

Does service quality of airlines industry have any contribution to passenger's satisfaction – A research based on previous literatures

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Abstract

Airline industry, which has become customer centric these days, is having their priority to satisfy customer satisfaction which is possible through uplift of their service quality. The current research examines the various factors of service quality those are having direct and significant relationship with the satisfaction of airline passengers. Research paper based methodology is accumulated to figure out the various factors of service quality used to determine the satisfaction level of customers, which helps airlines industry to build the customers' loyalty, brand equity and attract new customers towards the particular airline. The rapid development and competition of service quality, both in developed and developing nations has made it important for airlines to measure and evaluate the quality of service. Brand Managers working for Airlines industry have focused to identify the characteristics that consistently please their customers, and to develop mechanism for monitoring customer satisfaction, their loyalty towards airline brand. Also, their focus is receiving the feedback from the customers to improve the service quality systems. For the same, relevant and important papers have been discussed to bring forth the relevance of service quality and passenger satisfaction in this business

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I. INTRODUCTION

The airline industry is an incessantly growing service industry and is poised for growth in the international arena. Globalization of the world's economy and the rapid advancement of technology have led to the increased usage of airline service. This is supported by The International Air Transport Association (IATA) and according to it the net profit of aviation will

rise to \$ 34.5 billion globally in 2018, a tremendous increase from the expected profit in 2017 (revised from \$ 31.4 million forecast in June, IATA, 2017). The airline industry is expected to reach 7.8 billion passengers by 2036 (IATA 2017) and further to 10

billion passengers by 2040 (ICAO 2018). Determining and upholding service quality offered to airline passengers is very essential to the growth and competitiveness of a business.

The growth of aviation has acted as a harbinger to innumerable activities both economic as well as social at an indigenous and universal level. There has been a spurt in employment both direct and indirect and this has stirred and the economy locally and universally. Aviation integrates the regions across the globe to bind cultures socially. This helps the cause of the environment through the judicious use of natural resources. Increased competition in the aviation industry has led to drastic changes in economic regulation. A new face of aviation is

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emerging as a consequence of the globalization of the world economy and the emergence of regional economic groups, privatization and the liberalization of service industries in general and airlines in particular.

In this article, selective research papers on service quality and its effect on customer satisfaction in the airline industry were reexamined.

II. LITERATURE REVIEW:

Examination of selected papers

Nikolaos Korfiatis et al (2018) conducted a research titled “Measuring service quality from unstructured data: A topic modeling application on airline passengers’ online reviews” with this he intends to research that: Whether or not the service quality features add surety to the amorphous data to customer satisfaction models that use statistical substitutes? This research also focuses on the time-bound aspects of service quality while taking into account the changing aspects and interrelations between service features?

This research is a useful tool for the benefit of managers with an emphasis on the issue of using unstructured data to measure service quality and transforming it, thereby forming the basis of an effective intelligent system. This research makes available the evidence about the content of accessible analysis and its usage in the perspective of service quality measurement, the procedural assumptions behind structural topic models (STM). According to Yan et.al. (2015). the primary impetus that customers opt to online their views is to reduce their risk and data indiscretions about a product or service. (Law, Gruss, & Abrahams, 2017; Zhang, Xu, & Wan, 2012) dwell on the important question that needs to be dealt is as to how airline companies can drive benefit from this content of online comments and concentrated on mining information to further improve the quality of service reflecting the customer’s inclinations. Stamolampros et.al, (2018) explained the importance of understanding

the demographic or ethnic characteristics of their customers. STM connects the random information, in the form of covariates, with the amount of association of a document and the degree of association of a word with a topic. An open-ended questionnaire was examined by Roberts et al. (2014); The changing aspects of critics’ estimation on music albums was done by Light & Odden, (2017); The dissertation reports were explained by Kuhn (2018). Data was collected from trip advisor (N=557208) which included information about the date of the flight, flight route (boarding to deplaning), the class traveled in different categories such as business class traveler, premium and economy class traveler, and the level of involvement of assessors to different platform (how many posts reread by an individual). An ordinal scale from 1 – 5 was used to calculate the passenger experience, and an individual rating for 8 included the specific service aspects of the chosen airline includes (1) Comfort in seating, (2) Service provided to customers (3) Neatness /Cleanliness, (4) Food services onboard, (5) Leg space, (6) Entertainment onboard (7) Return Value on Investment (8) Check-in time and Boarding time. The mean, the standard deviation was calculated and STM applied to calculate the quality dimension. 184,502 online comments were used for estimating workflow drawn from previous studies done by authors (Guo et al., 2017; Tirunillai & Tellis, 2014). They have concluded the information retrieved from the studies and identified dynamic service factors for the delivery of quality services. Besides the information gain through the framework, the second limitation across the service quality was established “sequential variation of the research”. According to Robert et.al. (2016), this research demonstrates the appropriateness of Structural Topic Model – STM for mapping service quality dimensions, thereby permitting an effective means of measuring service quality. The shortcomings of this method are that the passengers’ culture and demographics can affect the responses which change the documented content and influence the rating of customers’ online comments

pattern too (Korfiatis&Poulos, 2013; Stamolampros et al., 2018). In continuation of the existing theory, the author further developed the effect of sequential shifts happened in the service quality, as airlines load factor varies seasonally across the globe. According to (Kuo& Liang, 2011) the research of service quality aspects can be further extended to the examination of other participants involved such as airports.

Ejem et al. (2017) conducted research titled “Evaluation of Airline Service Quality Attributes: The Nigerian Experience”. This paper aims to provide a better understanding of the satisfaction levels among passengers with Arik and Aero Airlines and how its managers can improve their service quality. Different models of service quality measurement were studied and finally Gronroos model as an inclusive model was developed and adopted to incorporate various aspects of airline service. Based on the measurement scale for service, the differences in perceived quality between Aero and Arik Airlines passengers were further analyzed by using the one-sample t-test for data examination. To determine the reliability of the measurement scale Cronbach’s was used as an examination indicator. Cronbach’s alpha, was more than 0.7. Thus the research measurement scales, applied in this paper, are reliable. Friedman test of Service Quality Attributes of Aero and Arik Airlines indicates the following results:

Table 1: Test Statistics for airlines

	Aero	Arik
N	100	100
Chi-Square	448.794	422.115
Df	39	39
Asymp. Sig.	.000	.000

According to Friedman the test result, the following service attributes were highly rated among the dimensions of service quality

Table 2: Rating of Different Service Attribute

Service Quality Group	Highest Rating for Aero	Highest Rating for Arik
Tangibles	TAN 3	TAN 3
Reliability	REL 4	REL 1
Responsiveness	RES 6	RES 6
Assurance	ASS 5	ASS 7
Empathy	EMP 7	EMP 4
Technical	TEC 1	TEC 1
Image	IMA 4	IMA 1

The seven Dimension of the Gronroos model has been ranked in this case paper. 39 attributes have been derived and found by interview and questionnaire. In addition to 22 factors of the SERVQUAL model, the image and technical quality supplemented, and all factors changed to cover aspects of these services of the airlines i.e. Arik and Aero. The result can be used by airline managers and other airline managers to plan for increasing their market share. Managers of both airlines have identified passengers’ attitudes and opinions about the services delivered, and as a result, can modify and strengthen their weak points to increase satisfaction level among their consumers. Other airlines’ managers can use these results to measure and compare with their passengers’ satisfaction.

Hung-Che Wu and Ching-Chan Cheng (2013) conducted research titled “A hierarchical model of service quality in the airline industry”. This research aimed to recommend a service quality model for the airline industry and to develop a scale to measure service quality in the aviation industry by testing the reliability and validity of the developed model. This might be helpful in the development of the aviation industry, an explicit service quality model catering to its needs. An extensive literature, qualitative and empirical research led to the proposal of a hierarchical model of service quality for the aviation industry. The scales developed by Dabholkar et.al, (1996) and Brady and Cronin’s (2001) form the basis of this research and the proposed instrument incorporates performance-based procedures. In view of criticisms of SERVQUAL, SERVPERF and SERVPEX, many studies have recognized the fact

that these scales can reflect travelers' overall evaluations of airline service quality as a separate and multi-item construct (Buttle, 1996; Cunningham et al., 2004; Dabholkar et al., 2000; Park et al., (2006). The following model developed to:



Figure 1: A proposed hierarchical model of service quality

The final version of the instrument after the scale purification process had a total of 37 items signifying 11 sub-dimensions of airline service quality (each sub-dimension having 3 - 6 items). The effectiveness of the proposed model and the psychometric properties of the scale were analyzed using the Statistical Package for Social Science (SPSS) 15.0 and the AMOS- 18.0. The results specify that the framework and measurement scale is reliable and valid. The theory and concepts of the passenger perception of service quality in the airline industry are still in the evolving stage. This suggested model seeks to fill the existing gaps in the aviation literature by providing a framework for the research of the dynamics in this segment. The findings of this research have expanded the research into providing a conceptual framework and measurement scale for the airline industry. Future

studies should attempt to examine service quality across different international or domestic airports of other geographic regions. This possibly will provide an opportunity to relate the quality of service based on different assessments of the quality of service based on passengers' observations in different areas or countries.

Ray Wang et.al (2011) in the research titled "Evaluation of customer perceptions on airline service quality in uncertainty" studied the principles by which passengers assess the service quality of airlines. The researcher studies the service quality assessment and its implications by aviation companies. The structure of service quality was studied by (Chang, 1998; Gourdin and Kloppenborg, 1991; Hopkins et al., 1993). The fuzzy model along with Analytical Hierarchy Process (AHP) was used, also researchers like Tsaur et al. (2002) studied the Ideal Solution Method (TOPSIS). These studies helped in the decision making process. Liou et al. (2007) explored the safety measures used by Airline industries using DEMATEL method. This method to research the cause-effect has been used successfully by researchers since 1971. The procedure followed included the developing of research items by experts, data collection, reliability, and validity establishment. While highlighting the differences in the service quality model requisite for an airline, this research verifies a model developed by Parasuraman et al. (1985). This research limits the research to Taiwanese passengers and while other airlines in different regions are still open to benefit from this.

Mateja Kos Koklic et.al (2017) in his research titled "Exploration of customer satisfaction with low-cost and full-service airline companies." The difference in airline services is brought fore by classifying the airlines as low cost, full-service airlines also highlighting about hybrid airlines encompasses features of both (Reichmuth, 2008). Reasons for choosing an airline for traveling vary from price according to Dolnicar et.al (2011), Martínez et.al (2012). Rajguru (2016) stresses the fact that value for money is an important factor which fascinates

passengers traveling on low-cost airlines. The researcher views that very few efforts have been made to examine travelers regarding low – frill and fully-serviced airlines. According to Morin et.al (2016) a multi-group test, of the research, provides a rigorous statistical method to assess the extent to which a latent profile solution simplifies the customers of these two types of airlines. Loureiro and Fialho (2016) hold the view that due to the competition full-service airlines are forced to alter their model and provide similar services as are being provided by low-cost airlines. Suhartanto and Noor (2012) said that passengers traveling onboard a full-service airline are more satisfied than those traveling on a low-cost carrier. Based on divergent views expressed by different researchers, the following conceptual model was developed.

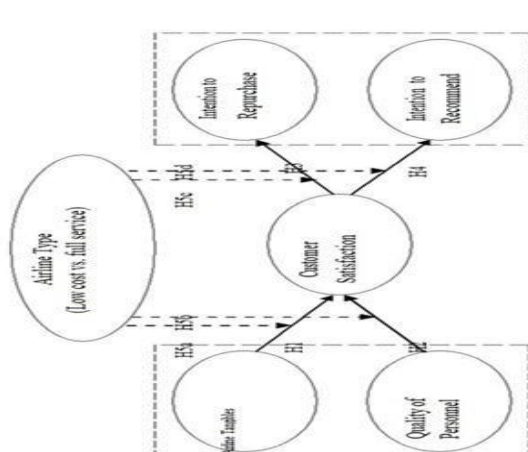


Fig 2: Conceptual Model

This research was conducted in a European Union country and two airlines were chosen to investigate the tangibles and intangibles factors affect the customers in the airline industry. The customers re-flying intentions and his decision to recommend the chosen airline are a result of his satisfaction with that airline. The airline tangibles and quality of its staff make a significant impact on passenger satisfaction levels. A satisfying experience is of key importance and only satisfied passengers will travel on the same airline again and recommend it to other prospective travelers. This research is confined to two specific service quality magnitudes i.e. tangibles and quality of workforces. There is also a scope of

testing other predictors which include a method of sampling, segmentation (business travelers) and specific airline oriented.

Rahim Hussain et.al (2014) in his research titled “Service quality and customer satisfaction of a UAE-based airline: An empirical research” chooses Emirates one of the leading airlines to investigate the linkages between service quality, service provider image, customer expectations, perceived value, customer satisfaction, and brand loyalty. The researcher in his research anticipates finding the different aspects of the airline service quality, which will be used along with a corporate image, customer expectations, and customer complaints to measure passenger satisfaction concluding to customer loyalty in the context of Emirates airlines. According to (Hoffman and Bateson, 2010). Research shows that a bad experience will be shared by a passenger to nine other people. The researcher dwells on the following models to bring forth the importance of service quality and customer satisfaction:

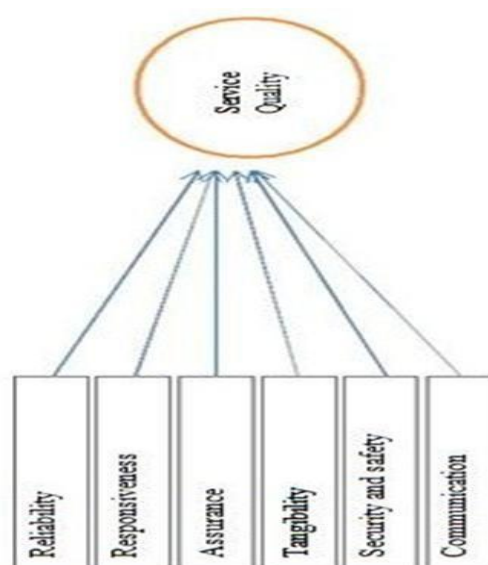


Fig 3: Service quality dimensions

Parasuraman et al. (1985) explain the service quality in the context of the difference between customers’ expectations from the service provider and their perception. In their research, they measure the service quality with five constructs namely;

Reliability, responsiveness, assurance, tangibility, safety and security, and communication.

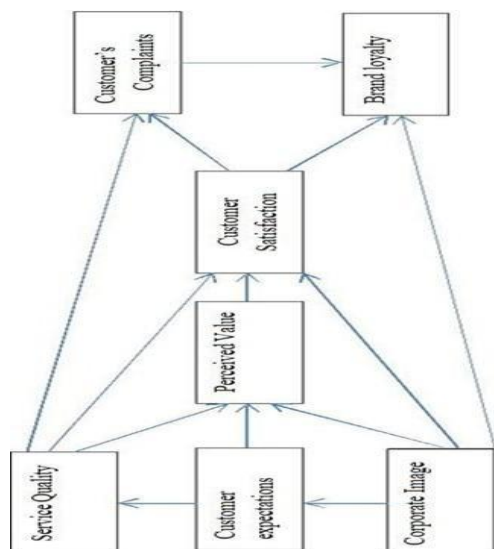


Fig4: Airline customer satisfaction Model

As per figure 4, Service Quality of the airline industry was influenced by customers' expectations and corporate image of the airline industry, which lead to perceived value about the airline Industry.

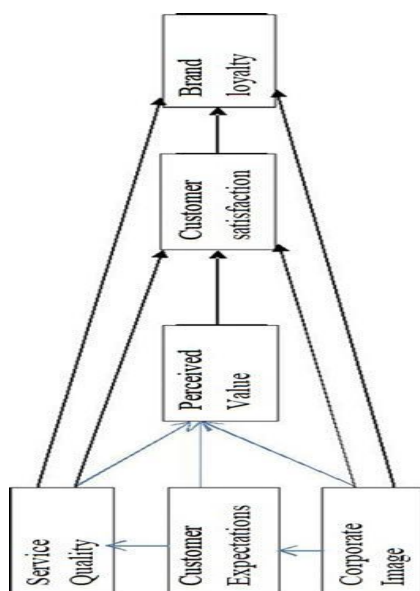


Fig 5: adjusted airline customer satisfaction model

This research is useful to understand customer satisfaction using airline services, which provide a framework to measure customer satisfaction and loyalty to the airline industry. Ilias Vlachos and Zhibin Lin (2014) in the research titled "Drivers of

airline loyalty: Evidence from the business travelers in China" focused on the research the factors that determine the loyalty of business travelers towards fully-serviced airlines in China. Ten attributes under three categories were derived on the basis of an extensive literature and panel interview. Dwelling on the experience of business travelers (Ringle et al., 2011) explained that business travelers are better familiar with the routine of flying than leisure travelers, saving the efficiency cost of service provision.

The key airline factors/attributes and description is as follows:

Category	Attributes	Description
Operational factors		
	Safety	Passenger perception of airline's safety record
	Punctuality	Passenger perception of on-time departure and arrival record
	Aircraft	Passenger perception of aircraft quality. New, large, modern aircraft signifies a higher level of safety and comfort
Competitive factors	Frequency of flights	Passenger perception of airline service frequency
	Schedule	Perceived convenience of flight schedule
	Frequent flyer program	Perceived generosity of FFP rewards and convenience of point accumulation and reward redemption
	Ticket price	Passenger satisfaction with the fare of air travel charged by the airline
Attractive factors	Reputation	Passenger's general impression of the airlines as a whole
	In-flight food & drinks	Passenger perceived quality of food and drinks
	In-flight staff service	Passenger perception of the courtesy, responsiveness of flight attendants

The data was analyzed using the hierarchical regression were employed to explore the customers' satisfaction, their repurchase intention and whether they are going to recommend the airline to their family and friends or not. The results are depicted into a radar diagram showing airline factors with significant beta coefficients across all three loyalty variables.

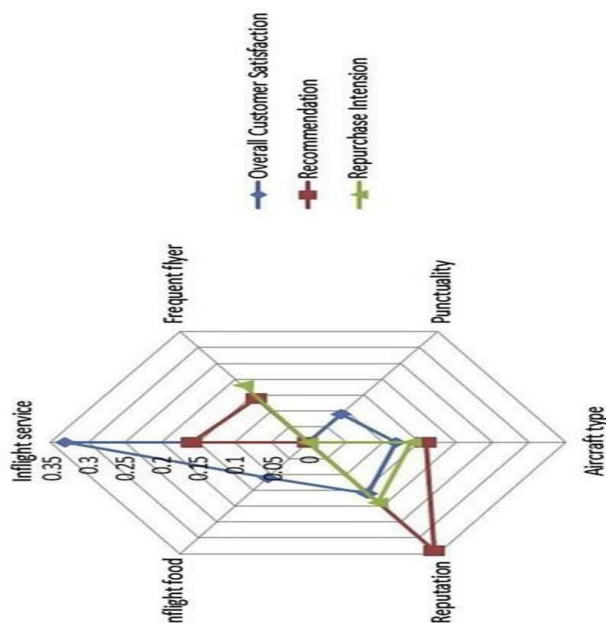


Fig 6: Airlines loyalty results

KenanAydina and SedaYildirim in the research titled "The measurement of service quality with SERVQUAL for different domestic airline firms in Turkey" at the SabihaGökçen Airport at Istanbul (Turkey) using the "face to face" method to determine whether travelers from different socio-demographic backgrounds have any significant bearing on the service quality expectation and service quality perception of the airline. According to (Chen & Chang, 2005). It is imperious for airline management to determine what their customer's requirement is. Cronbach's Alpha values were used to determine both of passengers' expectations and perceptions about airline services. The following results were observed in this research. The significant relationship between demographics airline preferences varied. Reliability of the obtained results was tested by using the Cronbach's Alpha

values for both the passengers' expectations and perceptions. The scale was reliable as results reveal a high Cronbach's Alpha value Alpha's value in both expectations and perceptions. The usage of SERVQUAL for service quality gave the differences between Turkish and other domestic airlines.

MatiullahSaadat et.al (2018) in the research titled "Factors That, Influence Customer Satisfaction in the Airline Industry in Malaysia" studies how service strategy influences customer satisfaction in Air Asia Malaysia. Subsequently, SERVQUAL was used to investigate Air Asia's committed level of service quality that led to customer satisfaction and desires whether these requirements differed on a customer basis. Atilgan et al. (2018) dwelt on the importance of excellence in the quality of service provided to the customers which are vital for the continued existence of the sector. Based on the literature the following research framework was developed:

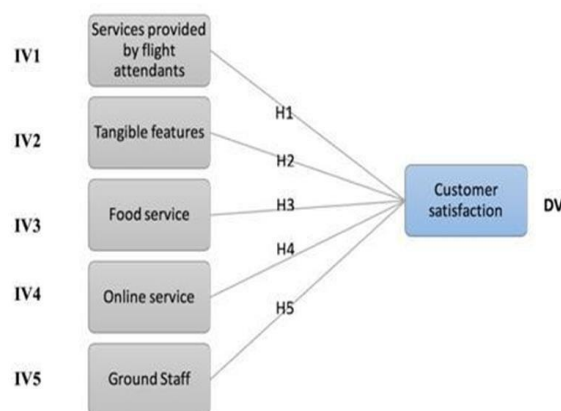


Fig 7: Research frameworks

The quantitative research method was applied to target a population that consisted of 115 business and leisure travelers who traveled onboard Air Asia Malaysia. Nonrandom convenience sampling was conducted and the reliability of this research is based on Cronbach's Alpha > (0.7). A 6 – Likert - scale questionnaire has been used for collecting the data. The results revealed that among Catering service and ground services providing staff has a significant impact on customer satisfaction in Air Asia Malaysia, and the other factors; online

service, tangible features, flight attendants did not reveal any significant relationship with customer satisfaction. The shortcomings highlighted in this research are its small sample size and a bigger sample would be more appropriate for future researches.

SteliosTsafarakis, TheodosiosKokotas, and AngelosPantouvakis (2017) in the research titled “A multiple criteria method for airline passenger satisfaction measurement and service quality improvement” applied the MUSA, a multi-criteria satisfaction test method, to measure passengers’ satisfaction from a set of services dimensions, and to postulate those magnitudes that require improvement Chow,(2015) puts forth the importance for firms to correctly perceive their customers' requirement and expectation and also to manage their own resources in meeting it. The following figure shows the hierarchical structure of a customers' satisfaction dimensions.

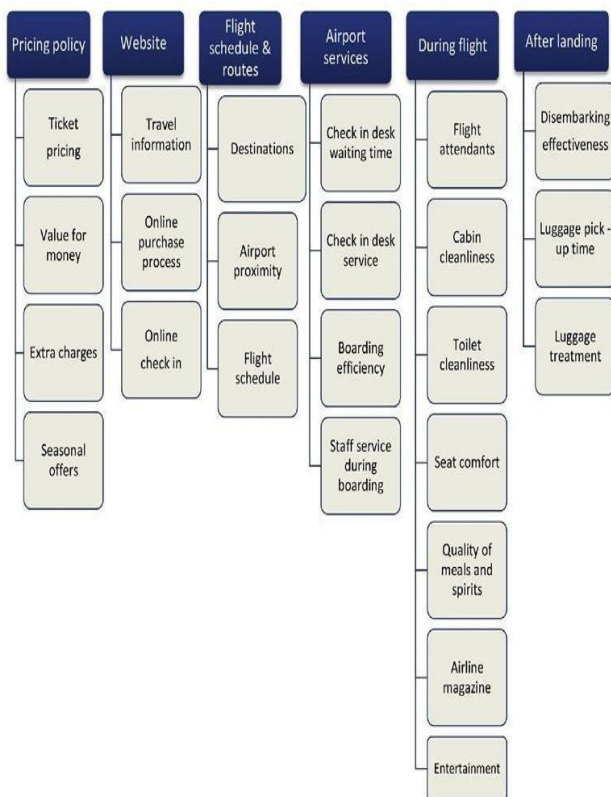


Fig 8: Hierarchical structures of customers' satisfaction dimensions.

Based on the above research the satisfaction and importance of each criterion is presented in the following figures below:

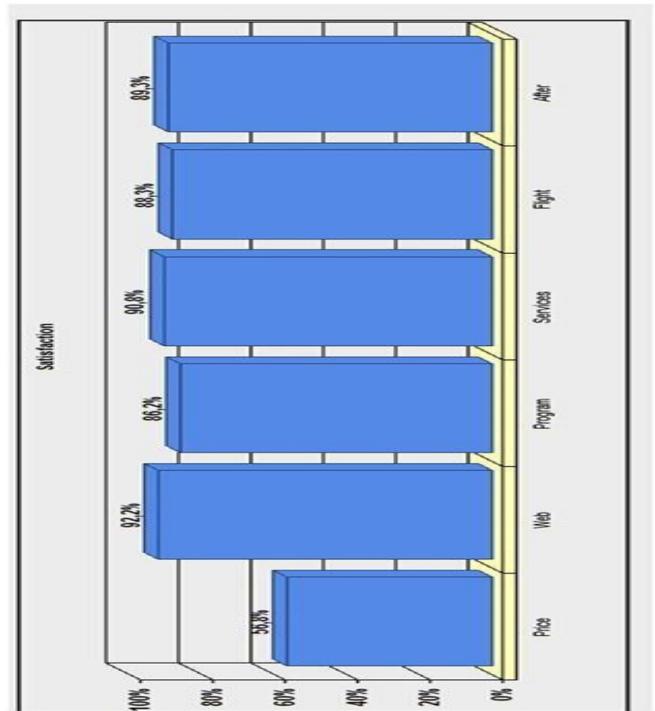


Fig: 9 Satisfaction levels for each criterion

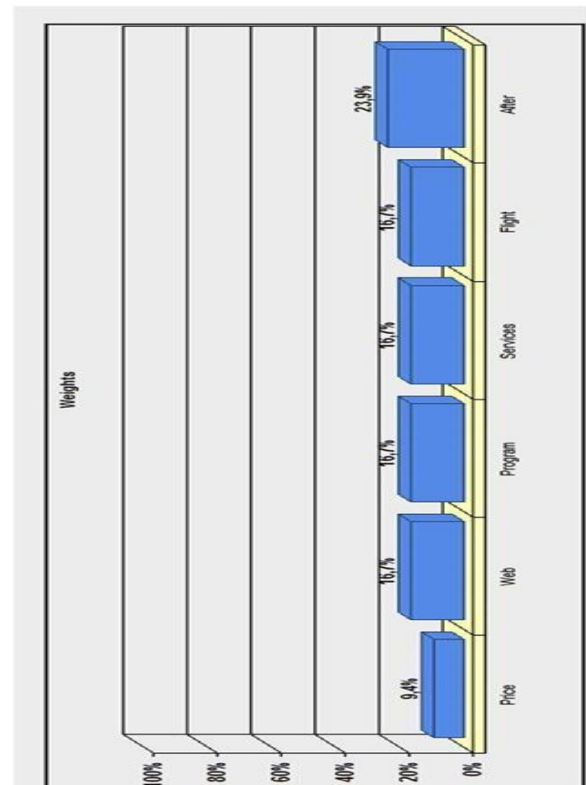


Fig: 10. Importance level for each criterion (weights).

With the implementation of the MUSA method, the researcher evaluates airline passenger satisfaction and also the global and partial satisfaction levels and determines the strength and the frail points of the Greece based airline. Future research can be extended to other airlines. Hung-Che Wu, Ching-Chan Cheng and Chi-Han A (2017) in the research titled “An empirical research of green switching intentions in the airline industry”. According to Teoh and Khoo (2016), the air transport sustainability factor is major concern these days as it having a direct relationship with climate change. Studies explored the green perceived value, green corporate image, green experiential loyalty perceived by the passengers traveling through airline services.

The following model was developed to explain the interrelationship between the constructs:

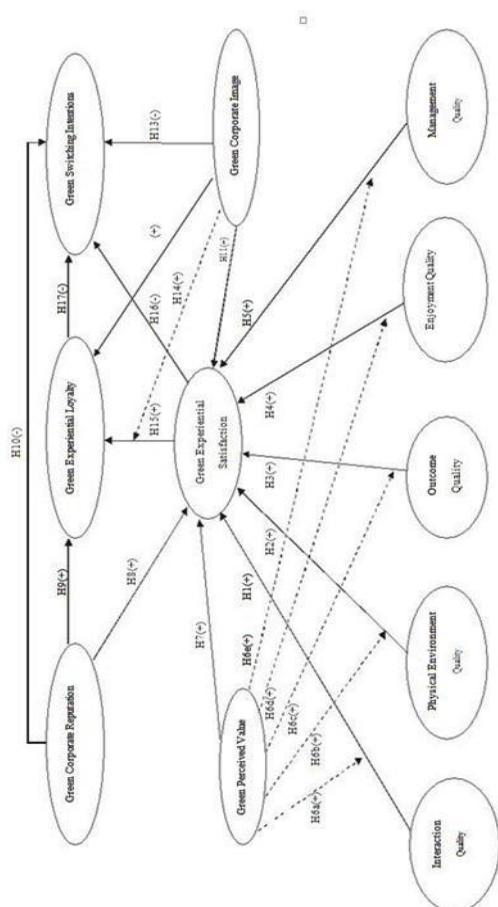
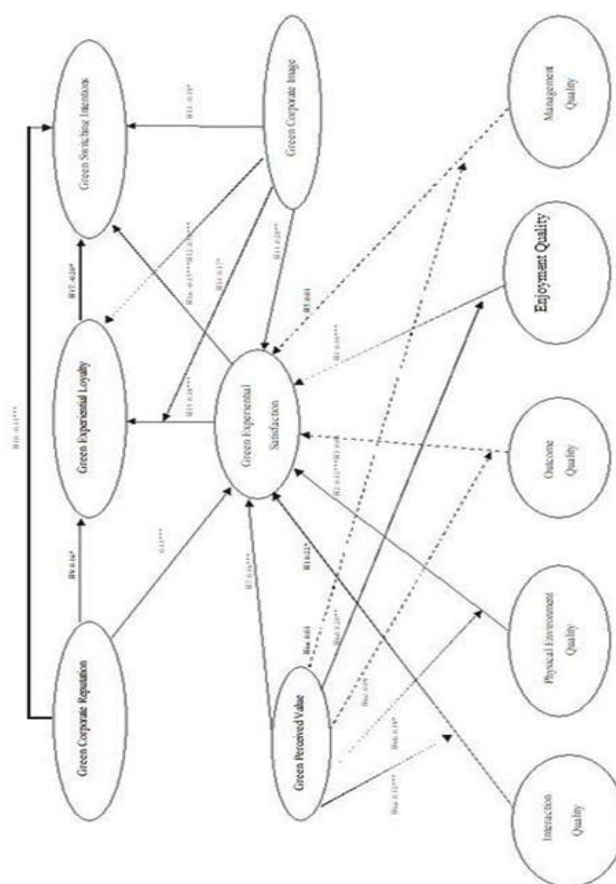


Figure 11: A conceptual research model.

A 46-item questionnaire was collected from passengers traveling onboard China Airlines. Environmental protection and sustainable development are among China Airlines principal values.

The results obtained after hypothesis testing are reflected in the following figure:



The research proved the role of experiential quality dimensions with required reliability and validity to accept the proposed conceptual model. Green perceived value by the airline passenger was found one of the major antecedents of green experiential satisfaction.

<Appendix 1>

CONCLUSION

The above literature of relevant studies is an attempt to in-depth research of literature concerning the effects of service quality on customer satisfaction in the fast-emerging aviation sector. Based on the

above research, it can be said that service quality is the most important basis of customer satisfaction and that SERVQUAL model of (Parasuraman and Zeithaml et al. 1988) is the most important that has been followed by researchers. The studies contributed by various scholars on service quality and customer satisfaction have made a valuable contribution to research in this field. The studies by their penetrating insight have made a valuable contribution and furthered the scope of research and have benefitted scholars, academicians, managers by adding value.

APPENDIX

Appendix 1:

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