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The Influence of Class of Seat on the Relationship between Aviation Service Quality and Customer Satisfaction

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ABSTRACT. *This paper examines the impact of different cabin class of aircraft on the relationship between air service quality and customer satisfaction.The study found that Airlines should be able to think about how to optimize customer service quality by analyzing customer perceived air service quality. By using the influence of the components of service quality on the perceived customer value and customer satisfaction, a highly efficient composite marketing strategy is implemented, and differentiated services are provided according to personality characteristics such as cockpit level. Moreover, customer satisfaction will change the attitude of consumers and will also affect consumers' willingness to participate. By improving customer satisfaction and increasing customers' willingness to purchase again, they can effectively improve customers' psychological conversion costs, reduce price sensitivity, reduce marketing failure costs, and reduce new customer creation costs, ultimately directly or indirectly affecting the company's future profitability and Economic performance. Therefore, for airlines, the implementation of a strategy centered on customer value and customer satisfaction is the continuous and effective management of customer repurchase.*

KEYWORDS: *Aviation Service Quality，Customer Satisfaction，Seat Class*

1. Introduction

During the passenger flight, the service is evaluated based on the psychological perception (atmosphere and environmental quality) of the aviation service delivery process and how they interact with the flight attendants (employees). The airline's model and cabin environment (physical environment quality) also affect customer perception of overall service quality[1]. Therefore, the assessment of airline service quality should be based on multi-dimensional quality assessment of interaction quality, physical environment quality and atmosphere quality. However, many studies on the quality of aviation services are limited to a single dimension of

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service quality research, and do not study the service quality of airlines from a multidimensional perspective.

At present, there are many studies on the service quality of airlines, but there is still a lack of detailed analysis of aviation service quality and customer satisfaction. Therefore, in this study, we try to understand how the quality of aviation service affects customer satisfaction, and based on the results of this research, propose the marketing strategy of aviation enterprises, and use high-quality services to enhance the competitiveness of Chinese airlines.

2. Literature review

In general, service quality variables are used as independent variables, and customer satisfaction and behavioral intention are used as dependent variables to identify the cause and effect of partial or total variables for each scholar. The reason for using these variables is to find out how the evaluation of the customer's service quality affects the customer satisfaction and the behavioral intention and ultimately find the point of marketing [2].

In order to obtain good behavioral intent from the customer, two factors such as service quality and satisfaction should play a similar role [3]. However, these two explanatory variables were different in focus and measurement methods [4]. Cronin, Brady, and Hultfound that service quality and value are the main factors that lead to satisfaction, and that they have a strong influence on behavioral intentions Through satisfaction of service quality, the path that affects the degree of behavior has been revealed [5] .

Gilbert and Wong conducted a study on the expectations of aviation service quality for travelers leaving Hong Kong airport. The nationality of tourists and the purpose of travel differed slightly according to the desired service quality, and the most important service quality dimension was conviction. This meant that travelers were most sensitive to their safety and security[6] . In this study, based on existing research, we classified the three dimensions of physical environmental quality, interaction quality with employees, and environmental environmental quality. Because these three components reflect the characteristics of air service better than the SERVQUAL model, which focuses on process quality. Airline passengers evaluate airline service based on the quality of the atmosphere and environment they perceive during service and the quality of the interaction between passengers and flight attendants or other staff. In addition, the quality of physical environment such as Airliner type and cabin environment of an airline company also influences the overall service quality perceived by customers . Therefore, the evaluation of airline service quality should be made from interaction quality, physical environment quality and atmosphere environmental quality. However, many domestic studies on aviation service quality only focus on a single level of service quality, without considering the components of aviation service quality. In addition, according to the different use patterns of passengers, such as class of cabin, and the difference in

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service content and quality between ordinary airlines and low-cost airlines, there are few studies on consumer choice preference.

This paper attempts to explore the difference in the influence of Aviation service quality on customer satisfaction according to the different characteristics of customers.

3. Research Method

3.1 Operational Definition of Configuration Concepts and Selection of Measurement Variables

The main concept of composition of this research model is composed of perceived service quality, customer satisfaction, and perceived service quality is divided into physical environment quality, interaction quality with staff and atmosphere environmental quality.

Aviation service quality

Perceived Aviation service quality is defined by Zeithaml & Bitner and Grünroos as 'customer perception of superior or outstanding service delivery and actual service performance' in terms of performance. For dimensions and factors of air quality of service, based on the model of Brady & Cronin , physical environmental quality, staff interaction quality, and atmosphere environmental quality were constructed and measured on a 5-point scale of recertification.

Customer satisfaction

Customer satisfaction refers to an emotional and emotional response to consumption experience to the extent of goodwill in the subjective assessment of the results and experience of purchasing and using a product or service. Airline users' satisfaction is an act to assess after using the service, defining the attitude of users per attribute and overall satisfaction level and measuring it on a five-point scale of recertification.

3.2 Sample design

On the basis of literature research, this study constructs a theoretical model of the relationship between perceived service quality and customer satisfaction, and verifies whether the relationship will change under the effect of different class of seats through empirical analysis.

The hypothesis of this paper is that, according to the utilization characteristics of users (seat level), the improvement of service quality has a positive impact on customer satisfaction. In addition, since business class passengers are more sensitive to the perception of service quality than economy class passengers, there are

ISSN 2706-6827 Vol. 1, Issue 1: 63-74, DOI: 10.25236/IJFS.2019.010107

differences in customer satisfaction between business class passengers and economy class passengers. Therefore, the following assumptions are set in this paper:

Seat class can adjust the relationship between airline service quality and customer satisfaction.

H1: Seat class can adjust the impact of the airline's physical environment quality on customer satisfaction.

H2: Seat class can adjust the impact of flight attendant interaction quality on customer satisfaction

H3: Seat class can adjust the influence of atmosphere quality on customer satisfaction

3.3 Sample design

In order to collect valid data, the preliminary preliminary surveys were conducted to collect data, and final questionnaires were confirmed based on the preliminary survey results. Then, The survey was conducted through direct visits.

The questionnaires were carried out from November 25 to 29, 2018, and 214 questionnaires were validated with the valid questionnaire except for the questionnaire which was not validated after the questionnaire was distributed.

The first 300 questionnaires were distributed. The total number of questionnaires collected was 222, and the recovery rate was 74%. A total of 214 questionnaires were used except for 8 questions that were not valid for the study.

3.4 Analysis method

Statistical analysis of the data collected in this study was conducted using SPSS 22.0 after data coding and refinement. Frequency analysis was performed to analyze the demographic and general characteristics of the collected samples. Reliability analysis was conducted to verify the reliability of the questionnaire items. Factor analysis was conducted to confirm service quality and customer satisfaction construct dimension. Multiple regression analysis was conducted to investigate the influence of air quality service factors and customer satisfaction. Univariate analysis was conducted to analyze the effect of seat class adjustment.

4. Empirical analysis

4.1 Verification of the reliability and validity of variables

<Table 1>shows that the value of KMO (Kaiser Meyer Olkin), which indicates the degree of correlation of variables between different variables, is 0.776. And the significance value of the Bartlett test, which indicates the suitability of the factor

ISSN 2706-6827 Vol. 1, Issue 1: 63-74, DOI: 10.25236/IJFS.2019.010107

analysis model, was 0.000. Factor analysis revealed three factors: physical environment, atmosphere environmental quality, and interaction quality.

Table 1. Factor Analysis of Aviation Service Quality

Survey item	Factor analysis			Reliability
	Physical environmental quality	Atmosphere environmental quality	Interaction quality	Cronbach's α
The meal is excellent.	.698	-.138	.104	0.605
The airline's model is up-to-date.	.697	.216	.090	
Seat comfort on board	.632	.296	.148	
In-flight facilities are convenient to use.	.466	-.064	.429	
The crew are courteous and polite.	-.039	.771	.246	0.615
The uniforms and the appearance of the crew are tidy.	.069	.751	.069	
The cabin environment of the aircraft is pleasant.	.460	.509	.071	
Crew members actively assist customers	.192	.359	.604	0.603
Crew members provide in-flight services at the right time	.281	.253	.583	
There is no inconvenience in communicating	.351	.522	.567	

ISSN 2706-6827 Vol. 1, Issue 1: 63-74, DOI: 10.25236/IJFS.2019.010107

with the crew.				
Total variance explained (cumulative%)	45.812	56.746	63.329	
KMO value	0.666	0.611	0.505	
	0.776			

As a result of factor analysis on customer satisfaction, only one component was extracted. As shown in Table 2, the value of KMO is 0.654, which is appropriate for factor analysis, and the significance value of Bartlett test is 0.000. Cronbach's alpha value was 0.647, which was a good measure.

Table 2. Factor Analysis of Customer Satisfaction

	Survey item	Factor analysis	Reliability
Customer Satisfaction	The service of the airline was attractive	.783	0.647
	I would like to recommend the airline I used to people around me.	.694	
	I am generally satisfied with the service of the airline I used.	.641	
	Total variance explained (cumulative%)	58.629	
	KMO value	0.654	

In addition, it is shown that each measurement item has a high degree of relevance exclusively to the originally intended concepts, and that the convergence validity is revealed. The questionnaires used in the research are the interviews between the validated measurement items and the actual working staff And to ensure the validity of the contents by including common items. The predictive validity is a concept related to the concept validity. It is to grasp the validity by comparing the relationship between the measurement result of the reference and the measurement tool, which is known to measure the attribute to be studied, and the accuracy in the prediction of the measurement tool This study confirms this by verifying the set hypothesis. On the other hand, the correlation analysis results for the discriminant validity test showed that the coefficient values between the variables are smaller than '1' in the <Table 3>.

ISSN 2706-6827 Vol. 1, Issue 1: 63-74, DOI: 10.25236/IJFS.2019.010107

Table 3. Effect of Air Service Quality on Customer Satisfaction

	Average	Standard Deviation	Physical environmental quality	Interaction quality	Atmosphere environmental quality	Customer Satisfaction
Physical environmental quality	4.0692	.48826	1.00			
Interaction quality	4.2833	.45855	.476**	1.00		
Atmosphere environmental quality	4.4413	.49771	.372**	.515**	1.00	
Customer Satisfaction	4.2786	.50013	.461**	.484**	.544**	1.00

In order to verify that the perceived air service quality of Chinese passengers has a positive effect on customer satisfaction, air service quality (physical environmental quality, interaction quality, atmosphere environmental quality) is set as independent variable, Regression analysis.

Regression analysis revealed that both physical environment quality (p=0.000), interaction quality (p=0.007) and atmosphere environmental quality (p=0.000) had positive effects on customer satisfaction. Comparing Beta values of each factor, the regression coefficient value of atmosphere environmental quality among 'physical environmental quality (0.240)', 'interaction quality (0.184)' and 'atmosphere environmental quality (0.360)' is relatively higher . It can be seen that the air quality of the air service quality (crew etiquette, cabin environment, etc.) should be higher to improve customer satisfaction.

Table 4. The effect of air service quality on customer satisfaction

Model	Non-standardization factor	Standardization Coefficient	T value	Sig.	VIF

ISSN 2706-6827 Vol. 1, Issue 1: 63-74, DOI: 10.25236/IJFS.2019.010107

	B	Standard error	beta			
1 (constant)	.811	.300		2.701	.007	
Physical environmental quality （X_1）	.246	.064	.240	3.871	.000	1.330
Interaction quality （X_2）	.201	.073	.184	2.746	.007	1.560
Atmosphere environmental quality （X_3）	.361	.064	.360	5.650	.000	1.401
R-squared=.396 Adjusted R-squared=.387 F = 45.610 P = .000						
Y: customer satisfaction						

So we can get the regression equation is

$$Y=0.811+0.246X_1+0.201X_2+0.361X_3$$

After further examining the impact of the seat class on the relationship between aviation service quality and customer satisfaction, the following results were obtained. We conducted a one-way ANOVA using customer satisfaction as a dependent variable, physical environment quality, interaction quality and atmosphere quality as independent variables. The results of each variance analysis are summarized in <Table 4-1>, <Table 4-2> and <Table 4-3>.

Table 4-1. Analysis of Variance of Customer Satisfaction, Physical Environmental Quality, and Seat Class

Variable	Type III sum of squares	F	Sig.
Model	793.693	3139.182	.001
Physical environmental quality	11.117	8.250	.000
Seat class	.265	1.853	.082
Physical environmental quality*Seat class	.621	.533	.783
Dependent variable: customer satisfaction			

Variable	Type III sum of squares	F	Sig.

ISSN 2706-6827 Vol. 1, Issue 1: 63-74, DOI: 10.25236/IJFS.2019.010107

Model	609.517	354.715	.032
Interaction quality	8.857	2.931	.095
Seat class	1.967	6.959	.018
Interaction quality*Seat class	2.805	2.690	**.016**
Dependent variable: customer satisfaction			

Table 4-2. Analysis of Variance of Customer satisfaction, Interaction Quality, and Seat Class

Table 4-3. Analysis of Variance of Customer satisfaction, Atmosphere Environmental Quality, and Seat Class

Variable	Type III sum of squares	F	Sig.
Model	525.395	1395.818	.001
Atmosphere environmental quality	14.743	11.218	.001
Seat class	.645	3.472	.092
Atmosphere environmental quality*Seat class	.972	1.157	.332
Dependent variable: customer satisfaction			

<Table 4-2> shows that at the 0.05 significance level, the impact of interaction quality on customer satisfaction will vary significantly depending on the class of cabin. However, the impact of physical environment quality and ambient environmental quality on customer satisfaction was not significantly different in the class of cabin (P=0.783>0.05; P=0.332>0.05).

ISSN 2706-6827 Vol. 1, Issue 1: 63-74, DOI: 10.25236/IJFS.2019.010107

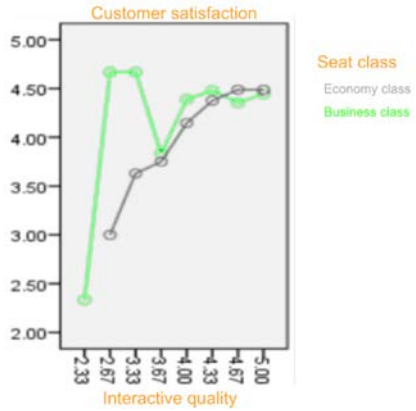

Figure. 1 Adjustment effect of seat class (interaction quality → customer satisfaction)

It can be seen from Fig.1. that in the case of low interaction quality, the satisfaction of business class passengers and economy class passengers is quite different, and the satisfaction of business class passengers is significantly higher than that of economy class passengers. This can be explained by the fact that business class passengers do not like to be disturbed by others during the flight. The evaluation of the quality of aviation services by economy class passengers depends more on the interaction between passengers and flight attendants. That is to say, for economy class passengers, the better the interaction between the flight attendants and the passengers, the higher the satisfaction of the economy class passengers.

5. Conclusion

Chinese tourists is growing rapidly every year to overseas, depending on income level increases. airlines in various countries industry is also developing air services to meet the symbols and tendency of Chinese customers and improve service quality by expanding it is necessary to derive the satisfaction of Chinese customers. Therefore in this study, the Chinese airline service quality and perceived focus on moderating effects of Chinese travel viable form of customer value and customer satisfaction, and determine the impact on the intent of relationship duration.

It was on the basis of looking for ways to improve the service quality of the Chinese airline. Looking at the research hypotheses were as follows.

First, perceived service quality of the physical environment, air quality (newest aircraft type, flight amenities easy access, etc.) means that the most important factors for increasing customer value is the perceived practical customer value .

ISSN 2706-6827 Vol. 1, Issue 1: 63-74, DOI: 10.25236/IJFS.2019.010107

Second, the quality of the atmosphere environment quality air service (courtesy of the crew, cabin environment, etc.), it can be seen that increase customer satisfaction further improved.

Third, the crew manners, crew uniforms and appearance, the higher the degree of atmosphere environmental quality is well-equipped air service quality, such as the more lasting relationship aircraft cabin environment.

Fourth, the practical value of the airline customer service (rates corresponding provision of benefits, rates rationality, etc.) will increase the more higher the degreeof customer satisfaction and lasting relationship.

Fifth, the charm of satisfaction and service for the whole airline services, such as the higher the higher the degree of relationship will persist.

Implications according to the results of this study are as follows.

First, the value of configuration factors that make up the service quality by empirical analysis of the air quality of service perceived by the customer are perceived, and depending on the degree of influence and customer satisfaction to be able to pursue a specific strategy for the use characteristics of the tourists.

Second, the customer service operator suggests on the importance of customer value, customer satisfaction and also the management of the relationship persists. Strategic implementation of customer value and customer satisfaction, customer relationship will soon become ongoing management of the impact factor.

Third, we propose the need for fine-grained discrimination and effective marketing strategies of the type used in the aviation service users.

These results are demanding a plan of effective marketing strategies according to the specific characteristics of tourists each use by type (seat class) is the practice of strategies to profit from customized according to the customers is required.

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