Measuring Airline Service Quality Using AIRQUAL Model: A Study Applied to Egyptair
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Abstract
This paper aims to address how passengers' satisfaction can be measured in relative to quality services provided by airlines using AIRQUAL methodology. AIRQUAL five dimensions (airline tangibles, Terminal tangibles, personnel, empathy, and image) among the airlines passengers & find out the areas where the company needs to improve to service quality of the airlines. To achieve this, a well-structured questionnaire was designed in line with AIRQUAL dimension scale to capture the airline opinion of the passengers about the service rendered to them, their opinion on whether the quality of service has any effect on the image of the airline and finally if the nature of the airline image has any effect on reiterate care.

This research has adopted the items from the previous literature to assess effect of airline service quality on passengers' satisfaction in Egypt Air. Survey method was employed using primary data obtained through the use of questionnaires. 300 questionnaires were administered by the researcher through convenience sampling to air passengers using Egypt Air. The questionnaires were analyzed using descriptive statistics, Reliability analysis with the support of SPSS18.0.

The findings of this research will help Egypt Air to redefine their marketing strategy to one that is passengers-focused and emphasizes on airline service quality. The research thus recommended that airline managers should improve on the quality of service rendered to passengers since it is one of the determinants of the airline image and the airline image also determines the passengers' choice of repeat patronage.

KeyWords: service quality, Airline Service Quality, AIRQUAL model, passengers' satisfaction, Egypt Air.

Introduction
Globalization and stiff competition have changed the landscape of doing business. Decrease in customer satisfaction and increase in customer expectations have challenged businesses to come up with unparalleled methods of enhancing their quality of service. The same is true for airlines industry too. As a result, many airlines have changed their marketing strategies, especially with regard to service quality, in order to compete efficiently in the global market (Mishal, 2015).

The marketing literature has introduced models of service quality, e.g.: SERVQUAL and AIRQUAL to help companies measure and enhance customer experiences. SERVQUAL has been extensively researched and utilized in many industries. Similarly, AIRQUAL, a model for the airline industry, this research, therefore, adapted 44-items of AIRQUAL and assessed and validated this revised scale. The validated scale was then utilized in the airline industry of Egypt .

The airline service quality is earning attention both from researchers. The airline industry not only plays a critical role in the service industry but also contributes to other industries by transporting passengers to their required locations all over the world (Rhoades and Waguespack, 2008). The airline industry has seen an average growth of about 12 percent per annum since the 1960s (Chau and Kao, 2009). Despite the recent slowdown due to a maturing industry, deregulation and general crises, the world passenger traffic is expected to grow. In 2017, global air traffic passenger demand increased by 7.5 percent on the year before. By 2018, traffic is rpojected to grow with another six percent (Statista, 2018). Among many factors that have affected the passenger growth, airline service quality plays an important role in the success of the airline industry. Airline Service quality promotes passenger satisfaction, which translates directly

into profitability, market share, and return on investment Airline companies is constantly looking for ways to increase their competitiveness in airline service quality due to the agile business environment resulting from increased competition (Ku and Fan, 2009). Therefore, an astute understanding of service quality in the airline industry can be precious to service providers.

A number of approaches have been utilized to measure the service quality of the airline industry. For instance, Chau and Kao (2009) applied the SERVQUAL model (Parasuraman et al., 1998) and the disconfirmation model to distinguish critical performance measures in the airline industry. Pakdil and Aydin (2007) applied weighted SERVQUAL scores to study passengers' expectations and perceptions of airlines' service quality. Ekiz et al. (2006) sophisticated an AIRQUAL scale to measure the quality perceptions of airline passengers. Shahin and Zairi (2009) utilized the Kano model for classifying and prioritising requirements of airline passengers with three case studies on global airlines. A factor analysis was utilized by Aksoy et al. (2003) to reduce thirty nine service quality attributes of several airlines into a few important factors. Liou and Tzeng (2007) sophisticated a non-additive model using factor analysis to assess the airline service quality of global airlines. Shannon et al. (2009) used a quasi-experiment research setting to investigate the components of customer satisfaction. Yet other approaches include the longitudinal analysis (Lemon and Wangenheim, 2009), multimarket contact approach (Prince and Simon, 2009).

Statement of the problem
This research has set out to address the following problem: How can passengers' satisfaction are measured in relative to airline service quality provided by Egypt Air using AIRQUAL methodology?

The research questions
The research will be concentrated on finding answers to the following questions:
1- What are dimensions that can be utilized to measure airline service quality?
2- What is the relationship between Airline service quality and passenger satisfaction?
3- What influence does the airline service quality have on passenger Satisfaction?

Objective of the research
The main aim of the study is to analyze the impact of airline service quality on passengers' satisfaction for Egypt air

Significance of the research
This research has tried to assess how the airline service quality provided by Egypt air has affected the level of passenger satisfaction.

Literature Review
The Concept of Service Quality
According to Kotler (2003) explains that the quality should start from the expectations of passengers and ends at the passenger's perception. This means that good quality perception is not based services provider, but based on the point of view or perception of the passenger. Passenger perception of service quality is a comprehensive assessment of a service benefits.

Benefits obtained from creating and preserve quality of service are greater than the cost to reach or as a result of poor quality, Superior airline service quality as a tool to achieve competitive

advantage of airlines. Superior airline service quality and similarity can lead to passenger satisfaction which in turn will provide various benefits, such as: (1) the relationship between the airline and its passengers will become more harmonious, (2) provide a good basis for re-purchase activities, (3) encourage passenger loyalty, (4) creating a recommendation by word of mouth that benefit the airline, (5) to be a good corporate reputation in the passenger's mind, and (6) airline's profit will be increased. The implication of these benefits is that each airline must realize the strategic importance of quality. Continuous quality improvement is not a cost but an investment to generate greater profits.

Service quality is a concept that has aroused major interest and discussion in the research literature because of the difficulties in both defining it and measuring it with no overall unanimity emerging on either. There are a number of different "definitions" as to what is meant by service quality. One that is commonly utilized defines service quality as the extent to which a service meets customer's perceptions (Okeudo and Chikwendu, 2013).

Service quality is defined as a function of the difference between the service expected and the customer's perceptions of the actual service delivered (Parasuraman et al., 1988) and it has received intense research attention in services marketing (Caro and Garcia, 2007; Wu and KO, 2013). A great deal of attention has been given to its measurement and conceptualization (Ali et al., 2013; Amin *et al.*, 2013). They suggested that customers perceive the relative quality of services by comparing the actual performance of the company with their own expectations, shaped by experience, word of mouth communications (Tsoukatos and Mastrojianni, 2010); this comparison is referred to as perceived service quality (Parasuraman et al., 1988). In this context, Zeithaml et al. (2000) posited that better understanding of customers' expectations is significant in delivering quality services.

Measuring Service Quality (SERVQUAL)
The SERVQUAL model is a summarized multiple-item scale with reliability and validity that can be utilized to recognize and explain customers' perceptions as well as expectations of services which then improve the service quality and increase customer satisfaction (Parasuraman et al., 1988). Within the airline context, SERVQUAL has been utilized by various researchers to measure the effects of service quality (Sultan and Simpson, 2000; Shanka, 2012). Also, as suggested by (Hoang and Mai, 2013), SERVQUAL can be utilized flexibly in different types of industries. SERVQUAL used for service quality dimensions which is then adapted or modified to fit the typical features making up that particular company. In this research, apart from five SERVQUAL dimensions being used (tangibles, reliability, responsiveness, assurance and empathy), three more aspects are added to assist and meet with the purpose of this research as well as fitting with the distinctive characteristics of an airline industry. The ones being examined are the following dimensions: on-ground services, tangibles, reliability, responsiveness, assurance, empathy, safety records and image.

Parasuraman et al. (1988) has developed the new refined instrument of SERVQUAL with five dimensions:

Tangibility: physical facilities, equipment, and appearance of personnel
**Reliability**: ability to perform the promised service dependably and accurately
Responsiveness: willingness to help customers and provide prompt service
Assurance: knowledge and courtesy of staff and their ability to inspire trust.
Empathy: caring individualized attention the company provides to its customers.

These five SERVQUAL dimensions are utilized to measure the gap between customers' perceptions for excellence and their perception of actual service delivered. The SERVQUAL model, when applied helps service providers to understand both customer expectations, and areas in need of quality Improvements.

Figure1. Model of service quality gaps
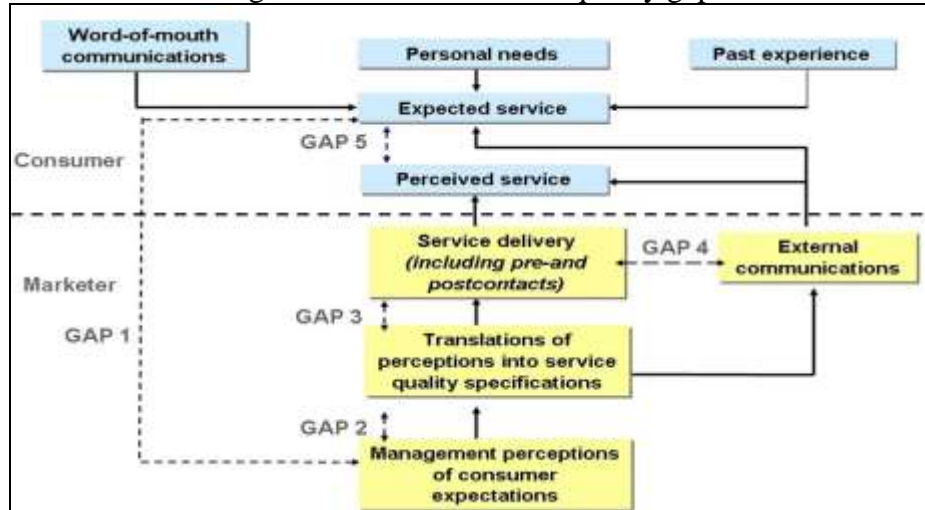
Source: Parasuraman et al. (1988).

Airline service quality

Airline Service Quality is a key discriminator between the competing airlines. It is especially very critical in a highly competitive environment such as that of the Egypt Air operating environment. Therefore, Service Quality improvement is key issue that determines the very survival of the airline.

Many studies have specified a large number of airline service quality attributes for the airline industry. Some studies propose that the determinants of passenger satisfaction in airline contain staff service, on-board service, safety and reliability, flight availability (Liou and Tzeng, 2007; Park, 2007), schedule, on-time performance, frequent flyer program (Liou and Tzeng, 2007), airport service, ticket price, and airline image (Park, 2007). According to Chen and Chang (2005), the airline service attributes of ground service (e.g., convenient flight schedules, service efficiency of reservation staff, convenient ticketing and check-in procedures) and the service attributes of in-flight service (e.g., seat comfort, good cabin equipment conditions, cabin crew's ability to handle passenger complaints) influence the service quality of the airline industry. Many studies have utilized and extended the dimensions of SERVQUAL to measure the service quality of the airline industry. For example, Nadiri et al. (2005) developed the AIRQUAL model based on the dimensions of the SERVQUAL and suggest that the service quality of the airline industry depends on airline tangibles, terminal tangibles, personnel, empathy, image, customer satisfaction. Park et al. (2004) utilized the dimensions of SERVQUAL together with service expectation, service perception, service value, passenger satisfaction, and airline image to understand the effects of these factors on passengers' intentions. Yet Pakdil and Aydin (2007) utilized weighted SERVQUAL scores, including staff, tangibles, responsiveness, reliability and assurance, flight patterns, availability, image, and empathy to investigate passengers' expectations of airline service quality.

Table 1: Factors influencing airline service quality

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

Source: Adopted by the Author based on Khatib, F. (1998) An Investigation of Airline Service Quality, Passenger Satisfaction and Loyalty: The Case of Royal Jordanian Airline.

Measuring airline service quality (AIRQUAL Model)
Given the wide criticisms of SERVQUAL as a process-based assessment of service quality, a new measurement scale was sophisticated by Bari et al. (2001). AIRQUAL This scale was utilized to measure airline service quality. The main reason behind the development of AIRQUAL was that the existing scales of service quality were developed and evaluated in different.
The AIRQUAL scale sophisticated by Bari et al. (2001) has five distinct dimensions, namely, airline tangibles, terminal tangibles, personnel, empathy, and image, and they investigated whether AIRQUAL could successfully measure the airline service quality of perceptions of airline passengers. In the AIRQUAL instrument these five dimensions enquire various aspects of

the airline service. For example, the first dimension of AIRQUAL, airline tangibles contain questions related to the interior of aircraft used by airlines, the quality of catering in the plane, the cleanliness of the plane seats, the comfort of the plane seats, and the quality of air-conditioning in the planes (Bari et al., 2001; Ekiz et al., 2006; Nadiri et al., 2008).

The second dimension of AIRQUAL, Terminal tangibles, another important dimension of AIRQUAL, contains questions more related to airports. In this dimension respondents are asked about availability of shop in the airport, parking space availability in airport, size of airport, air-conditioning of the airport, effectiveness of sign age in the airport, availability of trolleys in airport, efficiency of security control system in airport, staff's uniforms, and comfort of waiting hall of the airport (Bari et al., 2001; Ekiz et al., 2006; Nadiri et al., 2008).

The third dimension of AIRQUAL, personnel, was designed to assess staff working in airlines. Questions contained in this dimension are about staff attitude, knowledge, experience, and level of education, personal care of staff to everyone, and airlines error-free reservations and ticketing transactions.

The fourth dimension of AIRQUAL is "empathy", which shows questions such; punctuality of the departures and arrivals, transportation between city and airport, care paid to passengers' luggage, locations of the airline company offices, and number of flights to satisfy passengers' demands (Bari et al, 2001; Ekiz et al., 2006; Nadiri et al., 2005).

The last dimension of AIRQUAL pertinent to airline service quality is image. In this dimension questions on availability of low price ticket offerings, consistency of ticket prices with given service, and image of the airline company is included. Ekiz et al. (2006) and Nadiri et al. (2008) applied the AIRQUAL to investigate whether it could capture passenger satisfaction along with some other constructs. Both these studies (Ekiz et al., 2006; Nadiri et al., 2008) found that better airline service quality, as measured by AIRQUAL, has statistically significant effect on passenger satisfaction. Nadiri et al. (2008) also found a significant positive effect of airline service quality as measured by the AIRQUAL scale on passenger satisfaction behavioral aspects.

Passengers' satisfaction
Customer is the key to success for each company and each economical commercial activity. A successful company reputation is based on that company long term relationships with customers. Customer satisfaction as an individual perspective which is resulted from continual comparisons between company actual performance and customers expected performance (Kisang and Han, 2008).

Providing high quality and stabilized services is one solution for airlines service to attract passengers' satisfaction. Studies indicated that airline service quality affect passengers' satisfaction and as a result on their purchase. Airline Service quality and passengers satisfaction are interrelated (Meysam and Ghasemali, 2016).

Passenger satisfaction in airline service operations thus has become critically important for sustainable operation. To enhance passenger satisfaction, airline service quality has received more attention (Dennett et al., 2000). To this respect, service quality is considered as a critical dimension of competitiveness by enhancing passenger satisfaction. Thus, providing distinguished service quality and high passenger satisfaction is the important issue and challenge facing the airlines service industry in particular. Passenger satisfaction is the extent to which a service meets or overrides passenger expectations. Satisfaction is an overall passenger attitude towards a service provider to the difference between what passengers expect and what they receive. When passengers are satisfied, they are more likely to return, For example some services in the nature

is very complex and comprise of numerous stages for achieving passenger satisfaction (Han and Ryu, 2009). Archana, and Subha (2012) have introduced airline service quality aspects containing service while flight, digital services and office operation airline which can be significantly prophesy passengers' satisfaction and satisfaction can affect faithfulness and the airline office image. Similarly, Abdolah et al (2007) indicated that there is a positive relationship between satisfaction and utilize of airlines in future as well as the possibility of proposing it to others. Therefore, passengers' satisfaction in airplane industry plays an important role in measuring airline service quality and preserving their relationship with service providers (Archana, and Subha, 2012; Lau et al, 2011; Abdolah et al, 2007).

Airline Service quality and passengers' satisfaction

Various studies that have focused on a link between satisfaction and quality argued for different opinions in terms of relationship. Some think that quality leads to satisfaction, Negi, (2009) and others support that satisfaction leads to quality (Cronin & Taylor, 1992). Some researchers propose that quality and satisfaction are determined by the same features; like Parasurman et al., (1988) tried to link passenger satisfaction to airline service quality. Negi, (2009) obviously points out that overall airline service quality is significantly associated with and contributes to the overall satisfaction of passengers. Passenger satisfaction is based on the level of airline service quality delivered by the service providers (Saravanan & Rao, 2007). Parasuraman et al., (1985) contends that when perceived service quality is high, then it will lead to increase in passenger satisfaction.

Airlines that consistently satisfy their passengers enjoy higher retention levels and greater profitability due to increased passengers' satisfaction (Wicks & Roethlein, 2009). It is vital to keep passengers satisfied by trying to know their expectations of services offered by service providers. In this way, airline service quality could be assessed and thereby evaluating passenger satisfaction.

Airline services in Egyptair

Egyptair is the flag carrier airline of Egypt. The airline is based at Cairo International Airport, its main hub. The airline is working to regain profitable operations following the revolution of 2011. Egyptair is a member of Star Alliance, having joined on 11 July 2008 and also of Arabesk Airline Alliance and the Arab Air Carriers Organization.

Egyptair offers a wide range of facilities and services to passenger such as:

- Lowest fare availability.
- Flight delays, and Essential customer needs during extraordinary delays.
- Assistance when your flight has been delayed or cancelled.
- Baggage delivery, Baggage liability, Baggage delays, Destruction, loss or damage to baggage, and Complaints on baggage.
- Ticket refunds, Overbooked flights, and Cancelling Reservations without Penalty.
- Accommodation of customers with special needs.
- Complaint about our schedule services.

Where customers can enjoy the exclusive services offered by Egyptair. Currently, Egypt air's is serving more than 80 destinations in 60 Countries fulfilling the needs of both business and leisure passengers.

Research Methodology
This research follows the survey research methodology. Previous studies in airline service quality are included in this research paper. A questionnaire was designed to study the AIRQUAL scale for measuring airline service quality and its effect on passenger satisfaction. The questionnaire was applied to 300 passengers of Egypt air with a minimum age of 18 years. The data was collected by using structured questionnaire and convenience sampling. Then it was analyzed with Percentage Method, Frequencies, Mean, Standard Deviation and Reliability Analysis. Charts and tables are also included in this research.

Research aim
The main aim of this study is to validate AIRQUAL scale and also to investigate its effect on passenger satisfaction in Egyptair. The most sample of the present research includes passengers of Egyptair.

Data collection
Data has been collected through questionnaires which were prepared in a way that is relevant to the situation so as to decrease invalid responses. They were distributed to passengers at Cairo international airport.

Measures
The questionnaire was designed based on a range of related studies (youngcourt et al., 2007). Its final form included 57 questions. The first part of the questionnaire consisted of demographic information. The second part included the following 8 variables representing Airline service quality dimensions (AIRQUAL model). the third part passenger satisfaction.
Airline service quality dimensions (AIRQUAL model): 44 items were used to assess participants' perception on Reservation service, Airline service, Airport service, Scheduling, Personnel, Price, Image, and Cabin staff service**.**
Passenger satisfaction: 7 items were used to assess participants' perception on Overall impression of airport service**,** on-board service quality**,** services offered by Egypt air, fly with Egypt air**,** choice of Egypt air as a service provider was a wise one, experience with Egypt air has been enjoyable and positive attitude towards the   company
Most of the questions used five point Likert scale which is equivalent to "1 = strongly disagree", "2 = disagree", "3 = neutral", "4 = agree", and "5 = strongly agree".

Data Analysis
The survey questionnaire data was encoded to SPSS (version 18.0). SPSS (version 18.0) was used to analyze the preliminary data, including Descriptive analysis, Reliability analysis.

Results and Discussion
The following part explains the results concerning the five dimensions representing the airline service quality delivered by Egypt Air. It aims to highlight the passengers' perception flying with Egypt Air.

Sample characteristics

The research covered a total of 300 out of 350 passengers completed the questionnaire in the 30-days survey period representing a response rate of 85.7 %. The results of this research have been organized according to the variables**.**

Reliability analysis

Before proceeding with further analysis, the reliability testing was leaded in order to ensure consistent measurement across various items in the questionnaire. Indeed, the reliability of a measure indicates stability and consistency of the instrument. Consequently, this method determines reliability through examining the internal consistency of the research instrument such as questions (items) in the questionnaire, which are normally presented. Cronbach's Alpha is one of the most frequently applied metrics to measure a scale's reliability, in which its index ranges from 0.0 to 1.0. Researchers should target a value closer to 1.0, as Alpha value proves that the instrument of the study is strong and consistent. However, it's important to note that in social sciences the threshold value of 0.7 is considered acceptable

Table 2: Reliability Statistics of the airline service quality (AIRQUAL model)

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	No. of Items
0.870	0.946	44

Cronbach's Alpha value of 0.870 for the 44 items in the airline service quality (AIRQUAL model) was achieved, indicating good consistency and stability of the instrument. The results of the reliability tests are highlighted in Table (2).

Table 3: Reliability Statistics of the passenger satisfaction

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	No. of Items
0.936	0.946	7

Cronbach's Alpha value of 0.936 for the 7 items in the passenger satisfaction was achieved, indicating good consistency and stability of the instrument. The results of the reliability tests are highlighted in Table (3).

Descriptive analysis

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

Table4: Demographic profile of the respondents

Descriptive Features	Frequency	Percentage (%)
Age groups		
18-28	32	10.7
29-39	97	32.3
40- 50	13	4.3
51-59	133	44.3
60 and above	25	8.4
Gender		
Female	135	45
Male	165	55
Education level		
Bachelor Degree	152	50.7
Diploma	46	15.3

Master Degree	49	16.3
PHD degree	53	17.7
Income (per month: in Egyptian pound)		
Less than 1.000	0	0
1.000 - 2.999	18	6
3.000 - 5.999	134	44.7
6.000 - 8.999	95	31.7
9.000 and above	53	17.6
main reason to fly		
Business	130	43.3
Leisure	159	53
Personal reasons / Commuting	11	3.7

Table (4) shows The discussion of the research findings begins with a brief demographic profile of respondents in terms of gender, age, education level, income, number of flights, and purpose of visit. 55% of the respondents were male whereas 45% of them were female. Most of the respondents 44.3% were aged between 51 and 59 years. Regarding the education level, 50.7% of the respondents were studying for Bachelor' degrees. Additionally, more than 44 % of the respondents reported an income range between 3.000and 5.999 EGP. Regarding the purpose of their journeys, about 53% mentioned that they were travelling for leisure.

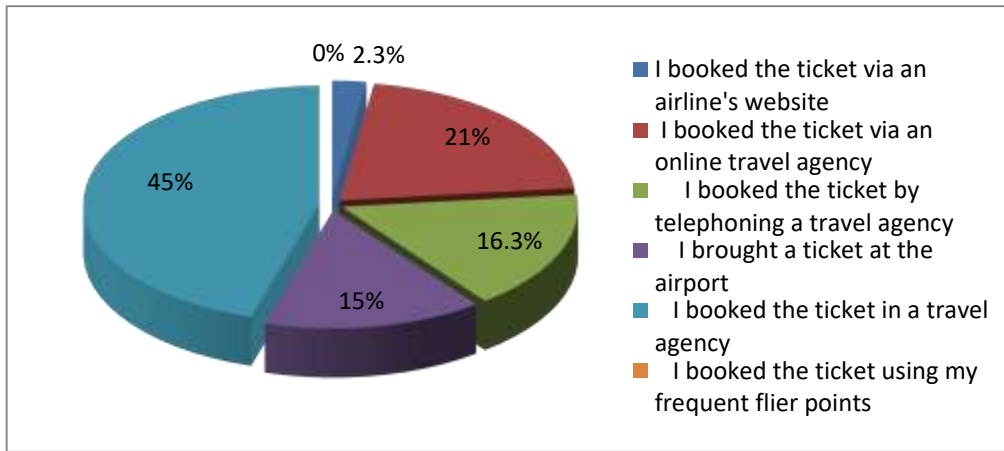Figure 2: airline ticket booking

Figure (2) has shown the percentage of the means of airlines ticket purchase. Regarding the best describes the way in booked airline ticket, 45% of the respondents preferred travel agency for a ticket reservation.
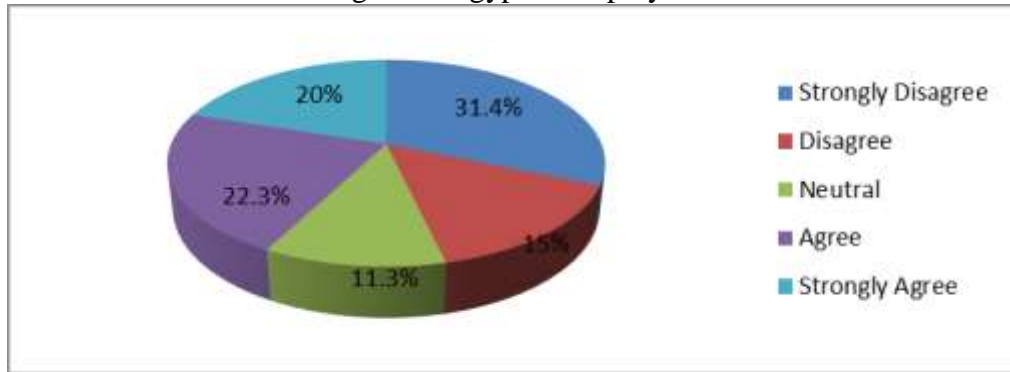
Figure 3: Egyptair employees

Figure (3) has shown the results of reservation services variable: the finding of this section revealed the extent to which respondent. Regarding "Egypt air employees show a friendly and helpful response to reservation calls", 22.3% of the respondents satisfied, and 20% of the respondents satisfied strongly.
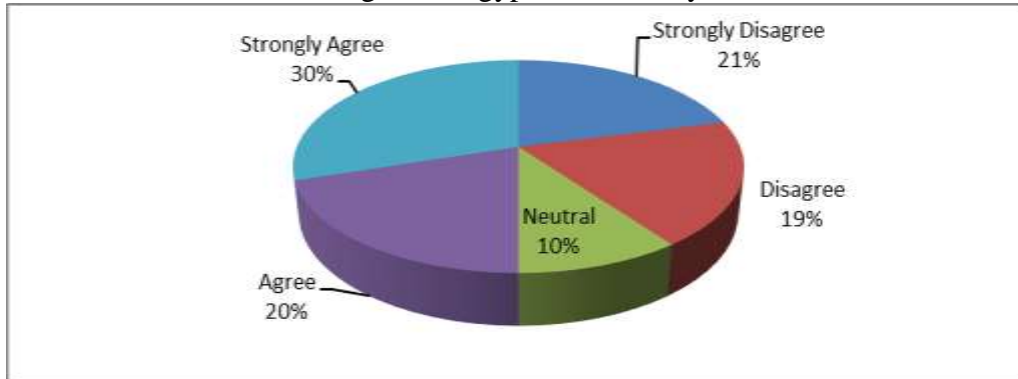
Figure 4: Egyptair flexibility

Figure (4) has shown the results of reservation services variable: the finding of this section revealed the extent to which respondent. Regarding "Egypt air shows good flexibility in changing reservations ", 30% of the respondents satisfied strongly, and 22.3% of the respondents satisfied.

Table 5:   Mean Rating and percentages the respondents' of Egyptair airline service

airline service	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Mean	Std deviation
Aircraft is a safe and clean	43.3	13.3	5.3	20.3	17.7	2.56	1.61
Quality of catering served in plane is good	33.7	3.3	9.7	16	37.3	3.20	1.73
Plane toilets are clean	33.7	3.3	12.7	13	37.3	3.17	1.73
Plane seats are clean	33.7	3.3	12.7	13	37.3	4.070	.97
Plane seats are comfortable	33.7	3.3	12.3	13.3	37.3	3.17	1.72
Quality of air-conditioning in the planes are good	33.7	3.3	12.3	13.3	37.3	2.50	1.58
Up to date newspapers,	26.7	15.3	8.3	18.3	31.3	3.896	1.31

magazines and video films are available during the flight							

The detailed examination of the results presented in Table (5) reveals the respondents' responses pertaining to airline service. The average score resulted with a mean of 3.265. This indicates that majority of the cases tend to mark on the middle of the scale on a 1 to 5 range. However, most of the items resulted with a slightly higher mean than 3 indicating the agreeableness of the respondents on those items, as imperative for airline service quality.

The highest mean values for Airline service emerged for the item "plane seats are clean" (mean = 4.070), followed by "Up to date newspapers, magazines and video films are available during the flight" (mean = 3.896), whereas, the lowest mean value for this construct is for "Aircraft is a safe and clean", followed by "Quality of air-conditioning in the planes are good"

Lastly, two items: "Plane seats are comfortable" and "Plane toilets are clean" resulted with a less varied standard deviation as, 1.72 and 1.73, respectively. These items are from the dimension "airline tangibility", consequently, indicating that for respondents it seemed to be important with regard to service quality.

Table 6:   Mean Rating and percentages the respondents' of Egyptair Airport service

Airport service	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Mean	Std deviation
Ground staff are very helpful	37.3	15.7	5.7	17.7	23.7	2.74	1.65
Egypt air employees are consistently courteous	31	15.7	12	17.7	23.7	2.87	1.59
Check-in procedures are efficient	31	15.7	12	17.7	23.7	2.87	1.59
There are sufficient number of shops in airport	26.3	15.7	12	17.7	28.3	3.06	1.59
The airport has effective sign system	32.7	15.7	5.7	17.7	28.3	2.9	1.67
Airport facilities are very clean	27.3	21	5.7	17.7	28.3	2.59	1.61
Baggage handling is quick	27.3	21	5.7	17.7	28.3	3.03	1.62
Terminal announcements at Cairo international airport are very clear	27.3	21	5.7	17.7	28.3	2.99	1.62
Security procedures (for persons & Luggage)	32.7	15.7	5.7	17.6	28.3	2.98	1.62

The detailed examination of the results presented in Table (6) reveals the respondents' responses pertaining to airport service. The average score resulted with a mean of 2.99 this indicates that

majority of the cases tend to mark on the middle of the scale on a 1 to 5 range. However, most of the items resulted with a slightly lower mean than 3 indicating the agreeableness of the respondents on those items, as imperative for airline service quality.

The highest mean values for airport service emerged for the item "There are sufficient number of shops in airport" (mean = 3.06), followed by "Baggage handling is quick" (mean = 3.03), whereas, the lowest mean value for this construct is for "Ground staff are very helpful", followed by "Airport facilities are very clean"

Lastly, five items: "Egypt air employees are consistently courteous" , "Check-in procedures are efficient", " The airport has effective sign system", " Terminal announcements at Cairo international airport are very clear", and " Security procedures (for persons & Luggage)" resulted with a less varied standard deviation as, 1.59,167,162 and 1.62, respectively. These items are from the dimension "terminal tangibility", consequently, indicating that for respondents it seemed to be important with regard to service quality.

Table 7: Mean Rating and percentages the respondents' of Egyptair flight Scheduling

Scheduling	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Mean	Std deviation
Egypt air provides reliable schedules	17.3	13.7	9.3	31.3	28.3	3.40	1.46
Egypt air has convenient flight schedule	20	13.7	9.3	17.7	39.3	3.42	1.59
Egypt air offers many non-stop flights	9	42	5	16	28	3.12	1.43

The detailed examination of the results presented in Table (7) reveals the respondents' responses pertaining to Scheduling service. The average score resulted with a mean of 3.22 this indicates that majority of the cases tend to mark on the middle of the scale on a 1 to 5 range. However, most of the items resulted with a slightly higher mean than 3 indicating the agreeableness of the respondents on those items, as imperative for airline service quality.

The highest mean values for airport service emerged for the item "Egypt air has convenient flight schedule" (mean = 3.42), followed by "Egypt air provides reliable schedules" (mean = 3.40), whereas, the lowest mean value for this construct is for "Egypt air offers many non-stop flights".

Table 8: Mean Rating and percentages the respondents' of Egyptair Employees

Personnel	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Mean	Std deviation
Employees' general attitude is good	36	6	15.3	21.7	21	2.87	1.59
Airline personnel give exact answers to your questions	30.3	14.7	15.3	.3	39.3	3.04	1.72
Personnel show personal care equally to everyone	26.7	0	15.7	40.3	17.3	3.22	1.46

Employees have the knowledge to answer your questions	25	33	4	4.3	33.7	2.89	1.65
The airline personnel show empathy	25	34.7	3.7	16.7	20	2.72	1.49
Airline personnel are aware of their duties	25	32.3	12.7	15	15	2.62	1.39
Reservations and ticketing transactions are error-free	25	43.3	3.7	4.7	23.3	2.58	1.49

The detailed examination of the results presented in Table (8) reveals the respondents' responses pertaining to personnel. The average score resulted with a mean of 2.89 this indicates that majority of the cases tend to mark on the middle of the scale on a 1 to 5 range. However, most of the items resulted with a slightly lower mean than 3 indicating the agreeableness of the respondents on those items, as imperative for airline service quality.

The highest mean values for airport service emerged for the item "Personnel show personal care equally to everyone" (mean = 3.22), followed by "Airline personnel give exact answers to your questions" (mean = 3.04), whereas, the lowest mean value for this construct is for "Reservations and ticketing transactions are error-free", followed by "Airline personnel are aware of their duties".

Lastly, three items: "The airline personnel show empathy", "Employees' general attitude is good", and "Employees have the knowledge to answer your questions ", resulted with a less varied standard deviation as, 1.49,159 and 1.65, respectively. These items are from the dimension "Personnel", consequently, indicating that for respondents it seemed to be important with regard to airline service quality.

Table 9: Mean Rating and percentages the respondents' of Egyptair Price

Price	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Mean	Std deviation
Egypt air offers competitive ticket prices	59.3	6	7	6.7	21	2.24	1.66
Egypt air offers discount prices for children	64.3	9.7	6.1	9.7	9.7	1.91	1.40
Low price ticket offerings are available	60.3	10	7	7.7	15	2.07	1.53
Ticket prices is consistent with given service	61.7	6.7	5	10.7	16	2.13	1.59

The detailed examination of the results presented in Table (9) reveals the respondents' responses pertaining to Price. The average score resulted with a mean of 2.00 this indicates that majority of the cases tend to mark on the middle of the scale on a 1 to 5 range. However, most of the items

resulted with a slightly lower mean than 3 indicating the agreeableness of the respondents on those items, as imperative for airline service quality.

The highest mean values for airport service emerged for the item "Egypt air offers competitive ticket prices" (mean = 2.24), followed by "Ticket prices is consistent with given service" (mean = 2.13), whereas, the lowest mean value for this construct is for "Egypt air offers discount prices for children", followed by "Low price ticket offerings are available".

Table 10: Mean Rating and percentages the respondents' of Egyptair Image

Image	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Mean	Std deviation
The airline company has a good image	23.3	22	13	13.7	28	3.01	1.55
Egypt air modem looking planes	3.3	20.7	8	28.7	39.3	3.80	1.25
Egypt air offers different flight classes	0	0	10	30.3	59.7	4.50	.67

The detailed examination of the results presented in Table (10) reveals the respondents' responses pertaining to Image. The average score resulted with a mean of 3.98. This indicates that majority of the cases tend to mark on the middle of the scale on a 1 to 5 range. However, most of the items resulted with a slightly higher mean than 3 indicating the agreeableness of the respondents on those items, as imperative for airline service quality.

The highest mean values for Airline service emerged for the item "Egypt air offers different flight classes" (mean = 4.50), followed by "Egypt air modem looking planes" (mean = 3.80), whereas, the lowest mean value for this construct is for "The airline company has a good image".

Table 11: Mean Rating and percentages the respondents' of Egyptair Cabin staff service

Cabin staff service	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Mean	Std deviation
The cabin crew are very courteous toward passengers	15.3	12.7	5.3	9.3	57.3	3.81	1.58
Egypt air cabin crew give passengers individual attention	9.7	15	13.7	9.7	52	3.79	1.44
Cabin crew give prompt service to passengers	9.7	18.3	10.3	9.3	52.3	3.76	1.48
Cabin crew are willing to help	12	10	13.3	11.3	53.3	3.84	1.46

Cabin crew can speak foreign languages	12	7	16	12.3	52.7	3.87	1.42
Cabin crew show an awareness of different cultures	12	7	13	19	44	3.86	1.40
Cabin-crew have a smart appearance	12	10.3	11	15.3	51.3	3.84	1.45
Cabin announcements are clear	14	7.3	10.7	17	51	3.84	1.45
Egypt air offers appropriate services for children	19.3	7.3	4.7	7.3	61.3	3.84	1.64

The detailed examination of the results presented in Table (11) reveals the respondents' responses pertaining to cabin crew. The average score resulted with a mean of 3. 65. This indicates that majority of the cases tend to mark on the middle of the scale on a 1 to 5 range. However, most of the items resulted with a slightly higher mean than 3 indicating the agreeableness of the respondents on those items, as imperative for airline service quality.

The highest mean values for Airline service emerged for the item "Cabin crew can speak foreign languages" (mean = 3.87), followed by "Cabin crew show an awareness of different cultures" (mean = 3.86), whereas, the lowest mean value for this construct is for "Cabin crew give prompt service to passengers", followed by "Egypt air cabin crew give passengers individual attention".

Table 12: Mean Rating and percentages the respondents' of Egyptair passenger satisfaction

Passenger satisfaction	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Mean	Std deviation
Overall impression of airport service	16	11.3	17	22.7	33	3.45	1.45
Overall impression of on-board service quality	12.3	10.3	9	21.3	47	3.80	1.43
Overall impression of all services offered by Egypt air	16	10	11.7	19.3	43	3.63	1.50
The next time I need to fly, I would certainly fly with Egypt air	10	16.3	16.7	23	34	3.55	1.36
My choice of Egypt air as a service provider was a wise one	10	15.3	20.7	25.7	28.3	3.47	1.31
I feel that my experience with Egypt air has been enjoyable	9.7	5	21.7	34.7	29	3.68	1.22

I now have a more positive attitude towards the company	3.7	1.7	18.7	39.7	36.3	4.03	0.97

The main objective of conducting the research was to find out the satisfaction level of the customers from the airline service quality of general services of Egyptair Airlines. The results in section 3 show that the customers of Egyptair Airlines were mainly satisfied. From out of seven variables, more than half of the respondents were satisfied about Overall impression of airport service, on-board service quality, all services offered by Egypt air, preferred fly with Egypt air, choice of Egyptair as a service provider, experience with Egyptair has been enjoyable and a more positive attitude towards the company.

The detailed examination of the results presented in Table (12) reveals the respondents' responses pertaining to passenger satisfaction. The average score resulted with a mean of 3. 50. This indicates that majority of the cases tend to mark on the middle of the scale on a 1 to 5 range. However, most of the items resulted with a slightly higher mean than 3 indicating the agreeableness of the respondents on those items, as imperative for passenger satisfaction.

The highest mean values for Airline service emerged for the item "I now have a more positive attitude towards the company" (mean = 4.03), followed by "Overall impression of on-board service quality" (mean = 3.80), whereas, the lowest mean value for this construct is for "Overall impression of airport service", followed by "My choice of Egypt air as a service provider was a wise one".

Lastly, three items: "The next time I need to fly, I would certainly fly with Egypt air" and "Overall impression of all services offered by Egypt air", and "I feel that my experience with Egypt air has been enjoyable", resulted with a less varied standard deviation as, 1.36, 1.50 and 1.22, respectively. These items are from the dimension "passenger satisfaction", consequently, indicating that for respondents it seemed to be important with regard to passenger satisfaction.

Summary and Conclusion
AIRQUAL scale has been used to determine airline service quality in every kind of service areas. Because of being easy used-form and the reliability of AIRQUAL, it was preferred to use AIRQUAL to determine Egyptair service quality as a sample from an area of airline service. A total of 300 passengers answered the questionnaire. Totally, it was seen that %55 passengers were male and %44.3 of them in Elderly as 51-59. In addition, %50.7 of the passengers had a university degree and %44.7 of them had income nearly 3000-5999 EGP. It was seen that %53 passengers had a trip for leisure. Then it was seen that almost of the passenger's preferred Egypt air according to its Quality of catering served in plane is good, Airline personnel give exact answers to your questions, Egypt air modem looking planes, Egypt air offers different flight classes, and Cabin staff service . Cronbach's Alpha test was used to determine the scale's reliability situation. All of the AIRQUAL dimension were tested separately and It was seen that "(airline tangibles, Terminal tangibles, personnel, empathy, and image) dimension had high Cronbach's Alpha's value in both expectations and perceptions. At total, this scale had 0.870. With descriptive statistics it was presented passengers' perceptions and expectations in airline services for Egyptair.

No doubt, developing the required level of understanding passengers' perceptions will enable better investment decisions and commitment of resources to areas most significant to passengers, in meeting the expectations of passengers, who have a tendency to be more demanding and less loyal.

This implies that service attributes must be well-defined by the airline operators in terms of their features in order to comprehend how service quality is perceived by passengers.

Recommendations for Egyptair

1. Egypt Air should improve the weaknesses in all quality service dimensions, particularly Tangibility and Empathy. There are needs for providing high-tech equipment on board, training staff for providing spontaneous care and concern for passengers.
2. Egypt Air should collaborating with other travel related partners (e.g. car rental, hotels, travel insurance) and having a sound loyalty and mileage program to recognize frequent passengers to transfer him to loyal customer.
3. Egyptair should develop strategies to improve airline service quality across all the service quality dimensions in a way and manner that suit the preferences of those market segments they choose to serve.
4. Egyptair should recognize the changing needs and expectations of air passengers; hence, passenger surveys should be periodically conducted to generate three types of service performance reports: monthly update, quarterly performance review, and an annual performance report.
5. Egyptair should customize their services offered by identifying unique service requirements of individual passengers, providing in-flight entertainment and variety in-flight meals, and more newspapers and magazines, Also, it is recommended that the variety of the programs must be increased according to male and female preferences, when flight entertainment programs are selected.
6. Egyptair Airline managers should deliver services as promised and occasionally, when the services delivered fall short of expectations, effort should be made to immediately restore any service failure and sincere apologies should be offered to the passenger with a genuine commitment to prevent the reoccurrence of such service hiccups.

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