas and comments will be respected and kept private. You are not required to write your name in order to build a conducive atmosphere for your free and genuine answer.

Part I: General information

Instruction: please indicate your answer by checking one of the boxes next to the fixed alternative question.

1. Please let us know your gender.
   - o Male
   - o Female

2. Choose your age group.
   - o 18-25
   - o 26-33
   - o 34-41
   - o 42-49
   - o Above 50

3. History in Education:
   - o High school complete
   - o Certificate
   - o Diploma
   - o BA/BSC
   - o MA/MSC
   - o PHD
   - o Other

4.In terms of air travel, how would you classify yourself?

- Business
- Leisure
- Medical
- Education
- Other

5. How many round-trip flights have you taken in the last year?

- 1 - 5
- 6 -10
- 11 – 15
- 16-20
- More than 20

6. Yearly Income $

- Below 5000
- 5001-10,000
- 10,001-15,000
- 15,001-20,000
- Above 20,000

7. When flying, which class do you normally ride in?

- Economic Class
- Business Class
- First Class

8. How do you go about purchasing airline tickets?

- Via the internet
- Airline Company office
- Travel Agency
- Other

9. Which airline do you fly with on a regular basis?

- o Ethiopian
- o Turkish
- o Lufthansa
- o Emirates
- o Other

Part II: Dimensions of service quality and customer satisfaction determinants

Directions: On a 5-point likertscale,you must circle the appropriate answer category for each argument by circling the number against it. Where (1=strongly Disagree; 2=Disagree; 3=Neutral; 4= Agree and 5= Strongly Agree).

No	Airline Tangibles	Strongest Disagree	Disagree	Neutral	Agree	Strongly Agree
1	Ethiopian Airline' aircraft are both safe and sanitary					
2	The quality of meal services provided on a plane is excellent					
3	The Plane seats are very confortable					
4	The Plane seats are in good condition					
5	The Plane's restrooms are spotless					
6	During the flight, there is in-flight entertainment available (up to date magazine, newspapers, videos and films)					
7	The plane's air conditioning is of high quality					

No	Terminal Tangibles	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
8	Passenger check-in made easy					
9	The airport is large enough to accommodate the passengers.					
10	The restrooms at the airport are spotless.					
11	The airport is well-equipped with air conditioning good					

12	The airport has a well-organized signage scheme					
13	In the airport, there are plenty of trolleys to choose from					
14	The security system works well					
15	The airport is open to people with disabilities disabled					
16	The airport's waiting room is spacious and welcoming					
17	Employee uniform are usually attractive					
18	The airport has a sufficient number of shops	1	2	3	4	5
No	**Personnel**	**Strongly Disagree**	**Disagree**	**Natural**	**Agree**	**Strongly Agree**
19	Employee attitudes are positive					
20	Personnel have an additional response to the issue					
21	The employees are compassionate					
22	The staff is courteous and eager to assist					
23	All receives the same level of personal attention from the employees.					
24	Employees are patient, self-assured ,and capable					
25	Employees are courteous and go above and beyond to solve problems solve the problem					

No	**Empathy**	**Strongly Disagree**	**Disagree**	**Neutral**	**Agree**	**Strongly Agree**
26	The flight departs and arrives on schedule					
27	Between the city and the airport, there is a convenient transportation system					
28	The airline takes good care of the baggage of its passengers					
29	There are sufficient frequencies of convenient flight services available					
30	Airline offices can be found in a variety of location					
31	There are sufficient flights to meet passenger demand					
32	It is easy to book flights on the internet					

33	In the event of a failure or injury, Ethiopian Airlines will compensate you					
No	**Image**	**Strongly Disagree**	**Disagree**	**Neutral**	**Agree**	**Strongly Agree**
34	The airline enjoys a positive reputation					
35	The airline provides a low-cost, high-quality service					
36	The ticket price is reasonable for the service provided					
37	Offering with low ticket prices are open					
No	**Customer satisfaction**	**Strongly Disagree**	**Disagree**	**Neutral**	**Agree**	**Strongly Agree**
38	As a service provider ,Ethiopian Airline has met my expectation					
39	When I decided to fly Ethiopian Airlines, I made the right decision					
40	I am more optimistic about the business now					
41	The airline caters to its passengers					
42	My airline experience has exceeded my expectations					
43	My appreciation for Ethiopian has grown					

Thank you !!