



**ST. MARY'S UNIVERSITY  
SCHOOL OF GRADUATE STUDIES**

**MEASURING SERVICE QUALITY  
AT ETHIOPIAN AIRLINES**

**BY:**

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**November 2013**

**Addis Ababa**

**“MEASURING SERVICE QUALITY  
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**Advisor: Matiwos Ensermu (PhD)**

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## **LIST OF ABBREVIATIONS:**

AFR	Authority for Release
ANOVA	Analysis of Variances (Using SPSS Software)
AQR	Air Quality Rating
ASS	Assurance
CSPR	Customer Service Performance Report
EAS	Expectations on Assurance
EEM	Expectations on Empathy
EMP	Empathy
ERL	Expectations on Reliability
ERS	Expectations on Responsiveness
ET	Ethiopian Airlines
ETA	Expectations on Tangibles.
ICAO	International Civil Aviation Organization
IOSA	International Organization for Safety Audit
LOPS	Layout of Passengers Seats
MRO	Maintenance Repair and Overhaul
OTP	On-Time Performance
PAS	Perceptions on Assurance
PEM	Perceptions on Empathy
PLF	Passenger Load Factor
PRL	Perceptions on Reliability
PRS	Perceptions on Responsiveness
PSK	Passenger Seat Kilo-meter
PTA	Perceptions on Tangibles
REL	Reliability
RES	Responsiveness
SMUC	St. Mary's University College
SPSS	Statistical Product for Service Support
TAN	Tangibles



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## **Abstract**

*Airline industry is by its inherent nature very prone to international competition. Because of deregulation and globalization, customers are now better informed about the optional services that are available as well as about their rights in getting these services. Unless airlines measure and monitor their service quality and hence the degree of customer satisfaction, they may lose their customers for good to other competitors and risk reduction of revenue or being out of business altogether. Service quality at Ethiopian Airlines is not properly measured and monitored. The purpose of this study is to measure the service quality of Ethiopian Airlines as perceived by its customers using the 22 components of SERVQUAL model. These 22 components are categorized under five dimensions consisting of tangibles, reliability, responsiveness, assurance and empathy. Questionnaires have been developed in both Amharic and English which were distributed to passengers of selected routes representing the four major continents that the airline has been flying for years. Convenient sampling technique was used and feedback received from 165 respondents has been analyzed using SPSS package.*

*The findings revealed that ET's service quality in all the five dimensions are above 4.92 and that the expectations in these dimensions are even higher. Among the five dimensions reliability which includes respecting arrival and departure time is perceived by passengers to be the lowest performance area for the airline and it is also a dimension where expectation of customers is the highest. On the other hand Assurance is a dimension where ET's service is perceived to be relatively better. Among the individual components, ET's services in the area of neatness of employees, safety of transactions and courtesy of employees are perceived to be among the best performance areas of the airlines. On the other hand, visual appeal of physical facility, advising customers about the service time and respecting schedule are perceived to be among the weak performance areas. Hence, it is recommended for the airline to focus and address areas of the widest perceived gap on priority, measure service quality on periodic basis, and monitor progress. The airline should also try to get information on the performance of its competitors and gear its customer relations strategy in a bid to better satisfy the needs of its customers and keep them loyal for good.*

## CHAPTER ONE: INTRODUCTION

### 1.1 Background of the Study

Air transportation is one of the most important modes of transportation. It is the fastest means to move people and cargo (that is often perishable or of high value, in areas where speed of transportation is important and in areas where regional peace, the environment and the terrain are not friendly). Air transport service is important for land locked countries like Ethiopia. It goes without saying that reliable and efficient air transport is crucial for the economic and social progress of landlocked countries (Economic and Social Commission for Asia and the Pacific, 1997).

According to Button, K. (2008), air transport can facilitate, for example, the economic development of a region or of a particular industry such as tourism. The air transport industry is now large and accounts for about 1% of the GDP of both the EU and the US. It is an important transporter of high-value, low-bulk cargoes. International aviation moves about 40% of world trade by value, although far less in physical terms. The industry is characterized generally by low profit margins and high fixed costs (The Airline Industry, 2013).

Because of globalization, and deregulation, flight segments that were operated by few airlines are now open to many airline operators. This has raised the level of competition and airlines are forced to reduce their fares (Wall, et al., 2010).

Due to excessive competition with low cost carriers, the vast majority of airlines have been retracting, pulling services, and some, such as ATA Airlines, Sky bus, and the legacy airline, Aloha, have simply vanished from the market. In addition to these about 54 low cost airlines have ceased to exist in a two year period between 2003 and 2005 (Button, 2008).

Globalization gave consumers not only the different options but also the knowledge and awareness about these options and the rights they have while enjoying these services. Consumers are subsequently becoming more demanding and less loyal. Unless service

providers satisfy the needs and demands of these customers, these customers will seek service from other competitors and will be lost for good and the very existence of the airlines will subsequently be questionable.

One estimate is that attracting a new customer can cost five times as much as pleasing an existing one. And it might cost 16 times as much to bring the new customer to the same level of profitability as that of the lost customer (Kotler, 2000).

The expenses of an aircraft flight do not vary significantly with the number of passengers carried and, as a result, a relatively small change in the number of passengers or in pricing could have a disproportionate effect on an airline's operating and financial results. Accordingly, a minor shortfall in expected revenue levels could harm the business (The Airline Industry, 2013). For the year 2013, the break even passenger load factor for international flights operated by Ethiopian Airlines is estimated to be 62.7 % (Ethiopian Airlines, 2009). This means that if on the average, more than 62.7 % of the available seats are not occupied by paying passengers, the revenue generated will not cover the expenses.

This shows how important it is to attract new customers and retain existing ones and raise the seat occupancy or the Passenger Load Factor (PLF). Service providers in general and airline operators in particular should therefore measure their service quality and gear their services to suite customers' requirements.

Ethiopian Airlines measures service quality in terms of four dimensions, on-time performance, denied boarding, baggage irregularity and customer satisfaction. Customer satisfaction is calculated from the feedbacks collected through questionnaires distributed to passengers on-board (Ethiopian Airlines, 2012).

There are various methods of service quality measurements and service providers use these different models or the different versions of the same model; SERVQUAL however remains one of the most widely used service quality measurement tool (Shahin, 2005, Arambwela & Hall, 2006, Tolpa, 2012).

SERVQUAL measures service quality as a gap between customer perception of service provided and their expectation for same service. This gap (P-E) is often multiplied by

the relative weights customers attach to that particular service. The expectation of customers is a measure of what they would expect from an excellent service provider. Customers' expectations from an excellent service provider is anticipated to be very high (Parasurman, et al., 1991) and the gap (P-E) is therefore expected to be low or even negative. When the perceived service is equal to or greater than the expectation, customers are happy or delighted. Important elements like cost are not included as a measure of service quality in SERVQUAL, and the model should therefore be supplemented with other models. SERVQUAL model is best used to measure service quality trend shift overtime by measuring the service quality periodically (Parasurman, et al., 1991).

This paper explores the service quality of Ethiopian Airlines and tries to identify if there are different patterns among the different demographic segments.

## **1.2 Statement of the Problem**

Ethiopian Airlines has a customer relations section spear headed by a vice president and the section is involved in the periodic measurement of service quality and improving the level of customer satisfaction. The section is understaffed and employees of the section complain about the inadequate IT supports system availed for their section.

Thousands of questionnaires are distributed on-board (Ethiopian Airlines On-Board Customer Satisfaction Survey Questionnaire, 2013); feedback collected and analysed every year. The analysis however is not properly done (Ethiopian Airlines. 2012).

For instance:

Feed-back obtained on suitability of flight schedule, frequency of flights, on-time departure data are not summed up in determining the overall performance. The perceptions and expectations of different customer segments are not assessed independently.

During the analysis of the collected data, 3 is considered to have a neutral, negative or even positive values under different service quality dimensions.

There are 26 service quality measurement areas that are assessed in pairs and it is difficult to analyze the rating of each individual component in the pair. E.g. availability and quality of reading materials.

The relationships of the 55 components in the questionnaire and the relative weights of the four dimensions are not considered. The perceptions on the service quality related to food and beverage are assessed in five different forms. E.g. as choice, quality, quantity and availability.

The level of satisfaction in different specific areas is not measured and the trend shifts in these areas are not monitored.

There are lots of efforts in the airline to improve the service quality but despite these efforts, improvement on customer satisfaction has not been observed. The latest published Customer Service Performance Report (CSPR) for the period of July 2012 through December 2012 shows that the number of complaints received per 1000 passengers have increased by 37.5% from 1.12 to 1.54. Baggage irregularities, international flight on-time performance, number of passengers who are denied to board have all shifted in the wrong direction (Ethiopian Airlines, 2012).

Airlines like South African Airlines, Etihad, Air France, British Airways and Delta Airways are considered to be ET's competitors (Ethiopian Airlines. 2009). These airlines have four star rating while ET still has only three star rating in SKYTRAX world airline rating system. (SKYTRAX, 2013a).

There are lots of complaints from customers on the issue of 'on-time performance'. Flights often leave or arrive later than their promised scheduled time and it is believed that the 'reliability' of the airline as perceived by its customers is low.

### **1.3 Research Question**

- What are service areas that most customers consider to be important?
- How is the service rendered by ET perceived by customers in these areas?
- Which areas have the biggest negative/positive gap?
- Determine whether there is different customer satisfaction between different segments.

### **1.4 Objective of the Study**

#### **1.4.1 General Objective**

To serve as a diagnostic methodology for uncovering broad areas of the company's service quality shortfall and strengths.

#### **1.4.2 Specific Objective**

- To determine the relative importance of the five service quality measurement dimensions as perceived by the ET's customers.
- To determine the customers perception of the services provided by ET in 22 predetermined service items/criteria.
- To determine areas with the highest negative gap between customer expectation and experience for the purpose of addressing issues on priority.
- To determine if there are demographic/ geographic patterns in perceived service quality ratings.

### **1.5 Significance of the Study**

The results of the study will have the following practical significance:

Because of the inherent nature of the aviation industry, the cost of flying an airplane that is almost empty or almost full with passengers is more or less the same. The major costs are fuel costs, maintenance cost, lease cost, cost of overflying, landing fee, etc.



The revenue to be generated and hence the profit margin under the two scenarios can be completely different. Ethiopian Airlines should on the average have a minimum of 62.7% passenger load factor to remain profitable at the 2013 operation size (Ethiopian Airlines 2009). Measuring and improving the service quality and focused action in meeting customer demands with subsequent customer retention is a question of survival.

Measuring service quality using the right tools will help the airline determine areas of high gap between perception and expectation. Determining the perceived relative importance of the service provider's performance also helps in identifying areas that need to be addressed on priority (Martilla & James, 1997).

The segmentation of customers by demographic, region, etc. will help the airline in identifying pattern and subsequent customization of services to better satisfy customers.

## **1.6 Delimitation/Scope of the Study**

Ethiopian Airlines provides different services to different customers. These services include passenger transport service, cargo transport service, training service, Maintenance Repair and Overhaul (MRO) services. This research is however limited to passenger transport services. This is because this is the main source of revenue for the airline and where fierce competition among the airlines world-wide exists.

SERVQUAL model has been used to measure the service quality. SERVQUAL can effectively be used to measure trend shifts. Because of time limitation, questionnaires were distributed only once and trend shifts were not assessed.

Cost has not been included in the 22 item scale. Customers perception about cost of the service while a good thing to consider does not fall under the conceptual domain of service quality. It should therefore be treated separately in analysing the survey data. SERVQUAL can fruitfully be supplemented with additional research to uncover the causes of underlying key problem of key areas or gaps (Parasurman, et al., 1991).

Only two routes were selected from each continent and were considered as representative of all flight segments.

## **1.7 Definition of Terms**

### **Customer Satisfaction**

Customer satisfaction is defined in different ways by different scholars. According to Vavra (2000), customer satisfaction is the difference between the expectation of service and the actual experience of the service rendered. Kottler & Keller (2012) also refer to it as a person's judgement of services or good's perceived performance in relation to expectation. In this paper customer satisfaction is also used in the above context.

### **Baggage irregularity**

Baggage irregularity is the number of mishandled baggage per 1000 passengers (Ethiopian Airlines. 2012).

### **On-Time Performance**

On-Time Performance is taking off an airplane at the scheduled time without any delay or with delay that is not in excess of 15 minutes (Ethiopian Airlines. 2012).

### **Passenger Seat Kilo-Meter**

The total kilometres flown by passengers. It is the sum of the products obtained by multiplying the number of revenue passengers carried on each flight stage by the stage distance ([www.icaodata.com/terms.aspx](http://www.icaodata.com/terms.aspx)).

### **Passenger Seat Load Factor**

Passenger seat load factor also known as passenger load factor (PLF) – or load factor – is a measure of the amount of utilisation of the total available capacity of a transport vehicle. It is passenger-kilometres performed expressed as a percentage of seat-kilometres available ([www.icaodata.com/terms.aspx](http://www.icaodata.com/terms.aspx)).

### **Quality**

Quality is exceeding what customers expect from the service (Garvin, 1998). It is conformance to requirements of both the customer's and the products (Crosby, 1979).

### **Service**

Service is a function that one party can perform for another that satisfies a need. It is an intangible activity that satisfies wants (Vinal, 2000).

### **SERVQUAL**

SERVQUAL is a research methodology designed to identify the gaps between what customers expect from an excellent product or service provider and what they perceive the service to be from their current supplier of that product or service. In particular, it looks at five different dimensions of service quality: tangibles, reliability, responsiveness, assurance and empathy. Under these five dimensions, a set of 22 service attributes in a form of questionnaire are used to assess the customers' expectation of the service and the perception of the services provided (Szwarc, 2005).

## **1.8 Organization of the Research Paper**

Chapter one is devoted to introduction, which includes background of the study, Statement of the problem, research questions, objective of the study, significance of the

study, delimitations of the study as well as definitions of terms. Under chapter two, related literature is reviewed. In this chapter, theoretical background of the SERVQUAL is discussed; similar works done on the air industry using SERVQUAL as well as ET's practice related to service quality are also discussed. Under chapter three, the research design as well as the methods employed are discussed. Under chapter four, the results of the finding are fully analysed and interpreted and finally under chapter five, conclusion of the findings are summarized and recommendation also given.

## CHAPTER TWO: REVIEW OF RELATED LITERATURE

### 2.1 Introduction

Under this section the concept of service quality and the implication of service quality on customer satisfaction are discussed; the different service quality tools are also briefly reviewed. Following that, SERVQUAL model as well as arguments made by critics of SERVQUAL model are discussed in some details together with why we need to measure service quality.

Finally, the service quality measures in aviation industry in general and initiatives under way at Ethiopian Airlines with respect to its service quality and customer satisfaction are also discussed.

### 2.2 Service Quality Concept.

As economies advance, a growing proportion of their activities are focused on the production of services. The US economy today for instance consists of a 70:30 ratio for the services: goods. Service in this context includes, airlines, hotels, maintenance and repair services as well as professional tasks like- accounting, legal, and medical services (Kottler & Keller, 2012). With the increase in the relative size of the service sector, the need to define the service quality concept and measure it has significantly increased in recent times.

According to Kottler (2000), service quality can have different forms or mix:

1. *Pure tangible good*: The offering is a tangible good such as soap where no services accompany the product.
2. *Tangible good with accompanying services*: The offering consists of a tangible good accompanied by one or more services. General Motors, for example, offers repairs, maintenance, warranty fulfillment, and other services along with its cars and trucks.

3. *Hybrid*: The offering consists of equal parts of goods and services. For example, people patronize restaurants for both food and service.
4. *Major service with accompanying minor goods and services*: The offering consists of a major service along with additional services or supporting goods. For example, airline passengers are buying transportation service, but they get food and drinks, as well.
5. *Pure service*: The offering consists primarily of a service; examples include baby-sitting and psychotherapy.

In this study, the 4<sup>th</sup> type of service will be discussed. The main focus will be on the major service i.e. providing transport service between point A and point B. Other services related to tangibles like food and drinks will also be discussed.

Different scholars have tried to explain the concept behind service quality in different ways. As service quality is difficult to define and measure, consumers often use other tangible cues like- packaging, colour or even price to determine level of service quality (Zeithaml, 1981). Despite the difficulties in defining the word Service Quality, a number of researches have been carried out by different scholars, (Parasurman, et al., 1988), (Gronos, 1982).

Service quality is seen as a measure of how well the service level delivered matches the customer's expectation (Parasurman, et al., 1985). Quality on the other hand, can be measured by the gap between customers' expectations and their perceptions. This gap-based view of quality says that if you beat customers' expectations you have good quality (Hill, Self & Roche, 2002).

Shahin (2005) also states that service quality is a concept that has aroused considerable interest and debate in the research literature because of the difficulties in both defining it and measuring it with no overall consensus emerging on either. He defines service quality as the extent to which a service meets customers' needs.

### **2.3 Service Quality and Customer Satisfaction**

The fact that there is a strong relationship between service quality and customer satisfaction is not contested, but on the other hand, the level of relationship between service quality and customer satisfaction is an area that is highly debated by different scholars. According to Singh (2002), the level of total perceived quality is not determined by the level of technological and functional quality dimensions only but rather by the gap between expected and experienced quality.

Oliver (1981) introduced the expectance-disconfirmation model to determine customer satisfaction level in the retail and service industry. According to these disconfirmation theorists, customers develop their satisfaction based on the subjective or direct comparisons between their expectations and perceptions. According to this theory, the direction and the magnitude of the disconfirmation, determines the level of satisfaction. According to Haemoon (2009), Churchill and Surprenant in their study found that both perception and expectation influence customer satisfaction under various circumstances. The expectancy-disconfirmation model or its variants remain one of the most widely discussed and tested approaches in measuring customer satisfaction (Parasurman et al., 1988, 1991). The model suggests that customer satisfaction is related to the size and direction of disconfirmation, which is defined as the difference between an individual's pre-purchase (pre-choice) expectations (or some other comparison standard) and post-purchase (post-choice) performance of the product as perceived by the customer (Arambwela & Hall, 2006).

Service quality can be defined as the difference between customer expectations of service and perceived service. If expectations are greater than performance, then perceived quality is less than satisfactory and hence customer dissatisfaction occurs (Shahin, 2005).

Factors contributing to any successful business mainly result from customer satisfaction, customer loyalty and customer retention. Customer satisfaction is an important factor in determining the probability of the firm's success and profitability. Customer satisfaction

results in customer loyalty. When there is customer loyalty, the customer retention rate is high and good business result tends to follow. Customer satisfaction is therefore the measure of how products and services supplied by a company meet or exceed customer expectation (Mankongvanchkul, 2010).

## **2.4 How is Service Quality Measured?**

Attempt to measure service quality has been made in different ways. According to some scholars, service quality is better measured by assessing the consumer's perception of the service rendered in its un-weighted form (Cronin & Taylor, 1992). Others use the gap model where service quality is measured by the gap between the perceived service quality and the expected service quality or the above gap multiplied by the relative weight attached to that particular service by the consumer (Parasurman. et al., 1991).

Some of the models developed to measure service qualities include the Gronroos-Gummerson Quality Model (Singh, 2002); Thomson's System Approach, and SERVQUAL model (Tolpa, 2012). One of the most widely applied models for measuring the service quality however is the SERVQUAL model (Shahin, 2005, Arambwela & Hall, 2006, Tolpa, 2012).

In a literature review study, Seth et al. (2005), presented a list of key service quality models including, for example, Technical-Functional Quality Model of Gronroos, 1982, Gap Model and SERVQUAL Model (Parasurman et al., 1985, 1988), Service-Profit Chain Model of Heskett et al., 1994, and Satisfaction-Service Quality Model of Spreng & Mackoy, 1996. These conceptual models along with other models have contributed to the development of various schools of thought of service quality. Generally, in the current service marketing literature there are three key schools of service quality modeling, namely the Nordic School, the Holistic School, and the North American School, i.e. the Gap Analysis School (Basam and Shawi, 2008).

The SERVQUAL scale developed by Parasurman, Zeithaml and Berry incorporates a measurement of consumer expectations before a service encounter and comparing it with the measurement of that same consumer's perception of outcome after a service



encounter. This specific matched response approach, using before and after experience measurements, offers a very rich glimpse into consumer attitudes and advances our thinking about service quality measurement (Headly & Bowen, 1997).

## **2.5 SERVQUAL and Its Critics**

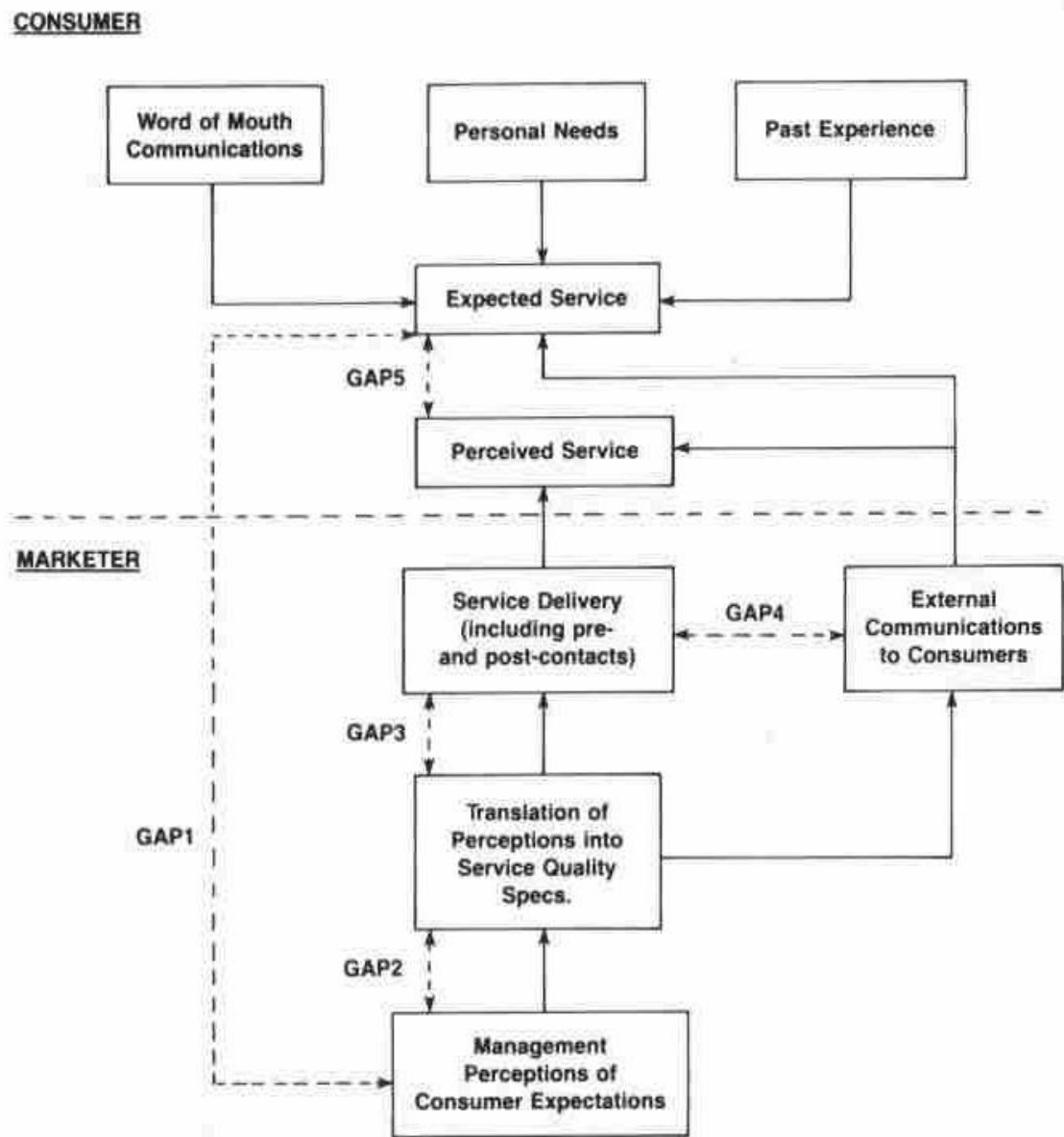
Though SERVQUAL model is used widely across different service giving firms, it has drawn criticism in its application. To accommodate valid comments made by its critics, the developers of SERVQUAL model have revised the model at least twice (Parasurman, et al. 1985, 1988, 1991). Changes made within SERVQUAL as well as what critics say are discussed below.

### **2.5.1 SERVQUAL**

The SERVQUAL model was developed by Parasurman, Zeithaml and Berry in 1985. This original model was used to measure the gap between customer expectation and experience in ten dimensions, (Parasurman, et al., 1985). To measure the service quality, questionnaire was developed and major service dimensions were assessed in different areas. Each dimension consists of a number of components or items that are used to measure the total value.

In their initial work, 97 items were listed under ten dimensions and extensive research work was conducted to determine suitability of these items/dimensions. After extensive empirical tests and scale purifications, items that were determined to overlap were omitted and a total of 7 dimensions with 34 items were developed. After further empirical tests, the 34 items were further refined and reduced to 22 items. These 22 items were tested for internal consistency and dimensionality and have been found to be acceptable (Parasurman, et al., 1988).

Figure 1. Service Quality Model



Source: Parasurman, et al., (1985).

Parasurman, et al., (1985) state that gap 5, the quality that a consumer perceives in services is a function of the magnitude and direction of the gap between perception and expected service, they also state that it is a function of all other gaps, and that a change in any of the gaps will have impact on gap 5. This was their basis for later developing the SERVQUAL model (Parasurman et al., 1991).

For instance, media advertising and other forms of communication by the service provider may raise the customer expectation and hence adversely affect the consumer perception of service quality, the service providers must be certain not to promise more in communication than can be delivered in reality (Parasurman, et al., (1985).

After gaining experience in the use of SERVQUAL through practical application, the authors refined the model once again and changed the wordings of the questionnaire. Some of the questions in the 22 item list that were worded negatively were changed to positive and the final refined SERVQUAL model was developed in 1991. These questions were grouped under five dimension namely under *tangibles, reliability, responsiveness, assurance and empathy*. The new model captures the gap between what customers would expect from an excellent service provider and their actual experience of the service rendered by the particular service provider being assessed. The gap is then multiplied by the relative importance/weight for the five dimensions as perceived by the customers. Multiplying the perceived performance with the relative weight helps in identifying critical areas that need to be addressed on priority (Martilla & James 1997).

The 22 components under the five dimensions of the new SERVQUAL model are as indicated in the table below. Consumers are asked about their expectation of these dimensions, their perception or experience after receipt of the service and the relative weight they attach to these dimensions.

**Table 1. SERVQUAL Model Dimensions and Components.**

NO	CODE	COMPONENT DESCRIPTION	DIMENSION	PERCEPTION RATING	EXPECTATION RATING	P - E	WEIGHT	TOTAL RATING
1	TAN 1	Modern Looking Equipment	TANGIBLES					
2	TAN 2	Visually Appealing Physical Facility						
3	TAN 3	Neat Appearing Employees						
4	TAN 4	Visually Appealing Service Material						
5	REL 5	Doing what is promised by the Time Promised.	RELIABILITY					
6	REL 6	Showing sincere interest in Solving Problems						
7	REL 7	Doing Service Right the First Time						
8	REL 8	Providing Service at the Promised Time						
9	RES 9	Error Free Recording	RESPONSIVENESS					
10	RES 10	Telling Customers Time of Service						
11	RES 11	Giving Prompt Service						
12	RES 12	Willingness in Helping Customers.						
13	RES 13	Never being too Busy to Respond to Requests.						
14	ASS 14	Behavior that will Instill Customer Confidence	ASSURANCE					
15	ASS 15	Safe Transactions						
16	ASS 16	Courteous Employees						
17	ASS 17	Knowledgeable Employees who Answer Customer Questions.						
18	EMP 18	Giving Individualized Services.	EMPATHY					
19	EMP 19	Operating Hours that is Convenient to All Customers						
20	EMP 20	Giving Personal Attention to Customers						
21	EMP 21	Customers' Best Interest at Heart						
22	EMP 22	Understanding specific needs of Customers.						

SERVQUAL is considered the basic skeleton underlying service quality and it should therefore be used in its entirety as much as possible. While minor modification in the wording of the items in the five dimensions to adapt to a specific industry setting is acceptable, deletion of an item/component from the model will adversely affect the integrity of the scale. The ability of the reduced components to capture the full scale of service quality will subsequently be questionable (Parasurman, et al., 1991).

A number of firms use the SERVQUAL model in its entirety and in this research paper, the entire 22 components of SERVQUAL are used in the five dimensions to measure the service quality at Ethiopian Airlines.

In literature, there are various studies conducted on measuring the quality of airline service. SERVQUAL method is a popular approach to this. Most of these studies aim to show the relationships between service quality and related issues (Degrimenci, et al., 2012).

According to Buttle (1995), analysis of SERVQUAL data can take several forms: item-by-item analysis (e.g. P1 – E1, P2 – E2); dimension-by-dimension analysis (e.g.  $[(P1 + P2 + P3 + P4) / 4] - [(E1 + E2 + E3 + E4) / 4]$ , where P1 to P4, and E1 to E4, represent the four perception and expectation statements relating to a single dimension); and computation of the single measure of service quality  $[(P1 + P2 + P3 \dots + P22) / 22] - [(E1 + E2 + E3 + \dots + E22) / 22]$ , the so-called SERVQUAL gap.

Without question, SERVQUAL has been widely applied and is highly valued. Any critique of SERVQUAL, therefore, must be seen within this broader context of strong endorsement (Buttle, 1995).

Nicolini & Salini (2006) also state that the most widespread application of the gap model is the SERVQUAL method proposed by Parasurman *et al.*, in 1988 which is based on the theoretical model (*gap model*) proposed by the same authors in 1985. This model overcomes difficulties in finding objective evaluations by considering consumer's subjective judgments in relation to their expectations and perceptions. It results in a

quantitative instrument measuring quality indirectly, since it provides information on consumer perceived quality through the indirect comparison between perceived and expected services, rather than through the direct consumer evaluation process (Nicolini & Salini, 2006).

### **2.5.2 Criticism on SERVQUAL**

Though SERVQUAL remains the most widely used service quality measurement tool in different service giving institutions, it has also attracted lots of criticisms from different scholars.

The criticisms forwarded by these scholars do not focus on one area alone. Some blame the model based on its conceptual basis, others blame it for not being comprehensive and yet others doubt its reliability. Cronin & Taylor (1992) who are among the most prominent scholars to criticize SERVQUAL model blame the model for its use of expectation column to determine service quality gap.

The authors of the model also observed the problem associated with the gap model where customers may set a high expectation and thereby affecting the 'Perception – Expectation' gap. After receiving lots of criticism from other scholars and after collecting further field data, the authors of the model revised the content of the wording in the questionnaire to address these concerns. The statement '*should an excellent service provider have modern looking equipment?*' was for instance changed to '*Would an excellent service provider have modern looking equipment?*' The phrase '*should*' was replaced with '*would*' in the expectations column in the later revisions of the SERVQUAL model. In their original study by the developers of SERVQUAL model on different service industries, the mean values for most of the 'Expectations' were above 6 in a seven point likert scale (Parasurman, et al., 1991). This is expected to reduce the Perception – Expectations gap or even make it negative. The authors however contend that SERVQUAL is to be used in addition to other service quality tools and is very useful when used periodically to measure shift or changes between the expectation and perception whether it is negative or positive (Parasurman, et al., 1991).

Cronin and Taylor (1992) have developed their own performance-based measure, the SERVPERF. The SERVPERF scale uses the existing 22 components of SERVQUAL model to measure service quality. The difference between SERVPERF and SERVQUAL is that the SERVPERF does not include questions to measure the expectation of consumers and it does not use relative weights for the dimensions.

Cronin and Taylor (1992) state that the un-weighted SERVPERF measure (performance-only) performs better than any other measure of service quality, and that it has the ability to provide more accurate service quality score than SERVQUAL. They argue that current performance best reflects a customer's perception of service quality, and that expectations are not part of this concept.

Despite the criticisms, SERVQUAL has been used to measure service quality in a variety of contexts; the wide array of application of such an instrument as SERVQUAL spells confidence in its utilization as a technique for measuring service quality in various business sectors and service industries (Munhurrun et al., 2001).

Other notable critics on the SERVQUAL model, Peter et al. (1993) state that the direct difference score approach of SERVQUAL causes poor reliability and problems of variance restriction associated with the component score.

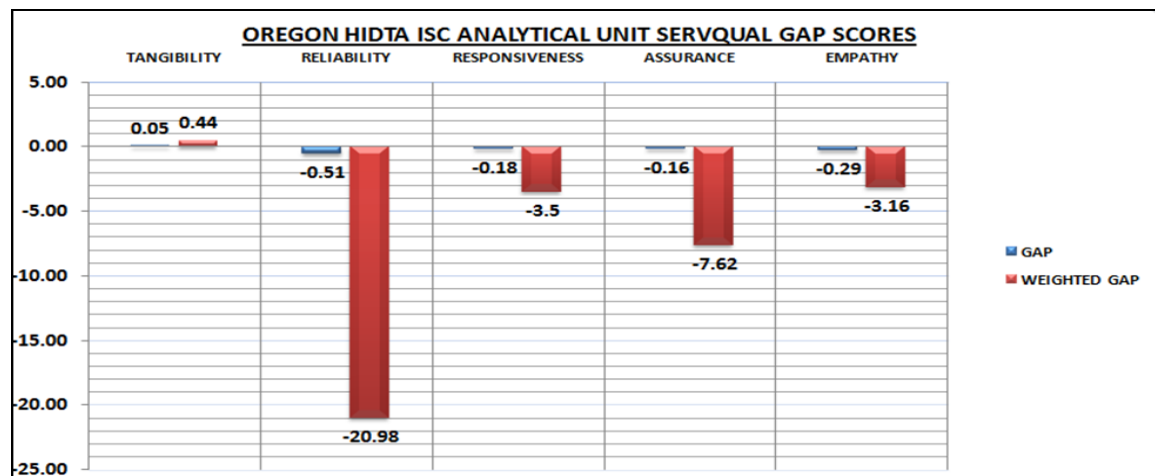
Babakus and Boller cited in Buttle (1995), found the use of a "gap" approach to service quality measurement "intuitively appealing" but suspect that the "difference scores do not provide any additional information beyond that already contained in the perceptions component of the SERVQUAL scale". The dominant contributor to the gap score was the perceptions score because of a generalized response tendency to rate expectations high.

The above statement is consistent with the findings of various researchers using SERVQUAL model where the gap between perception and expectation is negative because of the high expectation. Some of the research works where the perception or the experience of customers fall short of their expectations ( $P - E < 0$ ) in all the five dimensions include, researches made on Iran Asmen airways (Bozorgi, 2012), a

Nigerian Airline (Chinkwendu & Ezenwa, 2012), Turkish Airline (Degrimenci, 2012), Grocery Stores in Omea city (Daniel, 2010).

Gibson (2009) found out that customers were dissatisfied, (P-E is negative) in four of the five dimensions for the services given by Oregon Drug Trafficking Investigative Service Centre Analytical Unit. Except on tangibles, the perceptions or experience of the customers with this analytical unit were less than their expectations.

**Figure 2. SERVQUAL Gap Scores for Oregon HIDTA Analytical Unit**



Source Gibson (2009)

During the development of the SERVQUAL model, the authors distributed thousands of questionnaires to various service providers and thoroughly analyzed the feed-backs received. From the responses they received; they found out that the means for the expectations of SERVQUAL to be 6.22. These high mean values were not unexpected as the intention was to measure the customers' normative expectation (Parasurman, et al., 1991).

Teas cited in Buttle, (1995) states that there is lack of clarity on interpretation of the SERVQUAL questionnaire. Teas states that when customers are requested to give feedback on what they expect from an excellent service provider, they may interpret the



question in different ways. Teas contends that respondents may be using any one of six interpretations for their “expectation” of the service:

- (1) *Service attributes importance*. Customers may respond by rating the expectations statements according to the importance of each item.
- (2) *Forecasted performance*. Customers may respond by using the scale to predict the performance they would expect.
- (3) *Ideal performance*. The optimal performance; what performance “can be”.
- (4) *Deserved performance*. The performance level customers, in the light of their investments, feel performance should be.
- (5) *Equitable performance*. The level of performance customers feel they ought to receive given a perceived set of costs.
- (6) *Minimum tolerable performance*. What performance “must be”.

Each of these interpretations is somewhat different, and Buttle (1995) explains Teas’s contentions that a considerable percentage of the variance of the SERVQUAL expectations measure can be explained by the difference in respondents’ interpretations. When expectations and experience evaluations are measured simultaneously, respondents will indicate that their expectations are greater than they actually were before the service encounter. Expectations must be measured prior to receipt of services otherwise responses will be biased. Customers who had a negative experience with the service tend to overstate their expectations, creating a larger gap; customers who had a positive experience tend to understate their expectations, resulting in smaller gaps (Buttle, 1995).

According to Nicolini & Salini (2006), Babakus and Boller doubt the validity of SERVQUAL model on the basis of shifting of expectations from perceptions. They state their experimental studies conducted in the psychometric field reveal that evaluations on perceptions already include differences between perceptions and expectations. The introduction of these differences in the model would tend to create redundancy in the model itself.

The researcher also believes that SERVQUAL has some limitation. The components are not comprehensive. Cost is an important component in measuring service quality. Any services received by customers are assessed against cost paid for the service. Expectations are also based on the amount paid for the service. A low paying customer dining in the remote corner in a rural town does not have the same level of expectation as an foreign executive staying over at the Sheraton Hotel. A first class passenger does not have the same level of expectation as an economy class passenger. Cost should therefore be one of the components in any service quality measurement tools.

In SERVQUAL model, expectation is what customers would expect from an excellent service provider. When customers asses the service of Ethiopian Airlines with respective to any parameter, e.g. punctuality, they are required to compare the service they receive from Ethiopian airlines and compare it with what they would expect from an excellent service provider under this component. If the passengers believe that Lufthansa is the most punctual airline, they would be comparing Ethiopian Airlines' service with what they would expect from Lufthansa. The probability for the expectation to be higher than perception is therefore very high and the gap will often be negative. The focus when using SERVQUAL should be in measuring trend shift overtime.

## **2.6 Need for Measuring Service Quality**

Globalization process has opened new opportunities for world-wide businesses in general and airline industry in particular. But with these opportunities also come threats of competition (wall, et al., 2010). To survive this competition, organizations and firms need to measure their service quality as perceived by their customers and try to fill gaps and make their customers happy.

It is therefore imperative for service providers to monitor their service qualities and keep their customers satisfied because satisfied customers are more likely to stay and it is five times more expensive to win a new customer than to keep an existing one (Hill, Self & Roche, 2002).

Studies also show that a reduction of customer attrition of 3-10 % can actively increase a company's profit by 25-75 % depending on the industry (Thomson, 2003).

Organizations that monitor the service quality and work hard in delivering services in line with what their customers expect tend to have satisfied customer. If the performance falls short of customer expectation, customer is disappointed (Kotler & Keller, 2012). When a service provider knows how service quality is measured by the consumers, the service provider will be in a better position to influence consumer decision in the desired way (Yue, 1996).

“In the aviation sector, investments and volume of business are increasing each day, and depending on this, competition increasingly deepens. Airline companies must be financially strong to find a place for themselves and survive in this deeply competitive world since in today's world, almost all of the hundreds of studies conducted under the heading “the most powerful companies” are already related to the financial power. Various studies showed that the quality of service affects the tendency to purchase again as a result of increased satisfaction” (Degrimenci, 2012).

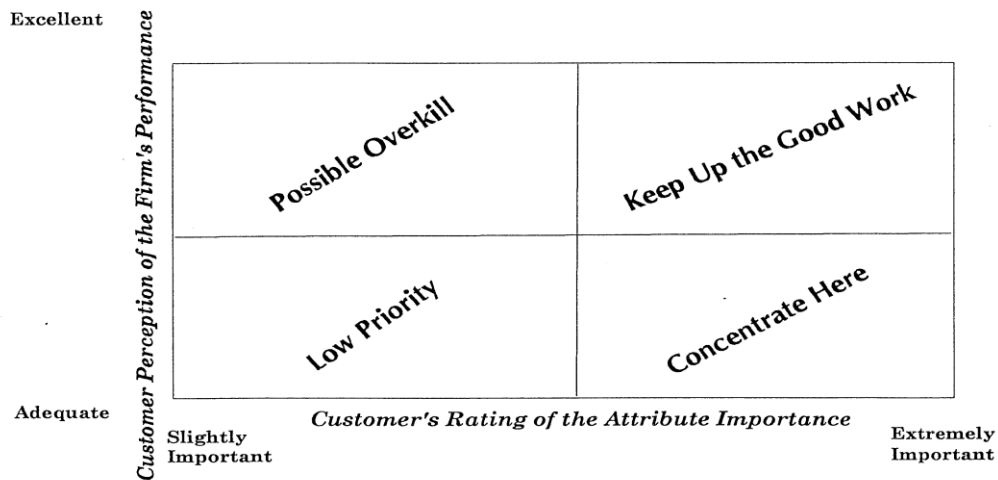
Most successful marketing practitioners understand that the key issues in developing competitive edge include building long-term relationships, and central to these relationships are maintaining customer satisfaction and creating customer value through continuous improvement on service quality (Oladele, 2008). It is noteworthy however, that customers are becoming more demanding, knowledgeable and sophisticated to an extent that they are ready more than ever before, to challenge bad service. This knowledge has not only shaped their service expectation, it has also exposed most organizations to see customer service as an important competitive tool by means of

which to distinguish their product(s) from competitors 'offerings, thereby successfully differentiating their sales efforts to ensure customer satisfaction (Oladele, 2008).

It is not only the service quality but also the relative weights of the different dimensions that are often measured, determining the relative weights attached by customers to the different dimensions will help the service providers to tackle service delivery issues on priority.

**Figure 3. Generic Importance-Performance Matrix**

***Matrix for a Generic Importance-Performance Analysis***



Source: Martilla, J.A. & James J.C. (1997).

Service organisations are competing to achieve sustainable competitive advantage through providing a high-quality service to their existing customers in a severely competitive environment. This has led to a continued focus on service quality. Organisations have recognised a number of potential benefits derived from implementing service quality programs, including increasing customer satisfaction, customer retention, customer loyalty and positive word-of-mouth, increasing opportunities for cross-selling, employee benefits, improved corporate image, profit gains, and financial performance. The purpose of one of the service quality measurement

tools the SERVQUAL is as diagnostic methodology for uncovering broad areas of a company's service quality shortfalls and strengths (Basam and Shawi, 2008).

## **2.7 General Service Quality in the Airline Industry**

Many airlines distribute questionnaires on-board to collect feed-back from their passengers. The contents of the questionnaire revolve around some issues. These contents of the service quality components differ from airline to airline. Areas that are considered important by some airlines or some scholars may not be seen as important by others.

Headley and Bowen (1997) contend that an airline passenger is generally concerned with two basic aspects of the airline service: 1) schedule and 2) price. They further state that there are other secondary, but important, aspects that a consumer may consider in the ultimate choice of an airline. The basic factors can be used to explain a large majority of consumer use of airline services. At the same time, once the basic concerns are met, the larger, more complex set of concerns begin to dominate the consumer's perception regarding quality of and satisfaction with a particular service experience and ultimately, the choice of a particular airline. Such things as safety, comfort of the seats, in-flight amenities such as food and beverages, attitude of the ground and flight crew, financial stability of the airline, on-time performance of the flights, assurance that bags arrive with the passengers, crowded conditions of the flight, being bumped from the flight, and frequent flyer programs are considered important to consumers.

Some scholars classify airline service quality in terms of three items: consistency of service, reliability of service, and augmented products (Degrimenci, et al., 2012).

Gourdin (1988) classified airline service quality in terms of three items: price, safety, and timelines. Gilbert and Wong (2003) used employees, facilities, customization, flight patterns, assurance, reliability, responsiveness as the dimensions of service quality. They detected significant differences among passengers of different ethnic groups/

nationalities as well as among passengers who travel for different purposes, such as business, holiday and visiting friends/relatives.

Pakdil and Aydın (2007) identified employees, tangibles, responsiveness, reliability and assurance, flight patterns, availability, image, and empathy as dimensions of their study. In that study responsiveness and empathy dimensions are very close to each other in terms of meaning. They proposed that the passengers' educational level as an important variable affecting the quality of service.

Chang and Yeh (2002) proposed on-board comfort, airline employees, reliability of service, convenience of service, handling of abnormal conditions as service quality dimensions.

There is an international firm that assesses and rates the airlines and airports world-wide. This firm (SKYTRAX) collects data from millions of passengers who have used the services of the airlines/airports in every continent for nine consecutive months and publishes its finding once a year. These findings are used by airlines and airport authorities worldwide to determine their rating with regards to the service they provide.

### **SKYTRAX Service Quality Measurement**

<b>GROUND / AIRPORT</b>	<b>ONBOARD : PRODUCT</b>	<b>ONBOARD : STAFF SERVICE</b>
Airline web site	Cabin Seat comfort	Assistance during Boarding
Online Booking	Cabin Cleanliness	Friendliness of Staff
Online check-in	Toilet Cleanliness	Service Attentiveness / Efficiency
Airport Ticket Counters	Cabin Lighting / Ambience	Consistency of Service
Waiting times at Check-in	Cabin Temperatures	Staff Language skills
Quality of Check-in service	Cabin Comfort amenities	Meal service efficiency
Self-Check-in	Reading Materials	Cabin presence thru Flight
Boarding Procedures	Airline magazine	PA announcements
Pre-boarding Procedures	Inflight Entertainment	Assisting families
Friendliness of Ground staff	Audio / Movie programming	Problem solving Skills
Efficiency of Ground Staff	AVOD options	Staff Attitudes
Airline Lounge Product facilities	Quality of Meals	Staff Grooming
Airline Lounge Staff Service standards	Quantity of Food	
Transfer services	Meal Choices	
Arrival services		
Baggage Delivery		

Source SKYTRAX (2013b)

Most of these items are captured in the SERVQUAL dimensions. As SERVQUAL is designed to measure the service quality of organizations in different industries, the items are presented in a general form under five dimensions. On the other hand, SKYTRAX is developed for capturing service quality in the airline industry, the items are presented in a way that explicitly describes airline service quality in three dimension. SKYTRAX components are captured in SERVQUAL model in more general form. Reading materials, airline magazine, in-flight entertainment, etc listed in SKYTRAX are for instance captured as visually appealing service material in SERVQUAL.

One of the most important tangibles for measuring the service quality of an airline is based on assessing the condition of the airplane fleet as measured by the fleet age.

**Table 2. Fleet Age for Selected Airlines**

No	Airline	Fleet Age
1	Air France	10.2
2	Air India	8.5
3	Alitalia	8.4
4	British Airways	13.4
5	Delta Airways	16.8
6	Egypt Air	10.3
7	Emirates	6.4
8	Ethiopian Airlines	8.1
9	KLM	9.9
10	Lufthansa	12.6
11	Qatar Airways	5.3
12	Royal Air Moroc	8.1
13	Saudi Arabian Airways	8.8
14	South African Airways	9.8
15	United Airways	13.6

Source: Air safe LLP (2013)

## **2.8 Service Quality at Ethiopian Airlines**

According to an official report issued by the airline and posted on its web site, Ethiopian Airlines (2013a), Ethiopian Airlines is one of the fastest growing airlines in Africa.

Fully owned by the state, the airline was founded in 1945 with a fleet of DC 3 airplanes. The flag carrier now operates 17 domestic and 73 international destinations in five continents. The airline currently employs over 6500 employees and operates 58 aircraft consisting of ten different airplane models. ET has code share agreements with 14 international airlines with special partnership agreement with the West African operator, ASKY Airlines. The airline has won various prestigious awards for its service including one from SKYTRAX for Best Airline Staff Service in Africa on June 18, 2013 in Paris.

Ethiopian Airlines has a dedicated section headed by a vice president that is tasked to address customer relations issues. The airline briefly made use of an external consultancy firm named “Service Quality Institute” (SQI) to measure and improve customer satisfaction level. In its mission statement, the airline has indicated that it is working to have a four star SKYTRAX rating, (Ethiopian Airlines. 2009), but the airline still has a three star rating (SKYTRAX. 2013a).

The airline measures service performance in terms of four service quality rating criteria: on-time performance, baggage service, denied boarding and customer satisfaction, (Ethiopian Airlines. 2012). The first three are believed to have a direct impact with the fourth one (Customer satisfaction). Ethiopian Airline on the other hand independently measures ‘customer satisfaction’ for on-board services as well as ground services using 25 and 30 criteria respectively (Appendix C). Relative weights are not assigned per the requirement of Airlines Quality Rating (AQR).

Some of the questions are yes/no type binomial questions while others use a five point likert scale ranging from excellent = 5 to unsatisfactory = 1. The relative weights of the items in the questionnaire have not been established and customer’s expectations for these criteria are not considered.

The relationship/ internal consistency of the 55 criteria have not been fully explored. Provision of meal/beverages for instance are evaluated as five different components in the form of “choice of meal”, “quantity of meal”, “quality of meal”, “choice of beverages” and “availability of special meal”, each with the same relative weights.



The average value of these 55 items is then calculated and considered to be the measure for service quality and customer satisfaction. The questionnaire does not include items like, airline web site, online booking, online check-in, transfer service, etc. that are all included in the SKYTRAX measurement or other items like visual appeal of physical facility, modernity of equipment, etc. that are included in the SERVQUAL model.

Despite exerting a lot of effort and deployment of resource to measure and improve service quality, improvement in customer satisfaction could not be achieved as planned. ET's mission statement is "To become the leading aviation group in Africa by providing safe and reliable passenger and cargo transportation ... services whose quality and price are always better than that of its competitors" (Ethiopian Airlines. 2009). On the other hand, the trend on customer satisfaction rating using the 55 criteria is not showing improvement (Ethiopian Airlines. 2012).

In the coming few years, many carriers from US and Europe will face diminishing trend in their home countries and will have a better opportunities in Africa. As a result, many African airlines including Ethiopian Airlines will experience tough competition (Ethiopian Airlines. 2009).

With globalization, the airline industry like most other industries is being deregulated more and more by the day. Cross-border restrictions are now relaxed and the skies are more open than ever before. This has created opportunities for some airlines while it has created threats for others. With the advent of the internet, news travels at a very high speed and informed consumers today demand for their right more than before (Wall et al., 2010). For passengers using the US airports, the US government issues informative statistics on the performance of airlines and airports on monthly basis and makes the information available on public domain (US Department of Transportation, 2012).

In Europe and North America, passengers are compensated for flight delays and cancellations. In line with US Department of Transportation "Enhanced Protection for airlines passenger regulation, 14 CFR Part 259", the interests of passengers on board

Ethiopian Airlines fleet whose point of departure or arrival are in the USA are protected whenever there is delay in excess of 2 hours on tarmac. Ethiopian Airlines has subsequently developed policy to compensate the affected passengers and post its policy on its web site (Ethiopian Airlines. 2013b).

Management staff members who travel on company business are expected to fill service quality audit form and provide feedback on their experience to the concerned section in Customer Relations (Appendix E).

Lead cabin crew members fill up what they have experienced or encountered in each flight (Appendix F). One of the issues they are expected to fill in each flight comes under the header “Customer Relations/Satisfaction Issue”. Station managers report any irregularity on each flight that passes through the station they supervise (Appendix G). Issues to be addressed in the flight irregularity form include any flight delay, flight cancellation, denied boarding, etc. including the causes for the incidents and the service recovery actions taken.

To upkeep the grooming of its cabin crew, the airline has arranged free laundry services to clean the uniforms of all cabin crews; the airline also arranges tailoring service for the production of custom made attire. There is also a strong follow-up system with the tailor to track down cabin crews who fail to collect the tailored uniforms in time (Appendix H & I).

## **2.9 Empirical Literature**

### **2.9.1 Thai Airways**

Mankongvanchkul (2010) studied the domestic flights between Bangkok and Chiangmai. Responses received from 150 passengers were analyzed using SERVQUAL model. The five dimensions of SERVQUAL were used in the study. The components SERVQUAL were used in the study. These components were however reduced to 20 and instead of collecting feedback on expectation of respondents, the researcher used 3 as a standard for expectation and considered any perception above 3 as a sign of good

service quality and a measure of satisfaction. Assurance and tangibles were dimensions with the highest perception rating where as reliability and responsiveness were rated as the least among the five dimensions.

These findings are close to the findings on Ethiopian Airlines where assurance and empathy are rated high and reliability tangibles and responsiveness are rated as the least.

### 2.9.2 Turkish Airline

Degrimenti, et al. (2012) developed a modified SERVQUAL model to assess the service quality of Turkish Airlines. The model uses 34 components under six dimensions and uses the SERVQUAL structure and methodology to measure the service quality as a gap between perception and expectation. Expectation rating is taken to be 5 in a five point likert scale thereby making the gap negative in all the six dimensions. This finding is very similar to the findings on Ethiopian Airlines. The gap is then multiplied by the relative weights to get a weighted SERVQUAL score. The average weighted score for each of the six dimensions are as follows:

**Table 3. SERVQUAL vs. SKYTRAX Rating**

FACTORS (DIMENSIONS)	AVERAGE SKYTRAX SCORE	AVERAGE CUSTOMER SCORE	CUSTOMER SCORE- SKYTRAX SCORE	SERVQUAL SCORE
Ground Handling	3.17	3.87	0.70	-4.047
Image	3.75	4.29	0.54	-1.126
Employees	3.57	4.26	0.69	-3.066
Inflight Services	3.83	3.59	-0.24	-2.954
e-Commerce Services	4.00	3.85	-0.15	-1.306
Empathy	2.50	4.00	1.50	-0.854

Using SPSS, the researchers found that there is significant difference between men and women passengers on their perception about the adequacy of in-flight entertainment programs at Turkish Airlines. Women’s degree of satisfaction in in-flight entertainment programs is lower than that of male passengers.

### 2.9.3 Aero Contractors

Chikendu & Ezenwa (2012) used a modified SERVQUAL to assess the service quality of a Nigerian airline called Aero Contractors. For their research the authors increased the

22 SERVQUAL components to 26 and items like sincerity which fall under reliability dimensions in SERVQUAL are summed up under assurance. 3 in a five point likert scale is taken as the mean for expectations. The gap between the perception and expectation is not multiplied by a relative with to get the weighted SERVQUAL ratings. The overall gap between perception and expectation is negative which is in line with the findings on Ethiopian airlines. Unlike the findings on Ethiopian, the worst gap for this airline falls under tangibles.

#### 2.9.4 Delta Airlines

In their effort to measure the service qualities of airlines including Delta, Bowen & Headley (2012) used the Air Quality Rating (AQR) model using the four criteria at the following relative weights.

Code	Description	Weight	Impact (+/-)
OT	On-time Performance	8.63	+
DB	Denied Boarding	8.03	-
MB	Mishandled Baggage	7.92	-
CC	Customer Complaint	7.11	-

Data on the performance of Delta was collected under the above four criteria and the average AQR score was calculated using the formula:

$$AQR = \frac{(+8.63 \times OT) + (-8.03 \times DB) + (-7.92 \times MB) + (-7.17 \times CC)}{(8.63 + 8.03 + 7.92 + 7.17)}$$

Using the above formula, the service quality rating of Delta Airlines was measured and found to be -0.80, which was a significant improvement from the previous year's rating of -1.22. The data collected under the four dimensions were also much better when compared with the data collected by Ethiopian Airlines for the same period.

**Table 4. Air Quality Rating (AQR) for Delta Airways and Ethiopian Airlines**

<b>Description</b>	<b>Delta *</b>	<b>Ethiopian Airlines **</b>
On-time Performance	82.30%	76.54%
Denied Boarding	0.31	5.47
Mishandled Baggage	2.66	5.69
Customer Complaint	1.23	4.41

Sources: \* Dean & Headley (2013)

\*\* Ethiopian Airlines (2012)

### **2.9.5 Low Cost Airlines in Copenhagen Airport**

In his study to measure the service quality of selected low cost carriers operating in the Copenhagen airport, Jensen R.L., (2009) used a modified SERVQUAL model. He modified the 22 components and reduced them to 17 and used a 10 point likert scale. The components are categorized under the five SERVQUAL dimensions. The research revealed the gap between perceptions and expectations in all the five dimensions as well as all the components under them except in one had negative values. This is in line with the findings on Ethiopian Airlines.

Reliability and assurance are considered as important and tangibles is found to be the least important dimension, which is similar to findings on Ethiopian Airlines.

### **2.9.6 Major Airlines in the USA**

Headley & Bowen (1997) made a survey on selected major airlines operating with in the USA. Major airlines for their research are airlines whose annual revenue are more than one billion US dollar. They have involved 65 experts from different fields in the aviation industry and developed a list of 19 airline quality rating factors with their respective weights shown below.

**Table 5. Air Quality Rating Relative Weights**

<b>Airline Quality Rating Factors, Weights, and Impact</b>		
<i>Factor</i>	<i>Weight</i>	<i>Impact</i>
1. Average Age of Fleet	5.85	-
2. Number of Aircraft	4.54	+
3. On-Time	8.63	+
4. Load Factor	6.98	-
5. Pilot Deviations	8.03	-
6. Number of Accidents	8.38	-
7. Frequent Flier Awards	7.35	-
8. Flight Problems*	8.05	-
9. Oversales*	8.03	-
10. Mishandled Baggage*	7.92	-
11. Fares*	7.60	-
12. Customer Service*	7.20	-
13. Refunds*	7.32	-
14. Ticketing/Boarding*	7.08	-
15. Advertising*	6.82	-
16. Credit*	5.94	-
17. Other*	7.34	-
18. Financial Stability	6.52	+
19. Average Seat-Mile Cost	4.49	-

Source International Airline Quality Measurement by Dean E. Headley

The three most important factors in AQR model are:

- On-time performance with a weight of 8.63
- Number of accidents with a weight of 8.38 and
- Flight problems with a weight of 8.05

Which fall under the SERVQUAL dimensions of reliability and assurance. This finding is similar to the findings disclosed in this paper where customers see reliability and assurance as the most important dimensions with relative weights of 28% and 19% respectively. The authors later refined their model to have four dimensions with their respective weights (Bowen & Headley, 2012).

## **CHAPTER THREE: RESEARCH DESIGN & METHOD**

### **3.1. Research Design**

Both qualitative and quantitative methods were employed. The research design used in this paper is descriptive research. Business research can be classified as exploratory, descriptive and causal. As the name implies, the major purpose of descriptive research is to describe characteristics of objects, people, groups, organizations, or environments. In other words, descriptive research tries to “paint a picture” of a given situation by addressing who, what, when, where, and how questions (Babin & Griffin, 2009). In this paper descriptive research is chosen because it is attempted to describe the collected data.

Data is collected on the perception and expectation of customers and the gap between perception and expectation is multiplied by the relative weight and the total SERVQUAL score is assessed. Passengers’ expectations of excellent airline services as well as their perception of the services rendered by Ethiopian Airlines were also separately assessed in their un-weighted forms.

### **3.2. Sample and Sampling Techniques**

The population included in this study are adult passengers who have used Ethiopian Airline flights in the last three months. Both domestic and international passengers of both genders who used the service for different reasons were covered. Convenient sampling was used and questionnaires were distributed to passengers on-board Ethiopian Airlines flying in the first week of July 2013 on flight segments between Addis and:

- A) Bahir Dar & Dire Dawa (Representing Domestic routes)
- B) Lagos & Johannesburg (Representing African routes)
- C) Dubai & Mumbai (Representing Asian routes)
- D) London & Frankfurt (Representing European routes)
- E) Washington & Toronto (Representing North American routes)

The above routes were selected based on the flight frequency, the volume of passengers transported in the flight segment and their potential to feed other flight segments. Flight from Addis to Dire Dawa for instance feeds the flight segment from Dire Dawa to Djibouti whereas flight from Addis to Bahir dar feeds flight segments from Bahir Dar to Khartoum. 190 questionnaires were distributed and the 165 properly filled up questionnaires were used for the research.

Based on the pilot test of 20 respondents, respondents were satisfied ( $P-E \geq 0$ ) in 30% of the components  $P =$  Percentage of population satisfied with the service = 0.3

$$n = [Z^2 \times (P) \times (1-P)]/C^2$$

(Naik, C.N., et al., 2010)

Where:

$Z = 1.96$  (for 95% confidence level)

$P =$  Percentage of population that is satisfied with the service of Ethiopian Airlines.

$= (P - E \geq 0)$

$= 0.3$  (=30%) based on the pilot test

$C =$  Confidence interval or precision (assumed to be 0.07 or 7% in my case)

It is common to have a precision of 5%. If prevalence or percentage of population meeting a certain criteria falls below 10% or is higher than 90% (i.e.  $P$  value  $< 10\%$  or  $P$  value  $> 90\%$ ),  $C$  values of less than 5% (0.05) may be required. In a case of a preliminary study, investigators may use a larger  $C$  value (e.g.  $>10\%$ ). (Niang, Winn & Rusli, 2000).

Taking  $Z$  value for 95 % confidence level and inserting data,

$$n = [1.96 \times 1.96 \times 0.3 \times (1- 0.3) / 0.07 \times 0.07]$$

$$= 165$$

Previous similar studies made by other researchers have also been reviewed to see sample size employed and the following has been found:



**Table 6. Previous works of SERVQUAL on airlines industry**

<b>NO</b>	<b>Work Title</b>	<b>Author(s) / Year</b>	<b>Sample Size Used.</b>
1	Measuring Customer Expectation of Service Quality, Case Airline Industry	Tolpa/ 2012	79
2	International Air Quality Measurement	Headly, et al./1997	65
3	Customer Satisfaction Measurement in Airline Services, An empirical Study of Need- Gap Analysis	Upandhyaya/ 2012	100
4	Passengers Satisfaction With Service Quality, A Case Study of Thai Airways' Domestic Flights.	Mankongvanichkul/ 2010	150

### **3.3. Types of Data and Tools/Instruments of Data Collection**

Both primary and secondary sources were used to collect data. Standard SERVQUAL questionnaires that have five dimensions and twenty two components were distributed to passengers willing to fill up the questionnaires. The questionnaires have columns where passengers fill up their perceived service (i.e. their experience) as well as the expectations they have from an excellent service provider.

In addition to the questionnaires, interviews were conducted with selected officials in areas of customer relations in the airline and various documents in hard copies on the shelves as well as on line from Ethiopian Airlines portal, website and on the internet were reviewed

### **3.4. Procedures of Data Collection**

SERVQUAL questionnaires were prepared and distributed to passengers of selected routes. In all cases, passengers who are older than 18 years were requested if they are willing to fill up the questionnaires and the questionnaires were handed over only to those who were willing.

The questionnaires were prepared in both Amharic and English. The English version of the questionnaire was distributed to all passengers (domestic as well as international) who were willing to provide data in English while the Amharic version of the questionnaire was distributed to Direedawa and Gondar passengers who were more comfortable with the Amharic version than the English version. The distribution was made in equal number to both male and female passengers in each of the selected flight routes.

The questionnaires were distributed and later collected to the willing passengers with the standard Ethiopian Airlines on-board survey questionnaires.

For the structured interview, the participants were contacted in advance for an appointment that is convenient for them. On the day of the interview, they were thanked for their willingness to provide their valued opinion and for being willing to devote their precious time for the interview.

During the interview, they were advised that the research is meant for academic purpose and were requested to shade some lights on areas of interest. After the conclusion of the interview, they were thanked again for their participation.

### **3.5. Methods of Data Analysis**

From the feed backs collected, the means of each of the 22 items in the SERVQUAL model were calculated. Descriptive statistics was used for the analysis. The high and the low values had been assessed based on their mean values. In areas where there are observed differences based on demographic data, statistical significances of these observed differences have been assessed using SPSS. ANOVA is used to determine the significance of differences among the means of observed variables. The means of the 22 SERVQUAL components that have statistical significance with “P” values of less than 0.05 as found during analysis of ANOVA are also discussed in some details.

### **3.6 Ethical Consideration**

Questionnaires were distributed to adult volunteers who are 18 years and older and willing to fill up the questionnaires. The purpose of distributing the questionnaire was clearly indicated on the questionnaire. The names of the respondents are kept confidential. As the information contained in this research paper is sensitive, and should not be disclosed to competitors, the distribution should be controlled.

The conclusions reached and the recommendations given are based on the data collected.

## **CHAPTER FOUR: DATA PRESENTATIONS, ANALYSIS AND INTERPRETATION**

### **4.1 Introduction**

Under this section, the total average of perception, expectation and the gap between the two are briefly discussed. The above gaps for each of the five dimensions of SERVQUAL (i.e. Tangibles, Reliability, Responsiveness, Assurance and Empathy) are discussed in general. In all cases, gaps will be discussed in relative terms by comparing the mean of one gap with the other SERVQUAL dimensions or components.

The twenty two individual components of the above five dimensions are investigated and where applicable, existing practice at Ethiopian airlines are also discussed.

Specific areas that have statistical significance with “P” value of less than 0.05 are discussed during analysis in ANOVA to determine differences in mean behaviour between different segments. ET’s experience in these areas is also discussed simultaneously.

Finally on-board service quality measurements undertaken at Ethiopian Airlines are discussed.

### **4.2 Overall Perceptions, Expectations and Gap.**

#### **Perceptions**

Passengers feed-backs were collected on 22 SERVQUAL components with respect to their perception of the service they received from Ethiopian airlines as well as what they expect from an excellent airlines in the 22 components.

Passengers’ perception with respect to the service provided by Ethiopian Airlines is found to be higher than 4.9 in all the five dimensions. The total mean of perceptions is 5.13 in a seven point likert scale. The highest observed performance is in assurance (mean= 5.367), followed by empathy (mean = 5.154). The lowest perceived performance is related to reliability with a mean of 4.92.

## Expectations

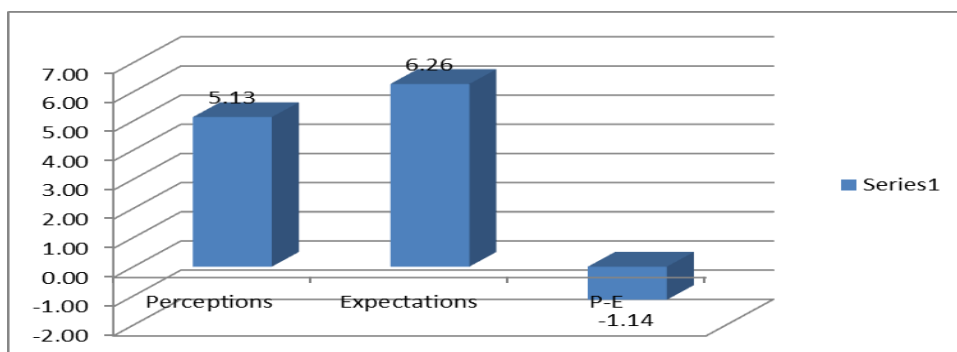
Passengers' expectations in all the five dimensions were also found to be high with a mean value of 6.26. This is consistent with the finding of the developers of the SERVQUAL model. In their research, the developers of the model distributed thousands of questionnaires across different industries and the mean for the respondents expectation was found to be 6.22 (Parasurman, et al., 1988).

## Gap between Perceptions and Expectation

Though the perception was high in all the five dimensions, because of the higher expectations, the gap between the two were negative in all dimensions. The highest negative gap was found in the dimension of reliability. Reliability includes components/items like providing service (e.g. departure) at the promised time, providing the promised service by the promised time, sincere interest in solving customers problems and providing service right the first time. This is the dimension where ET's service is perceived to be the lowest, and the expectation of customers is the highest, hence among the five dimensions of Ethiopian Airlines service quality, reliability is an area of the widest gap.

The overall gap between perception and expectation is  $5.13 - 6.26 = -1.14$  which is negative. This means that customers perceive Ethiopian Airlines Service quality not to meet what they would expect from an excellent service provider.

**Figure 4. Gap for the Overall Perceptions vs. Expectations**



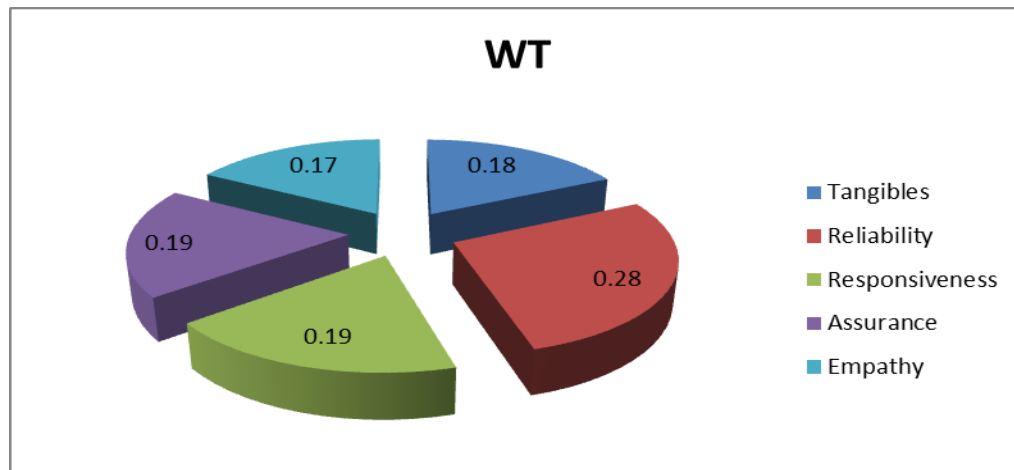
Source: own survey (2013)

### 4.3 Relative Weights for the Five Dimensions.

SERVQUAL model has five dimensions: tangibles, reliability, responsiveness, assurance and empathy, with each dimension having either four or five components. From the feedbacks received, passengers believe that “Reliability” is the most important dimension with a relative weight of 28 % followed by assurance and responsiveness each with a 19% rating. Assurance includes items like transactions in which customers feel safe.

Empathy and tangibles are the least important factors as perceived by passengers with a percentage of 17 % and 18 % respectively.

**Figure 5. Relative Weights for the Five Dimensions of SERVQUAL**



Source: Own survey (2013)

### 4.4 Summary of Perceptions vs. Expectations for the Five Dimensions.

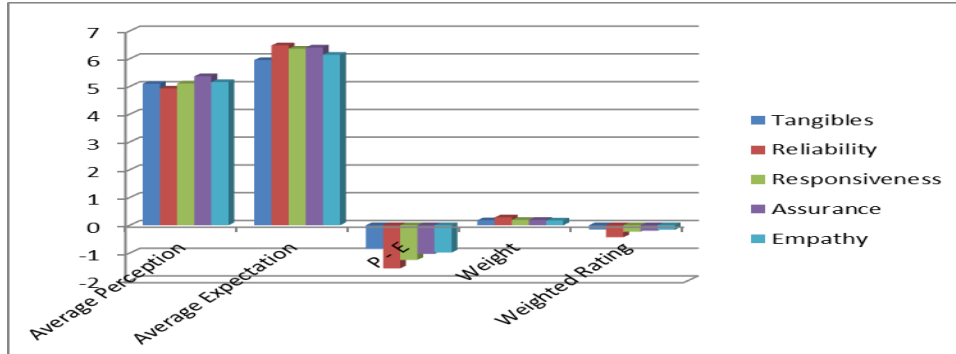
The five dimensions of SERVQUAL model have either four or five components under them. Among the five dimensions, ET's performance is rated highest in assurance, whereas the expectation of passengers was highest in reliability. Each component is discussed later in some details.

**Table 7. Data on Perception, Expectation and Relative Values for the 22 components of SERVQUAL.**

Dimension	Component Code	Description	PERCEPTION	High	Low	Average Perception	Expectation	High	Low	Average Expectation	P-E	High	Low	Weight	Rating	High	Low	Weighted Rating		
Tangibles	TAN 1	Modern Looking Equipment	5.25			5.10	6.14			5.95	-0.88			0.18	-0.16			-0.2		
	TAN 2	Physical Facility	4.57		1st		5.76		1st		-1.19					-0.21				
	TAN 3	Neatness of Employees	5.78	1st			5.88		2nd		-0.10	1st				-0.02	1st			
	TAN 4	Service Material	4.78		4th		6.02		4th		-1.24					-0.22				
Reliability	REL 5	Provide Service by the Promised Time	4.97			4.92	6.45	7th		6.48	-1.48		4th	0.28	-0.41		3rd	-0.43		
	REL 6	Sincere Interest	4.95		5th		6.56	3rd			-1.62		3rd			-0.45			2nd	
	REL 7	Serving Right the First Time	5.04				6.32				-1.27					-0.35				
	REL 8	Provide Service at the Promised Time	4.72				6.57	2nd			-1.85		1st			-0.51			1st	
Responsiveness	RES 9	Error Free Record	5.35	4th		5.11	6.26			6.36	-0.92	4th		0.19	-0.18			-0.2		
	RES 10	Telling Customers about the Service Time	4.67		2nd		6.47	4th			-1.80		2nd			-0.35				
	RES 11	Prompt Service	5.18				6.44				-1.26					-0.24				
	RES 12	Willingness to Help	5.25				6.47	4th			-1.21					-0.24				
	RES 13	Never too Busy to Respond	5.09				6.16				-1.07					-0.21				
Assurance	ASS 14	Behaviour that Instills Confidence	5.25			5.37	6.47	4th		6.40	-1.23			0.19	-0.23			-0.2		
	ASS 15	Transactions that Customers Feel Safe	5.59	2nd			6.61	1st			-1.01					-0.19				
	ASS 16	Courteousness of Employees	5.54	3rd			6.27				-0.73	2nd				-0.14	3rd			
	ASS 17	Knowledge of Employees.	5.08				6.25				-1.16					-0.22				
Empathy	EMP 18	Individual Attention	5.23			5.15	6.19			6.14	-0.96			0.17	-0.16			-0.16		
	EMP 19	Convenient Operating Hours	5.18				6.09				-0.92	4th				-0.15	4th			
	EMP 20	Personal Attention	5.13				6.13				-1.00					-0.17				
	EMP 21	Customers Best Interest at Heart	4.99				6.30				-1.31					-0.22				
	EMP 22	Specific Needs of Customers	5.24				5.98		3rd		-0.73	3rd				-0.12	2nd			
			Average Values	5.13				5.13	6.26				6.26		-1.13					-0.23

Source: Own survey (2013).

**Figure 6. Perceptions vs. Expectations for the Five Dimensions of SERVQUAL**



Source: Own survey (2013).

For the expectation of passengers in the five dimensions, reliability, assurance and responsiveness are rated again as high with mean values of 6.48, 6.4 and 6.36 respectively in the seven point likert scale. Empathy is considered as one of the least important dimensions and the expectation of passengers in this dimension is also low, but on the other hand, it is one of the areas where passengers believe that the airline's performance is good.

The expectations of customers with a mean value of 6.26 (in a seven point scale) is high and the overall perceived service quality (P-E) in all five dimensions is negative. This finding is similar to some other researches made on Iran Asmen airways (Bozorgi, 2012), on a Nigerian Airlines called Aerocontractors (Chinkwendu & Ezenwa, 2012), on Turkish Airline (Degrimenci, 2012) and on grocery stores in Umea (Daniel, 2010). This is also similar to the findings of the authors who collected close to two thousand questionnaires from various service giving industries and had a calculated mean of 6.22 for expectations (Parasurman et al. 1991).

Some of the most important factors in determining reliability are provision of service at the time promised, keeping the promised departure and arrival of the flights according to the promised flight schedule. The six months report (Dec. to June 2012) shows that there were 1255 flights (out of a total of 4559) that were either cancelled altogether or had delays.



#### 4.5 Analysis of Perception versus Expectation for all Dimensions of SERVQUAL

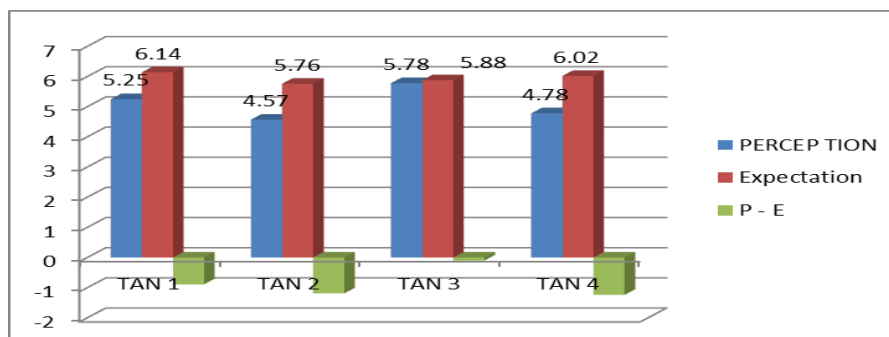
Under this section, the gap between the passengers' perception of the services they received and their expectation of these services for each dimension are analysed independently in some details.

#### 4.6 Perceptions on Tangibles.

Regardless of the fact that perception is low, the gap between perception and expectation is the narrowest under this dimension. This is because of the relatively low expectation customers have from this dimension.

Tangibles include modern looking equipment (e.g. airplanes), visual appeal of facilities and service materials as well as neatness of employees. This is an area where the airlines' perceived service quality is among the lowest with a mean value of 5.10 (overall mean for perception = 5.13 and the expectation is also lowest at a mean of 5.95 (overall mean for expectation = 6.26). The perceived relative importance is also low at 18%. Among the four components of tangibles, the perceived performance of the airline is at its lowest in TAN-2 (visual appeal of physical facility with a mean value of 4.57, followed by visual appeal of service materials at mean of 4.78. On the other hand, neatness of employees is perceived to be the best performance area for the airline (mean of 5.78).

**Figure 7. Perceptions vs. Expectations for Tangibles**



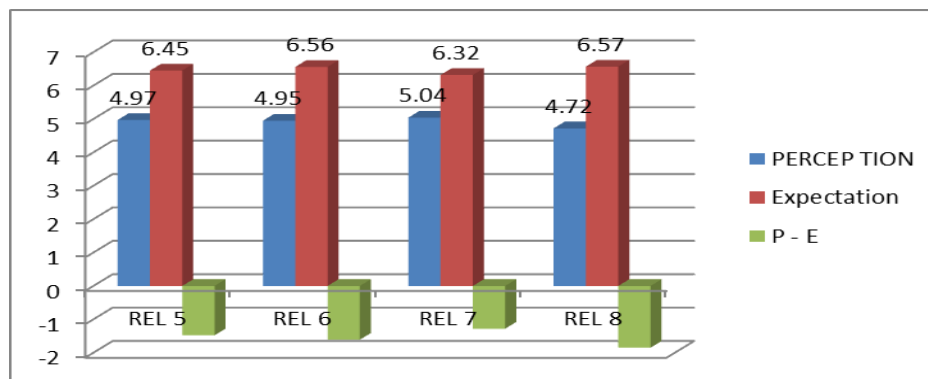
Source: Own survey (2013)

#### 4.7 Perceptions on Reliability

Reliability in SERVQUAL includes, “doing what is promised by a certain time as promised”, “sincere interest to solve customers’ problems”, “performing service right at the first time” and “providing service at the time promised”.

“Reliability” is a dimension where ET’s performance (relative mean value of 4.92) is perceived to be the lowest and where passengers have the highest expectation (relative mean value of 6.48) and unfortunately an area where passengers also attach a very high importance (mean value of 28%). The above facts make customers satisfaction at the lowest point with the weighted mean value of -0.4368

**Figure 8. Perceptions vs. Expectations on Reliability**



Source: Own survey (2013).

Doing what is promised by a certain time as promised” in ET context involves among other things, the on-time performance in respecting the departure and arrival schedule.

**Table 8 Ethiopian Airline’s on-time Performance Data for International Flights (Jan-June 2012)**

Category	Jul-11	Aug-11	Sep-11	Oct-11	Nov-11	Dec-12	Jan-12	Feb-12	Mar-12	Apr-12	May-12	Jun-12	Jun-11
% of Flights departed on time	71.58%	71.58%	80.88%	79.23%	69.01%	74.72%	78.25%	79.30%	79.27%	61.05%	79.37%	74.31%	73.19%
% of Flights Delayed	28.20%	28.20%	17.90%	19.71%	27.13%	23.73%	18.46%	17.93%	15.47%	33.47%	18.43%	22.50%	25.16%
% of flights Cancelled	0.22%	0.22%	1.22%	1.06%	3.86%	1.54%	3.29%	2.76%	5.26%	5.47%	2.20%	3.19%	1.65%

Source: Ethiopian Airlines Customer Service Report (2012).

*Note: The last column for June 2011 data is included for comparison*

**Table 9. Ethiopian Airline’s On-time performance report for domestic flights (Jan-June, 2012)**

Station	# of Departed flights	# of Delayed flights	Delay In minutes	Delay in Hour	Jun OTP 2012	Target	Variance	Delay Intensity	YTD	Jun 2011 OTP
ABK	9	7	724	12:04:00	22.22%	85%	-62.78%	1:20:27	74.76%	42.86%
JIJ	60	31	3251	54:11:00	48.33%	85%	-36.67%	0:54:11	68.31%	78.57%
GDE	21	10	999	16:39:00	52.38%	85%	-32.62%	0:47:34	62.74%	90.48%
DIR	58	27	3056	50:56:00	53.45%	85%	-31.55%	0:52:41	70.29%	77.59%
BJR	60	25	1971	32:51:00	58.33%	85%	-26.67%	0:32:51	78.75%	86.00%
HUE	9	2	127	2:07:00	77.78%	85%	-7.22%	0:14:07	86.54%	66.67%
ADD	288	63	5508	91:48:00	78.13%	85%	-6.88%	0:19:07	80.86%	86.67%
GDQ	90	19	1681	28:01:00	78.89%	85%	-6.11%	0:18:41	81.26%	82.86%
MQX	116	19	930	15:30:00	83.62%	85%	-1.38%	0:08:01	80.25%	76.67%
ASO	13	2	170	2:50:00	84.62%	85%	-0.38%	0:13:05	73.97%	55.56%
GMB	13	2	225	3:45:00	84.62%	85%	-0.38%	0:17:18	71.82%	83.33%
AXU	60	9	449	7:29:00	85.00%	85%	0.00%	0:07:29	76.90%	80.39%
SHC	17	2	58	0:58:00	88.24%	85%	3.24%	0:03:25	78.09%	60.00%
LLI	60	5	354	5:54:00	91.67%	85%	6.67%	0:05:54	83.60%	82.35%
AMH	13	1	63	1:03:00	92.31%	85%	7.31%	0:04:51	73.29%	88.89%
JIM	13	1	64	1:04:00	92.31%	85%	7.31%	0:04:55	63.89%	73.91%
<b>Total</b>	<b>900</b>	<b>225</b>	<b>19630</b>	<b>327:10:00</b>	<b>75.00%</b>	<b>85%</b>	<b>-10.00%</b>	<b>0:21:49</b>	<b>77.97%</b>	<b>81.38%</b>

Source: Ethiopian Airlines Customer Service Report (2012).

More than 20% of flights that departed from various stations (i.e. more than one in every five flights) have either been cancelled or had delays in the six months period between

Jan and June of 2012. On-Time performance for US operators for the year 2012 was 83.7% (US Department of Transport, 2012)

**Table 10. On-Time Performance of Ethiopian Airlines by Station (Jan-June 2012)**

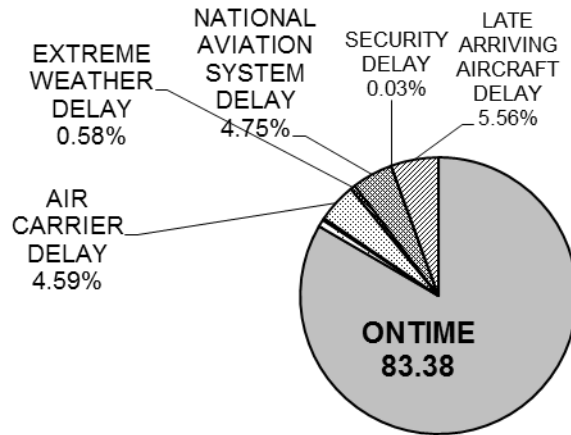
Station	# of Departed flights	# of Delayed flights	Delay In minutes	Delay in Hour	Jun OTP 2012	Target	Variance	Delay Intensity	YTD	Jun 2011 OTP
BOM	31	28	1406	23:26:00	9.68%	85%	-75.32%	0:45:21	16.62%	6.25%
MCT	19	14	684	11:24:00	26.32%	85%	-58.68%	0:36:00	70.59%	
BKO	14	10	423	7:03:00	28.57%	85%	-56.43%	0:30:13	82.38%	82.35%
FIH	30	21	865	14:25:00	30.00%	85%	-55.00%	0:28:50	50.68%	60.00%
BZV	30	17	647	10:47:00	43.33%	85%	-41.67%	0:21:34	63.93%	60.00%
ABV	22	10	343	5:43:00	54.55%	85%	-30.45%	0:15:35	62.55%	71.43%
BKK	36	16	853	14:13:00	55.56%	85%	-29.44%	0:23:42	72.60%	66.67%
JNB	30	13	853	14:13:00	56.67%	85%	-28.33%	0:28:26	53.69%	46.67%
LUN	30	13	525	8:45:00	56.67%	85%	-28.33%	0:17:30	59.13%	80.00%
ADD	1323	297	12579	209:39:00	77.55%	85%	-7.45%	0:09:30	80.32%	78.22%
HKG	17	4	81	1:21:00	76.47%	85%	-8.53%	0:04:46	89.05%	83.33%
HGH	30	7	183	3:03:00	76.67%	85%	-8.33%	0:06:06	63.51%	47.62%
RUH	30	7	301	5:01:00	76.67%	85%	-8.33%	0:10:02	90.68%	86.36%
BGF	13	3	159	2:39:00	76.92%	85%	-8.08%	0:12:14	53.11%	70.59%
KWI	26	6	338	5:38:00	76.92%	85%	-8.08%	0:13:00	87.21%	82.76%
MBA	61	14	542	9:02:00	77.05%	85%	-7.95%	0:08:53	90.74%	98.00%

Source: Ethiopian Airlines Customer Service Report (2012).

In the month of June 2012, more than nine flights out of ten that departed from Mumbai (BOM) had either delays or were cancelled. As shown in table 10, most of the delays and cancellations were related to either Marketing or Customer Services and were mostly avoidable.

The percentage of flight delays varies along different regions and in stations like Mumbai (BOM) and Bangkok (BKO) where regulatory control is minimal the delays are high.

**Figure 9. Causes for Delays for Airlines Operating within USA.**



Source: Air Travel Consumer Report 2012

**Table 11. Functional Causes for flight delays for Ethiopian Airlines (Jan-June 2012)**

**2.4.1 International**

Delay by Division/Department	12-Jun				11-Jun			
	# of delayed	delayed	flight delay	delayed	# of delayed	delayed	flight delay	delayed
	flights	hours	in %	hours in %	flights	hours	in %	hours in %
Customer Service	351	229:15:00	27.64%	22.35%	447	207:40:00	37.75%	24.36%
MRO	207	223:25:00	16.30%	21.78%	116	130:47:00	9.80%	15.34%
Marketing	484	325:31:00	38.11%	31.73%	428	397:30:00	36.15%	46.63%
Flight Operation	76	40:12:00	5.98%	3.92%	40	23:10:00	3.38%	2.72%
Cargo	65	151:59:00	5.12%	14.82%				
External	87	55:30:00	6.85%	5.41%	153	93:16:00	12.92%	10.94%
Total	1270	1025:52:00	100.00%	100.00%	1184	852:23:00	100.00%	100.00%

Source: Ethiopian Airlines Customer Service Report (2012).

Most of the flight delays at Ethiopian Airlines are caused by internal problems. As contrasted to airlines operating within USA, delays caused by weather and National Aviation system in the case of Ethiopian Airlines is minimal.

Another area for measurement of reliability is the ability of the airline in performing its duty right the first time, which includes delivering baggage to the right destination and

avoiding misconnection for those passengers that have connecting flights with other airlines or to different flight segments operated by Ethiopian Airlines.

**Table 12. Baggage Irregularity**

**Baggage Irregularity per Station**

STN	Pax carried	# of BiR	Baggage irregularity of Jun 2012		
			Jun 12 Bag irreg/1000 pax	Variance	Jun 11 Bag irreg/1000 pax
FCO	2831	66	23.31	17.31	24.22
BRU	1495	30	20.07	14.07	6.67
JNB	3926	76	19.36	13.36	14.29
ACC	2678	47	17.55	11.55	9.89
CDG	3536	58	16.40	10.40	18.67
ARN	3110	50	16.08	10.08	11.7
CAI	1777	28	15.76	9.76	5.84
CAN	5627	82	14.57	8.57	48.88
MCT	1378	20	14.51	8.51	
FRA	4284	62	14.47	8.47	13.75
LUN	2561	37	14.45	8.45	7.26
BGF	614	8	13.03	7.03	1.59
BJM	953	12	12.59	6.59	5.44
BKK	2218	27	12.17	6.17	11.35
HKG	2326	25	10.75	4.75	6.11
MBA	1134	11	9.70	3.70	3.42
JED	4934	44	8.92	2.92	17.53
LFW	2061	18	8.73	2.73	13.52
ABV	2734	23	8.41	2.41	11.1
LHR	4573	35	7.65	1.65	7.87
BKO	1087	8	7.36	1.36	12.39
NBO	4667	32	6.86	0.86	6.04
RUH	3655	25	6.84	0.84	7.75
KRT	4338	29	6.69	0.69	7.18
KWI	2206	14	6.35	0.35	7.55
IAD	8512	49	5.76	-0.24	9.91
DKR	1484	8	5.39	-0.61	3.05
TLV	2788	15	5.38	-0.62	9.36
LLW	2253	12	5.33	-0.67	6.49
MPM	1546	8	5.17	-0.83	25.45

STN	Pax carried	# of BiR	Baggage irregularity of Jun 2012		
			Jun 12 Bag irreg/1000 pax	Variance	Jun 11 Bag irreg/1000 pax
LAD	3721	19	5.11	-0.89	7.77
BZV	1766	9	5.10	-0.90	4.97
JRO	1987	10	5.03	-0.97	1.44
MXP	1249	6	4.80	-1.20	
DLA	3129	15	4.79	-1.21	3.76
BEY	2568	12	4.67	-1.33	3.27
DXB	13685	63	4.60	-1.40	9.31
SSG	1562	7	4.48	-1.52	7.48
FIH	3366	15	4.46	-1.54	5.23
LBV	2062	9	4.36	-1.64	6.33
ADD	184089	803	4.36	-1.64	3.03
DAR	3160	13	4.11	-1.89	10.65
ZNZ	2052	8	3.90	-2.10	7.72
NDJ	2588	10	3.86	-2.14	5.42
JIB	3584	13	3.63	-2.37	5.2
PEK	7058	24	3.40	-2.60	6.55
SEZ	603	2	3.32	-2.68	
DEL	4456	14	3.14	-2.86	2.06
JUB	2876	9	3.13	-2.87	2.65
KGL	1598	5	3.13	-2.87	5.43
EBB	4213	13	3.09	-2.91	2.62
LOS	5298	16	3.02	-2.98	8.03
FBM	1114	3	2.69	-3.31	3.98
COO	406	1	2.46	-3.54	
OUA	1307	3	2.30	-3.70	39.66
BOM	5014	11	2.19	-3.81	6.65
ABJ	1001	2	2.00	-4.00	10.89
HRE	2725	5	1.83	-4.17	11.63
HGH	3790	6	1.58	-4.42	3.21
<b>Total</b>	<b>363,243</b>	<b>2,085</b>	<b>5.74</b>	<b>-0.26</b>	<b>6.66</b>

Source: Ethiopian Airlines Customer Service Report (2012).

The highest observed baggage irregularity is noted for stations CAN (Guangzhou in China), OUA (Ouagadougou, in Burkina Faso), MPM (Maputo in Mozambique) and FCO (Rome in Italy). In June 2011 and the 2012 data shows that the airports with the highest baggage irregularity to be, FCO, BRU (Brussels in Belgium) and JNB

(Johannesburg in South Africa). (The average baggage irregularity the airline says to have recorded with a value of 5.74 is not higher than the targeted irregularity of 6 (Ethiopian Airlines 2012) but is higher than most airlines.

Among airlines that volunteered to submit their data, the worst performing airlines in US had a baggage irregularity of 6.98 in Jan-June 2008 period (Hard, R. 2009). The May 2011 baggage irregularity for major US airlines was 3.54 and the May 2012 irregularity was reduced to 2.77 (US Department of Transport, 2012). As the baggage irregularity report for Ethiopian Airlines was obtained mainly from what is posted by the airline while data for other airlines was obtained by what is posted by a neutral third party, data could not be compared apple to apple.

Even when comparing this data that is supplied by Ethiopian Airlines with data supplied on US airlines by neutral third party, the baggage irregularity of Ethiopian Airlines (= 5.74) is higher than that of major US airlines (= 2.77) or that of Delta Airways which has a baggage irregularity of 0.31 (Bowen & Headley).

Among ET's passengers, the number of misconnections for passengers originating from some Asian cities is very high. For instance from the total of 829 misconnections recorded in Addis Ababa Airport in the six months leading to June 30/2012, 228 of them originated from Mumbai (Ethiopian Airlines. 2012).

**Table 13. Data on Misconnection at Addis Ababa**

Origin	Destination																						Total				
	BOM	DXB	ACC	BEY	LFV	HRE/LUN	MPM	OUA	LOS	NBO	ACC/ABY	IAD	EBB	ABY	JNB	LBY	CAI	TLV	EBB/KGL	DLA	MBA	BJS		LLV	SSG	Others	
BOM			38		32	14	29	11			22		5	11	3	13				6			8	8	28	228	
ABY/ACC	27	12								4								7	12						6	68	
SSG/DLA	7	20								7	3						10					8			8	63	
ACC/ABY	21	16		3						9								6							0	55	
BZW/FIH	16			20								6													0	42	
CAN			14		5	16		5																	0	40	
DXB							1		19				11							5					3	39	
LOS	32																								0	32	
ZNZ/DAR	27																								0	27	
JNB	6			1						1	2											11			6	27	
SSG	6			14							2														0	22	
TLV						3		1						5	1										12	22	
ABY/ACC	7			3						1															5	16	
ABY	15																								1	16	
DLA	5										5						3								0	13	
RUH								4	1						8										0	13	
BEY			2		3		1	7																	0	13	
KRT		12																							0	12	
BJM/KGL	3			1								2													5	11	
ACC	7	1																							2	10	
DLA/SSG	10																								0	10	
SEZ			1						2						1										6	10	
LFw	7			3																					0	10	
Others	11	1	0	2	0	1	0	0	1	0	0	1	1	0	1	0	0	0	0	0	0	0	0	0	0	11	30
<b>Total</b>	<b>207</b>	<b>62</b>	<b>55</b>	<b>47</b>	<b>40</b>	<b>34</b>	<b>31</b>	<b>28</b>	<b>23</b>	<b>22</b>	<b>22</b>	<b>21</b>	<b>17</b>	<b>16</b>	<b>14</b>	<b>13</b>	<b>13</b>	<b>13</b>	<b>12</b>	<b>11</b>	<b>11</b>	<b>8</b>	<b>8</b>	<b>8</b>	<b>93</b>	<b>829</b>	

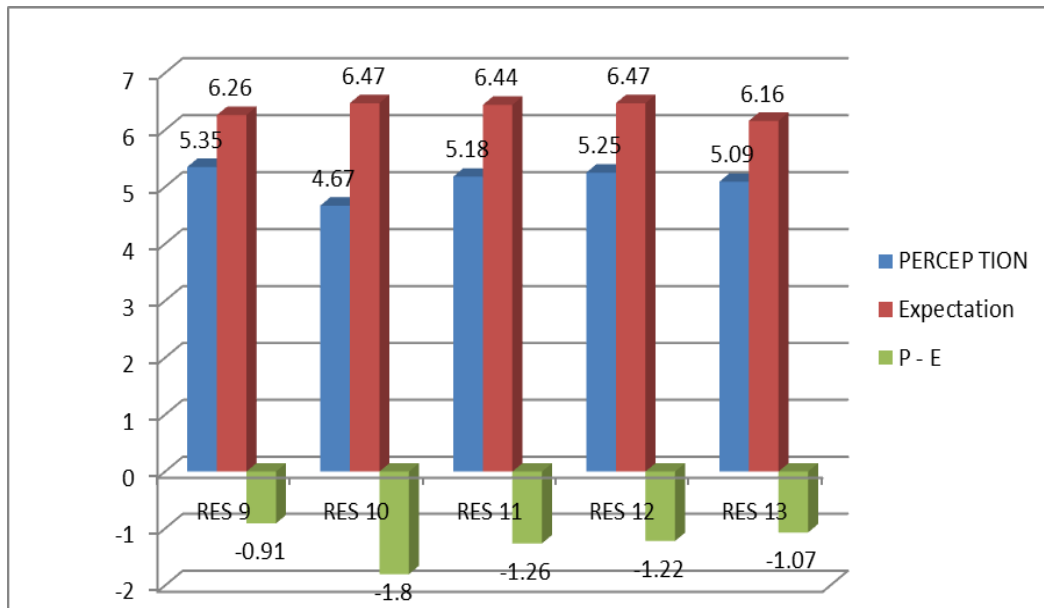
Source: Ethiopian Airlines Customer Service Report (2012).

#### 4.8 Perceptions on Responsiveness.

Responsiveness in SERVQUAL model includes error free recording, telling customers exactly when service will be performed, providing customers prompt service, willingness to help customers and never being too busy to answer customers' requests.



**Figure 10. Perceptions vs. Expectations for Responsiveness**



Source: Own survey (2013)

In ET context, responsiveness involves the provision of prompt service to customers including re-claiming lost baggage or compensating passengers for their lost baggage and in the case of ET ticket offices, reducing the queuing time and completing the booking and other travel related formalities promptly.

The speed of settlement for the lost or damaged baggage is believed to have improved a lot in the last few years, but data posted on ET's portal is very limited. Based on this limited available data it takes Ethiopian, an average of 107 days to settle payment for lost or damaged baggage and this is much higher than the 75 days which is considered by ET as a standard (Ethiopian Airlines. 2012). On the other hand, it takes only 48 hours for European operators to reclaim 85 % of the lost baggage (Hard, 2009).

**Table 14. Claim Settlement Efficiency of Ethiopian Airlines for Lost Baggage**

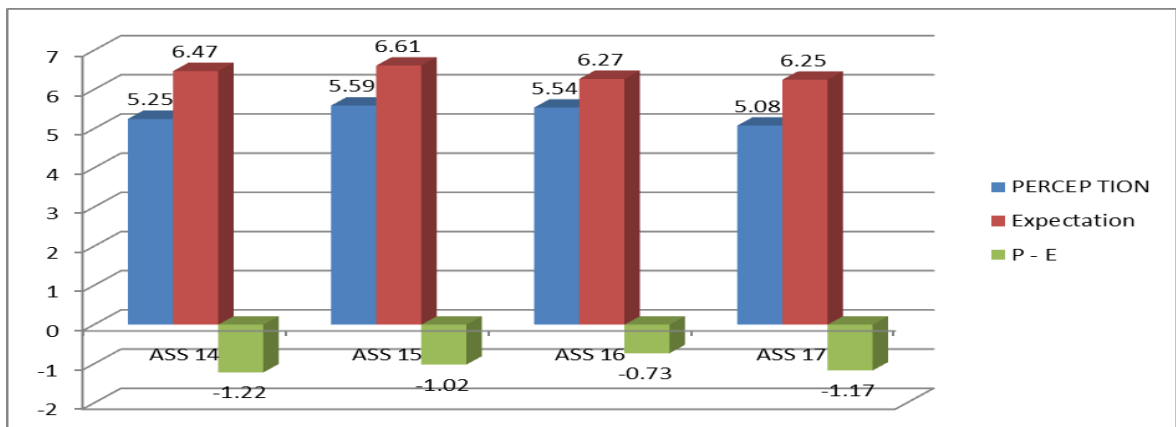
Station	No. of Cases	# of days from Flight date until claim is received at Customer Relation		# of days since claim is received at Customer Relation until AFR is issued		# of days since AFR is issued until settlement		# of days from Flight date until settlement	
		Average # of days	Std Deviation	Average # of days	Std Deviation	Average # of days	Std Deviation	Average # of days	Std Deviation
ADD	1	13.00	0.00	NO AFR	NO AFR	1.00	0.00	14.00	0.00
FCO	3	123.67	118.42	1.00	0.00	3.00	3.56	127.00	116.69
IAD	1	61.00	0.00	NO AFR	NO AFR	4.00	0.00	65.00	0.00
JIB	1	58.00	0.00	3.00	0.00	10.00	0.00	71.00	0.00
LUN	1	140.00	0.00	51.00	0.00	61.00	0.00	252.00	0.00
NBO	1	63.00	0.00	6.00	0.00	6.00	0.00	75.00	0.00
<b>Total</b>	<b>8</b>	<b>88.25</b>	<b>84.02</b>	<b>15.25</b>	<b>20.72</b>	<b>11.38</b>	<b>19.05</b>	<b>107.25</b>	<b>97.34</b>
<b>Standard</b>		<b>30</b>				<b>45</b>		<b>75</b>	

Source: Ethiopian Airlines Customer Service Report (2012).

#### 4.9 Perceptions on Assurance

Assurance includes instilling confidence in customers, safety, courteousness of employees, the knowledge employees have to address customers’ questions. This is the strongest point in the airline’s performance. Safety (PAS 15) with a mean value of 5.59 and courteousness (PAS16) with a mean value of 5.54 are among the strongest areas where customers’ perceived performance of the airline are high.

**Figure 11. Perceptions vs. Expectations on Assurance.**



Source: Own survey (2013).

The airline has an excellent safety record and is one of the very few airlines in Africa that is certified by both European safety agency (EASA), International Organization for Safety Audit (IOSA) as well as the American regulatory authority, the Federal Aviation Authority (FAA), (Ethiopian Airlines. 2009).

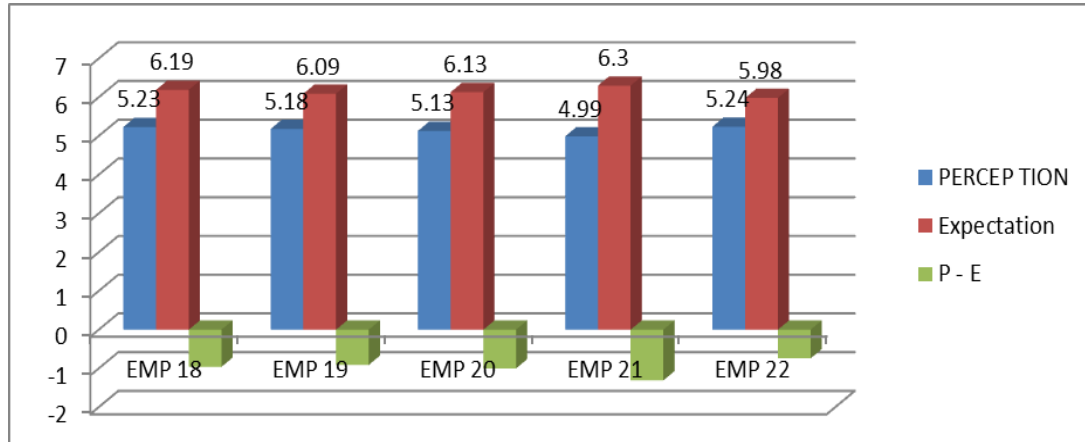
The airline is rated above five in all the measures under this dimension including in employees courteousness. This is in line with the independent rating made by a renowned rating agency that puts Ethiopian airlines cabin crew enthusiasm and friendliness at a four star while the overall performance of the airline is considered as a three star (SKYTRAX. 2013a), (Ethiopian Airlines, 2013a).

Expectation on assurance is also the highest among the five dimensions. Transactions in which ‘customers feel safe’ is the component in which customers have the highest expectation. Expectation can be raised by personal needs among other factors (Parasurman, etal. 1985). Passengers need to have a safe transaction when getting service from any airline.

#### **4.10 Perceptions on Empathy**

Empathy includes providing the customers with individual and personal attention, having customers’ best interest at heart, understanding specific needs of customers and setting working hours for customers’ convenience. Customers’ expectation for this dimension is the second lowest at a mean value of 6.138. Which means if the airlines’ perceived performance is higher than this value, customers will be delighted. ET’s perceived performance with this dimension happens to be the second highest with a mean value of 5.15 and customers see this dimension as the least important with mean value of 17%.

**Figure 12. Perceptions vs. Expectations on Empathy**



Source: Own survey (2013)

#### 4.11 Findings on areas of Statistical Significance

Under this section, findings that have significant statistical values with “P” less than 0.05 during analysis with ANOVA are discussed.

##### 4.11.1 Flight Regions vs. Visual Appeal of Physical Facility

**Table 15. Flight Region vs. PTA-2 (Perception on Visual Appeal of Physical Facility)**

Routes	Mean	N	Std. Deviation
Africa	4.69	45	.793
Asia	4.43	40	.675
Domestic	5.11	28	.956
Europe	4.27	30	.691
N. America	4.32	22	.839
Total	4.57	165	.828

Source: Own survey (2013)

The visual appeal of the physical facility of the airline is rated low by passengers of all segments. The domestic passengers and passengers flying within Africa have a higher perception of the airlines' performance in this dimension with respective means of 5.11 and 4.69.

This may be because actual physical facility of the airline is better than most of the facilities found in Africa. On the other hand, ET's outstation offices in most major cities of the world are not located in the heart of the city. The ET check-in counters worldwide are located in the extreme far end of the airport and cannot compete with major airlines that have permanent presence at all major airports. ET'S check-in counters are shared by other airlines and are opened with ET's logo only when there are ET flights and only briefly for a few hours before the flight departure at that airport and is closed immediately upon completion of check-ins.

Delta which is considered to be one ET's competitors, for instance has thousands of flights departing from US cities which include daily departures of 940 from Atlanta, 502 from Detroit, 434 from Minneapolis, 146 from New York, etc. (Delta Airlines. 2013) while Ethiopian has only one flight that departs from Washington per day (Ethiopian Airlines. 2013a).

Delta therefore has permanent presence in a large plot at major airports 24 hours a day while ET's logos and banners are removed when there is no flight and other small airlines lease the space and make use of it. This may have affected the perception of North American bound passengers with respect to assessing the appeal in the physical facility.

#### 4.11.2 Gender vs. Perceptions of Appeal of Service Material

**Table 16. Gender vs. Perceptions on TAN 4 (Visual Appeal of Service Materials)**

<b>Gender</b>	<b>Mean</b>	<b>N</b>	<b>Std. Deviation</b>
F	4.60	82	.735
M	4.96	83	.740
Total	4.78	165	.758

Source: Own survey (2013)

Female passengers perception of the quality of service with respect to visually appealing material (like on board video, magazine) is lower with mean 4.6 than men's rating of 4.96. During interview with Manager Customer Relations, it was disclosed that the on-board reading materials supplied by ET include, News Week, Times, The Herald Tribune, etc. which all deal mainly on political issues.

Travel is widely associated with masculine values such as adventure and pleasure, and numerous researchers do not recognize gender specific concerns and incorporate gender-neutral values into travel. Many women feel discriminated and perceive airlines as masculine organizations (Westwood et al., 2000).

Most of the films shown on board Ethiopian flights in July 2013 are rated 'PG', which means they should not be freely shown to children and children require parental guidance. As shown in table 16, among the films shown on board flight segments covered by all airplane models except the Boeing 777/787 fleet, about 65% are rated as PG. Women in general are more concerned than men about the well-being of their children. Married mothers, even if working full time bear a disproportionate responsibility for home and child care (Hill & Hill, 1990).

**Table 17. Films Shown in July 2013 on All Fleet except the B777/787**

<b>Number</b>	<b>Film Title</b>	<b>Parental Guidance (PG) Rated?</b>
1	The Incredible Burt Wonderstone	Yes
2	The Jewel of the Nile	Yes
3	English Vinglish	Yes
4	Secret Garden	Yes
5	New Girl	No
6	Pawn Stars	No
7	Love Marilyn	Yes
8	Aliens in the Attic	Yes
9	The next Magic	Yes
10	The Middle	No
11	Megacities	No
12	Scooby Doo! Big Top Scooby Doo!	Yes
13	Miss Queen	Yes
14	A day in the Life	No
15	The Endless Summer	Yes
16	Gbolahan	Yes
17	How I Met Your Mother	No

Source: Salamta/ The Ethiopian in-flight Magazine, July/August 2013 Edition.

#### **4.11.3 Perception on Punctuality**

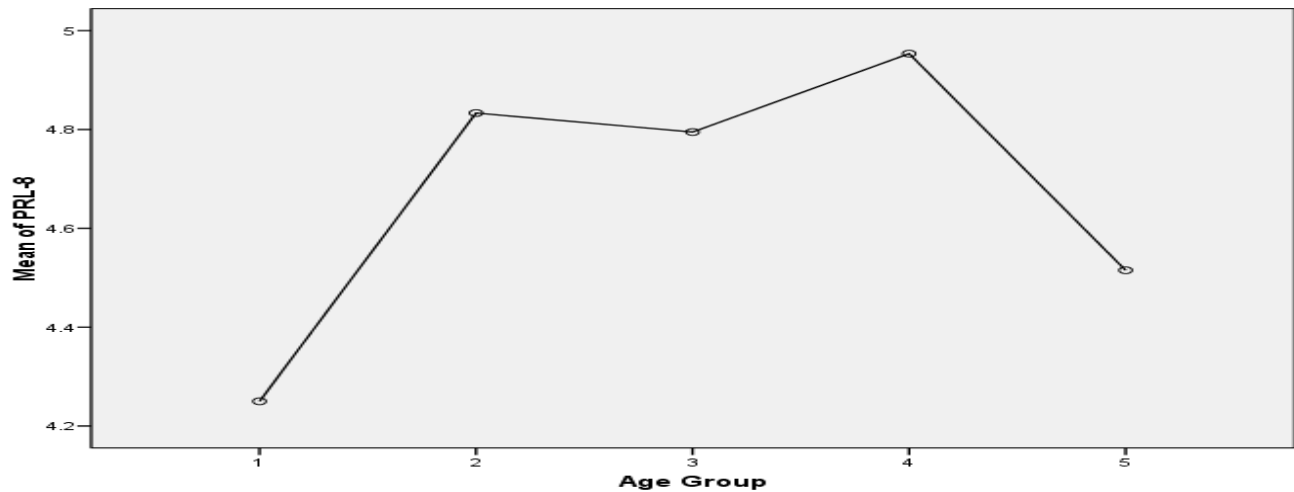
The punctuality of Ethiopian Airlines (REL-8) is believed to be low by all groups with an average mean value of 4.72. The North American bound passengers have a much lower perception of the service with an average mean value of 4.5. Youngsters with age group of 18-30 seem to have the least tolerance with flight delay with an average mean value of 4.25.

**Table 18. Age vs. PRL-8 (Perception on Punctuality)**

Age Group	Age	Mean	N	Std. Deviation
1	18-30	4.25	20	.851
2	31-40	4.83	30	.747
3	41-50	4.79	39	.767
4	51-60	4.95	43	.815
5	>60	4.52	33	.712
Total		4.72	165	.801

Source: Own survey (2013)

**Figure 13. Age vs. PRL-8 (Perception on Punctuality)**



Source: Own Survey (2013)

#### **4.11.4 Expectation on the need to be told about the time of service (ERS-10)**

Business travellers have a high expectation on the need to be advised about the time of service. (ERS 10 average mean value of 6.54) as compared holiday goers and vacationers with a mean value of 6.28.



**Table 19. Type of Passenger vs. ERS 10 (Expectations on the need to be told about the time of service.**

<b>Purpose of Travel</b>	<b>Description</b>	<b>Mean</b>	<b>N</b>	<b>Std. Deviation</b>
C	Company Business	6.54	50	.646
H	Holiday/Vacation Travelers	6.28	36	.659
O	Others	6.57	49	.540
P	Personal Business/trade	6.40	30	.563
Total		6.47	165	.610

Source: Own survey (2013)

People on vacation can understandably afford to spend few more minutes waiting at the airport or at duty free shops before their scheduled flight than company travellers with strict schedule.

#### **4.11.5 Gender vs. Perception on Courteousness (PAS-16)**

Male passengers find the hostesses as more courteous (PAS 16) with a mean value of 5.83 than female passengers with a mean value of 5.24. Almost all the cabin crew members are female employees (hostesses).

**Table 20. Gender vs. Perception on Courteousness of Employees (PAS-16)**

<b>Gender</b>	<b>Mean</b>	<b>N</b>	<b>Std. Deviation</b>
F	5.24	82	.937
M	5.83	83	.881
Total	5.54	165	.953

Source: Own survey (2013)

The above is consistent with the research findings of Richmond, et al. (1987) who states, “Males are more likely to compliment females, treat what they say as important, and females are perceived by males more than themselves as likely to be agreeable, encouraging, re-enforcing (supportiveness).

## CHAPTER FIVE: MAJOR FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

### 5.1 Major Findings

Ethiopian airlines SKYTRAX rating for service quality is three star while its actual target and the current rating for some of its competitors is four star. The service quality provided by Ethiopian Airlines as perceived by its customers is above 4.9 in a scale of 7 in all dimensions. The expectation however is higher making the gap between the perceived and expected service quality values negative in all dimensions.

The overall perception of customers with respect to the services they received from Ethiopian Airlines is high with a mean value of 5.13 in a seven point likert scale. This is a good achievement but there is still room for improvement. As customers however have a much higher expectation, (mean = 6.26), the airline needs to work hard to meet/exceed these expectations.

There are lots of improvement initiatives at Ethiopian Airlines. Passenger feedbacks from thousands of passengers in all segments are collected and analyzed but this is not done systematically. The gap between the perception of passengers and their expectations is not measured and comprehensive service quality components have not been identified.

Reliability, (mean = 4.92) which includes punctuality, is the poorest service quality dimension while assurance (mean = 5.37) which includes safety and courtesy is the best perceived service quality that Ethiopian Airlines renders to its customers.

**Table 21. Summary of Major Findings for the Five Dimensions.**

Description	Perception	Expectation	P-E	WT	Weighted Rate
Tangibles	5.10	5.95	-0.85	0.18	-0.153
Reliability	4.92	6.48	-1.56	0.28	-0.4368
Responsiveness	5.11	6.36	-1.25	0.19	-0.2375
Assurance	5.37	6.4	-1.03	0.19	-0.1957
Empathy	5.15	6.138	-0.98	0.17	-0.1673

Source: Own survey (2013)

According to Hill, Self & Roche (2002), if you beat the customer expectation, you have good service quality. This means that the value on perception or the experience of the customers has to exceed or at least be equal to the values attached to their expectation. The above table shows that there is room for improvement in all the five dimensions for Ethiopian Airlines. Regardless of the size and direction of the gap, SERVQUAL is very useful when assessments are made periodically to capture trend shift. But in the case of Ethiopian Airlines, the service quality measurement parameters and tools employed have not been revised for years and the trend changes in service quality are not properly monitored.

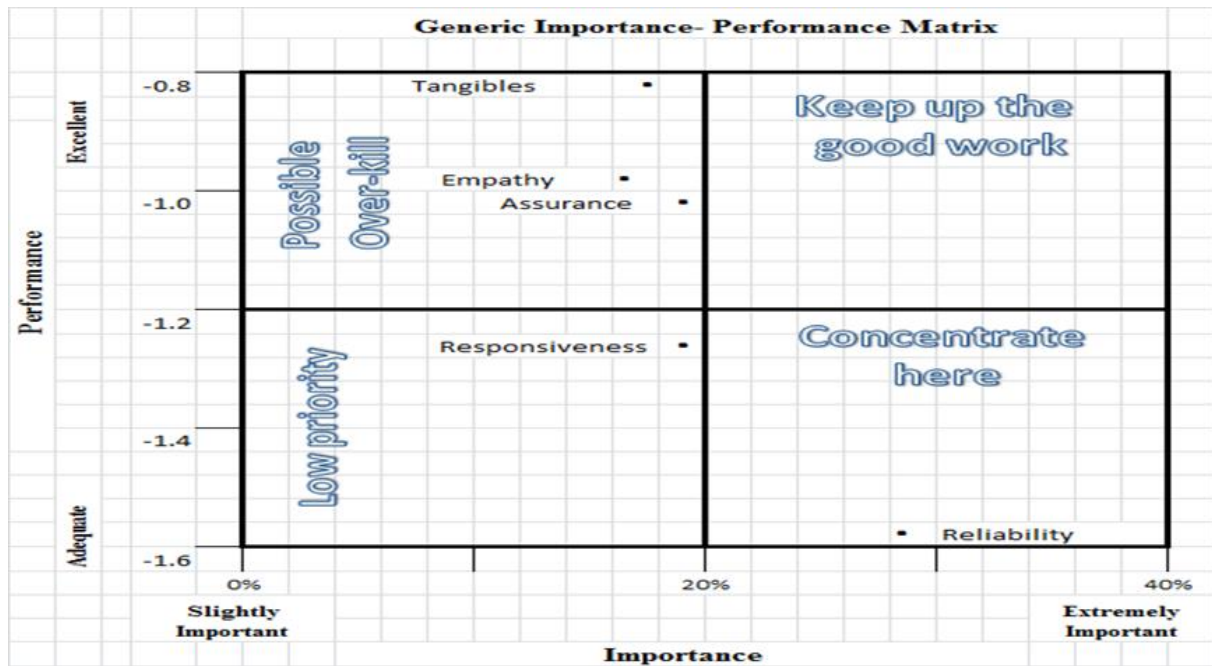
## **5.2 Conclusions**

Despite exerting a lot of effort and allocation of resource, there is no improvement in the perceived service quality provided by Ethiopian Airlines. The efforts are not concerted and coordinated.

Both the expected and perceived service qualities differ along demographic lines like gender, age group, purpose of travel and region. Ethiopian Airlines does not analyze these differences and the requirement of each segment is not properly and adequately addressed.

Ethiopian airlines works hard on dimension like empathy and some components of tangibles that are not considered by customers as very important. On the other hand, customers consider reliability as more important but Ethiopian airlines is not trying to address these issues on priority.

**Figure14. Ethiopian Airlines’ Performance in Service Quality/Importance-Performance Matrix**



Source: Own survey (2013)

The section that is responsible to measure and monitor the service quality at Ethiopian Airlines, (Customer Relations Section) is understaffed, and the IT support employed in the section is poor. The lowest service quality is in reliability which includes punctuality. Most of the flight delays are caused by problems related to marketing and customer services and are mainly avoidable.

### 5.3 Recommendations

There are lots of service quality measurement initiatives underway at Ethiopian Airlines. More however needs to be done. A section that is tasked to measure and monitor service quality is understaffed and not fully supported by IT system. The quality measurement practice is not systematic and efforts are not consolidated. It is therefore recommended to:

- Develop a more systematic and comprehensive service quality measurement that contains all the 22 SERVQUAL components.
- Re-assess the existing manpower under Customer Relations section and consider improving the IT support system.

- Use the SERVQUAL in addition with other tools. Items about customers' perception of cost while a good thing to consider, does not fall under the conceptual model of SERVQUAL and should be treated separately (Parasurman, et al., 19991).
- Address areas with noted high service gap on priority.
  - Measure and monitor on-time performance closely. With a calculated service gap of -0.510, on-time performance is the worst service quality of the airline. This is one of the critical areas and needs to be addressed on priority. On top of the negative impact on customer satisfaction, delays are expensive. Direct and indirect delay costs typically range from 0.6 % to 2.9 % of revenue, depending on the size and type of operation (Niehues, et al., 2012).
  - Regularly assess service recovery process like solving customer problems. Monitor baggage irregularity both for speed of settlement and percentage of resolution of the issue.
  - Advise customers about the service time and update flight status periodically.
- Gear services to accommodate the specific needs of customers, (e.g. include flight entertainments that are appealing to both male and female passengers). When flight entertainment programs are selected, special programs for women must also be included. This will make a positive effect on enhancing the satisfaction of the women passengers. Decoration, home design, cooking programs can be given as examples (Degrimenci, 2012).
- Do not over promise in advertisement. As expectations play a major role in consumer perception of service quality, firms must be certain not to promise more in communications than can be delivered in reality. Promising more than can be delivered will raise initial expectation and lower perception thereby reducing the perceived service quality (Parasurman, et al., 1985).
- Make further research to determine why customers' expectation was high in all dimensions.
- Try to get the service quality rating of competitors and design customer relations strategy to address customers' need better than competitors.
- Get feedback from customers of all flight segments and monitor progress and trend shifts through periodic measurement of service quality.

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## APPENDIX A.

### English Version of SERVQUAL

#### English Version of SERVQUAL

##### Part I Demographic Data

Dear Passenger,

Thank you very much for being a volunteer and for taking your time in filling up this questionnaire. The questionnaire is distributed to get your highly valued input for academic purpose. The outcome of the research will be used to improve the service quality to be in line with your requirement. Filling up the questionnaire will take only few minutes and there is no right or wrong answer.

Name: (Optional) \_\_\_\_\_

Gender:

Male

Female

Age:

from 18- 30 years old

from 31-40 years old

from 41- 50 years old

51-60 years old

above 60 years

Primary Purpose of travel ( for trips you made in the last three months)

Company business

personal business/trade

holiday/vacation

others

The number of flights with Ethiopian in the last three months:

1 time

2-3 times

4-7 times

More than 7 times

Flight Routes (For most of your trips, if you made more than one trip in the last three months)

within Africa

Between Addis & Asia

Between Addis & Europe

Between Addis & N. America

Domestic

##### Part II. Point-Allocation Section

**Direction:** Listed below are five features pertaining to airlines and transport service they offer. The main interest here is in getting your inputs on how important each of these features is to you when you evaluate an airline's quality of service. Please allocate a total of 100 points among the five features according to how important each feature is to you- the more important a feature is to you, the more points you should allocate to it. Please ensure that the points you allocate to the five features add up to 100.

No.	Description	/100
1	The appearance of an airlines physical facilities, equipment, personnel, and communications material	
2	The ability of the airline to perform the promised service dependably and accurately.	
3	The willingness of the airline to help customers and provide prompt service.	
4	The knowledge and courtesy of the airline's employees and their ability to convey trust and confidence	
5	The caring, individualized attention the airline provides to its customers	

### Part III. Expectations Section

**Directions:** Based on your experience as a customer of an airline services, please think about the kind of an airline that would deliver excellent quality of service. Think about the kind of airline with which you would be pleased to do business. Please show the extent to which you think such an airline would possess the feature described by each statement. If you feel a feature is not at all essential for excellent airline such as the one have in mind, circle the number "1". If you feel a feature is absolutely essential for excellent airline, circle "7". If your feelings are less strong, circle one of the numbers in the middle. There are no right or wrong answers- The main interest here is in a number that truly reflects your feelings regarding airlines that would deliver excellent quality of service.

No.	Would Excellent airlines possess the following features?	Rating						
		7	6	5	4	3	2	1
1	Modern looking equipment (e.g. new airplanes)	7	6	5	4	3	2	1
2	Visually appealing physical facilities (e.g. ticket office)	7	6	5	4	3	2	1
3	Neat-appearing employees	7	6	5	4	3	2	1
4	Visually appealing materials that are associated with service (e.g. onboard video)	7	6	5	4	3	2	1
5	Do what is promised (e.g. relocate lost baggage) by a certain time as promised.	7	6	5	4	3	2	1
6	Showing sincere interest in solving customers problems (e.g. lost baggage)	7	6	5	4	3	2	1
7	Performing service right the first time	7	6	5	4	3	2	1
8	Provide service at the time they promised (e.g. departure)	7	6	5	4	3	2	1
9	Insist on error-free records (e.g. recording your flight booking)	7	6	5	4	3	2	1
10	Employees who will tell customers exactly when services will be performed	7	6	5	4	3	2	1
11	Employees who will give prompt service to customers.	7	6	5	4	3	2	1
12	Employees who will always be willing to help customers.	7	6	5	4	3	2	1
13	Employees who will never be too busy to respond to customers requests.	7	6	5	4	3	2	1
14	The behavior of employees that will instill confidence in customers.	7	6	5	4	3	2	1
15	Transactions in which customers feel safe.	7	6	5	4	3	2	1
16	Employees who will be consistently courteous with customers.	7	6	5	4	3	2	1
17	Employees who will have the knowledge to answer customer questions.	7	6	5	4	3	2	1
18	Giving customers individual attention.	7	6	5	4	3	2	1
19	Operating hours that are convenient to all of their customers.	7	6	5	4	3	2	1
20	Employees who give customers personal attention	7	6	5	4	3	2	1
21	Customers' best interests at heart.	7	6	5	4	3	2	1
22	Employees who will understand the specific needs of their customers.	7	6	5	4	3	2	1

"Strongly Disagree" (=1) and "Strongly Agree" (=7)

**Part IV. Perceptions Section**

**Directions:** The following set of statements relate to your feelings about Ethiopian Airlines service. For each statement, please show the extent to which you believe Ethiopian Airlines has the feature described by the statement. Once again, circling a "1" means that you strongly disagree that Ethiopian Airlines has that feature, and circling a "7" means that you strongly agree. You may circle any of the numbers in the middle that show how strong your feelings are. There are no right or wrong answers- The main interest here is in is a number that best shows your perception about Ethiopian Airlines' service.

No.	Does Ethiopian Airlines have the following features?	Rating						
		7	6	5	4	3	2	1
1	Modern looking equipment (e.g. new airplanes)	7	6	5	4	3	2	1
2	Visually appealing physical facilities (e.g. ticket office)	7	6	5	4	3	2	1
3	Neat-appearing employees	7	6	5	4	3	2	1
4	Visually appealing materials that are associated with service (e.g onboard video)	7	6	5	4	3	2	1
5	Do what is promised (e.g. relocate lost baggage) by a certain time as promised.	7	6	5	4	3	2	1
6	Showing sincere interest in solving customers problems (e.g lost baggage)	7	6	5	4	3	2	1
7	Performing service right the first time	7	6	5	4	3	2	1
8	Provide service at the time they promised (e.g. departure)	7	6	5	4	3	2	1
9	Insist on error-free records (e.g. recording your flight booking)	7	6	5	4	3	2	1
10	Employees who will tell customers exactly when services will be performed	7	6	5	4	3	2	1
11	Employees who will give prompt service to customers.	7	6	5	4	3	2	1
12	Employees who will always be willing to help customers.	7	6	5	4	3	2	1
13	Employees who will never be too busy to respond to customers requests.	7	6	5	4	3	2	1
14	The behavior of employees that will instill confidence in customers.	7	6	5	4	3	2	1
15	Transactions in which customers feel safe.	7	6	5	4	3	2	1
16	Employees who will be consistently courteous with customers.	7	6	5	4	3	2	1
17	Employees who will have the knowledge to answer customer questions.	7	6	5	4	3	2	1
18	Giving customers individual attention.	7	6	5	4	3	2	1
19	Operating hours that are convenient to all of their customers.	7	6	5	4	3	2	1
20	Employees who give customers personal attention	7	6	5	4	3	2	1
21	Customers' best interests at heart.	7	6	5	4	3	2	1
22	Employees who will understand the specific needs of their customers.	7	6	5	4	3	2	1

"Strongly Disagree" (=1) and "Strongly Agree" (=7)

## APPENDIX B.

### Amharic Version of SERVQUAL

#### ሰለ በረራ አገልግሎት መጠይቅ

ክፍል አንድ

ወደ መንገደኞቻችን" ይህንን መጠይቅ ለመሙላት ፈቃደኛ በመሆናችሁ በቅድሚያ ለማመስገን እንወዳለን። መጠይቁ የሚሠራጩው የእናንተን የውድ ደንበኞቻችንን አስተያየት ለመቀበል ነው።

የመጠይቁ ግኝት የመንገደኞቻችንን ፍላጎት በተሻለ መልክ ለማሟላት በሚያስችል መልኩ የበረራ አገልግሎቱን ለመቅረጽ ያገለግላል። መጠይቁን ለመሙላት የሚያስፈልገው ጥቂት ደቂቃዎችን ሲሆን ትክክል ወይም ስህተት የሚያስብል መልስ አለመኖሩን አስቀድመን ለመግለጽ እንወዳለን።

ስም \_\_\_\_\_ (ለመግለጽ ከ ፈለጉ)

- ጾታ ( ) ወንድ ( ) ሴት
- ዕድሜ ( ) ከ18 - 30 ዓመት ( ) ከ 31 - 40 ዓመት  
 ( ) ከ41 - 50 ዓመት ( ) ከ 51-60 ዓመት  
 ( ) ከ 60 ዓመት በላይ
- የጉዞዎ ዋና አላማ ( ) ለድርጅት ስራ ( ) ለ ግል ስራ  
 ( ) ለ እረፍት / ለ መዝናኛት ( ) ለ ሌሎች

ባለፉት ሶስት ወራት ውስጥ በኢትዮጵያ አየር መንገድ ያደረጉት የበረራ መጠን

- ( ) 1 ጊዜ ( ) ከ 2-3 ጊዜ  
 ( ) ከ 4 - 7 ጊዜ ( ) ከ 7 ጊዜ በላይ

የበረራዎ መስመር (ባለፉት ሶስት ወራት ውስጥ በዋነኝነት ላደረጉት በረራ)

- ( ) በአፍሪካ ( ) በአዲስ አበባ እና በአዲስ መካከል  
 ( ) በአዲስ አበባ እና በአውሮፓ መካከል ( ) በአዲስ አበባ እና በሰሜን አሜሪካ መካከል  
 ( ) በ አገር ውስጥ

ክፍል 2. አንጻራዊ ልኬት

ከዚህ በታች ለተዘረዘሩት አምስት መለኪያዎች ተገቢና ተመጣኝ ብለው የሚገምቱትን ነጥብ በመቶኛ ተምነው ይጻፉ። በጣም ጠቃሚ ነው ለሚሉት መለኪያ ክፍ ያለ ነጥብ ስጥተው የአምስቱ ጠቅላላ ድምር 100% መሆኑን ያረጋግጡ።

ተ.ቁ	ዝርዝር	100%
1	የአንድ አየር መንገድ ህንፃ መገልገያ መሣሪያ የሰው ሀይል እና የ መገናኛ መሣሪያዎች መልክና ገጽታ።	
2	አንድ አየር መንገድ ቃል የገባውን ግልጋሎት በአስተማማኝ ሁኔታ በትክክል የመፈፀም ብቃት።	
3	አንድ አየር መንገድ መንገደኞቹን የመርዳት ፈጣን አገልግሎት የመስጠት ፈቃደኝነት።	
4	የአንድ አየር መንገድ ሠራተኞች የዕውቀት ደረጃ ትምህርት እንዲሁም መንገደኞች በአየር መንገዱ ላይ አምነት እንደጥሉ ለማስደረግ የሚያስችል የሠራተኞች ብቃት።	
5	አንድ አየር መንገድ ለመንገደኞች የሚያደርገው እንክብካቤና በመንገደኞቹ ግላዊ ፍላጎት ላይ የተመሠረተ አገልግሎት።	

ክፍል 3

እንደ አየር መንገድ ደንብኝነትዎ አንድ በጣም ጥሩ ነው ብለው የሚገምቱት አየር መንገድ የሚሠጠውን የላቀ የበረራ አገልግሎት ያሰቡ። በአገልግሎቱ ተደስተው በፈቃደኝነት የሚገለገሉበትን አየር መንገድ በማሰብ ከዚህ በታች የተዘረዘሩትን መስፍርቶች በምን ያህል መጠን በጣም ጥሩ ነው ብለው የሚገምቱት አየር መንገድ አንደሚያሟላ ይግለጹ። የተዘረዘሩት መስፈራቶች በጣም ጥሩ ለሚሉት አየር መንገድ ጠቃሚነታቸው በጣም አነስተኛ ነው ብለው ካመኑ 1 ቁጥር ላይ ያክብቡ መስፈርቱ በጣም ጠቃሚ ነው ብለው ካመኑ ደግሞ 7 ቁጥር ላይ ያክብቡ። ጠቃሚነታቸው መካከለኛ ነው ብለው ካመኑ ደግሞ በ 2 እና በ 6 መካከል ባሉ ቁጥሮች ለእምነትም በሚመጥን መልኩ ተገቢውን ቁጥር ያክብቡ። ልክ ወይም ስህተት የሚባል መልሰ አለመኖሩን እየለጸን የመጠይቁ አላማ አንድ በጣም ጥሩ የሚባል አየር መንገድ ምን ማሟላት እደሚገባው የመንገደኞችን እይታ ለማወቅ ነው።

ተ. ቁ	በጣምጥሩ ነው ብለው የሚገምቱት አየር መንገድ የሚኖሩት ገጽታዎች	መጠን						
1	ዘመናዊ የመገልገያ መሣሪያዎች (ለምሳሌ አውሮፓላኖች)።	7	6	5	4	3	2	1
2	ለ እይታ የሚያስደስቱ የመገልገያ ሥፍራዎች (ለምሳሌ የቲኬት ቢሮ)።	7	6	5	4	3	2	1
3	ጽዳታቸውን የጠበቁ ሠራተኞች።	7	6	5	4	3	2	1
4	ለእይታ የሚያስደስቱ የመገልገያዎች (ለምሳሌ በበረራ ወቅተ የሚታዩ ፈልሞች)።	7	6	5	4	3	2	1
5	ቃል የገቡትን (ለምሳሌ የጠፋ-በዎትን ሻንጣ ማፈላላግ) ቀኑ ሳያልፍ በወቅቱ መፈፀም።	7	6	5	4	3	2	1
6	የመንገደኞችን ችግር (ለምሳሌ ሻንጣ ቢጣፋ-በዎት) ለመፍታት ልባዊ ፍላጎት ማሳየት።	7	6	5	4	3	2	1
7	ግልጋልሎት ሲሰጡ መጀመሪያውኑ በትክክል መፈፀም።	7	6	5	4	3	2	1
8	ለመፈፀም ቃል የገቡትን አገልጋሎት ባሉበት ሰዓት መፈፀም።	7	6	5	4	3	2	1
9	ከ ስህተት ነፃ የሆነ የመዝገብ አይደለም (ለምሳሌ የመንገደኞች ስም የበረራ ምዝገባ)	7	6	5	4	3	2	1
10	የአየር መንገድ ሠራተኞች ግልጋሎት የሚፈፀምበትን ሰዓት ለመንገደኞቻቸው መገንጠል።	7	6	5	4	3	2	1
11	ለመንገደኞች ፈጣን አገልግሎት የሚሠጡ ሠራተኞች።	7	6	5	4	3	2	1
12	መንገደኞችን ሁሉም ለመርዳት ፍቃደኛ የሆኑ ሠራተኞች።	7	6	5	4	3	2	1
13	በሌላ ሥራ ውጥረት ምክንያት የመንገደኞችን ጥያቄ ለመመለስ ጊዜ የማያጥራቸው ሠራተኞች።	7	6	5	4	3	2	1
14	በ መንገደኞች ላይ እምነት ለመጣል የሚያስችል ምግባር ያላቸው ሠራተኞች።	7	6	5	4	3	2	1
15	መንገደኞች የሚተማመኑበት የግልጋሎት ግንኙነት።	7	6	5	4	3	2	1
16	ለመንገደኞች ሁል ጊዜ ትሁት የሆኑ ሠራተኞች።	7	6	5	4	3	2	1
17	የመንገደኞችን ጥያቄዎች ለመመለስ የሚያበቃ ዕውቀት ያላቸው ሠራተኞች።	7	6	5	4	3	2	1
18	ለመንገደኞች ግላዊ እንክብካቤ መስጠት።	7	6	5	4	3	2	1
19	ለመንገደኞች ምቹ የሆነ የሥራ ሰዓት ።	7	6	5	4	3	2	1
20	በአካል ቀርበው የመንገደኞችን ፍላጎት የሚያሟሉ ሠራተኞች።	7	6	5	4	3	2	1
21	የመንገደኞችን ፍላጎት የማሟላት ክልብ የመነጨ ፍላጎት።	7	6	5	4	3	2	1
22	የመንገደኞችን ልዩ ፍላጎት የሚረዱ ሠራተኞች።	7	6	5	4	3	2	1





**ክፍል 4 የኢትዮጵያ አየር መንገድ የሚሠጠው ግልጋሎት በእርስዎ እይታ**

የሚከተሉት መስፈርቶች የኢትዮጵያ አየር መንገድ የሚሠጣቸው ግልጋሎት ላይ ያልዎትን እይታ የሚያንፀባርቁ ናቸው። በ እያንዳንዱ አረፍተ ነገር ላይ የተገለፁትን መስፈርቶች የኢትዮጵያ አየር መንገድ በምን መጠን እንደሚያሟላ ይግለጹ ።

መስፈርቶቹን አየር መንገዱ አያሟላም ብለው ሲያምኑ 1 ቁጥር ላይ ያክብቡ። መስፈርቱን የኢትዮጵያ አየር መንገድ በጣም ያሟላል ብለው ካመኑ ደግሞ 7 ቁጥር ላይ ያክብቡ። ሌሎች ቁጥሮች ላይ እምነትዎን በሚገልጹ መጠን ያክብቡ። ስሕተት ወይም ትክክል የሚባል መልስ አለመኖሩን እየገለጹን ዋናው አላማችን ስለ የኢትዮጵያ አየር መንገድ ግልጋሎቶች ያልዎትን እምነት ለማወቅ መሆኑንም ጭምር እንገልጻለን።

ተ. ቁ	በጣምጥሩ ነው ብለው የሚገምቱት አየር መንገድ የሚኖሩት ገጽታዎች	መጠን						
1	ዘመናዊ የመገልገያ መሣሪያዎች (ለምሳሌ አውሮፓላኖች)።	7	6	5	4	3	2	1
2	ለ እይታ የሚያስደስቱ የመገልገያ ሥፍራዎች (ለምሳሌ የቲኬት ቢሮ)።	7	6	5	4	3	2	1
3	ጽዳታቸውን የጠበቁ ሠራተኞች።	7	6	5	4	3	2	1
4	ለእይታ የሚያስደስቱ የመገልገያዎች (ለምሳሌ በበረራ ወቅት የሚታዩ ፈልሞች)።	7	6	5	4	3	2	1
5	ቃል የገቡትን (ለምሳሌ የጠፋ-በዎትን ሻንጣ ማፈላላግ) ቀኑ ሳያልፍ በወቅቱ መፈፀም።	7	6	5	4	3	2	1
6	የመንገደኞችን ችግር (ለምሳሌ ሻንጣ ቢጣፋ-በዎት) ለመፍታት ልባዊ ፍላጎት ማሳየት።	7	6	5	4	3	2	1
7	ግልጋሎት ሲሰጡ መጀመሪያውኑ በትክክል መፈፀም።	7	6	5	4	3	2	1
8	ለመፈፀም ቃል የገቡትን አገልጋሎት ባሉበት ሰዓት መፈፀም።	7	6	5	4	3	2	1
9	ከ ስህተት ነፃ የሆነ የመዝገብ አያያዝ (ለምሳሌ የመንገደኞች ስም የበረራ ምዝገባ)	7	6	5	4	3	2	1
10	የአየር መንገድ ሠራተኞች ግልጋሎት የሚፈፀምበትን ሰዓት ለመንገደኞቻቸው መንገር።	7	6	5	4	3	2	1
11	ለመንገደኞች ፈጣን አገልግሎት የሚሠጡ ሠራተኞች።	7	6	5	4	3	2	1
12	መንገደኞችን ሁሉም ለመርዳት ፍቃደኛ የሆኑ ሠራተኞች።	7	6	5	4	3	2	1
13	በሌላ ሥራ ውጥረት ምክንያት የመንገደኞችን ጥያቄ ለመመለስ ጊዜ የማያጥራቸው ሠራተኞች።	7	6	5	4	3	2	1
14	በ መንገደኞች ላይ እምነት ለመጣል የሚያስችል ምግባር ያላቸው ሠራተኞች።	7	6	5	4	3	2	1
15	መንገደኞች የሚተማመኑበት የግልጋሎት ግንኙነት።	7	6	5	4	3	2	1
16	ለመንገደኞች ሁል ጊዜ ትሁት የሆኑ ሠራተኞች።	7	6	5	4	3	2	1
17	የመንገደኞችን ጥያቄዎች ለመመለስ የሚያበቃ ዕውቀት ያላቸው ሠራተኞች።	7	6	5	4	3	2	1
18	ለመንገደኞች ግላዊ እንክብካቤ መስጠት።	7	6	5	4	3	2	1
19	ለመንገደኞች ምቹ የሆነ የሥራ ሰዓት ።	7	6	5	4	3	2	1
20	በአካል ቀርበው የመንገደኞችን ፍላጎት የሚያሟሉ ሠራተኞች።	7	6	5	4	3	2	1
21	የመንገደኞችን ፍላጎት የማሟላት ክልብ የመነጨ ፍላጎት።	7	6	5	4	3	2	1
22	የመንገደኞችን ልዩ ፍላጎት የሚረዱ ሠራተኞች።	7	6	5	4	3	2	1

## APPENDIX C.

Ethiopian Airlines Customer Satisfaction Survey using On-Board Questionnaire.																														
<p>Dear valued customer,</p> <p>In our continuous effort to ensure the service we offer meets your requirement, we kindly request you to take a few minutes of your time and give us your opinion by completing this questionnaire.</p> <p>Dear Customer,</p> <p>Welcome aboard Ethiopia Airlines.</p> <p>Ethiopian airlines is committed to provide its customers with high standard products &amp; services.</p> <p>Realizing that there is always room for improvement and placing high value on your comments &amp; feedbacks, we are kindly asking you to take a moment to fill out this form, seal and return it to one of the cabin crew.</p> <p>If you have additional comments, you may visit our website at <a href="http://WWW.ETHIOPIANAIRLINES.COM">WWW.ETHIOPIANAIRLINES.COM</a></p> <p>Thank you</p> <div style="text-align: center;">  <p><b>Ethiopian</b> የኢትዮጵያ ማየት THE NEW SPIRIT OF AFRICA</p> <p>A STAR ALLIANCE MEMBER </p> </div>	<p>Dear valued customer,</p> <p>In our continuous effort to ensure the service we offer meets your requirement, we kindly request you to take a few minutes of your time and give us your opinion by completing this questionnaire.</p> <p><b>Flight Information</b></p> <p>Flight No: ..... Date: .....</p> <p>Seat Number: .....</p> <p>Origin (City): .....</p> <p><b>Personal Detail (Optional):</b></p> <p>Name: (First) .....</p> <p>(Last): .....</p> <p>Nationality: .....</p> <p>Sex: <input type="checkbox"/> Male <input type="checkbox"/> Female</p> <p>E-mail: .....</p> <p>Sheba Miles membership No.: .....</p> <p>How did you book your flight?</p> <p><input type="checkbox"/> Online</p> <p><input type="checkbox"/> Through Travel Agency</p> <p><input type="checkbox"/> Through Ethiopian Ticketing Office</p> <p>If you buy your ticket from Ethiopian Ticketing Office, please indicate the City Location: .....</p> <p>What was your reason to choose Ethiopian? (a maximum of three reasons)</p> <p><input type="checkbox"/> Suitable flight schedule <input type="checkbox"/> The only flight choice</p> <p><input type="checkbox"/> Good reputation <input type="checkbox"/> Use of frequent flyer program</p> <p><input type="checkbox"/> Low Price <input type="checkbox"/> Corporate Travel Program</p> <p><input type="checkbox"/> Safety <input type="checkbox"/> Other reason .....</p> <p><input type="checkbox"/> Good Service .....</p>	<p>Which class of service are you travelling today? Cloud Nine Economy</p> <p>What is the purpose of your trip? Business Leisure Visiting friends/ relatives Others (specify) .....</p> <p style="text-align: center;"><b>Flight Schedule</b></p> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 70%;"></th> <th style="width: 5%;"></th> <th style="width: 5%;">strongly agree</th> <th style="width: 5%;">Agree</th> <th style="width: 5%;">Neutral</th> <th style="width: 5%;">Disagree</th> <th style="width: 5%;">strongly Disagree</th> </tr> </thead> <tbody> <tr> <td>1. The departure/arrival of this flight is convenient</td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> </tr> <tr> <td>2. The frequency (number of flights per week) to this destination meets my travel requirements</td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> </tr> <tr> <td>3. Ethiopian Airlines route network meets my travel requirements</td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> </tr> </tbody> </table> <p><b>Punctuality of Your Flight</b></p> <p>Was the flight on-time (within 15 minutes of displayed departure time)? <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>If the flight departed late, How long was the delay (in minutes) .....</p> <p>Was sufficient delay information communicated at Airport (boarding gate)? <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>On-board? <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>Sheba Miles (only for Sheba Miles members)</p> <p>Are you satisfied with our frequent flyer program? <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>If you are not satisfied what improvements would you suggest? ..... .....</p>			strongly agree	Agree	Neutral	Disagree	strongly Disagree	1. The departure/arrival of this flight is convenient	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2. The frequency (number of flights per week) to this destination meets my travel requirements	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3. Ethiopian Airlines route network meets my travel requirements	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		strongly agree	Agree	Neutral	Disagree	strongly Disagree																								
1. The departure/arrival of this flight is convenient	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>																								
2. The frequency (number of flights per week) to this destination meets my travel requirements	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>																								
3. Ethiopian Airlines route network meets my travel requirements	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>																								

**GROUND SERVICES**

**Telephone handling**  
If you called Ethiopian Office for flight booking, what is your rating on the following services?

\* The telephone was answered promptly  Strongly Agree  Agree  Neutral  Disagree  Strongly Disagree

\* The staff answering the telephone was courteous and helpful  Strongly Agree  Agree  Neutral  Disagree  Strongly Disagree

\* My inquiry was handled efficiently and quickly  Strongly Agree  Agree  Neutral  Disagree  Strongly Disagree

**Ticketing Office & Reservation**  
If you have visited Ethiopian ticketing office, what is your rating on the following

\* Office was clean and tidy  Strongly Agree  Agree  Neutral  Disagree  Strongly Disagree

\* Queue management was efficient-first come first served  Strongly Agree  Agree  Neutral  Disagree  Strongly Disagree

\* Waiting time was reasonable  Strongly Agree  Agree  Neutral  Disagree  Strongly Disagree

\* Courtesy and helpfulness of staff  Excellent  Highly Satisfactory  Satisfactory  Fairly Satisfactory  Unsatisfactory

\* Competency of ticketing office staff  Excellent  Highly Satisfactory  Satisfactory  Fairly Satisfactory  Unsatisfactory

\* Attire/grooming of ticketing office staff  Excellent  Highly Satisfactory  Satisfactory  Fairly Satisfactory  Unsatisfactory

\* Information given on flight departure time, meal preference, baggage allowance, safety & security etc. was complete and adequate  Excellent  Highly Satisfactory  Satisfactory  Fairly Satisfactory  Unsatisfactory

**AIRPORT SERVICES**

At which airport did you check-in for this flight (where did you board this flight?)  
Name of airport/city .....

Did you have to wait in line at the check-in  Yes  No

Approximate Minutes .....

If yes, was the waiting time acceptable?  Yes  No

What is your rating on the following airport services?

\* The check-in process was quick and efficient  Strongly Agree  Agree  Neutral  Disagree  Strongly Disagree

\* The check-in area was tidy and had a pleasant environment  Excellent  Highly Satisfactory  Satisfactory  Fairly Satisfactory  Unsatisfactory

\* Courtesy and helpfulness of airport staff  Excellent  Highly Satisfactory  Satisfactory  Fairly Satisfactory  Unsatisfactory

\* Competence of airport staff  Excellent  Highly Satisfactory  Satisfactory  Fairly Satisfactory  Unsatisfactory

\* Attire/Grooming of airport staff  Excellent  Highly Satisfactory  Satisfactory  Fairly Satisfactory  Unsatisfactory

\* Information given at check-in/boarding  Excellent  Highly Satisfactory  Satisfactory  Fairly Satisfactory  Unsatisfactory

\* Boarding process efficiency  Excellent  Highly Satisfactory  Satisfactory  Fairly Satisfactory  Unsatisfactory

\* Clarity of boarding announcement  Excellent  Highly Satisfactory  Satisfactory  Fairly Satisfactory  Unsatisfactory

\* Airport facilities (Wash rooms/toilets, information, signage, display)  Excellent  Highly Satisfactory  Satisfactory  Fairly Satisfactory  Unsatisfactory

\* Service by immigration, customs, securities, etc.  Excellent  Highly Satisfactory  Satisfactory  Fairly Satisfactory  Unsatisfactory

\* Service at transit point  Excellent  Highly Satisfactory  Satisfactory  Fairly Satisfactory  Unsatisfactory

\* Baggage handling service at departure/arrival  Excellent  Highly Satisfactory  Satisfactory  Fairly Satisfactory  Unsatisfactory

\* Delay care management (if any)  Excellent  Highly Satisfactory  Satisfactory  Fairly Satisfactory  Unsatisfactory

\* Overall rating on airport services and customer handling  Excellent  Highly Satisfactory  Satisfactory  Fairly Satisfactory  Unsatisfactory

**Lounge**

Did you have lounge in the course of your trip today? Yes  No

What is your rating on the following services at the lounge?

\* The lounge is easy to locate  Strongly Agree  Agree  Neutral  Disagree  Strongly Disagree

\* Sufficient seats were available  Strongly Agree  Agree  Neutral  Disagree  Strongly Disagree

\* The drinks/snacks offered were to my satisfaction  Strongly Agree  Agree  Neutral  Disagree  Strongly Disagree

\* The staff at the reception desk including other service staff were friendly and helpful.  Strongly Agree  Agree  Neutral  Disagree  Strongly Disagree

\* The room temperature, ventilation & lighting were conducive.  Strongly Agree  Agree  Neutral  Disagree  Strongly Disagree

\* E-mail facilities were up and running  Strongly Agree  Agree  Neutral  Disagree  Strongly Disagree

\* Adequate reading materials were available  Strongly Agree  Agree  Neutral  Disagree  Strongly Disagree

**ON BOARD PRODUCTS & SERVICES**  
Flight Attendants (Cabin Crew)

\* Friendly and helpful  Strongly Agree  Agree  Neutral  Disagree  Strongly Disagree

\* Attentive & within reach  Strongly Agree  Agree  Neutral  Disagree  Strongly Disagree

\* Efficient & competent  Strongly Agree  Agree  Neutral  Disagree  Strongly Disagree

\* Satisfied with the performance of the flight attendants  Excellent  Highly Satisfactory  Satisfactory  Fairly Satisfactory  Unsatisfactory

\* Attitude and professionalism  Excellent  Highly Satisfactory  Satisfactory  Fairly Satisfactory  Unsatisfactory

\* Personality and Grooming  Excellent  Highly Satisfactory  Satisfactory  Fairly Satisfactory  Unsatisfactory

\* Attentiveness/efficiency in answering calls  Excellent  Highly Satisfactory  Satisfactory  Fairly Satisfactory  Unsatisfactory

\* Language Proficiency  Excellent  Highly Satisfactory  Satisfactory  Fairly Satisfactory  Unsatisfactory

Cabin Environment					
	Excellent	Highly Satisfactory	Satisfactory	Fairly Satisfactory	Unsatisfactory
* Cleanliness & orderliness of cabin	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
* seat Comfort/leg space	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
* Hand luggage storage space	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
* Working conditions of aircraft facilities utilities and equipment (light, toilet, toilet amenities, air conditioning, seat adjustment facilities', etc.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Meal, Drink, Duty free services					
	Excellent	Highly Satisfactory	Satisfactory	Fairly Satisfactory	Unsatisfactory
* Choice of meal	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
* Quality of meal	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
* Quantity of meal	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
* Choice of beverages	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
* Availability of special meal requested (If you have ordered)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
* Availability & variety of duty free items	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Entertainment					
	Excellent	Highly Satisfactory	Satisfactory	Fairly Satisfactory	Unsatisfactory
* Availability & Quality of in-flight magazines	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
* Availability & quality of reading materials	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
* Timing, selection, variety of movie/ video show	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

* Condition & functionality of entertainment systems (video, audio, head set, entertainment controlling unit, etc.)	Excellent	Highly Satisfactory	Satisfactory	Fairly Satisfactory	Unsatisfactory
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
* Information given by cabin crew	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
* Information given by cockpit crew	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
* Clarity & adequacy of in-flight announcement	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Your experience with Ethiopian Airlines					
* What is your overall assessment of Ethiopian Airlines service?	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
* What is the probability that you will fly Ethiopian again?	Certain	Probably	Less probable	Probably not	Definitely not
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
* Will you recommend Ethiopian airlines to friends, colleagues, relatives and acquaintances?					
What aspect of our service do you like most?					
.....					
What was it that you were not happy about and that you want us to improve? .....					
Any other comment on your experience on this trip? .....					
.....					
Thank you, for taking your time.					

**APPENDIX D.**

**Management Team Member Service Quality Audit Form**

**Service Audit Of Traveling Management Team**

Name: \_\_\_\_\_  
 ID No.: \_\_\_\_\_  
 Pass No.: \_\_\_\_\_

Ethiopian Airlines is engaged in a continuous service/safety improvement plan. Feedback is a crucial element of this plan. As a result, management team members on business trips are identified as one source of feedback among others. Thus, every management staff is required to carry this form before commencing trip, observe and rate the services as the business trip progresses. The rating however is The ratings of 1 to 5 represent poor, fair, satisfactory, Good, Very Good in the order of ascension. The Completed form may be submitted to Customer Service Quality Management in electronic copy.

Reservation/Ticket Office Observation				
Complete this section if you have visited an ET office on this trip.				
Indicate City, date and time of visit				
Item	Description	RATING	REMARK	
1	If you have called Ethiopian Office for flight booking what is your rating on the following?			
1.1	The telephone was answered in 3 rings	1	2	3
1.2	The staff answering the call was courteous and helpful	1	2	3
1.3	My inquiry was handled efficiently and quickly	1	2	3
2	If you have visited Ethiopian Office for a flight booking what is your rating on the following?			
2.1	There is a clean, clear, visible and current ET Signage	1	2	3
2.2	the office hours are clearly posted on the entrance	1	2	3
2.3	The office is clean, tidy and comfortable	1	2	3
2.4	The queue management was efficient and waiting time is reasonable	1	2	3
2.5	Courtesy and helpfulness of staff [smile, eye contact, greetings, addressing passengers by name]	1	2	3
2.6	Attire and Grooming of Staff [Agents have name labels, agents are in proper uniforms and attire]	1	2	3
2.7	Information given on flight departure, meal, terminal number, free baggage allowance, security/immigration requirement, Dangerous Goods & security items, check-in time, departure time	1	2	3
Airport Service observations				
Indicate Flight Number/Date/Departure Airport?				
Item	Description	RATING	REMARK	
1	The check-in area was clean has pleasant environment.	1	2	3
2	The check-in process was quick and efficient [Queue Guiding Belts, Signage, Separate Queue for Cloud Nine, ShebaMiles, Economy]	1	2	3
3	Courtesy of Staff [Smile, eye contact, greetings, addressing passengers by name]	1	2	3
4	Competency, speed and efficiency of airport staff [Information is provided on immigration clearance delay/seat number/ lounge/ baggage claim tag/ confirmation on boarding time & gate number/ Dangerous Goods/Handbag limit, ShebaMiles Membership Soliciting]	1	2	3
5	Competency of airport staff in administering Security questions	1	2	3
6	The lounge is easy to locate [Lounge Card has Direction Print on the Back page, Lounge has ET Signage] (if traveled in cloud nine only)	1	2	3
7	Lounge conduciveness [Sufficient seating, well ventilated, availability of fresh food & drink/reading materials/TV show/internet access/clean lavatory/smoking room]	1	2	3
8	Boarding process efficiency [orderliness of boarding, boarding announcements, boarding as per seat number, separate Boarding for Cloud Nine (first, last, separate bus)]	1	2	3
9	Arrival Service [Agent has Met Flight, Cloud Nine disembark first, proper signage to guide passengers to service area, priority bags arrived first and last bag arrived within 00:30 hours of flight arrival]	1	2	3
Onboard Service observations				
1 Indicate Flight Number/Date/Departure Airport?				
2 Indicate Class of service flown				
Item	Description	RATING	REMARK	
1	Cleanliness and orderliness of cabin [Seat Condition - seat Controls/Reading Light/Recline/Foot or Leg Rest recline/Tables/Cleanliness, Cabin Condition - Temperature Control/Carpet and Walls/loose objects/ Cabin Dividers/Galley Area/Lavatory/Entertainment Systems]	1	2	3
2	Onboard amenities [Clean and Comfortable Blankets/Pillows/Hot and Cold towels/ availability of Amenity Kits/ Head Sets]	1	2	3
3	Attire/grooming/appearance of Cabin Crew [ Crew have name labels, Grooming, and presentable]	1	2	3
4	Courtesy and helpfulness of Cabin Crew - [Smile, eye contact, greetings, addressing passengers by name, Assisting Passengers- Seating, Handbag or passenger with especial needs, Cabin Control, Response to call button, executing orders]	1	2	3
5	Competency and efficiency of Cabin Crew	1	2	3
5.1	Cabin safety & procedures [announcement, demonstration, Check and Enforcement, cabin control]	1	2	3
5.2	Clarity of Announcements, announcement made on ShebaMiles program/ customer comment card	1	2	3
5.3	Responding to Meal/Drink/Sleep requirements and Timing, conducting bar/aperitif service, Removal of empty tray/glasses, Visible presence through out the flight,	1	2	3
5.4	Cleanliness of lavatory	1	2	3
6	Meals and Drink [Current and Clear Menu, Presentation, Choice, temperature, moisture, size/portion, frequency]	1	2	3
7	Duty free service [ Condition of Sheba duty free guide , choice and availability of duty free items, timing of duty free sales service , price of duty free articles, presentation and appearance of sales cart]	1	2	3
8	Reading material (Cloud Nine Only) [Timing of service, type /choice, quantity of magazine/ newspaper, availability of reading materials in different language ]	1	2	3
9	In -flight Entertainment condition, functionality, program [ Selection and choice of movie / short feature/sport program, language choice offered ]	1	2	3

## APPENDIX E.

### LEAD CABIN CREW FLIGHT REPORT FORM

#### LEAD CABIN CREW FLIGHT REPORT FORM



Flight No. \_\_\_\_\_ Code Share \_\_\_\_\_ Date \_\_\_\_\_ A/C registration \_\_\_\_\_

From (Origin) \_\_\_\_\_ To (Final Destination) \_\_\_\_\_

First Station \_\_\_\_\_ C-9 paxs. No. \_\_\_\_\_ EY/C paxs No. \_\_\_\_\_ C-9 meal Svc \_\_\_\_\_ Y/C meal Svc \_\_\_\_\_

	Time:	Name:	ID#	Name:	ID#
Departure from briefing room	_____	Capt: _____	_____	I/Sup. _____	_____
Crew boarding	_____	Lead _____	_____	C2 _____	_____
Boarding Clearance	_____	C _____	_____	B _____	_____
Boarding started	_____	C3 _____	_____	E2 _____	_____
Boarding Completed	_____	E1 _____	_____	E3 _____	_____
Door Closure	_____	D1 _____	_____	D2 _____	_____
Departure	_____	D3 _____	_____	D4 _____	_____

Second Station \_\_\_\_\_ C-9 paxs. No. \_\_\_\_\_ Y/C paxs No. \_\_\_\_\_ C-9 meal Svc \_\_\_\_\_ Y/C meal Svc \_\_\_\_\_ Departure \_\_\_\_\_

**Remarks/information/comments/suggestions/complaints regarding:-** Please use supplementary pages whenever required

**1- C.C. Admin Issue:-** \_\_\_\_\_

**2- Maintenance Issue:-** \_\_\_\_\_

Indicate Log book no. \_\_\_\_\_

**3- Catering Issue:-** \_\_\_\_\_

**4- Station [Marketing] Issue:-** \_\_\_\_\_

**5- Customer Relation / Satisfaction Issue:-** \_\_\_\_\_

**6- Other Issues:-** \_\_\_\_\_

**7- Sheba Miles Collected by position:** B \_\_\_\_\_ C \_\_\_\_\_ C2 \_\_\_\_\_ C3 \_\_\_\_\_ D1 \_\_\_\_\_ D2 \_\_\_\_\_ D3 \_\_\_\_\_ D4 \_\_\_\_\_ E1 \_\_\_\_\_ E2 \_\_\_\_\_ E3 \_\_\_\_\_

**Lead C.C.** \_\_\_\_\_

**Check list for service handover**

Boarding music/Safety demo film \_\_\_\_\_  
 No. of feature films returned \_\_\_\_\_  
 Bible/Quran \_\_\_\_\_  
 Cabin Crew Operation Manual \_\_\_\_\_  
 Extension/Infant seatbelt returned \_\_\_\_\_  
 No. of Baby cots \_\_\_\_\_  
 On-board wheel chair \_\_\_\_\_  
 Missing service items \_\_\_\_\_  
 No. of Sheba Miles forms collected \_\_\_\_\_  
 No. of comment cards collected \_\_\_\_\_

**Others**

VIP seat No. \_\_\_\_\_  
 Mental patient seat no. \_\_\_\_\_  
 UM seat No. \_\_\_\_\_  
 Paxs. requiring special assistance \_\_\_\_\_  
 Wheel chair Paxs \_\_\_\_\_  
 Prisoner seat no. \_\_\_\_\_  
 Disappointed Paxs seat no. \_\_\_\_\_  
 Doctor's Kit [Used or Not-Used] \_\_\_\_\_

**Duty free sold by:-**

	D1	D2
USD	_____	_____
EUR	_____	_____
GBP	_____	_____
AED	_____	_____
SAR	_____	_____

Gold and silver Sheba mile Pax. that have been personally addressed by seat no. \_\_\_\_\_



**APPENDIX G.**

**UNIFORM REPLACEMENT FORM**

*Date* \_\_\_\_\_

**To:** *Manager Cabin Crew Administration*

**Subject:** *Request for Replacement of Uniform Items*

*I would like to request for replacement of the following uniform items.*

- Wing*
- Name plate*
- National Dress*
- Green Uniform*
- Trolley Bag*
- Suitcase*

*Other* \_\_\_\_\_

*Explanation* \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**Signature:**  
\_\_\_\_\_

**Name:**  
\_\_\_\_\_

**Reg. No.** \_\_\_\_\_



**APPENDIX H.**

**UNIFORM COLLECTION FOLLOW-UP FORM**

Name: \_\_\_\_\_

Reg. No. \_\_\_\_\_

Subject: **Uniform Collection Advise**

You have collected a letter to \_\_\_\_\_ for the fitting of the subject uniform item. But it is now reported to our office that you haven't yet contacted \_\_\_\_\_.

As this is unacceptable you are required to complete the fitting immediately and report to this office on why you delayed it for so long.

\_\_\_\_\_  
Manager Cabin Crew Administration

c.c. P/F

## DECLARATION

I, the undersigned, declare that this thesis is my original work, prepared under the guidance of my advisor, Matiwos Ensermu (PhD). All sources of materials used for the thesis have been duly acknowledged. I further confirm that the thesis has not been submitted either in part or in full to any other higher learning institution for the purpose of earning any degree.

---

Name

---

Signature & Date

## **ENDORSEMENT**

This thesis has been submitted to St. Mary's University, School of Graduate Studies for examination with my approval as a university advisor.

---

Advisor

---

Signature & Date