ADDIS ABABA UNIVERSITY
COLLEGE OF BUSINESS AND ECONOMICS
DEPARTMENT OF MANAGEMENT
MASTER OF BUSINESS ADMINISTRATION (MBA)

Impact of Service Quality on Customer Satisfaction in the Aviation Industry: The Case of Ethiopian Airlines

A thesis submitted to Addis Ababa University college of Business and Economics in partial fulfillment of the requirement for the Degree of Masters of Business Administration.

Prepared By: Liliya Tadesse

Advisor: Workneh Kassa [PHD]

June 2016
Addis Ababa

ADDIS ABABA UNIVERSITY

COLLEGE OF BUSINESS AND ECONOMICS

DEPARTMENT OF MANAGEMENT

MASTER OF BUSINESS ADMINISTRATION (MBA)

Impact of Service Quality on Customer Satisfaction in the Aviation Industry: The Case of Ethiopian Airlines

Prepared By: Liliya Tadesse

ID NO: GSR2549/07

Approved by Board of Examiners

_____	_____
Advisor Signature	Signature
_____	_____
Internal Examiner	Signature
_____	_____
External Examiner	Signature

June 2016

Addis Ababa

Declaration

I, the under signed, declare that this thesis is my original work and has not been presented for a degree in any other University, and that all sources of materials used for the thesis have been duly acknowledged.

Declared by:

Name _____

Signature _____

Date: _____

Confirmed by:

Name _____

Signature _____

Date: _____

Date and place of submission _____

Impact of Service Quality on Customer Satisfaction in the Aviation Industry; the Case of Ethiopian Airlines

Acknowledgment

First of all I would like to thank almighty God with whom none of this would be possible. I am very grateful for the support and encouragement from families and friends. I would like to express my deepest gratitude to Dr.Workneh, my thesis advisor, for his unreserved support and encouragement throughout the thesis work. I also don't want to pass on expressing my heart gratitude for passengers who took the time to cooperate and participate in this research.

Table of content

List of figures

List of Tables

List of Acronyms

Ethiopian: Ethiopian airlines

SERVQUAL/AIRQUAL: Service quality

Abstract

Globalization and stiff competition have changed the landscape of doing business. Decrease in customer loyalty and increase in customer expectations have challenged businesses to come up with unique methods of enhancing their quality of service. The same is true for airlines industry too. As a result, many airlines have transformed their marketing strategies, especially with regard to service quality, in order to compete efficiently in the global market. The marketing literature has introduced models of service quality, e.g.: SERVQUAL and AIRQUAL to help organizations measure and enhance customer experiences. This research has adopted the items from the previous literature to assess impact of service quality on customer satisfaction in Ethiopian Airlines. Survey method was employed using primary data obtained through the use of questionnaires. 270 questionnaires were administered by the researcher through convenience sampling to air travelers using Ethiopian Airlines at Addis Ababa bole international airport. The questionnaires were analyzed using descriptive statistics, T-test, one way ANOVA and regression with the support of SPSS2.0. The study revealed that frequency of flying, airline tangible, personnel, empathy and image have significant influence on customer satisfaction and majorly or 71.68% of Ethiopian customers are satisfied with the services of Ethiopian airlines.

However, terminal tangible has not been found significant in this study. This study may indicate that customers who used frequently the airline service have a higher tendency of being loyal and hence satisfied with the services of the airline.

Key words: Service quality, customer satisfaction

CHAPTER ONE
INTRODUCTION

Aviation is one of the most fundamental aspects that affect the global development significantly in the new century. It is considered as the "global connectivity that ultimately strengthens productivity and economic growth as a whole" (Perovic, 2013). The Aviation industry can be defined as those activities that are directly related to the transporting of people and goods by air from one location to another (Chikwendu, 2012). Airline industry plays a major role in every countries economic activity and it aids in opening up of the countries market to both local and foreign investors (Abeyratner 1998). Also, airline industry helps to generate employment to enhance living standards, minimizes the state of poverty, starvation and later on intensifies the economic growth of a country (P.Steele ,2012). Globalization has made it even more necessary for everyone to be every-where at anytime. Over 2.1 billion passengers departed on scheduled journey in 2006 (IATA 2007).

In recent years, the air transportation market has become more challenging and airlines have turned to focus on service quality to increase service satisfaction. There is need for airlines to focus on service quality if the airlines aspire to improve on market share and further enhance financial Performance in domestic and international market (Albrecht and Zemke,1995). Service quality conditions influence an organization's competitive advantage by retaining customer patronage and market share (Park et al., 2004)

The end product of an airline is the transportation services it offers to its customers. And the main performance indicator of an airline is its Service Quality. By Service Quality is meant all the chain of activities that must take place efficiently and effectively to transport the passenger from origin airport to the destination airport (Mersha, 2004). Airline services are made up of a very complex mix of intangibles Gursoy et al.(2005) Thus, measuring customers' expectations, as well as their service quality is a real challenge because customer satisfaction is determined by many intangible factors such as neatness of the cabin, crews behaviors, etc.(Fitzsimmons and Fitzsimmons, 1994).

When we come to Africa (and specially Ethiopia), the aviation industry has a vital role to play in achieving a sustainable development. The expansion of air services is a necessary condition for the development of a more diversified export base across the continent and for the expansion of tourism in the region. Perhaps the major potential contribution that air transport can make to economic

development in Africa is through developing and promoting international tourism. Tourism facilitates poverty reduction by generating economic growth, providing employment opportunity and increasing tax collection, and by fostering the development and conservation of protected areas and the environment in general (Mersha, 2004).

In some cases, the airlines industry is the only direct outlet for a land locked country like Ethiopia. In such cases the well being and the sustainability of the airline becomes not only a commercial issue, but also a survival issue (Mersha, 2004).

Ethiopian airline is exposed to a heavy competition against giant alliance in the international scene, regional alliance in Africa and the Middle East, and strong individual airlines from Europe, Middle East and Africa. Unless the airline prepare and develops strategy to counter the upcoming competitive pressure, the consequences could be unmerciful (Gashaw,2011). Airline Service Quality is a key differentiator between the competing airlines. It is especially very critical in a highly competitive environment such as that of the Ethiopian Airlines operating environment. Therefore, Service Quality improvement is key issue that determines the very survival of the airline itself (Mersha, 2004).

1.1 Background of the study

In the last 25 years, the aviation industry has been growing rapidly (Dwi, 2012). In addition to its technological developments, the growing of airline industry due to its role as supporting the world trade, international investment, and tourism activities. Because of these roles, it is often said that the aviation industry is the center of globalization for other industries (Dwi, 2012). The growing of the airline industry provides opportunities as well as challenges to the business entities in this industry. The opportunities arise due to the increasing demand for the airline services. The challenges arise in the airlines industry not only because of growing competition between the airlines; but also due to growing consumer demands for better service. In a highly competitive environment the provision of high quality services to passengers is the core competitive advantage for an airline's profitability and sustained growth. In the past decade, as the air transportation market has become even more challenging, many airlines have turned to focus on airline service quality to increase service satisfaction (Archan and Shuba, 2012).

Customer satisfaction in airline service operations thus has become critically important for sustainable operation. To enhance customer satisfaction, service quality has received more attention (Dennett et al., 2000). To this respect, service quality is considered as a critical dimension of competitiveness by enhancing customer satisfaction (Lewis, 1989). Thus, providing excellent service quality and high customer satisfaction is the important issue and challenge facing the airlines service industry in particular (Hung et al., 2003). Customer satisfaction is the extent to which a service meets or exceeds customer needs and expectations (Lewis and Mitchell, 1990). Satisfaction is an overall customer attitude towards a service provider (Levesque and McDougall, 1996) or according to Zineldin (2000) an emotional reaction to the difference between what customers anticipate and what they receive. When customers are satisfied, they are more likely to return.

In the introduction section the study has tried to emphasize the contribution of aviation industry to economic growth and productivity. Ethiopian Airlines is one of highest profit earning companies that has enjoyed profit in almost all its years of operation. It has major contribution to the economy of our country and offers numerous employment opportunities. Previous research have indicated that aviation industry allows to have a more diversified export base and opens up country for foreign investment and having competent airline goes a long way with regards to this aspect. Moreover Ethiopian Airlines is a flag carrier and acts as a flagship that carries the image of Ethiopia. Therefore this study is necessary, useful and relevant because it focuses on service quality perception of Ethiopian airlines.

1.2 Brief Background of Ethiopian Airlines

Ethiopian Airlines (Ethiopian) is the flag carrier of Ethiopia. Ethiopian Airlines formerly Ethiopian Air Lines (EAL) and often referred to as simply Ethiopian is the flag carrier of Ethiopia and is wholly owned by the country's government. EAL was founded on 21 December 1945 and commenced operations on 8 April 1946, expanding to international flights in 1951. The firm became a share company in 1965, and changed its name from Ethiopian Air Lines to Ethiopian Airlines. The airline has been a member of the International Air Transport Association since 1959, and of the African Airlines Association (AFRAA) since 1968. Ethiopian is a Star Alliance member, having joined in December 2011.

Ethiopian has become one of the continents leading carriers, unrivalled in Africa for efficiency and operational success, turning profits for almost all the years of its existence. Operating at the forefront of technology, the airline has also become one of Ethiopia's major industries and a veritable institution in Africa. It commands a lion's share of the pan African network including the daily and double daily east-west flight across the continent. Ethiopian currently serves 81 international destinations operating the newest and youngest fleets. Ethiopian airlines offers two classes of service: cloud nine which offers combined services of first and business classes and Economy class where passengers are offered 12 audio chandelles with access to a video library of more than seven titles. Ethiopian has frequent flyer program called shebamilses. Since shebamiles has a frequent flyer program partnership[agreement with over 27 airlines including all star alliance member airlines and 10 non airline partners (hotels, restaurants, shopping centers etc…) where members have the privilege to earn and redeem miles whenever they use the services of these partners.

The Addis Ababa Bole international Airport is the major hub for Ethiopian Airlines and one of the largest airports in Africa. The ultra-modern airport terminal was inaugurated on January 21, 2003. This spacious terminal handles all international flights with its 21st century facilities. Addis Airport is the busiest airport in East Africa with a capacity of providing a world class passenger.

During the past sixty five plus years, Ethiopian has become one of the continents leading carriers, unrivalled in Africa for efficiency and operational success, turning profits for almost all the years of its existence.

1.3 Statement of the problem

Service quality and customer satisfaction are very important concepts that companies must understand if they want to remain competitive and grow (Biljana and Jusuf, 2011). In today's competitive environment delivering high quality service is the key for a sustainable competitive advantage. Customer satisfaction does have a positive effect on an organization's profitability. Satisfied customers form the foundation of any successful business as customer satisfaction leads to repeat purchase, brand loyalty, and positive word of mouth (Biljana and Jusuf, 2011).

With the ever growing competition in the airline service industry, the delivery of high level of service quality by airline companies became a marketing requisite in recent decades in particular (Miller, 1993). As a consequence, most airlines began to offer various incentives such as frequent

flyer programs, in an effort to build and maintain the loyalty of customers (Miller, 1993). Air line companies also attempted differentiate their service through use of computerized reservation system which was also designed to create customer loyalty in distribution channels. (Lee and Cunningham, 1996).

Despite the airline's effort to differentiate their services, an extensive study survey of frequent fliers conducted by Ott(1993) revealed that customers didn't perceive any difference from carrier to another. Ostrowskietal (1993) noted when all companies have comparable fares and matching frequent flyer programs the company with the better perceived service quality dimensions will draw passengers from the other carriers. In line with this, it has been stated that an organization that consistently satisfies its customers, enjoy higher retention levels and greater profitability due to increase customer loyalty (Wicks and Roethlein, 2009). Although there are other factors such as price, product quality etc other than service quality that determine customer satisfaction my interest on service quality alone for the study Wicks and Roethlein, 2009). It is because service quality has been proven to be the best determinant of customer satisfaction when it come to service sectors(Jenet, 2011)

There are a number of complaints on the service delivery system of Ethiopian Airlines both on domestic and international flights. A Number of reasons are behind these customer discontents. Whatever the reasons may be, once the customer is dissatisfied, it would be very difficult to gain their trust back. In this regard, a research should be carried out to urge a major reform, to assesses the root causes of the problem and get the problem rectified. (Gashaw,)

There is very little literature that postulates the problems in the service quality of Ethiopian airlines. However Mersha, 2004 has identified poor service quality on numerous areas as one of the weakness of the airline. Furthermore online ratings from passengers on the quality of services provided indicate that the airline lacks in areas such as quality of in-flight catering, cleanness of aircraft interior, customer service and human interactions, irregularity handling.

In line with above statement I believe in this current highly competitive market where there are wide range of airlines customers can choose from starting from major airlines like Lufthansa and the like and low cost airlines like fly Dubai flying to the same destinations as Ethiopian airlines each offering their own different respective attractive service packages now is the time more than ever for to emphasize on the quality of service provided and customer satisfaction.

This paper has tried to assess the quality of service provided by Ethiopian airlines. It has also attempted to look into how the quality of service provided has impacted the level of customer satisfaction in today's extremely competitive market. It has also attempted to forward possible ways to increase customer satisfaction and gain competitive advantage through quality of service provided to customers.

1.4 Research questions

The following are the research questions of the study.

- What dimensions of service quality influence customer satisfaction for Ethiopian Airlines customers?
- Which dimension of service quality has highest influence on customer satisfaction for Ethiopian Airlines Customers?
- What is the status of overall satisfaction of customers on the services of Ethiopian Airlines?
- Do demographic characteristics of respondents have any significant influence on satisfaction of customers of Ethiopian Airlines?

1.5 Objective of the study

In line with the specified problems and research questions, the objective of this research has been categorized into general objective and specific objectives.

1.5.1 General objectives

The general objective of the study is to analyze the impact of service quality on customer satisfaction for Ethiopian Airlines.

1.5.2 Specific objectives

The specific objectives of the study are: Identify that Airline tangibles, Terminal tangibles, personnel, empathy and image influence customer satisfaction for Ethiopian airlines.

- Identify which service quality dimension has the most influences on customer satisfaction for Ethiopian Airlines Customers.
- To identify the status of overall satisfaction of customers on the services of Ethiopian Airlines.
- Identify demographic factors that influence satisfaction of customers of Ethiopian Airlines.

1.6 Significance of the study

In this era where the service sector is continuously growing quality of service rendered is becoming extremely crucially to gain competitive advantage. This study has tried to assess how the service quality provided by Ethiopian airlines has affected the level of customer satisfaction. The research will add to existing knowledge with the concept of customer satisfaction and quality of service in general especially in the case of Ethiopian airlines. Findings of this study will go on to assist future researchers and academicians as an input for embarking upon similar researches in the future and reckon to further their insight regarding the issue. Generally the findings and conclusion from this study may be used to by different carriers for decision making by addressing the root problems hindering customer satisfaction.

1.7 Scope and limitation of the study

Even though the industry this study is focused on is worldwide with various carriers operating to and from different destinations it has focused only on passengers of Ethiopian airlines. Moreover this topic concerns both employees and customers it has focused on customer as I am interested in the perception of the customers who consume the service. The sampling method that was used is convenience sampling where passengers were given briefing on the purpose of the study and asked if they were willing to be a participant in the study before giving them the questionnaire. A convenience sampling is one where the units that are selected for inclusion in the sample are the easiest to access. Using this sampling method may lead to under or over representation of a particular group within the sample. Since the sampling frame is not known the inherent bias in convenience sampling means that sample is unlikely to be representative of the population being studied.

CHAPTER TWO
REVIEW OF RELATED LITRATURE

2.1 Service

Because services are intangible, they are different from physical products and cannot be stored. Their purpose however is to satisfy human needs and wants. Although services are part of our life there is difference between services and commodities. Fisher, in 1935, was the first to identify the difference. He used the term "tertiary sector" to identify services and then it was used by Judd in 1965. Schneider and White (2004) highlighted 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 between services and goods and argued that, services are acts, deeds, performances, or efforts, whereas, goods are articles, devices, materials, objects, or things. As opposed to acquiring title or ownership when buying a physical good, a service consumer receives only the rights to a service for a specified amount of time (Kandampully, 2002).

2.1.1 Characteristics of service

The service industry is increasingly competitive in its nature, especially the travel industry. Service professionals must be concerned themselves with a minimal increase in the market share in addition to maintaining their existing customer base (O'Neill, 2001). Customers are constantly presented with new opportunities to find a service provider that is capable of fulfilling their demands and meeting their expectations with the growing horizon of the service industry. Lovelock (2001) believes that the pressure placed on service organizations to achieve service excellence is truly justified. In his research, he pointed out three issues [i] today customers are more demanding of the products and services they buy. [ii] the development of sophisticated technology has made it convenient for all service organizations, large and small, to offer personalized services that are highly valued by the customer. And [iii] in an increasingly competitive and international marketplace, providing a quality service encounter is seen as having the advantage over the competition

In addition to the characteristics stated above Services have been defined as multidimensional; which includes intangibility, heterogeneity, and inseparability of production and consumption Parasuraman, Zeithaml, and Berry, 1985). Although this is not a pre-determinate factor constituting a

service in some cases perishability is additional characteristic of services (Hartman and Lindgren, 1993).

a) Intangibility: Zeithaml et al (1990) claims that intangibility is the fundamental factor that differentiates services and goods. As services are defined as an intangible process, customers can only measure its quality through their own subjective perception (Mackey and Crompton, 1998; Kandampully, 2002). The conception of a service can be viewed through three dimensions of intangibility, namely, physical intangibility dimension referring to the untouchability, mental intangibility – the degree of visualization, and generality dimension – the accessibility or inaccessibility feature (Lovelock and Gummesson 2004). Intangibility, therefore, necessitates a subjective engagement of the consumer in evaluating the process.

b) Heterogeneity*:* The service delivery is itself totally dependent on the staff member's skill level. For this reason, firms have the extra challenge maintaining standards of quality Zeithaml et al., 1985) Airlines industry service management is especially challenged insofar as air travelers 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 this staffs also need to be excellent problem solvers, often improvising to provide the best quality of service possible. Heterogeneity in this sense therefore 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).

c) Inseparability: As a process that is intangible then, service is experienced the moment it is delivered (Kotler, 2003, Gronroos, 1990).The provider is present when the service is being delivered and consumed. Therefore, consumers are often physically involved and become a vital part of the service delivery process. Thus, the quality of the service depends on the provider's performance as well as the customer's participation (Kelly et al., 1990). The delivery of the service becomes a human performance and the customer is inseparable from participation. Organization must strive hard to ensure maximization of consumption of output by customers when service is readily available as no further storage can be made (Schneider and White, 2004). Airline managers must work hard to leave no empty seat exists as it cannot be inventoried for later use (Schneider and White, 2004)

d) Perishability: Services are perishable, which means that they cannot be saved, stored for reuse at a later date, resold, or returned in the same sense as a product (Lovelock and Gummesson, 2004). Zeithaml et al., (1985) definition of perishability states that, unlike products that can be stored or reinvented for future orders, services cannot be returned, recaptured; only repeated. The issue of perishability is also of prime concern for the producers (Hartman and Lindgren, 1993). This dimension of service comes to play especially, when an organization can't fully meet the demands of the consumers (Hartman and Lindgren, 1993). In the case of airlines, if the customers wait for the registration process in long queues or wait in the boarding area for long hours, service perishability is resulted (Hartman and Lindgren, 1993).

2.2 Service quality

During the past two decades, service quality has become a major area of attention to practitioners, managers and researchers because of its strong impact on business performance, lower costs, return on investment, customer satisfaction, customer loyalty and profitability (Cronin and Taylor. 1992; Hallowell, 1996). Mostafa (2005) observes that service quality has become a famous research topic because of its important relationship to cost, profitability, customer satisfaction, customer retention, service guarantee, and financial performance. More over providing service, understanding customer expectations and the customer's perception of the service encounter is a vital component to delivering superior service. Delivering superior service, especially in the travel industry creates a myriad of opportunities for the service organization to surpass the competitive and become a recognized leader in the service industry. It only stands to rationalize that the concept of the service encounter directly affects satisfaction, loyalty and future behavioral intentions; which in turn, has a direct affect on the organization's success and financial stability (Zeithaml et al., 2008).

Service quality is considered as a critical dimension of competitiveness (Lewis, 1989). Excelling in service quality and opting for high customer satisfaction is the vital issue and challenge facing the contemporary service industry (Hung et al., 2003). Service quality is an important subject in both the public and private sectors, in business and service industries (Zahari et al., 2008). The concept of service quality has been defined differently by many authors as follows:

Service quality is the extent to which a service meets or exceeds customer needs and expectations (Lewis and Mitchell, 1990). Bitner and Hubbert (1994) also define service quality as a consumer's

overall impression of relative inferiority/superiority of the organization and its services. On their part, Lewis and Booms (1983) define service quality as a measure of how well the service delivered matches customer expectations. Delivering service quality means conforming to customer expectations on a consistent basis. It has also been defined as the difference between customers' expectations and the service delivered (Parasuraman et al., 1985). Service quality can also be quantified by the degree of discrepancy between customers' desired, as opposed to predicted, expectations and their perceptions of service performance (Parasuraman et al., 1985). Service quality levels are higher when the gap between perceptions of performance and desired expectations is non-existent or small; the levels of satisfactory service quality exist when perceived performance exceeds predicted expectations (Parasuraman et al., 1988).

Service quality evaluation takes place when the customer's perceptions of the service experienced are compared with the service expected. In contrast, product quality results from a comparison of customer's perceptions of product performance with the expected level of product performance. A Service quality gap results when service perceptions fall below expected levels. The gap that exists between the service provider's perception of quality and the customer's perception of quality is the perception gap (Oliver, 1999). The difference between customers' expectations and the service delivered is termed the service quality (Parasuraman et al., 1985). Despite some definitional nuances, researchers generally agree that service quality is concerned with whether service perceptions meet, exceed or fall short of customer expectations (Cronin & Taylor, 1992, 1994; Gronroos, 1983a, 1983b; Oliver, 1993; Parasuraman et al., 1985; Zeithaml et al., 1993). Understanding the service quality expectations of customers would give marketers the opportunity to close the gap between expectations and perceptions of service quality levels.

2.3 Service Quality in the Airline Industry

Service quality and customer satisfaction in the travel industry today are two critical elements to most organizations. Professionals are constantly searching for new and exciting ways to promise more than the competition and delivery on their promise. O'Neill and Palmer (2004) explained that service quality and the degree of satisfaction derived from service quality is becoming the single most important differentiating factors in almost every travel environment. For the travel industry, the increasing competition and expansion of unique services and amenities has forced travelers to continuously search for competitive advantage. Today, customers have an overwhelming of choices

of Air transport. Customers are educated, well travelled and notorious for conducting extensive research before selecting that perfect airline, resort, tours or cruise line experience. Tour and Travel organizations face a significant challenge when they attempt to deliver quality service to create satisfied customers; customers who will hopefully demonstrate their loyalty to one exclusive brand (James, 2014).

Continuous quality improvement strategies are one of the methods employed by service providers in order to obtain service quality standards and deliver on their promises (James, 2014). The measurement and testing quality signifies the organization's commitment of quality to the customer. Customers often view service quality as the organization's demonstration of respect and appreciation. In cultivating a continuous quality improvement effort, one of the most important forms of analysis is to focus on the customer's opinions and feedback. An integral part of any organization's attempt to install a "quality culture" is a commitment to a process of "continuous improvement" (Witt and Muhlemann, 1995). In order to remain competitive in the marketplace and to be recognized as a leader in service quality, an organization must continue to utilize different forms of formal and informal measurements (James, 2014).

With regards to the airline industry service quality is contemplated as a composite of different interactions between customers and airlines, with employees seeking to influence customers' perceptions and the image of the carriers (Gursoy et al., 2005). To this respect, researchers have investigated the effects of individual dimensions of airline service quality using Structural Equation Modeling (SEM), (Park et al., 2005, 2006). Chang and Yeh (2001) suggests a multi-attribute decision making model to measure and compare overall competitiveness of airlines on five dimensions and their associated objective performance measures. However, a method based on conjoint analysis to determine the relative importance of service attributes measured in airline customer satisfaction surveys was also employed (Danaher, 1997). Many papers have been written in the past years scrutinizing the service quality of airline industry. These papers focus primarily on measuring the performance of airlines using SERVQUAL instrument (e.g., Bel, 2005).

2.4 Models for Measuring Service quality

Several conceptual models have been developed by different researchers for measuring service quality. It is envisaged that conceptual models in service quality enable management to identify quality problems and thus help in planning for the launch of a quality improvement program thereby improving the efficiency, profitability and overall performance (Seth and Deshmukh, 2005). The SERVQUAL scale (Parasuraman et al., 1985) has been widely applied by both academics and practitioners across industries in different countries in terms of service quality measurement (Ali et al., 2013; Wu and Ko, 2013). Parasuraman et al. (1985) developed a procedure for quantifying customers' perceptions of service quality. SERVQUAL determines customers' quality perceptions as influenced by a series of five distinct gaps that can interfere with delivery of high quality service. Zeithaml et al (2006), stated that "service quality is a focused evaluation that reflects the customer's perception of reliability, assurance, responsiveness, empathy, and tangibles" (Zeithaml et al., 2006, p. 106-107). They added that among these dimensions, "reliability" has been shown consistently to be the most important dimension in service quality (Zeithaml et al., 2006).

Parasuraman et al. (1988) has developed the new refined instrument of SERVQUAL with five dimensions, namely; tangibles, reliability, responsiveness, assurance, and empathy.

Tangibility: physical facilities, equipment, and appearance of personnel

Reliability: ability to perform the promised service dependably and accurately

Responsiveness: willingness to help customers and provide prompt service

Assurance*:* knowledge and courtesy of employees and their ability to inspire trust and Confidence

Empathy*:* caring individualized attention the firm provides to its customers

One of the first items of research to be conducted on airline service quality was by Gourdin (1988). Interestingly Gourdin (1988) did not use SERVQUAL. However, along with Kloppenborg in 1991 used the Parasuraman et al.'s (1985) conceptual gaps model to find out the gaps between passenger expectations and management perceptions of these gaps that might result in customer dissatisfaction in the airline industry. The service quality gaps approach using SERVQUAL scale to measure perceived service quality has also been applied by many other researchers in various service industries (Fick & Ritchie, 1991).

The methodology of Fick and Ritchie (1991) was criticized by Cunningham et al. (2004) who mentioned that, "they simply reported the mean scores of consumer expectation and perception of service performance measures and failed to determine the relative impact of various SERVQUAL items on overall service quality and satisfaction" They further mentioned that SERVQUAL can result in better findings if data analyses of individual items are done by means of multivariate statistical techniques.

When developing SERVQUAL, Parasuraman et al. (1985) noted that both focus group and in-depth interviews methods were adopted in the beginning with senior management of different service firms, including; banks, telecommunication, securities brokerages, appliance repair and maintenance shops, and credit card companies. Further, empirical research was undertaken where proved that the criteria used by consumers in evaluating and assessing service quality consists of ten dimensions which was later refined to five main dimensions (Parasuraman et al., 1988). Customers' responses to their perceptions and expectations are measured on a 7-point Likert scale at (perception - expectation) gap scores.

The refined version of SERVQUAL, (Parasuraman et al., 1988) replaced communication, credibility, security, competence, and courtesy with one main dimension of assurance. This consists of a number of dimensions, including:

1. Customers should be able to trust employees of these firms,
2. Customers should be able to feel safe in their transactions with these firms' employees.
3. A firm's employees should be polite; their employees should get adequate support from these firms to do their jobs well.

Further, understanding /knowing the customers, and access was replaced by empathy. The items they used for empathy (expectation and perception) are:

1. Firms should not be expected to give customers individual attention,
2. Employees of these firms cannot be expected to give customers personal attention.
3. It is unrealistic to expect employees to know what the needs of their customers are
4. It is unrealistic to expect these firms to have their customers' best interests at heart,
5. They shouldn't be expected to have operating hours convenient to all their customers.

The aggregated sum of difference between perceptions and expectations from the five dimensions forms the global perceive quality construct. (Laroche et al., 2004) Following this view, customers'

expectations were met through the outcome dimension (reliability) and exceed it by means of the process dimension (tangibility, assurance, responsiveness, and empathy).

2.5 Customer Satisfaction

Customer satisfaction has become a key intermediary objective in service operations due to the benefits it brings to organizations (Ranaweera and Prabhu, 2003). The importance of Customer satisfaction is derived from the generally accepted philosophy that for a business to be successful and profitable, it must satisfy customers (Shin and Elliott, 2001). Previous research has demonstrated that satisfaction is strongly associated with re-purchase intentions (Cronin and Taylor, 1992; Fornell, 1992). Customer satisfaction also serves as an exit barrier, helping a firm to retain its customers (e.g., Fornell, 1992). Several studies have concluded that it costs more to gain a new customer than it does to retain an existing one Blodgett et al.,(1995). In addition, customer satisfaction also leads to favorable word-of-mouth publicity that provides valuable indirect advertising for an organization (Fornell, 1992). In many industries, having satisfied customers also means that the organization receives fewer complaints (Fornell, 1992), hence reducing costs in handling service failures. Researchers also maintain that satisfied customers are willing to pay more for the benefits they receive and are more likely to be tolerant of an increase in price (Fornell et al., 1996). Shin and Elliott (2001) concluded that, through satisfying customers, organizations could improve profitability by expanding their business and gaining a higher market share as well as repeat and referral business.

Over recent years marketing researchers have shown an interest in exploring satisfaction and, more specifically, customer satisfaction (Heitmann et al., 2007), which is attributed to the fact that satisfaction can be held responsible for the competitive advantage of a service giving organization (e.g., Anderson et al., 1994), resulting in the increasing interest of companies around the world to monitor satisfaction on a continuous basis (Fornell, 1992). Fornell (1992) stated that companies need to dedicate significant resources for the improvement of customer satisfaction because satisfaction indicates the general health of the organization.

Satisfaction plays a key role in the service industry and especially in the travel and hospitality industry (Chang and Chang, 2010). As the service has evolved, researchers have made great strides to define and understand satisfaction from the customer's perspective. The emphasis to comprehend what truly creates satisfied customers has lead to an ever increasing body of literature surrounding

satisfaction, how service providers create satisfied customers and the value as well as effects that satisfaction has on businesses today (Anderson and Fornell, 2000).

For businesses in services industries, achieving customer satisfaction is far more challenging. For instance, some services are extremely complex in nature and involve multiple service encounter stages which have bearings on the level of overall customer satisfaction (Han and Ryu, 2009). In the context of studies on airlines companies, Archana and Subha (2012) state that airline service quality dimensions – i.e., in-flight services, in-flight digital services, and airline back-office operations – are significant predictors of passengers' satisfaction and that this satisfaction influences their loyalty and the airline's image. Similarly, Abdullah et al. (2007) also found a positive relationship between satisfaction and both future use of the airline and the likelihood of recommending it to others. Therefore, in the airline industry, passengers' satisfaction plays an important role in measuring the quality of services and the likelihood that they will continue their relationship with the service providers (Archana and Subha, 2012; Abdullah et al., 2007).

Several researchers prefer an overall summary measure of satisfaction, whereas others argue that it should be measured as a combination of attributes (Churchill and Iacobucci, 2005). However, in the case of applying a single item to overall satisfaction measurement, it should be preceded by the "evaluation of multiple statements based on customer own merits" (Churchill and Iacobucci, 2005). Oliver (1981) refers that multipoint satisfaction scales does not reflect true satisfaction because the surprise effect has just occurred and it did not have time to decay.

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.

In the airline industry, Saha and Theingi (2009) found a significant relationship between airline service quality and passenger satisfaction, meaning that the higher the perceived service quality, the higher was the passenger satisfaction (Lau et al., 2011). On the contrary, when a customer is not satisfied, he or she is more likely to switch to another airline and to not recommend the airline to friends or family members (Abdullah et al., 2007).

In support of the view of perceived service quality as an antecedent of customer satisfaction, Han et al. (2009) confirmed the antecedent role of service quality with respect to customer satisfaction in various service industries (airlines, banks, beauty salons, hospitals, hotels, mobile telephones). This study also adopts his school of thought and thus hypothesizes that airline service quality significantly influences passengers' satisfaction.

2.6 Empirical Studies on imapct of service qulaity on cutsomer satisfaction

Gashaw (2011) studied Assessment of Service Quality and Customer Satisfaction Airlines using SERVIQUAL model. The total sample of 150 passengers selected using convenience sampling for passengers that had traveled using Ethiopian airlines was taken as a respondent. Out of which 144 passengers returned a completely filled questionnaire therefore analysis and conclusion was done using the 144 responses. The study found that tangible (1.592) has the highest mean difference which placed it in the first position in Ethiopian air lines performance from the passengers' point of view, followed by Reliability (.043) then Empathy (-.158) which shows that performance was below expectation of the customer, assurance (-(1.612) has the group mean difference showing negative it implies that passengers perceive less than what the passengers expecting in assurance items. The last item is responsiveness where findings show that Ethiopian air line has not tried hard to improve its responsiveness as group mean is negative (- 2.699).

Archana and Subha (2012) conducted a research study on service qulaity and passener satusafction on Indain airlines. The study covered a sample of 270 respondents and the survey was conducted at the Chennai international terminal of Tamil Nadu. Sampling was done by interviewing randomly selected passenger. Exploratory Factor Analysis issued for measuring airline service quality to determine the dimension of airline service quality on three variables Passenger Satisfaction and Service Quality (PSSQ) on In-flight Services, PSSQ on In-flight Digital Services and PSSQ on Airline Back office Operations. The findings of the factor analysis showed that the overall cumulative percentage of variance is 53.686 to in-flight service, 62.239 to in-flight digital service and 72.793 to back-office operations. In this study, passengers are satisfied to the service provided and overall facilities delivered by the airline companies. The study revealed that the passengers are satisfied with the services quality delivered in in-flight service, in-flight digital service and back office operations.

While analyzing demographic profile of the passengers their study showed that educated and high income passengers are using flights more frequently.

In this study Archana and Subha ocnluded Failure to provide quality services to passengers may damage the formation of airline image and cause negative impact on passengers‟ behavioral intentions. These findings imply that airline companies‟ in-flight service quality depends upon the different delivery strategies deployed.

Ali et al. (2013) conducted a reserach “an assessment of service quality and resulting customer satisfaction in Pakistan International Airlines”. The target population for this study was defined as all passengers having flown with PIA in the last 12 months. A total of 848 questionnaires were distributed, of which 498 questionnaires were handed back. The survey model that was used in this study is the AIRQUAL model. This scale has five distinct dimensions, namely airline tangibles, terminal tangibles, Personnel, empathy, and image. The findings of this study indicate that airline tangibles (β=0.608; t-value=3.998; p=0.03) has as significant influence on cutsomer staisfaction. Terminal tangibles (β=0.411; t-value=2.366; p=0.000) has a sifnificant influence. Personnel has a significant effect on customer satisfaction (β=0.500; t-value=4.603; p=0.000), empathy as well has a signifacant influence on customer satisfaction (β=0.391; t-value=2.137; p=0.02). Lastly, Image (β=0.558; t-value=4.617; p=0.000) has a significant influence on Customer satisfaction. The result of the regression anayisis show that airline tangible has the highest influence folowed by image,Personnel,terminal tangible and empathy respectively.

Ali et al. (2013) recomend the company should be able to create high perceptions using tangible cues such as aircraft’s exterior and interior appearance and terminal appearance, and should also recruit and train human resources to provide a personalized service and ensure empathy, which seem to be highly important to customers. Moreover, PIA should update their catering service facilities, as this is one of the major components of service quality in airlines.

Another study by Ekiz and Hussain (2006) “perception of service quality in North Cyprus ailine industry: a path analysis application” also adopted the AIRQUAL model to overcome teh pshychmetrical application problem of exisisting quality scale. Out of the 610 questionnaaires distributed only 583 questionnaries were forund to be useful adn used in teh analysis and cinclusion. The samplin that was used in thi study non-probability judemental techinques. The study used path analysis to test hypothesis and findings showed that airline tangibles have a significant postive effect

on both customer satisfaction and repurchase intentions and the same is true for the four dimesnsions namely, Terminal tangible, personnel, epmathy and image. The study depicts that service quality dimensions jointly explain 68% of the variance in customer satisfaction.

A ccording to the results of the study Ekiz and Hussain (2006) recomended that inorder to better sstisafy their customers National airline should give impaortance to pyhsical euiptment such as aircraft's exterior and interrior appaerance, efficeint cargo handlinh procedures, technical mainteainace of aircraft at regular intervals. Personnel shuldbe trained and higly qualified in order to better understand and service the customers. Moerover they should update their catering service facilities. Especially in teh field of marketing the company should recurit qualified personnel.

2.7 Theoretical frame work

This research has adapted the school of thought that considers perceived service quality as an antecedent of customer satisfaction (Cronin and Taylor, 1992; Parasuraman et al., 1988. The framework (see Figure 2.1) used in this study is adapted from AIRQUAL model presented by Ekkiz et al (2006). This model comprised five distinct dimensions, namely airline tangibles, terminal tangibles, personnel, empathy, and image. AIRQUAL model was used to overcome the psychometrical application problems of the existing service quality scales.

Peterson and Wilson (1992) suggested that understanding what determined customer satisfaction and knowing what variables and/or factors related to customer satisfaction were a prerequisite to effectively interpret and utilize customer satisfaction ratings.

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 is included to the framework in Figure 2.1. The rationale behind the inclusion of Previous research suggested gender as a variable influencing customer satisfaction (e.g. Brody and Hall, 1993; Dittmar, Long, and Meek, 2004;). In marketing literature, studies showed that female customers tend to rate service quality lower when a comparison is made between genders (Lin, Chiu and Shieh, 2001; Juwaheer, 2011). On one hand, ignoring gender differences may create problems if there are gender-based differences to quality rating and level of satisfaction. On the other hand, a gender-sensitive approach may become even more problematic if there are no differences between male and female customers (Karatepe, 2011).

Thus, if the relative importance of the service quality dimensions to customers is likely to vary depending on their gender, resource allocation on those attributes should be contingent on the importance attached to them by customers.

According to Lim Bennet and Dagger 2008 suggested that consumers with higher income levels may perceive service quality differently from their lower-income counterparts. In addition, Yuanji Zheng (2011) also stated that income will affect a person's values and preferences. Thus, income is important indicators for consumer's perception of service quality that influence customer satisfaction. Kassim (2006) found that income is considered one of the most powerful factors in customer perception and satisfaction. Moreover Fatma and Ozlem (2007) in their study expectations and perceptions in airline services: An analysis using weighted SERVQUAL scores identified service quality gap vary by flight frequencies and concluded that its impact shows how important it is to treat each customer differently. Following these literatures this study has considered demographic factors sex, Income and Frequency of flying as a control variable.

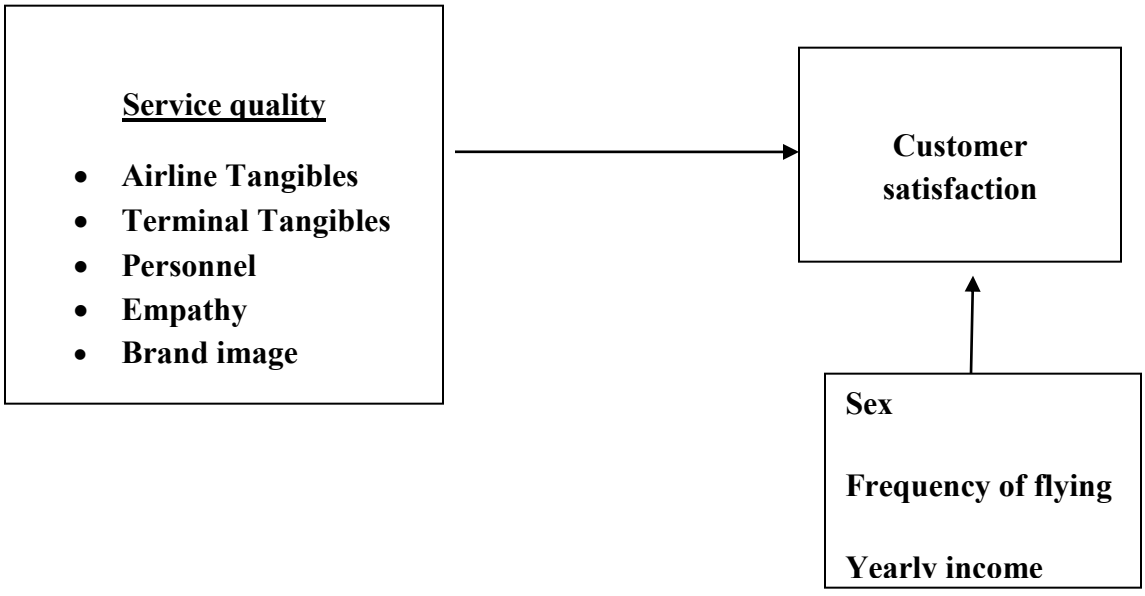

Figure 2.1Theoretical framework of the research (Source; Ekkiz et al (2006))

CHAPTER THREE
RESEARCH METHODOLOGY

This section of the thesis highlights the overall methodological considerations used in gathering, analyzing and interpreting the data.

3.1 Research Design

According to McDaniel and Gates (1999), a research design is a plan for a study that provides specification of procedures to be followed by the researcher in order to achieve the research objective, as well as, to test the hypotheses. Similarly, many researchers (e.g., Churchill and Iacabucci, 2005) call it a blueprint for a research to be followed in order to successfully implement the research

This study has a quantitative nature. To be able to investigate the relationship between the factors related to service quality and customer satisfaction. This research has been explanatory as it is focused on attempting to test a causal (attributes of service quality) and effect (customer satisfaction).

3.2 Sampling method and sample size

For this study, the survey method (paper based questionnaire) was used as instrument for collecting data. The unit of analysis was individual and respondents were Ethiopian Airlines customers who are waiting for departure or just arrived from Ethiopian plane at Addis Ababa Bole international airport. They were selected based on convenience sampling. Convenience sampling method is used because the sample population is too large and it is difficult to include every respondent and because of their convenient accessibility and proximity to the researcher. In addition similar research in other Airport has used convenience sampling. Convenience sampling method has been found appropriate to conduct survey in the case of airlines customers (e.g. Aydina and Yildirimb, 2012). A total sample of 270 passengers who had traveled using Ethiopian airlines was taken as a respondent. The questionnaire was distributed randomly. The questionnaires were passed directly to the customer or passengers around the terminal building. The researcher also asks them if they would be willing to participate and a short brief were given to the customer.

3.3 Research Instrument and Data collection

In this study data has been collected through questionnaires (see Appendix 2) which were prepared in a way that is relevant to the situation so as to decrease invalid responses and distributed to passengers at Addis Ababa Bole international airport.

The survey instrument that was used is adopted from Ekiz et al. (2006) and Westbrook and Oliver (1991). Multiple items were used in the questionnaire; and seven items were used for airline tangibles, 10 items for terminal tangibles, seven items for personnel, nine items for empathy, and three items for image, 6 items for Customer satisfaction (CSAT). A five-point Likert scale was used to reduce respondents' frustration and increase response rate and quality, as suggested by Prayag (2007).

3.4. Operationalization of Variables

a) **Dependent Variable;** Customer satisfaction is defined as passengers' opinion on the service delivered by Ethiopian Airlines. In this research 6 items were used to measure customer satisfaction and passengers were provided with 5 point Likert scale to indicate their level of satisfaction.

b) **Independent Variable:** The following are independents used in this study:

Table 3.1 Operational definition of independent variables

Variables	**Definition and measure**	**Expected effect on customer satisfaction**
Airline Tangibles	It is related, among others, to the interior of aircraft used by airlines, the quality of catering in the plane, the cleanliness of the plane's toilets, the cleanliness of the plane seats, and the comfort of the plane seats. It is measured using a 5 point Likert scale.	+
Terminal Tangibles	It related to aspects of the airports such as convenience of check-in, cleanliness of the airport toilets, availability of shop in the airport, size of airport, and air-conditioning of the airport. It is measured using 5 point Likert scale.	+
Personnel	It is designed to evaluate employees working in airlines,	+

	including employees' attitude and knowledge, personal care of employees to everyone, and airlines' error-free reservations and ticketing transactions. It is measured using a 5 point Likert scale.	
Empathy	Relates to issues such as punctuality of the departures and arrivals, transportation between city and airport, loyalty programs, and care paid to passengers' luggage. It is measured using a 5 point Likert scale.	+
Image	It is defined by availability of low price ticket offerings, consistency of ticket prices with given service, and image of the airline company. It is measured using 5 point likert scale.	+
Sex	Respondent's state of being male or female. It is measured using a dummy variable (1= Female, 0= Male).	+/-
Frequency of flying	Refers respondents frequency to fly with Ethiopian airlines interval scale	+
Yearly Income	Average income level of respondent per year in dollar. Measured in interval scale.	-

Source own literature review

3.5. Method of Data Analysis

The relationship between the dependent variable, customer satisfaction, and the independent variables is expressed as a linear combination of the independent variables plus an error term. Following Greene (2003), the multiple linear regression models is specified as:

$$Y= \beta_0 + \beta_1X1+ \beta_2X_2 + \beta_3X_3 + \beta_4X_4 + \beta_5X_5 + \beta_6X_6 + \beta_7X_7 + \beta_8X_8 + \varepsilon$$

Where: Y= customer satisfaction for the airlines services

$\beta_{0=}$ Constant term

X1= Airline tangibles

X2= Terminal tangibles

X3= Personnel

X4= Empathy

X5= Image

X6= Sex

X7= Frequency of travel

X8= Yearly income

Where the β_S are coefficients of independent variables, Xs are column vectors for the independent variables in this case; Airline tangibles, terminal tangibles, personnel, empathy, image, sex, frequency of travel and yearly income; while ε is a vector of errors of prediction. The errors are assumed to be normally distributed with an expected value of zero and a common variance.

Factor analysis was employed for all variables with multi-item scales. Kaiser-Meyer-Olkin (KMO) and Bartlett's Test of Sphericity (Hair et al., 2010) were used to measure the adequacy of the sample size for exploratory factor analysis. The threshold for KMO is greater than 0.7, whereas, for Bartlett's test of Sphericity it is $p<0.001$ of significance level, in order to conduct EFA (Hair et al., 2010).

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.878
Bartlett's Test of Sphericity	Approx. Chi-Square	841.948
	Df	15
	Sig.	.000

Table 3.2 KMO and Bartlett's Test

The above table clearly indicates that the cut-off values for KMO and Bartlett's Test of Sphericity were met. The KMO test confirms that the sample is adequate and that the different variables can be factorized into groups as its value is 0.878 which is greater than minimum 0.7 and the Bartletts test of Sphericity is also significant as it is less than 0.001 as it can be seen from the table. Again these measures tell us that the data is suitable factor analysis.

Factor analysis can be used to construct indices. Some variables might have greater explanatory power than others. Also sometimes similar questions correlate much so that we can justify dropping

one of the questions completely. In such cases factor analysis can be used to identify the weight of each variable. Generally using principal factor is preferred when using factor analysis when using factor analysis to reduce data. In this research we are interested in the dimensions behind the variable and therefore the researcher has used principal axis factoring.

During all factor analysis procedures, principal axis factoring with extracting to one factor methods was employed. The factors extracted for each of the scales, which had factor loading value greater than 0.4, were used in a subsequent analysis. Items with factor loadings of less than 0.4 were excluded from further analysis.

Table 3.3 Variables and factor loadings

Item	Airline Tangibles (Alpha=0.844)	Factor loading
1	Aircraft is safe and clean	0.745
2	Quality of catering served in plane is good	Dropped
3	Plane toilets are clean	.809
4	Plane seats are clean	.729
5	Plane seats are comfortable	.643
6	Quality of air-conditioning in the planes are good	.705
7	Up to date newspapers, magazines and video films are available during the flight	Dropped

Item	Terminal Tangibles (alpha=0.878)	Factor loading
1	Passenger check-in is convenient	Dropped
2	Size of airport is big enough for holding all passengers	.517
3	The airport toilets are clean	.484
4	There are sufficient number of shops in airport	.589
5	The airport has effective air-conditioning	.544
6	The airport has effective sign system	.624
7	Trolleys are abundantly available in the airport	Dropped
8	The security control system is reliable	Dropped

9	Employees' uniforms are visually appealing	Dropped
10	The waiting hall of the airport is comfortable	.535

Item	Personnel (alpha= 0.927)	Factor loading
1	Employees' general attitude is good	.709
2	Airline personnel give exact answers to your questions	.677
3	Personnel show personal care equally to everyone	.616
4	Employees have the knowledge to answer your questions	.828
5	The airline personnel show empathy	.738
6	Airline personnel are aware of their duties	.586
7	Reservations and ticketing transactions are error-free	.454

Item	Empathy (alpha= 0.776)	Factor loading
1	The departures and arrivals are punctual	.429
2	There is e convenient transportation between city and airport	Dropped
3	The airline provides loyalty program to frequent flyer	Dropped
4	The airline provides compensation schemes in case of loss or hazard	Dropped
5	The airline pays good Care to passengers' luggage	Dropped
6	Online flight booking is convenient	Dropped
7	Convenient flight schedules are available and enough frequencies	.773
8	There are convenient locations of the airline company offices	Dropped
9	There are enough number of flights to satisfy passengers' demands	.511

Item	Image (alpha=0.730)	Factor loading
1	Low price ticket offerings are available	.582
2	Ticket prices is consistent with given service	.582

3	The airline company has a good image	Dropped

Item	Customer Satisfaction (alpha=0.963)	Factor Loading
1	I am satisfied with my decision to use Ethiopian as a service provider	.813
2	My choice of Ethiopian as a service provider was a wise one	.847
3	I think I did the right thing when I chose to travel by Ethiopian	.863
4	I feel that my experience with Ethiopian has been enjoyable	.811
5	My satisfaction with this airline has increased	.786
6	I now have a more positive attitude towards the company	.778

Cronbach Alpha was used to test the reliability of multi-items (Churchill, 1979). Airline tangible is composed of five items, terminal tangible comprised of six items, personnel had seven items, empathy comprised of three items, image had two items and customer satisfaction had six items which had factor loading above 0.4. Each variable were tested for internal consistency and the results revealed Cronobach Alpha above 0.7 which shows a high internal consistency. The means, standard deviations and correlations of variables are shown in Table 3.4.

Table 3.4. Means, Standard deviations (SD), and correlations

	Variables	Mean	SD	1	2	3	4	5	6	7	8	9
1	Customer Satisfaction	3.58	0.962	1								
2	Sex	0.32	0.467	.008[a]	1							
3	Frequency of Flying	0.69	1.131	.080	-.140a	1						
4	Income	2.68	1.553	-.072[b]	-.130a	.302a	1					
5	Airline Tangible	3.76	0.712	.266[a]	-.207a	-.065	-.025	1				
6	Terminal Tangible	3.06	0.948	.115[a]	-.023a	.137b	.036	.275a	1			
7	Personnel	3.58	0.851	.534[a]	-.033b	-.183	.001	.179a	.355a	1		
8	Empathy	3.69	0.814	.320[a]	.121c	.201a	.141	.241a	.333a	.471a	1	
9	Image	3.39	0.883	.176[a]	-.019c	-.156	.000	.141a	.156a	.208a	.432a	1

Note: [a], [b], and [c] shows 1%, 5 % and 10% level of significant

3.6. Data Analysis

The survey questionnaire data was encoded to SPSS version 20 for windows. The procedures of data classification and organization were set to validate the data for further analysis. After data classification and organization the statistical analysis was performed in order to accomplish the purpose of the study. The results of the survey are presented in descriptive and in quantitative forms.

3.6.1. Descriptive analysis

Descriptive statistics frequency and percentage, histogram and tabular summarizations were used to present demographic factors, independent variables and for the level of passenger satisfaction.

3.6.2 Quantitative analysis

Ordinary least squares regression model was used to indicate the major determinants of customer satisfaction. OLS regression is a generalized linear modeling technique that may be used to model a single response variable which has been recorded on at least an interval scale. According to Pohlman (2003) OLS models the relationship between a dependent variable and a collection of independent variables. The technique may be applied to single or multiple explanatory variables and also categorical explanatory variables that have been appropriately coded (Hutcheson, 2011). Moreover T-test and one way ANOVA was employed to identify the difference between demographic variables and customer satisfaction.

Before estimating any model, it is a must to check the validity of the model properly. Hence, as necessary, tests for multicollinearity were made. Tests for multicollinearity is done using variance inflation factor (VIF). As a rule of thumb, if the VIF of a variable exceeds 10, there is a serious multicollinearity problem. The VIF indicates whether a predictor has a strong linear relationship with the other predictor(s). Myers (1990) suggests that a value of 10 is a good value at which to worry. Related to the VIF is the tolerance statistic, which is its reciprocal (1/VIF). As such, values below 0.1 indicate serious problems although Menard (1995) suggests that values below 0.2 are worthy of concern. Whichever measure the data set again shows no sign of significant colliniarity. Results of VIF and 1/vif are shown in Appendix 1.

3.7. Ethical Considerations

The ethical approval and clearance for the study before data collection was obtained from the College of Business and Economics, Addis Ababa University. The purpose of the research study was explained to respondents in order to obtain their full consent to use the information obtained. To first page of the questionnaire contained privacy and confidentiality terms and the respondents were assured the provided information will not be passed to a third party and will not be used for any other purpose other than as an input for the research. Name and other identifying information were not used in the study. The researcher safeguarded all information related to the participants. Their privacy, identity and confidentiality were maintained by assigning them code numbers instead of names (anonymity). The completed questionnaires were filed safely and were accessible only to the researcher and thesis advisor.

CHAPTER FOUR

RESULTS AND DISCUSSION

The first section of this chapter presents a demographic description of the sample in terms of age, sex, level of education, frequency of flying, purpose of travel and monthly income. The second section summarizes the response of participants of the research when it comes to various attributes of service quality and customer satisfaction.

4.1 Demographic Characteristics of Respondents

Regarding Age of greater past of respondents (27.4%) are within the age group of 18-28, 25.2% are from 29-29,21.9 are within the age group 40-50,18.5% are 51-59 and the last 7% are within the age group 60 and above. 68.1% of respondents are female while the remaining 31.9% are male respondents.

Majority (45.9%) of respondents have bachelor's degree while 30.4% have education level higher level of education, 16.3% have a diploma while 7.4% replied other. This may indicate that most of the respondents have a good educational background. Most of the respondents (87.5%) are traveling for Business and holiday purposes while 4.4% are traveling for medical and educational reasons while 7.6 responded others.

Table 4.1: Demographic characteristics of respondents

Items	Frequency	Percentage %
Age		
18-28	74	27.40%
29-39	68	25.20%
40-50	59	21.90%
51-59	50	18.50%
60 & above	19	7.00%
Sex		
Female	184	68.10%

Male	86	31.90%
Education Level		
Doctorate	13	4.80%
Masters	69	25.60%
Bachelor	124	45.9
Diploma	44	16.3
Other	20	7.4
Purpose of Travel		
Holiday	107	34.10%
Business	169	53.80%
Medical	2	0.60%
Education	12	3.80%
Other	24	7.60%

Table 4.2 gives the cross tabulation results between income range and annual frequency of flight. Those with the least annual income report to have the least frequency of flight only flying to a maximum of five times per year. Also those that have the highest income range report the most frequent travel using Ethiopian airlines.

Table 4.2: Cross tabulation between Yearly Income in Dollar and Annual frequency of flying with Ethiopian Airlines

Frequency Of Flying Per Year	Below 5000	5000-10000	10000-15000	15000-20000	Above 20000	Total
1-5	39	27	25	10	71	172
5-10	0	4	8	6	33	51
10-15	0	3	4	0	13	20
15-20	0	3	0	0	10	13
more than 20	0	0	0	0	14	14

Total	39	37	37	16	141	270
	Chi-Square Test					
			Value	Df	Asymp. Sig. (2-sided)	
	Pearson Chi-Square		50.739	16	.000	

Regarding the monthly income of the sampled respondents, the least is below USD 5,000 per year whereas the highest is above USD 20,000 per year. This means that there is higher income disparity among the sampled patient respondents. The frequency to flying with the Ethiopian airlines also varies where some of the passengers are flying more than 20 times in a year and there are also those who are first time travelers are the time of filling out the questionnaire.

The chi-square test of income and frequency of flying is also shown on the table. There was a significant association between yearly income and frequency of flying $\chi 2\,(16) = 50.739$, $p < .001$

4.2 Assessing the Level of Customer Satisfaction

There were six items that inquired about customer satisfaction directly. An average scoring method was employed to arrive at the level of customer satisfaction which is given out of 100%. The following histogram summarizes the average customer satisfaction score for the data set.

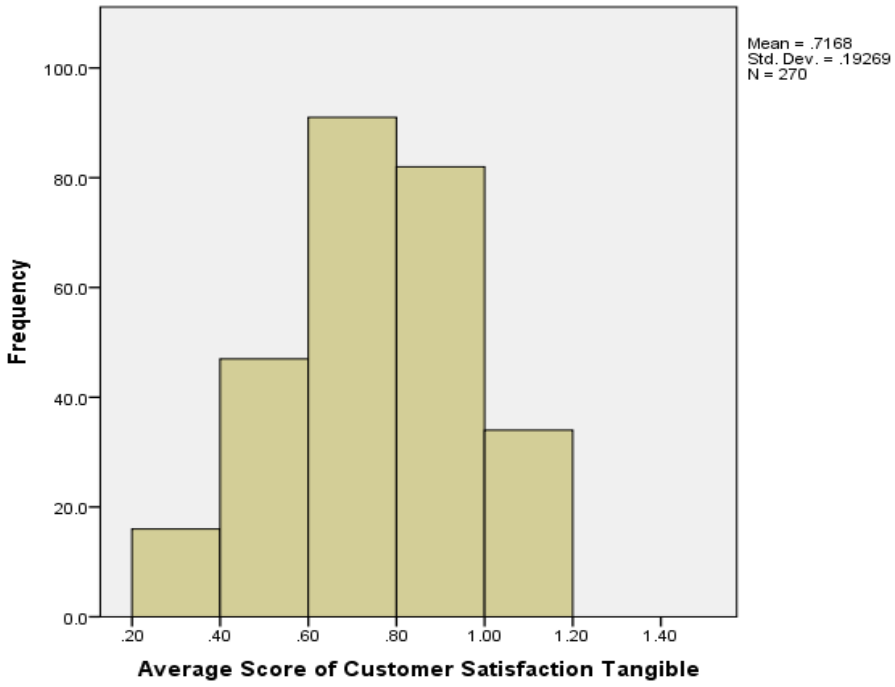

Figure 4.1 Satisfaction level on sampled passengers

The mean for average score of customer satisfaction is given 0.7168 (71.68%) with a standard deviation of 0.19269, So more than half of customers are fairly satisfied with the services of Ethiopian Airlines.

4.3 Respondents' satisfaction level on five service quality dimensions

The descriptive statistics table shows the results of descriptive analysis on the predictor variables (airline tangible, terminal tangible, personnel, empathy, image, sex, frequency of flying and yearly income) as well as the outcome variable (customer satisfaction). The descriptive statistics gives an initial idea about the differences in each group.

Sampled respondents indicated their level of satisfaction on each of the five service quality dimensions: Airline Tangible, Terminal Tangible, Personnel, Empathy and Image. The mean of passenger satisfaction score was the highest for Airline tangible (3.76), followed by Empathy 3.69 and Personnel 3.58. The mean of passnger satisfaction score was the lowest for Terminal tangibles (3.06). The mean of Image is 3.39. Detail result of respondents on each element has been attached on appendix 3.

Variable	Mean	Std. Deviation	N
Customer Satisfaction	3.5840	.96208	270
Airline Tangible	3.7674	.71217	270
Terminal Tangible	3.0667	.94886	270
Personnel Tangible	3.5847	.85104	270
Empathy	3.6988	.81434	270
Image	3.3981	.88345	270
Sex of Respondents	.32	.467	270
Frequency of Flying	.69	1.131	270
Yearly Income	2.68	1.553	270

Table 4.3 Descriptive statistics

4.4 The Difference between Demographic Variables and Customer Satisfaction

A. Gender and Customer Satisfaction

An independent sample t-test was conducted to compare and uncover any significant difference between female and male counterpart when it comes to customer satisfaction.

	Mean	Standard deviation	t-test	df	Sig (2 tailed)
Male	3.67	0.995	2.53	190	0.01
Female	3.37	0.857			

Table 4.4:T-test Comparison of mean for male and female

On average the customer satisfaction for male (M=3.67, SD=0.995) and female (M=3.37, SD= 0. 0.857), $t(190)= 2.53$, $p<0$ .05. Therefore there is statistically significant difference observed between the means of male and female counterparts when it comes to customer satisfaction.

B. Frequency of Flying and Customer Satisfaction

A one was ANOVA test was conducted to see if there were any significant differences among the different categories of respondents' frequency of flight and customer satisfaction. As it can be seen

from the table below the significance level is 0.238 (p = .238), which is above 0.05. Hence, there is a no statistically significant difference among various categories of respondents with frequency of flight when it comes to customer satisfaction.

Annual Frequency of Flying	Mean	Standard Deviation	Mean Square Between Groups	Df (Between Groups)	Mean Square Within Groups	DF (Within Groups)	F	Sig
1-5	3.53	.942	1.278	4	.920	265	1.38	.238
5-10	3.71	.962						
10-15	3.66	1.104						
15-20	3.21	.727						
More than 20	3.95	1.115						

Table 4.5: One way ANOVA Comparison of mean for frequency of flight

C. Income and Customer Satisfaction

The one- way ANOVA test reveals that there is a statistically significant difference among respondents with various level of income when it comes to customer satisfaction.

Income	Mean	Standard Deviation	Mean Square Between Groups	Df (Between Groups)	Mean Square Within Groups	DF (Within Groups)	F	Sig
Below 5000	3.35	.922	2.950	4	0.895	265	3.29	0.01
5000-10000	3.73	.839						
10000-15000	3.16	1.085						
15000-20000	3.75	.655						
Above 20000	3.69	.965						

Table 4.6: One way ANOVA Comparison of mean for Income

4.5. Regression Analysis

The results of the regression analysis for the independent and dependent variables is shown in Table 4.7.

Table 4.7: Result of Multiple Regression

Variables	Coefficients	Standard Error	t-value	Sig
Constant	-.231	.039	-5.924	.000
Sex	.002	.014	.131	0.896
Frequency of Flying	.009	.006	1.517	**0.065**
Yearly Income	-.003	.004	-.712	0.477
Airline Tangible	.313	.062	5.033	**0.000**
Terminal Tangible	.061	.061	1.006	0.315
Personnel	.448	.053	8.498	**0.000**
Empathy	.304	.093	3.258	**0.001**
Image	.196	.059	3.355	**0.001**
F Static	F(8,270)=98.050			**.000**
R2 (Adjusted R2)	.750 (.743)			

As shown in the multiple regression table, the coefficients of the regression for airline tangible (0.313, $p < 0.01$), personnel (0.448, $p<0.01$), empathy (0.304, $p<0.01$), image (0.196, $p<0.01$) and frequency of flying (0.009, $p < 0.065$) are significant; while sex (0.002, $p =0.896$), , yearly income (-0.003, $p = 0.477$), and terminal tangible (0.061, $p=0.315$) are statistically insignificant. This means that airline tangible, personnel, empathy, image and frequency of flying positively and significantly influence the level of customer satisfaction.

The study findings show that Frequency of flying has a significant influnece on customer staistfaction. Thisis inline with the Fatma and Ozlem (2007) who arguedthat the isgfiicant impact of frequency on satisfaction shows how important it is to treat each customer differently

But the other socio-economic factors are not significant. And It is concluded that no dependable pattern of relationship of socio-economic factors and satisfaction has been established so far. It has a wide variation in different studies and Doborah (2001), mentioned that most difficult relationship is to jot down socio- economic factors and level of satisfaction. This may be due to the fact that different studies had varied broadly in nature of certain sample studies and specific set of background characteristics examined. A particular scale used may also have affected perceived relationship.

From the regression analysis, we notice that one of the influential factors for customer satisfaction with airline service is airline tangible. This is dimension has to do with quality of in flight physical attributes. The findings from the regression analysis with regards to this dimension are in line with the work of Ali et al (2015) that airline tangible significantly influence on customer satisfaction. Previous studies by Ekiz, Hussian and Bavik (2006) suggest that airlines should to physical equipment such as asircrafts' interior and exterior appearance.

The result additionally exhibited that the other factor affecting customer satisfaction is personnel. This has to do with employees' treatment and interactions with passengers. Result of this study show that this dimension has the strongest influence on customer satisfaction. Although this dimension may not be the one with the highest influence other studies support the result that it has a significant influence. Saha and Theingi (2009) observed that flight attendants and ground staff were significant contributors to customer satisfaction. According to Ekiz, Hussian and Bavik (2006) pesonnel should be trained and highly quailed in order to better understand and serve the customer better.

The third note worthy dimension that influences customer satisfaction is empathy. This include items to do with punctuality of flights, convenient flight schedules are available, enough number of flights to satisfy customer demand. Consistent with previous studies although the ß value (.304) for our current study is slightly lower than the studies of Ali et al (2015) also supports the findings that empathy ß=.391 has a significant role on customer satisfaction in the airline industry. Prayag 2007 also stated that empathy significantly influences passengers' satisfaction with airline service quality. This study also found that there is a significant relationship between brand image and customer satisfaction. This is in line with the studies of Nardi et *al*. (2008)

The last noteworthy finding from this study is that it found that terminal tangible doesn't have a significant influence on customer satisfaction. Previous studies such as Ali et al. (2015) have shown that improved terminal tangibility lead to improved customer satisfaction. Prayag 2007 also stated

that tangibility explains high percentage of variance on passengers' rating of level of satisfaction. However findings of this study show that terminal tangible is not statistically significant.

CHAPTER FIVE

CONCLUSION, MANAGERIAL IMPLICATION AND RECOMONDATION

This concluding chapter attempts to highlight and summarize the significant contributions of this study. The chapter begins with a conclusion where research questions are answered, then to the managerial implication and theoretical contribution. It ends with suggestion for future research.

5.1 Conclusions

Service industry is one the most important sectors in today's economy. In this era of globalization people are seeking quality from what they get and firms are more in tune with their customers and trying to give best services n order to stay competitive in the challenging environment. Service quality as an important tool in enabling organisations to differentiate themselves in a very challenging environment (Olorunniwo et al., 2006; Ekiz et al., 2006). This argument also holds true in the airline industry, where deregulations and intense competition are forcing the service providers to improve their service quality in order to satisfy their customers (Nadiri et al., 2008), and same is true for Ethiopian Airlines.

The present study aimed to assess the service quality of Ethiopian Airlines by employing the AIRQUAL scale developed by Ekiz et al. (2006) and investigate its effect on passengers' satisfaction. The model prpopes that there are five dimensions of service quality which are Airline tangibles, Terminal tangibles, Personnel, Empathy and Image. Finidngs from the collected data show that 71.68% of customers are satisfied with the services of the airlines. As promised in the research objective the first objective was to identify dimensions of service quality which influence customer satisfaction in Ethiopian airlines. According to our model are airline tangibles, personnel, empathy and image significantly and positively influence customer satisfaction. Among these dimensions personnel has the most significant influence on customer satisfaction. . Finidngs from the collected data show that 71.68% of customers are satisfied with the services of the airlines. The study has also identified frequency of flying as a demographic factor that has a positive and significant influence on customer satisfaction.

The study may indicate that Ethiopian airlines need to be pay more attention to the service quality dimensions of airline tangibles, personnel, empathy and image as they significantly and positively influence customer satisfaction. This may mean that service deliveries by the airline need to focus on this pertinent service quality dimensions.

5.2 Managerial Implication

Organizations around the world struggle to find methods through which they can improve their quality of service, because it leads to enhanced satisfaction and loyalty. Alone the measures of service quality are imperative for organizations, as it tells them to focus on those facets that are critical for success. The same is true of airline industry too. With the growth of competition in the airline industry and the introduction of budget airlines different airlines are struggling to find ways to improve their service quality in order to ensure customer satisfaction. Data collected from the survey can be used as a great tool of performance indicator for Ethiopian Airlines. Sample survey enables the organization to see quality of service provided from the eyes of the customer.

In the airline industry where the customer is a king this study shows customers rating on the quality of service dimensions and their satisfaction with Ethiopian Airlines.. Therefore results of this study are considered important from the perspective of the organization.

In order to improve service quality dimensions which will intern affect customers satisfaction of the airline, Ethiopian airlines has to incorporate output of this study in order to create a more enjoyable experience for its customer. Results of the study have showed those major portions of the customers are satisfied with the service provided by the airline. This doesn't that doesn't mean that airline shouldn't work toward closing the gap and increasing level of satisfaction. Personnel dimension has been identified as the dimension with the most significant influence on customer satisfaction. This implies that not only the management team but also all employees within Ethiopian airlines have to give due care to customers perception on the quality of service provided. Moreover Ethiopian Airlines has to work hand in hand with its partner companies to ensure customer satisfaction. Unless all parties involved work together towards being more customer oriented and improving service quality all efforts will be in vein.

5.3 Recommendation for future research

This study has focused on passengers rating on the five dimensions of service quality; future studies can include more variables to measure service quality to get a broader view on quality of service provided and to come up with a more comprehensive strategy to improve over all service quality.

Another perspective would be use open ended-questions or semi- structured interview so that respondents are able to give more detailed response. In using the survey method employed in this study the respondents gave their ratings to provided specific questions. While if other methods such as those mentioned were used respondents will have freedom to include items that are important to them they may have been overlooked by the researcher and give more elaborate responses to questions asked. This will help the researchers to identify real problem areas as well as areas that are doing exceedingly well.

Other researchers can also be done not just from the perspective of the customers but all so from the point of view of the employees. In the airline industry where its customer service is primary part of the service provided it can be useful to analyze what service and service quality from the perspective of the employees giving the customer service.

Lastly comparative studies can be done comparing customers rating of service quality and customer satisfaction with Ethiopian airlines with their ratings of service quality and customer satisfaction with a different airline. This will enable to see how well the airline is doing compared to its competitors.

Reference

Abdullah, K., Manaf, N.H.A. and Noor, K.M. (2007). *Measuring the Service Quality of Airline Services in Malaysia, IIUM Journal of Economics and Management, Vol. 15 No. 1*

Abeyratne R (1998). *The Role of Civil Aviation in Securing Peace, 19 Int. J. World Peace*

Albrecht, K., and Zemke, R. (1995). *Service America! New York: Warner Books, Inc.*

Ali, Dey, Filieri 2015. *An Assessment of Service Quality and Resulting Customer Satisfaction in Pakistan International Airlines*

Ali, F., Omar, R. and Amin, M. (2013). *An Examination of the Relationships Between Physical Environment, Perceived Value, Image and Behavioural Intentions: a SEM Approach*

Alotaibi, K. F. (1992). *An Empirical Investigation of Passenger Diversity, Airline Service Quality, and Passenger Satisfaction. Unpublished PhD thesis, Tempe, Arizona State University*

Anderson, E., Fornell, C., & Lehmann, D.R. (1994). *Customer Satisfaction, Market Share, and Profitability: Findings from Sweden, Journal of Marketing*

Angur, M. G., Nataraajan, R., & Jahera, J. S. (1999). *Service Quality in the Banking Industry: an Assessment in a Developing Economy.*

Archana, R. and Subha, M.V. (2012). *A Study on Service Quality and Passenger Satisfaction on Indian Airlines". International Journal of Multidisciplinary Research, Vol. 2 No. 2*

Bel, J.B. (2005). *Beyond the Friendly Skies: An Integrative Framework for Managing the Air Travel Experience. Managing Service Quality, 15(5), 437-451*

Berry, L. L. (1980). *Service Marketing Is Different. Business, 30, 24-29*

Biljana, Angelova and Jusf, Zekri (2011). *Measuring Customer Satisfaction with Service Quality using American Customer Model (ACSI model). International Journal of Academic Researching Business and Social Science, vol.1, No3*

Bitner, M. J., Booms, B. H., & Mohr, L. A. (1994*). Critical Service Encounters: The Employee's Viewpoint. Journal of Marketing, 58, 95-106*

Blodgett, J.G., Wakefield, K.L., & Barnes, J.H. (1995). *The effects of Customer Service on Consumer Complaining Behavior. Journal of Services Marketing, 9(4)*

Brady, M.K., & Cronin, J.J. (2001). *Some New Thoughts on Conceptualizing Perceived Service Quality. A Hierarchical Approach, Journal of Marketing, 65(1), 34-49*

Brody, L., & Hall, J. A. (1993). *Gender and emotion. In M. Lewis, & J. Haviland (Eds.), Handbook of emotions* (pp. 447-460). *New York, NY: Guilford Press.*

Chang, Y & Keller, MR (2002). *A Survey Analysis of Service Quality for Domestic Airlines*

Chang, Y., and Chang, Y. (2010*). Does Service Recovery Affect Satisfaction and Customer Loyalty? An Empirical Study of Airline Services. Journal of Air Transport Management, 16, 340-342*

Chikwendu DU., Ejem E. and Ezenwa A. (2012*) Evaluation of Service Quality of Nigerian Airline using SERVQUAL Model*

Churchill, G. A., &Iacobucci, D. (2005). *Marketing Research: Methodological Foundations, 9th Edition*

Clemes, M.D., Ozanne, L.K., and Laurenson, W.L. (2001). *Patients' Perceptions of Service Quality Dimensions: An Empirical Examination of Health Care in New Zealand. Health Marketing Quarterly*

Cronin, J. and Taylor, S.A. (1992). *Measuring Service Quality: A Re-examination and Extension. Journal of Marketing, 56(3), 55 – 68*

Danaher, P.J. (1997). *Using Conjoint Analysis to Determine the Relative Importance of Service Attributes Measured in Customer Satisfaction Surveys. Journal of Retailing, 73(7), 235-260*

Dennet, C.E., Ineson, M., Stone, G.J., & Colgate, M. (2000). *Pre-Bookable Services in the Chartered Airline Industry: Increasing Satisfaction through Differentiation*

Dittmar, H., Long, K., & Meek, R. (2004). *Buying on the internet: Gender differences in online and conventional buying motivations. Sex Roles, 50(5/6),*

Ekiz, H.E., Hussain, K. and Bavik, A. (2006), *Perceptions of Service Quality in North Cyprus National Airline.*

FatmaPakdil and Ozlem Aydin (2001). *Expectations and Perceptions in Airline Services: An Analysis Using Weighted SERVQUAL Scores. Journal of Air Transport Management*

Fick, G. R., & Ritchie, J. R. B. (1991). *Measuring Service Quality in the Travel and Tourism Industry. Journal of Travel Research, 30 (Fall), 2-9*

Fitzsimmons J. and Fitzsimmons M.J. (1994). *Service Management for Competitive Advantage. New York: McGraw Hill Inc.*

Fornell, C. (1992). *A National Customer Satisfaction Barometer: The Swedish Experience*.

Gashaw Girma (2011): *Assessment of Service Quality and Customer Satisfaction: A Case Study of Ethiopian Airlines*

Getachew Mersha (2004). *Business Process Reengineering: A Focus on Time Performance. A Case Study on Ethiopian Airlines*

Gourdin, K. N. (1988*). Bringing Quality back to Commercial Air Travel. Transportation Journal, 27(3), 23-29*

Gourdin, K. N., & Kloppenborg, T. J. (1991). *Identifying Service Gaps in Commercial Air Travel: The First Step toward Quality Improvement. Transportation Journal, 31(1),22-30*

Gronroos, C. (1990). *Service Management and Marketing, Lexington Books, Lexington, MA*

Gursoy, D., Chen, M. and Kim, H.J. (2005). *The US Airlines Relative Positioning based on Attributes of Service Quality. Journal of Tourism Management, 26(1), pp.57-67*

Gursoy, D., McCleary, K.W. and Lepsito, L.R. (2007). *Propensity to Complain: Affects of Consumer Attitudes'. Journal of Marketing, No. 55*

Hallowell, R. (1996). *The Relationships of Customer Satisfaction, Customer Loyalty, and Profitability: an Empirical Study. International Journal of Service Industry , 7 (4), 27-42*

Han, H. and Ryu, K. (2009). *The Roles of the Physical Environment, Price Perception, and Customer Satisfaction in Determining Customer Loyalty in the Restaurant Industry. Journal of Hospitality & Tourism Research, Vol. 33 No. 4, pp. 487-510*

Hartman, D. E., & Lindgren, J. H. (1993). *Consumer Evaluations of Goods and Services: Implications for Services Marketing. The Journal of Services Marketing*

Heitmann,M.lehman, D.R & Hermna A. (2007). *Choice Goal Attainment and Decision and Consumption Satisfaction. Journal of Marketing Research.44(2)*

Huang, T.J., Chi, S.C., & Lawler, J.J., (2005). *The Relationship between Expatriate's Personality Traits and their Adjustment to International Assignments*

Huang, Y (2009). *The Effect of Airline Service Quality on Passengers' Behavioural Intentions using SERVQUAL Scores: A Taiwan Case Study. Journal of Eastern Asia Society for Transportation Studies, vol. 8, pp. 2330-2343*

International Air transport Association (2007). *Annual Report. 63rd Annual General Meeting. Vancouver*

J. Perovic, (2013). *The Economic Benefits of Aviation and Performance in the Travel & Tourism Competitive Index. The Travel & Tourism Competitiveness Report ch. 4.1*

James Malitoni (2014). *Evaluation Of Service Quality, Value And Satisfaction Of Air Transportation In Malawi: Case Study of Air Malawi*

Jenet Manyi Agbor (2011). *The Relationship Between Customer Satisfaction and Service Quality: a Study of Three Service Sectors in Umeå*

Juwaheer, T. D. (2011*). Gender bias in hotel guests' perceptions of service quhotels in Mauritius. e-Review of Tourism Research, 9(5*)

Kandampully, J. (2002). *Innovation as the Core Competency of a Service Organisation: The Role of Technology, Knowledge and Networks. European Journal of Innovation Management*

Karatepe, O. M. (2011). *Service quality, customer satisfaction and loyalty: the moderating role of gender. Journal of Business Economics & Management, 12(2),*

Kelly, S.W., Donnelly, J.H. Jr., and Skinner, S.J. (1990). *Consumer Participation in Service Production and Delivery. Journal of Retailing, 66(3), 315-335*

Kloppenborg, T.J., &Gourdin, K.N. (1992). *Up in the Air about Quality. Quality Progress*

Kotler, P. (2003). Marketing *Management (11th ed.). Upper Saddle River. NJ: Pearson Educations*

Kenan Aydina and Seda Yildirimb(2012). *The measurement of service quality with SERVQUAL for different domestic airline firms in Turkey: Serbian Journal of Management 7 (2) (2012) 219 – 230 august 2012*

Lancaster, K. (1971). *Consumer Demand: A New Approach, Columbia University Press, New York, NY*

Larchole, M, Kalamas, M., Cheikhrouhou , S and Xezard A. (2004). *An Assessment of Dimensionality of should will Service Expectations. Canadian Journal of Administrative Sciences-revue, 21(4),361*

Lau, T.C., Kwek, C.L. and Tan, H.P. (2011). *Airline e-Ticketing Service: How e-Service Quality and Customer Satisfaction Impacted Purchase Intentions. International Business Management, Vol. 5 No. 4, pp. 200-208*

Lee, M., & Cunningham, L.F. (1996). *Customer Loyalty in the Airline Industry Transportation Quarterly*

Levesque, T., & McDougall, G.H.G. (1996). *Determinants of Customer Satisfaction in Retail Banking. International Journal of Bank Marketing*

Lewis, B.R. (1989). *Quality in Service Sector – A Review. International Journal of Brand Marketing*

Lewis, B.R., & Mitchell, V.W. (1990). *Defining and Measuring the Quality of Customer Service. Marketing Intelligence & Planning*

Lewis. R. C., & Booms, B. H. (1983). *The Marketing Aspects of Service Quality. Emerging Perspectives on Service Marketing. Chicago, IL: American Marketing, 99-107*

Lim, C.G., Bennett, R.R. & Dagger, T. (2008). *The impact of service contact type and demographic characteristics on service quality perceptions. Journal of Services Marketing, 22(7), 550-56*

Lin, N. P., Chiu, H. C., & Hsieh, Y. C. (2001). *Investigating the relationship between service providers' personality and customers' perceptions of service quality across gender. Total Quality Management, 12(1),*

Lioua, J.J.H and Tzeng, G. (2007). *A Non-additive Model for Evaluation Airline Service Quality. Journal of Air Transport Management 13, 131-138*

Lovelock, C. (2001). *Services Marketing People, Technology, Strategy. Upper Saddle River: Prentice Hall*

McDaniel, C. & Gates, R. 1999. *Contemporary Marketing Research. 4th Edition. South Western University Publications: Cincinnatti*

Miller, C. (1993). *Rewards for the Best Customers: Loyalty Programs Increase as Marketers tries to Build Relationships. Marketing news*

Mishal M. Alotaibi (2015). *Evaluation of AIRQUAL Scale for Measuring Airline Service Quality and its Effect on Customer Satisfaction and Loyalty*

Mostafa, M. (2005). *An Empirical Study of Patients' Expectations and Satisfactions in Egyptian Hospitals. International Journal of Health Care Quality Assurance, 18(6/7)*

Schneider, B., & White, S. S. (2004). *Service Quality: Research perspectives. California: Sage Publications*

Nadiri, H., & Hussain, K. (2005). *Diagnosing the zone of tolerance for hotel services. Managing Service Quality, 15 (3), 259-277*

Nadiri, H., Hussain, K., Ekiz, E. H. Erdogan S. (2008). *An Investigation on the Factors Influencing Passengers' Loyalty in the North Cyprus National Airline. The TQM Journal. Vol. 20 (3), 265-280*

O'Neill, (2001) *Service Quality management in Hospitality, Tourism and Leisure. New York: Haworth Hospitality Press*

O'Neill, M.A. and Palmer, A. (2004). *The Effects of Survey Timing upon Visitor's Perceptions of Service Quality. Journal of Travel Research, 24, 221-236*

Oliver, R. I. (1999). *Whence consumer loyalty? Journal of Marketing. 63, 33-44*

Oliver, R. L. (1980). *A Cognitive Model of the Antecedents and Consequences of Satisfaction Decisions. Journal of Marketing Research, 17 (4), 460-469*

Ostrowski, R.L., O'Brien, T.V., & Gordon, G.L. (1993). *Service Quality and Customer Loyalty in the Commercial Airline Industry, Journal of Travel Research*

Ott, J. (1993). *Airline Customer Service Rated 'Average' in Survey", Aviation Week and Space Technology*

Oyewole, Philemon (2001). *Consumer's Socio-Demographic Characteristics and Satisfaction with Services in the Airline Industry. Services Marketing Quarterly, Vol. 23 (2)*

P. Steele. (2012). *Air Transport Provides Jobs and Sustainable Economic Growth. ATAG Press Release Retrieved from http://www.atag.org/our-news/press-releases/50.html?tmpl=Press*

Parasuraman, A., Zeithamal, V.A., and Berry, L.L. (1985). *A Conceptual Model of Service Quality and its Implications for Future Research. Journal of Marketing, 49 (3), 41-50*

Parasuraman, A., Zeithaml, V. A., & Berry, L. L. (1988). *SERVQUAL: A Multiple Item Scale for Measuring Consumer Perceptions of Service Quality. Journal of Retailing, 64, 12-40*

Park, J.W., Robertson, R. and Wu, C.L. (2005). *Investigating the Effects of Airline Service Quality on Airline Image and Passenger' Future Behavior Intentions: Findings from Australian International Air Passengers. The Journal of Tourism Studies, 16 (1), 2-11*

Park, J.W., Robertson, R., and Wu, C. (2004). *The Effect of Airline Service Quality on Passengers' Behavioural Intentions: a Korean Case Study. Journal of Air Transport Management, Vol. 10, 435-439*

Peterson, Robert A. and William, R.W. (1992). *Measuring Customer Satisfaction: Fact and Artifact. Journal of the Academy of Marketing Science, Vol. 20 (1)*

Ranaweera C. & Prabhu J. (2003). *On the Relative Importance of Customer Satisfaction and Trust as Determinants of Customer Retention and Positive Word of Mouth. Journal of Targeting, Measurement and Analysis for Marketing, 12(1), 82-98*

Saha, G.C. and Theingi (2009). *Service Quality, Satisfaction, and Behavioural Intentions: A Study of Low-cost Airline Carriers in Thailand. Managing Service Quality, Vol. 19 No. 3, pp. 350-372*

Schneider, B., & White, S. S. (2004). *Service Quality: Research Perspectives. California: Sage Publications*

Seth, N., &Deshmukh, S.G. (2005). *Service Quality Models: A Review. International Journal of Quality & Reliability Management, 22(9), 913-949*

Shin, D., & Elliott, K.M. (2001). *Measuring Customers' Overall Satisfaction: A Multi-Attributes Assessment. Services Marketing Quarterly, 22(1), 3-19*

Wicks, A. M., & Roethlein, C. J. (2009). *A Satisfaction-Based Definition of Quality. Journal of Business & Economic Studies, 15(1) 82-97*

Witt, C., and Muhlemann, A. (1995). *Services Quality in Airlines. Tourism Economics, 1 (1), 1-12*

Wu, H.C. and Cheng, C.C. (2013). *A Hierarchical Model of Service Quality in the Airline Industry*

Yuanji Zheng. (2011). *A study of some of the factors determining the choice of internationalrestaurants by Bangkokians. AU-GSB e-journal , 4(1), 156-167*

Zahari, W., Yusoff, W., & Ismail, M. (2008). *FM-SERVQUAL: A New Approach of Service Quality Measurement Framework in Local Authorities. Journal of Corporate Real Estate, 10(2), 130-144*

Zeithamal V., Mary Jo Bitner (2003*). Services Marketing Integrating Customer Focus across the Firm, Page 86- 92, 320-321*

Zeithaml, V. A., Berry, L. L., & Parasuraman, A. (1993). *The Nature and Determinants of Customer Expectations of Service. Academy of Marketing Science, 21 (1), 1-13.*

Zeithaml, V. A., Parasuraman, A., & Berry, L. (1985). *Problems and Strategies in Services Marketing. Journal of Marketing, 49 (2), 33-46.*

Zeithaml, V.A. and Bitner, M.J. (2000). *Services Marketing: Integrating Customer Focus Across the Firm. Madison: McGraw-Hill.*

Zeithaml, V.A., A. Parasuraman, and L. L. Berry (1990). *Delivering Quality Service: Balancing Customer Perceptions and Expectations. New York, NY. The Free Press*

Zeithaml, V.A., Berry, L.L., & Parasuraman A. (1996). *The Behavioral Consequences of Service Quality. Journal of Marketing, 60(2): 31-46*

Zeithaml, Valarie A. (1984). *Issues in Conceptualizing and Measuring Consumer Response to Price. Advances in Consumer Research, Volume 11, T. C. Kinnear (Ed.),628-63*

Zeithamal V., Mary Jo Bitner (2006). *Services Marketing Integrating Customer Focus across the Firm*

Zineldin, M. (2000). *Total Relationship Management (TRM) and Total Quality Management (TQM), Managerial Auditing Journal*

Appendix 1: VIF table for regression analysis

Model		Collinearity Statistics	
		Tolerance	VIF
	(Constant)		
	Airline Tangible	.457	2.190
	Terminal Tangible	.361	2.768
	Personnel Tangible	.440	2.271
	Empathy Tangible	.263	3.805
	Image Tangible	.461	2.171
	Sex of Respondents	.881	1.135
	Frequency of Flying with Ethiopian airlines per year	.769	1.300
	Yearly Income in Dollar	.854	1.171

Appendix 2: Questionnaire

Aviation Industry; The Case A Questionnaire on the Thesis Title "Impact of Service Quality on Customer Satisfaction in the aviation industry: The case of Ethiopian Airlines"

My name is Liliya Tadesse. I am a student in the postgraduate program at Addis Ababa University, College of Business and Economics. Currently I am conducting a research on the topic "Impacts of Service Quality on Customer Satisfaction – Case of Ethiopian Airlines" to fulfill the partial requirement of the Masters of Business Administration [MBA] degree. This questionnaire is designed to collect data on the topic under caption. Hence I would be grateful if you kindly take a few minutes of your time to fill out this questionnaire putting your personal experience with regard to the issue. Your willingness and cooperation in giving genuine information is well appreciated and the information you provide will be used for academic purpose and will be kept in strict confidentiality.

If you would like to gain further information about this study, or have a problem in completing this questionnaire, please contact me via email liliyat07@gmail.com

I would, in advance, like to thank you very much for your cooperation and taking the time to consider my request.

Section 1: Demographic characteristics of respondents

Please circle the answer you have selected.

1. Sex?
   - A. Female
   - B. Male
2. Age?
   - A. 18-28
   - B. 29-39
   - C. 40-50

D. 51-59

E. 60 and above

3. Education level?

A. Diploma

B. Bachelor Degree

C. Masters Degree

D. Doctorate degree

E. other

4. Frequency of flying with Ethiopian airlines per year?

A. 1-5

B. 5-10

C. 10-15

D. 15-20

E. more than 20

5. Purpose of travel? Feel free to choose more than one answer.

A. Business

B. Holiday

C. Medical

D. Education

E. Other

6. Yearly income per year in $?

A. Below 5,000

B. 5,000-10,000

C. 10,000-15,000

D. 15,000-20,000

E. Above 20,000

Section 2: Service quality dimensions and customer satisfaction

Please respond according to your first reaction to each statement by circling the numbers in the box to indicate the degree to which you concur with the statement. Below is a key which decodes the meaning assigned to each number.

1= Strongly Disagree

2=Disagree

3=Neutral

4=Agree

5= Strongly Agree

No.	Airline Tangibles	Strongly disagree (SD) (1)	Disagree (D) (2)	Neutral (N) (3)	Agree (A) (4)	Strongly agree (SA) (5)
1	Aircraft is safe and clean	1	2	3	4	5
2	Quality of catering served in plane is good	1	2	3	4	5
3	Plane toilets are clean	1	2	3	4	5
4	Plane seats are clean	1	2	3	4	5
5	Plane seats are comfortable	1	2	3	4	5
6	Quality of air-conditioning in the planes are good	1	2	3	4	5
7	Up to date newspapers, magazines and video films are available during the flight	1	2	3	4	5

F.

No.	Terminal Tangibles	Strongly disagree (SD) (1)	Disagree (D) (2)	Neutral (N) (3)	Agree (A) (4)	Strongly agree (SA) (5)

8	Passenger check-in is convenient	1	2	3	4	5
9	Size of airport is big enough for holding all passengers	1	2	3	4	5
10	The airport toilets are clean	1	2	3	4	5
11	There are sufficient number of shops in airport	1	2	3	4	5
12	The airport has effective air-conditioning	1	2	3	4	5
13	The airport has effective sign system	1	2	3	4	5
14	Trolleys are abundantly available in the airport	1	2	3	4	5
15	The security control system is reliable	1	2	3	4	5
16	Employees' uniforms are visually appealing	1	2	3	4	5
17	The waiting hall of the airport is comfortable	1	2	3	4	5

No.	**Personnel**	**Strongly disagree (SD) (1)**	**Disagree (D) (2)**	**Neutral (N) (3)**	**Agree (A) (4)**	**Strongly agree (SA) (5)**
18	Employees' general attitude is good	1	2	3	4	5
19	Airline personnel give exact answers to your questions	1	2	3	4	5
20	Personnel show personal care equally to everyone	1	2	3	4	5
21	Employees have the knowledge to answer your questions	1	2	3	4	5
22	The airline personnel show empathy	1	2	3	4	5

23	Airline personnel are aware of their duties	1	2	3	4	5
24	Reservations and ticketing transactions are error-free	1	2	3	4	5
No.	**Empathy**	**Strongly disagree (SD) (1)**	**Disagree (D) (2)**	**Neutral (N) (3)**	**Agree (A) (4)**	**Strongly agree (SA) (5)**
25	The departures and arrivals are punctual	1	2	3	4	5
26	There is e convenient transportation between city and airport	1	2	3	4	5
27	The airline provides loyalty program to frequent flyer	1	2	3	4	5
28	The airline provides compensation schemes in case of loss or hazard	1	2	3	4	5
29	The airline pays good Care to passengers' luggage	1	2	3	4	5
30	Online flight booking is convenient	1	2	3	4	5
31	Convenient flight schedules are available and enough frequencies	1	2	3	4	5
32	There are convenient locations of the airline company offices	1	2	3	4	5
33	There are enough number of flights to satisfy passengers' demands	1	2	3	4	5

No.	Image	Strongly disagree (SD) (1)	Disagree (D) (2)	Neutral (N) (3)	Agree (A) (4)	Strongly agree (SA) (5)
34	Low price ticket offerings are available	1	2	3	4	5
35	Ticket prices is consistent with given service	1	2	3	4	5
36	The airline company has a good image	1	2	3	4	5

No.	Customer satisfaction	Strongly disagree (SD) (1)	Disagree (D) (2)	Neutral (N) (3)	Agree (A) (4)	Strongly agree (SA) (5)
37	I am satisfied with my decision to use Ethiopian as a service provider	1	2	3	4	5
38	My choice of Ethiopian as a service provider was a wise one	1	2	3	4	5
39	I think I did the right thing when I chose to travel by Ethiopian	1	2	3	4	5
40	I feel that my experience with Ethiopian has been enjoyable	1	2	3	4	5
41	My satisfaction with this airline has increased	1	2	3	4	5
42	I now have a more positive attitude towards the company	1	2	3	4	5

Appendix 3: Response to Service Quality Attributes and Customer Satisfaction

The AIRQUAL method was used to collect data from different participants. This method contains various variables and sub-variables that are measured in a likert scale of strongly agree, agree, neutral, disagree and strongly disagree. The following table counts and summarized the response of each participant.

i. **Airline Tangible**

Airline Tangibles	**Frequency and percentage**	**strongly Disagree**	**Disagree**	**Neutral**	**Agree**	**strongly Agree**	**Total**
Aircraft is safe and clean	Frequency	2	14	29	145	80	270
	Percent	0.74%	5.19%	10.74%	53.70%	29.63%	100%
Quality of catering served in plane is good	Frequency	15	33	71	101	50	270
	Percent	5.56%	12.22%	26.30%	37.41%	18.52%	100%
Plane toilets are clean	Frequency	0	37	93	95	45	270
	Percent	0.00%	13.70%	34.44%	35.19%	16.67%	100%
Plane seats are clean	Frequency	2	12	63	132	61	270
	Percent	0.74%	4.44%	23.33%	48.89%	22.59%	100%
Plane seats are	Frequency	15	29	78	112	36	270

comfortable	Percent	5.56%	10.74%	28.89%	41.48%	13.33%	100%
Quality of air-conditioning in the planes are good	Frequency	4	18	51	130	67	270
	Percent	1.48%	6.67%	18.89%	48.15%	24.81%	100%
Up to date newspapers, magazines and video films are available during the flight	Frequency	33	40	68	83	46	270
	Percent	12.22%	14.81%	25.19%	30.74%	17.04%	100%

i. Terminal Tangibles

Terminal Tangibles	**Frequency and percentage**	**Strongly Disagree**	**Disagree**	**Neutral**	**Agree**	**strongly Agree**	**Total**
Passenger check-in is convenient	Frequency	17	38	60	117	38	270
	Percent	6.30%	14.07%	22.22%	43.33 %	14.07%	100%
Size of airport is big enough for holding all passengers	Frequency	35	51	75	67	42	270
	Percent	12.96%	18.89%	27.78%	24.81 %	15.56%	100%

The airport toilets are clean	Frequency	33	56	67	87	27	270
	Percent	12.22%	20.74%	24.81%	32.22 %	10.00%	100%
There are sufficient number of shops in airport	Frequency	38	61	91	59	21	270
	Percent	14.07%	22.59%	33.70%	21.85 %	7.78%	100%
The airport has effective air-conditioning	Frequency	40	34	68	98	30	270
	Percent	14.81%	12.59%	25.19%	36.30 %	11.11%	100%
The airport has effective sign system	Frequency	21	40	73	105	31	270
	Percent	7.78%	14.81%	27.04%	38.89 %	11.48%	100%
Trolleys are abundantly available in the airport	Frequency	14	38	91	90	37	270
	Percent	5.19%	14.07%	33.70%	33.33 %	13.70%	100%
The security control system is reliable	Frequency	16	8	68	119	59	270
	Percent	5.93%	2.96%	25.19%	44.07 %	21.85%	100%
Employees' uniforms are visually appealing	Frequency	10	18	64	121	57	270
	Percent	3.70%	6.67%	23.70%	44.81 %	21.11%	100%
The waiting hall of the	Frequency	45	74	59	54	38	270

airport is comfortable	Percent	16.67%	27.41%	21.85%	20.00 %	14.07%	100%

ii. Personnel

Personnel Tangibles	**Frequency and percentage**	**Strongly Disagree**	**Disagree**	**Neutral**	**Agree**	**strongly Agree**	**Total**
Employees' general attitude is good	Frequency	10	20	59	125	56	270
	Percent	3.70%	7.41%	21.85%	46.30 %	20.74%	100%
Airline personnel give exact answers to your questions	Frequency	12	32	60	112	54	270
	Percent	4.44%	11.85%	22.22%	41.48 %	20%	100%
Personnel show personal care equally to everyone	Frequency	18	39	61	108	44	270
	Percent	6.67%	14.44%	22.59%	40.00 %	16.30%	100%
Employees have the knowledge to answer your questions	Frequency	10	27	65	126	42	270
	Percent	3.70%	10.00%	24.07%	46.67 %	15.56%	100%
The airline personnel show empathy	Frequency	6	33	83	111	37	270
	Percent	2.22%	12.22%	30.74%	41.11	13.70%	100%

					%		
Airline personnel are aware of their duties	Frequency	2	24	60	130	54	270
	Percent	0.74%	8.89%	22.22%	48.15 %	20.00%	100%
Reservations and ticketing transactions are error-free	Frequency	18	35	76	101	40	270
	Percent	6.67%	12.96%	28.15%	37.41 %	14.81%	100%

iii. Empathy

Empathy Tangibles	**Frequency and percentage**	**Strongly Disagree**	**Disagree**	**Neutral**	**Agree**	**strongly Agree**	**Total**
The departures and arrivals are punctual	Frequency	19	38	54	107	52	270
	Percent	7.04%	14.07%	20.00%	39.63 %	19.26%	100%
There is a convenient transportation between city and airport	Frequency	14	19	104	102	31	270
	Percent	5.19%	7.04%	38.52%	37.78 %	11.48%	100%
The airline provides loyalty program to frequent flyer	Frequency	4	12	69	102	83	270
	Percent	1.48%	4.44%	25.56%	37.78 %	30.74%	100%

The airline provides compensation schemes in case of loss or hazard	Frequency	15	39	134	64	18	270
	Percent	5.56%	14.44%	49.63%	23.70 %	6.67%	100%
The airline pays good Care to passengers' luggage	Frequency	6	43	100	88	33	270
	Percent	2.22%	15.93%	37.04%	32.59 %	12.22%	100%
Online flight booking is convenient	Frequency	9	8	80	117	56	270
	Percent	3.33%	2.96%	29.63%	43.33 %	20.74%	100%
Convenient flight schedules are available and enough frequencies	Frequency	4	19	66	118	63	270
	Percent	1.48%	7.04%	24.44%	43.70 %	23.33%	100%
There are convenient locations of the airline company offices	Frequency	8	11	85	128	38	270
	Percent	2.96%	4.07%	31.48%	47.41 %	14.07%	100%
There are enough number of flights to satisfy passengers' demands	Frequency	2	10	83	122	53	270
	Percent	0.74%	3.70%	30.74%	45.19 %	19.63%	100%

iv. Image

Image Tangibles	Frequency and percentage	Strongly Disagree	Disagree	Neutral	Agree	strongly Agree	Total
Low price ticket offerings are available	Frequency	10	50	74	93	43	270
	Percent	3.70%	18.52%	27.41%	34.44 %	15.93%	100%
Ticket prices is consistent with given service	Frequency	0	53	84	107	26	270
	Percent	0%	19.63%	31.11%	39.63 %	9.63%	100%
The airline company has a good image	Frequency	6	12	47	138	67	270

v. Customer Satisfaction

Customer Satisfaction Tangibles	Frequency and percentage	Strongly Disagree	Disagree	Neutral	Agree	strongly Agree	Total
I am satisfied with	Frequency	8	28	59	109	66	270

my decision to use Ethiopian as a service provider	Percent	2.96%	10.37%	21.85%	40.37%	24.44%	100%
My choice of Ethiopian as a service provider was a wise one	Frequency	10	29	72	89	70	270
	Percent	3.70%	10.74%	26.67%	32.96%	25.93%	100%
I think I did the right thing when I chose to travel by Ethiopian	Frequency	14	20	81	99	56	270
	Percent	5.19%	7.41%	30.00%	36.67%	20.74%	100%
I feel that my experience with Ethiopian has been enjoyable	Frequency	6	30	78	108	48	270
	Percent	2.22%	11.11%	28.89%	40.00%	17.78%	100%
My satisfaction with this airline has increased	Frequency	12	46	77	89	46	270
	Percent	4.44%	17.04%	28.52%	32.96%	17.04%	100%
I now have a more positive attitude towards the company	Frequency	6	37	90	89	48	270
	Percent	2.22%	13.70%	33.33%	32.96%	17.78%	100%

Appendix 4:

Multiple One way ANOVA Comparisons			
Dependent Variable: Customer Satisfaction Tukey HSD			
(I) Yearly Income in Dollar		Mean Difference (I-J)	Sig.
below 5000	5000-10000	-.380	.406
	10000-15000	.193	.902
	15000-20000	-.395	.623
	above 20000	-.345	.261
5000-10000	below 5000	.380	.406
	10000-15000	.572	.073
	15000-20000	-.016	1.000
	above 20000	.034	1.000
10000-15000	below 5000	-.193	.902
	5000-10000	-.572	.073
	15000-20000	-.588	.233
	above 20000	-.53760*	.019
15000-20000	below 5000	.395	.623
	5000-10000	.016	1.000
	10000-15000	.588	.233
	above 20000	.050	1.000
above 20000	below 5000	.345	.261
	5000-10000	-.034	1.000
	10000-15000	.53760*	.019
	15000-20000	-.050	1.000
*. The mean difference is significant at the 0.05 level.			