Original Research Paper

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"Relationship between Service Quality , Customer Satisfaction and Customer Loyalty in No Frill Airlines: A Comparative Study of Jet Konnect and Indigo Airlines"

TOURISM

KEYWORDS: Service Quality , Customer Satisfaction ,Customer Loyalty, Comparative Study, No Frill Airlines

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ABSTRACT

Aviation industry is a vital segment of the fast growing Indian economy because of its catalytic role in stimulating growth across all other sectors of the economy. In tandem with fast growth of Indian economy and its continuing liberalization, the industry has witnessed rapid growth and expansion in the past decade. The industry has grown at a 16% CAGR in passenger traffic terms over the past decade. With advent of LCCs and resultant decline in yields, passenger traffic growth which averaged 13% in the first half has increased substantially to 19% CAGR during 2006-2011. Despite strong growth, air travel penetration in India remains among the lowest in the world. In the present age of modernization, one of the basic objectives of the firms is to measure the service quality through which they will be able to evaluate customers' level of expectation as well as level of perception about the services offered by them especially when the introduction of information technology has significantly changed customers' expectation and perception level about the quality of services. In this study researcher have shown the relationship between service quality, customer satisfaction, and customer loyalty along with a comparative study between two "No Frill Airlines".

Introduction

The aviation sector has now become as one of the most important segments in the economic development of a nation. It plays a vital role in moving people or products from one place to another, be it domestic or international, especially when distance becomes long. In the past decade, as the air transportation market has become even more challenging so many airlines have turned to focus on the quality of airline services in order to increase the satisfaction of the customers. Satisfaction of the customers comes only when their needs and wants are fulfilled (Choudhuri, 2016). Rust and Oliver (1994) explained the customer satisfaction as "a summary of cognitive and affective reaction to a service incident (or sometimes to a long-term service relationship). Satisfaction (or dissatisfaction) results from experiencing a service quality encounter and comparing that encounter with what was expected". Customer satisfaction has now become the most important objective of the airline companies through which they will be able to retain their own customers as well as will be able to attract the new customers in the global competitive market.

Service quality and customer satisfaction, the key differentiators, are now emerged as the important element of the business strategy of these companies that play a major role in day to day business operations of the companies. Service quality plays an important role in the customization process of service delivery, improvement of the productivity and profitability of the organizations as well as in the satisfaction process of the customers of the organizations. Customers are likely to evaluate service quality based on the total service package provided and how well the combined services meet their expectations (Gronroos, 2000). According to Czepiel (1990), service quality can be defined as customers' perception of how well a service meets or exceeds their expectations. Service quality is the consumer's overall impression of the relative efficiency of the organization and its services. Understanding exactly what customers expect is the most crucial step in defining and delivering high-quality service. Service quality is one of the best models for evaluating customers' expectations and perceptions. Passenger satisfaction which is fundamental to the practice of consumer sovereignty may be explained as a judgment made on the basis of a specific service encounter. Satisfaction and loyalty are not surrogates for each other. It is possible for customers to be loyal without being highly satisfied and to be highly satisfied and yet not loyal.

In a highly competitive environment the provision of high quality services passengers is the core competitive advantage for an airline's profitability and sustained growth (Chen, 2008). Service quality conditions influences a firm's competitive advantage by retaining customer patronage, and with this comes market share (Park et al., 2004; Morash and Ozment, 1994). Passenger satisfaction about the services arises when a company can provide passengers with benefits that exceed passengers' expectation and this is considered value-added. If customers are satisfied with the product or service, they will buy more, and do so more often. Passenger gratification is an essential goal for each airline providing passenger services. The on board experience is still something special for the customer. The customer has a wide choice to select the suitable airline product according to their requirements. Therefore, airlines are continuously working on the in-flight product development and innovation to differentiate themselves from competitors. During the last few years a variety of in-flight product innovations have entered into the market. This includes the aircraft seat on long haul flights as an important product element which is continuously being improved and renewed according to its life cycle and changing customer requirements. The current development of business class seat roll-outs shows the significance of this product element which influences the buying decision of the passenger especially on long haul flights. If the passenger is not satisfied, due to the negative experience, the client will reconsider the buying decision for further flights and will probably switch to another airline. This kind of situation belongs to the daily business in the passenger airline industry. Excellent passenger satisfaction is one of the greatest assets for air business in today's competitive environment. There are many factors that can help an airport to build its customer base, and passenger service and satisfaction can be a determining factor in the success of an entire operation. As, delivering high-quality service to passengers is essential for airline survival, so airlines need to understand what passengers expect from their services. Stiff competition and favorable initiatives of the Government of India added fuel to enlarge both flights and fleets. Under the circumstances, firms are now trying to understand the significant relationship between satisfaction and behavioural intention of the airline passengers in better way in the online environment and taking a number initiative against these in the present competitive airline market.

Objectives of the study

The basic objective of the current study is to conduct a comparative study in between Jetlite and Indigo airlines' passengers travelling from the city of Kolkata to observe the influence of service quality and customer satisfaction on the customer loyalty. The major objectives of this research work are given below:

(I) To elucidate the relationship between service qualities delivered to passengers and their satisfaction as to different class of journey.

(ii) To examine the impact of customers' satisfaction on customer loyalty in relation to airlines.

(iii) To understand the relationship among the service quality, customer satisfaction and customer loyalty in the aviation sector in present perspective.

(iv) To study the perception of the customer with respect to service quality offered by the two airlines under study.

(v) To compare the service quality of the two airlines under study.

Methodology

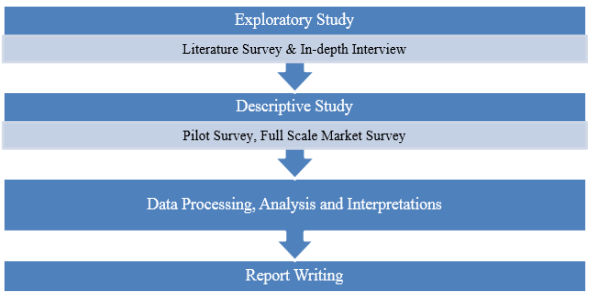
To conduct the current study methodically, the research design based on the identified objectives and visualization of the scope of the research was prepared. At first, using various secondary data sources such as journals, magazines, books, databases, internet etc. a detailed literature survey for the study was carried out which helped the researcher to design the present study in order to examine the significant relationship among the service quality, customer satisfaction and customer loyalty in the aviation sector. This section covered the detailed discussion of the various methodological procedures such as preparation of research design, formation of conceptual framework, formulation of hypotheses, establishment of sample design, development of survey instruments, scaling technique, data collection, data analysis, reliability and validity testing and the statistical software and tools used for the purpose of the study.

Research Design

After proper formulation of research problem in a clear form, at the time of research design the following perspectives were considered by the researcher:

(I) scope of the research
(ii) geographical area of the research
(iii) availability of the data for the research
(iv) availability of the time for the research
(v) availability of the cost for the research
(vi) way of data collection
(vii) relationship pattern of the variables of the research

The pictorial representation of the process of research design for this study is given below:



Process of Research Design

Hypotheses

Based on the research problem several hypotheses were developed to examine the research questions. Though these hypotheses are a tentative assumption which may or may not be supported by the sample data but these guided the researcher in the research process by keeping the researcher on the right path. Hypotheses helped the researcher to identify the type of data required to conduct the research and the type of methods needed to perform the data analysis operation. The following null and alternative hypotheses were developed for the purpose of the study:

$H1_0$: Customer satisfaction in the aviation sector is independent of the service quality.

$H1_a$: Customer satisfaction in the aviation sector is dependent of the service quality.

$H2_0$: Customer loyalty is independent of the satisfaction of the airline customers.

$H2_a$: Customer loyalty is dependent of the satisfaction of the airline customers.

$H3_0$: There exist no significant relationship among the service quality, customer satisfaction and customer loyalty in the aviation sector.

$H3_a$: There exist significant relationship among the service quality, customer satisfaction and customer loyalty in the aviation sector.

$H4_0$: There is no difference in perception of service quality between Jet Konnect and Indigo Airlines.

$H4_a$: There exists a difference in perception of service quality between Jet Konnect and Indigo Airlines.

Sample Design

The aim of the researcher was to obtain the passengers' perception score regarding the services provided by the Jet Konnect and Indigo Airlines. Therefore, researcher identified only one type of population, i.e., passengers who are travelling from the city of Kolkata to constitute the sample design. For this purpose researcher used purposive sampling method (=0.05) to collect the sample from above mentioned population where 650 questionnaires were distributed to both the Jet Konnect and Indigo Airlines passengers each. Though 539 Jet Konnect airline passengers and 502 Indigo airline passengers were agreed to give response but usable responses were only 149 in case of Jet Konnect passengers and 141 in case of Indigo airlines passengers, i.e., finally obtained a total number of 290 airlines customers' responses at here.

Survey Instrument

After completing extensive literature survey and in-depth interview, researcher decided to adopt SERVPERF model as a backbone of the survey instrument. The SERVPERF model developed by Cronin and Taylor (1992) was used for the study along with the process variables identified by Wen and Li (1998) with adequate modification to suit the Indian condition as adopted by Venkatesh and Nargundkar (2006). A multi-item structured and self-administered questionnaire was developed with a 7 point Likert scale to generate response across the items. The questionnaire aims to evaluate the perception of the airline passenger with regard to pre-flight, in-flight and post-flight services. The questionnaire was tested for reliability and scale validity using exploratory factor analysis. The initial 30 items were reduced to 22 items following the principal component analysis done by adopting the orthogonal rotation using varimax process.

1. 4. 5 Data Collection

Data collection is a process through which researcher can obtain information in order to take decision about important issues regarding the research problem. According to Zikmund (2000), primary and secondary processes are basically two types of data collection procedure used in research. Through survey, researcher collected primary data or raw data from the passengers who are travelling from the city of Kolkata. At the time of survey researcher assured all the respondents that their valuable responses would be protected in highly confidential manner for the purpose of the research itself and no particular identified response of any person would be brought in front or published in front of none and obviously all the results would be presented either in aggregated form or in average form or in form of percentage of result. Secondary data were collected from the various aviation reports, Press Reports, Jet Konnect and Indigo's Reports, several reports of Indian government and from the websites. The preparation of these data collection is both complex and difficult (Yin, 1994). Diagrammatically data collection procedure for the current study is given below:

Data Analysis

The statistical analysis procedures used to analyze the data are one-way ANOVA, discriminant analysis, cluster analysis and cross tabulation. The analysis of the data used the level of significance =0.05. The two aviation services considered for the comparative study were Jet Konnect and Indigo Airlines.

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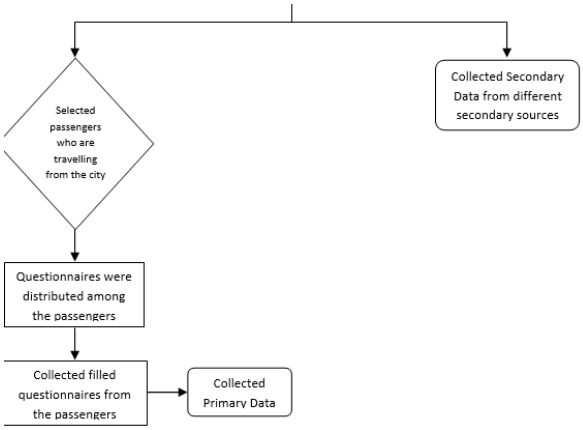
Data Collection



Process of Data Collection

Statistical Software and Tools

Statistical software and tools are the two most important factors to carry out all the statistical analyses based on the survey data. To perform the required operations successfully, the software used for the study are given below:

(i) Microsoft Excel 2007

(ii) SPSS 16

RESULTS AND DISCUSSIONS

The core objective of this research work is to conduct a comparative study in between Jetlite and Indigo airlines' passengers travelling from the city of Kolkata to observe the influence of service quality and customer satisfaction on the customer loyalty. The opinion survey followed by performance of various statistical analyses was carried out to examine the influence of service quality and customer satisfaction on the customer loyalty in the aviation sector. In Chapter 1 at the methodology section, the detailed methodology of such opinion survey has already been given. This chapter will cover a detailed discussion of the demographic characteristics of the Jetlite and Indigo airlines' passengers; satisfaction of the airline passengers and perceived service quality, customer loyalty and the satisfaction of the airline passengers, relationship among the service quality, customer satisfaction and customer loyalty in the aviation sector and the passengers' perception of quality of services provided by the Jet Konnect and Indigo Airlines.

Descriptive Analysis

In order to obtain the data for the purpose of the present study, purposive sampling method was carried out among the Jetlite and Indigo airlines' passengers travelling from the city of Kolkata where researcher carefully considered the different demographic profile such as gender, age, income status, occupation, educational qualification, locality of living and modern aids accessed by the airlines passengers. From the available data, researcher tried to present here the demographic profile of these passengers. The summarized demographic profile of the passengers of this study is now given below:

Demographic profile of the passengers

Demographic Variable	Demographic Characteristics	Frequency	Percentage
Gender	Male	182	62.8
	Female	108	37.2
Age	≤ 30 years	56	19.3
	31 - 40 years	92	31.7
	41 - 50 years	73	25.2
	51 - 60 years	49	16.9
	≥ 60 years	20	6.9
Income	≤ Rs.14999.00	7	2.4
	Rs.15000.00 -Rs.24999.00	26	9.0
	Rs.25000.00 -Rs.44999.00	81	27.9
	≥ Rs.45000.00	176	60.7
Occupation	Salaried	74	25.5
	Business	108	37.2
	Professional	55	19.0
	Retired	13	4.5
	Housewife	40	13.8
Educational Qualifications	High school	26	9.0
	Graduate	89	30.7
	Post-graduate	77	26.6
	Professional	33	18.3
	Any other	45	15.5
Locality of Living	Center of the town	133	45.9
	Outskirts of the town	121	41.7
	Rural areas adjoining town	36	12.4
Modern Aids	Only mobile phone	41	14.1
	Combination of mobile & internet	249	85.9

From the above table it is clear to understand that among 62.8% of male and 37.2% of female customers, the two largest age groups of 31.7% and 25.2% belong to the age groups of 31-40 years and 41-50 years respectively. In addition to this, 19.3% respondents belong to the age group of ≤ 30 years and 16.9% respondents belong to the age group of 51-60 years. Old generation, i.e., ≥ 60 years represents 6.9% of the respondents. Major respondents, that is, 60.7% had monthly household income ≥ Rs.45000.00 where 27.9% respondents' earning were Rs.25000.00 - Rs.44999.00 per month, 9% respondents' monthly household income were Rs.15000.00 - Rs.24999.00 and 2.4% respondents' income were ≤ Rs.14999.00 per month. Major number of customers (37.2%) were businessmen where as minor number of customers (4.5%) customers were retired persons. 25.5% customers were salaried employees, 19% were professionals and housewives were only 13.8%. 30.7% customers (the biggest group) were graduate where 26.6% were post-graduate, 18.3% had the background of professional qualifications, other qualified persons were 15.5% and only 9% customers were high school qualified. The most of the customers (45.9%) live at the center of the town where 41.7% customers live at outskirts of the town and 12.4% live at rural areas adjoining the town. It is easy to observe that where maximum customers (85.9%) accessed the modern aids of mobile and internet jointly there significantly only 14.1% customers used only the mobile.

Hypothesis Testing

Based on the literature survey, for the purpose of the study four hypotheses were developed. To test these hypotheses the necessary data was collected from the passengers of Jetlite and Indigo airlines. In the present study, both correlation analysis and regression analyses were performed to test the hypotheses which help to examine the relationship among the variables. The correlation analysis measured the linear relationship between two or more variables where regression analysis measured the relationship between one dependent variable and one or more independent variables. To study the relationship of dependent and independent variables both the null and alternative hypotheses were considered for the present study. The analyses of four hypotheses testing and their implication in the context of aviation sector especially in the

city of Kolkata are discussed in the following sections where statistical package SPSS 16 was used to perform these analyses.

Hypothesis 1

The literature survey explored that in the aviation sector satisfaction of the airline passengers is very much influenced by the quality of the service. To understand the imperative relationship of customer satisfaction and service quality, researcher has developed the first hypothesis for the purpose of the study at here:

H0: Customer satisfaction in the aviation sector is independent of the service quality.

H_0: Customer satisfaction in the aviation sector is independent of the service quality.

H : Customer satisfaction in the aviation sector is dependent of the service quality.

The simple regression analysis was performed to test the strength of the relationship of the customer satisfaction and service quality as well as to predict the dependent variable in respect of the independent variables (predictors). Here, customer satisfaction was considered as a dependent variable and service quality was considered as the independent variable. The results of regression analysis are given below:

Result of Regression Analysis 1
Variables Entered/Removed

Model	Variables Entered	Variables	Method
1	SERVICE QUALITY [a]	.	Enter

a. All requested variables entered.
b. Dependent Variable: CUSTOMER SATISFACTION

Model Summary (CS vs. SQ)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.357 [a]	.181	.169	.79304

a. Predictors: (Constant), SERVICE QUALITY
b. Dependent Variable: CUSTOMER SATISFACTION

Result of ANOVA (CS vs. SQ)
ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	8.513	1	8.513	11.628	.003 [a]
	Residual	180.576	288	.627		
	Total	189.089	289			

a. Predictors: (Constant), SERVICE QUALITY
b. Dependent Variable: CUSTOMER SATISFACTION

Regression Coefficients (CS vs. SQ)
Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	Sig.	Sig.
1	(Constant)	B	Std. Error	Beta		
		3.786	.259		15.426	.005
	SERVICE QUALITY	.411	.186	.495	4.763	.003

(I) a. Dependent Variable: CUSTOMER SATISFACTION
(ii) # Legends used: CS – Customer Satisfaction, **SQ** – Service Quality
(iii) The above simple regression analysis indicates that the dependent variable customer satisfaction is strongly related with the independent variable service quality and the prediction of dependent variable (customer satisfaction) has successfully been taken place by the independent variable (service quality). The value of R Square = 0.181 in Table 4.3, indicates the significance of the study. The result of ANOVA in Table 4.4, the value of $F = 11.628$, $p \leq 0.001$ established the significance of the relationship between the customer satisfaction and quality of service perceived by the airline customers. So, the null hypothesis is rejected and alternative hypothesis "*Customer satisfaction in the aviation sector is dependent of the service quality*" is accepted here. The result of regression coefficients in Table 4.5, shows that the standardized coefficient and corresponding t-value of perceived service quality are = 0.495, t = 4.763, $p<0.001$ which again explained that there exists positive and strong relationship between the customer satisfaction (dependent variable) and service quality (independent variables) in the aviation sector. The perfect positive linear relationship of above mentioned dependent and independent variable are strongly supported by the acceptance of hypothesis 1.

Hypothesis 2

The literature survey indicated that in the aviation sector now a days customer loyalty is vastly influenced by the satisfaction of the airline customers. To understand the relationship between these two factors the following hypothesis was developed for the purpose of the study:

H_0: *Customer loyalty is independent of the satisfaction of the airline customers.*

H : *Customer loyalty is dependent of the satisfaction of the airline customers.*

To understand the strength of the relationship between customer loyalty and their satisfaction, the simple regression analysis was performed through which the prediction of the dependent variable from the independent variable (predictor) would be possible. For this purpose customer loyalty was considered as a dependent variable and the customer satisfaction was considered as the independent variable. In the following tables, the results of simple regression analysis in this context are given below:

Result of Regression Analysis 2
Variables Entered/Removed

Model	Variables Entered	Variables Removed	Method
1	CUSTOMER SATISFACTION	.	Enter

a. All requested variables entered.
b. Dependent Variable: CUSTOMER LOYALTY

Model Summary (CL vs. CS)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.472	.098	.086	0.91451

a. Predictors: (Constant), CUSTOMER SATISFACTION
b. Dependent Variable: CUSTOMER LOYALTY

Result of ANOVA (CL vs. CS)
ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	3.709	1	3.709	14.792	.002
	Residual	237.312	288	.824		
	Total	241.021	289			

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a. Predictors: (Constant), CUSTOMER SATISFACTION
b. Dependent Variable: CUSTOMER LOYALTY

Regression Coefficients (CL vs. CS)
Coefficients

Model		Unstandardized Coefficients		Standardized	t	Sig.
1	(Constant)	B	Std. Error	Beta		
		2.619	.452		11.917	.001
	CUSTOMER SATISFACTION	.703	.238	.463	3.261	.002

a. Dependent Variable: CUSTOMER LOYALTY
 # Legends used: CL– Customer Loyalty, **CS–** Convenient Satisfaction

The simple regression analysis results established that the dependent variable customer loyalty has a strong relationship with the independent variable customer satisfaction. In ANOVA result of Table 4.8, the value of F = 14.792, p≤0.001 established the significance of the relationship between the customer loyalty and customer satisfaction in the aviation sector. So, the null hypothesis is rejected and the alternative hypothesis "*Customer loyalty is dependent of the satisfaction of the airline customers*" is accepted. In Table 4.9, the regression coefficients' result shows that the standardized coefficient and corresponding t-value of customer satisfaction are = 0.463, t = 3.261, p<0.001 which also established that in the present study a positive and strong relationship exists in between dependent variable customer loyalty and the independent variable customer satisfaction. Thus, the perfect positive linear relationship of the dependent and independent variables of the study can be explained by the acceptance of this second hypothesis.

3 Hypothesis 3
The review of literature pointed out the significant relationship among the service quality, customer satisfaction and customer loyalty in the aviation sector. To understand this relationship the researcher has developed the following hypothesis:

H_0: *There exist no significant relationship among the service quality, customer satisfaction and customer loyalty in the aviation sector.*

H_a: *There exist significant relationship among the service quality, customer satisfaction and customer loyalty in the aviation sector.*

To test the hypothesis 3 multiple correlation analysis was performed and Pearson's Correlation Coefficient test was conducted to measure the association among the service quality, customer satisfaction and customer loyalty. The result of this multiple correlation analysis is now given below:

Multiple correlation result of service quality, customer satisfaction and customer loyalty

		SERVICE QUALITY	CUSTOMER SATISFACTIO	CUSTOMER LOYALTY
SERVICE QUALITY	Pearson Correlation	1	.173**	.218*
	Sig. (2-tailed)	.	.018	.032
	N	290	290	290
CUSTOMER SATISFACTION	Pearson Correlation	.173**	1	.151**
	Sig. (2-tailed)	.018	.	.003
	N	290	290	290
CUSTOMER LOYALTY	Pearson Correlation	.218*	.151**	1
	Sig. (2-tailed)	.032	.003	.
	N	290	290	290

** Correlation is significant at the 0.01 level (2-tailed).
* Correlation is significant at the 0.05 level (2-tailed).

The result of Table 4.10 indicates that here Pearson Correlation Coefficients were statistically significant [significant at the 0.01 level (2-tailed) and at the 0.05 level (2-tailed)]. It established that the customer loyalty has strong relationship with quality of service [0.218, Sig. 0.032 (significant at the 0.05 level (2-tailed))] and with the customer satisfaction [0.151, Sig. 0.003 (significant at the 0.01 level (2-tailed))]. So, here the null hypothesis is rejected and the alternative hypothesis "*There exist significant relationship among the service quality, customer satisfaction and customer loyalty in the aviation sector*" is accepted. The acceptance of third hypothesis, therefore, explained that there exists perfect positive linear relationship among the service quality, customer satisfaction and customer loyalty in the aviation sector.

4 Hypothesis 4
The literature survey revealed the differences of passengers' perception of quality of services offered by several airline companies in the present aviation sector. To understand this in a broader way the researcher has developed the following hypothesis:

H_0: *There is no difference in perception of service quality between Jet Konnect and Indigo Airlines.*

H_a: *There exists a difference in perception of service quality between Jet Konnect and Indigo Airlines.*

To test the fourth hypothesis researcher considered the following composition of the sample presented at Table 4.11 followed by performed exploratory factor analysis at below. The results of these analyses are presented in a sequential manner:

Composition of the sample

Sl. No.	Aviation service	Obtained number of samples	% to total sample
1	Jet Konnect	149	51.37%
2	Indigo Airlines	141	48.63%

Table 4.12 presented the results of exploratory factor analysis which revealed the revised construct as per factor loading >.600. Items with <.600 were eliminated as maximization of Cronbach's would require elimination of item with lesser factor loading score. Total variance extracted was found to be 69.5%. Cronbach's was found to be 0.917, thereby confirming the reliability of the scale used and KMO sampling adequacy was recorded to be 0.923 which suggested evidence of convergent validity.

Factor loading of pre-flight and in-flight aviation services

Variable Code	Variables	Mean	Factor loading
ASQ1	Flights are on time	5.681	0.791
ASQ2	Airline informs about the delay, if any	5.632	0.789
ASQ3	Waiting time for baggage arrival is acceptable	5.098	0.782
ASQ4	Baggage loss is a problem	5.432	0.779
ASQ5	Airline compensates for the baggage loss	5.291	0.776
ASQ6	Airline provides good check-in services	5.009	0.771
ASQ7	Airline provides adequate refreshment if there is a delay	4.971	0.763
ASQ8	Airline provides accommodation if there is a delay	5.672	0.759
ASQ9	Airline provides online booking services	5.912	0.755
ASQ10	Airline offers several incentive schemes for frequent fliers	5.343	0.751
ASQ11	Airline provides reasonable entry and exit transportation	5.554	0.748
ASQ12	Clear & precise cabin announcements	5.091	0.744
ASQ13	Cabin safety	5.193	0.737
ASQ14	Clean and pleasant interior	5.439	0.735
ASQ15	Good condition of the cabin equipments	5.777	0.731
ASQ16	Appearance of the cabin crew members	5.087	0.728
ASQ17	Cabin crew are courteous	5.298	0.723
ASQ18	Cabin crew are willing & providing services in time	5.401	0.719
ASQ19	Cabin crew are knowledgeable & expert enough to deal to emergency situations	5.011	0.714
ASQ20	In-flight refreshment provision is acceptable	4.873	0.712
ASQ21	Seat and space are comfortable	5.091	0.708
ASQ22	In-flight entertainment materials & services are acceptable	5.046	0.705

One-way ANOVA was performed and the result displayed a significant difference except for the variables 'in-flight refreshment provision (ASQ20)', 'loss of baggage (ASQ4)' and 'airline presents good check-in services' (ASQ6). Table 4.13 provides a summary of the mean scores alongwith the one-way ANOVA results.

Service quality scores for the two aviation services under study

Variable Code	Jet Konnect	Indigo Airlines	One-Way ANOVA	
	Mean	Mean	F value	Significance
ASQ1	5.098	3.467	26.652	.000
ASQ2	4.432	5.461	20.961	.000
ASQ3	4.298	3.196	5.860	.004
ASQ4	4.872	4.789	1.872	.221
ASQ5	4.851	5.367	7.819	.001
ASQ6	5.231	5.118	1.378	.389
ASQ7	5.091	4.612	11.093	.000
ASQ8	5.714	5.001	12.094	.000
ASQ9	6.091	4.521	19.608	.000
ASQ10	5.631	4.987	8.808	.001
ASQ11	4.981	5.631	13.416	.000
ASQ12	5.109	4.318	9.591	.000
ASQ13	5.299	4.711	6.251	.002
ASQ14	4.812	5.714	15.009	.000
ASQ15	4.992	5.661	8.709	.001
ASQ16	5.001	6.145	17.893	.000
ASQ17	5.871	5.002	6.021	.003
ASQ18	5.642	5.021	11.097	.000
ASQ19	4.981	5.329	8.887	.001
ASQ20	4.876	4.773	1.732	.269
ASQ21	5.612	5.009	12.432	.000
ASQ22	4.872	5.632	6.098	.002

Discriminant analysis (DA) was used instead of regression analysis as the dependent variable (aviation service quality) was categorical in nature and will minimize the possibility of misclassifying cases into their respective groups or categories. The specific objective of applying discriminant analysis is investigate differences between the two aviation service providers on the basis of attributes of the cases identified in Table 4.13 indicating which attributes or combination of attributes is responsible for group separation. DA exhibited significant differences between the aviation services under study. Four functions were observed. The first two functions were proved to be statistically significant (Table 4.14). The third and the fourth functions were statistically insignificant.

Wilki's Lambda

Test of functions	Wilki's Lambda	Chi-square	df	Sig.
1 through 4	.426	290.566	31	.000
2 through 4	.529	178.323	26	.012
3 through 4	.651	21.433	14	.782
4	.831	6.437	8	.912

The standardized canonical discriminant function coefficients (Table 4.15), which successively identifies the linear combination of attributes known as canonical discriminant functions (equations) and contributes maximally to group separation, revealed the factor loadings across 4 functions. Function 1 consists of timely flight schedules (ASQ1), delay information (ASQ2), baggage retrieval time (ASQ3), incentive schemes (ASQ10), interior servicescape of airplane (ASQ14), condition of cabin equipment (ASQ15), courteous nature of cabin crews (ASQ17) and knowledge & expertise of cabin crews (ASQ19). Therefore the differences in aviation service quality (ASQ) between two aviation service providers under study are schedule-time-compliance of flights with delay situation handling and handling of baggage, henceforth nomenclated as reliability dimension, additional financial benefits to the air-passengers, physical evidence and tangibles related to the airplane, henceforth nomenclated as tangibles dimension, knowledge and expertise of the cabin crews, henceforth nomenclated as assurance dimension and behaviour & attitude of the cabin crews, henceforth nomenclated as empathy dimension. Online booking services (ASQ9) entry & exit transport facilities (ASQ11) and loaded highly on function 2 while delay-induced accommodation (ASQ8) exhibited high loading on function 3. Since statistical significance with regard to these factors is not achieved, it should be treated with caution.

Standardized Canonical Discriminant Function Coefficients

Variables	Function			
	1	2	3	4
Flights are on time (ASQ1)	.749	.440	-.228	.150
Airline informs about the delay, if any (ASQ2)	.667	-.231	.119	.323
Waiting time for baggage arrival is acceptable (ASQ3)	.641	.554	-.102	.502

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Baggage loss is a problem (ASQ4)	.089	-.099	.118	.239
Airline compensates for the baggage loss (ASQ5)	.024	-.144	.371	-.077
Airline provides good check-in services (ASQ6)	-.119	.212	-.094	.231
Airline provides adequate refreshment if there is a delay (ASQ7)	-.071	.099	.118	-.176
Airline provides accommodation if there is a delay (ASQ8)	-.442	.267	.672	-.313
Airline provides online booking services (ASQ9)	-.203	.711	.119	.302
Airline offers several incentive schemes for frequent fliers (ASQ10)	.612	-.211	.396	-.199
Airline provides reasonable entry and exit transportation (ASQ11)	.414	.587	-.117	.323
Clear & precise cabin announcements (ASQ12)	-.087	.119	.236	-.209
Cabin safety (ASQ13)	.109	-.074	.178	-.231
Clean and pleasant interior (ASQ14)	.599	-.321	.198	.299
Good condition of the cabin equipments (ASQ15)	.601	-.227	-.065	.107
Appearance of the cabin crew members (ASQ16)	-.065	-.116	.207	-.375
Cabin crew are courteous (ASQ17)	.635	-.431	-.097	.276
Cabin crew are willing & providing services in time (ASQ18)	.354	.243	.099	-.104
Cabin crew are knowledgeable & expert enough to deal to emergency situations (ASQ19)	-.723	.439	.366	-.198
In-flight refreshment provision is acceptable (ASQ20)	-.056	.211	-.076	.239
Seat and space are comfortable (ASQ21)	.112	-.091	.288	.301
In-flight entertainment materials & services are acceptable (ASQ22)	-.060	.342	.106	-.083

Composite mean generated across the identified dimensions of perceived aviation service quality for both Jet Konnect and Indigo Airlines were obtained and compared. The results (Table 4.16) revealed differences in PASQ between the two aviation service providers under study. The respondents expressed better perception of aviation service quality in favour of Jet Konnect with regard to dimensions namely reliability (ASQ1, ASQ2, ASQ3), tangibles (ASQ10, ASQ14, ASQ15) and empathy (ASQ17) while Indigo Airlines seemed to provide better service quality across assurance dimension (ASQ19).

Comparison of dimensional means of PASQ between two aviation services under study

Aviation service provider	PASQ dimensions			
	Reliability	Tangibles	Assurance	Empathy
Jet Konnect	6.90	5.01	4.96	5.27
Indigo Airlines	4.67	4.99	4.66	4.99

Cluster analysis was used to find out the similarity between the brands. The ANOVA results (Table 4.17) revealed that the service quality variables are significantly different across the different clusters except for variables 'in-flight refreshment provision (ASQ20) and in-flight entertainment materials and services (ASQ22).

ANOVA (Cluster analysis)

Variables	Cluster	Error	F	Sig.		
	Mean square	df	Mean square	df		
Flights are on time (ASQ1)	29.970	5	1.292	134	44.271	.000
Airline informs about the delay, if any (ASQ2)	37.650	5	1.098	125	29.078	.000
Waiting time for baggage arrival is acceptable (ASQ3)	28.885	5	1.211	119	31.432	.000
Baggage loss is a problem (ASQ4)	33.976	5	1.291	98	27.564	.000
Airline compensates for the baggage loss (ASQ5)	5.873	5	.873	102	6.009	.001
Airline provides good check-in services (ASQ6)	37.974	5	1.266	123	39.89	.000
Airline provides adequate refreshment if there is a delay (ASQ7)	19.997	5	.853	119	42.344	.000
Airline provides accommodation if there is a delay (ASQ8)	25.682	5	.866	109	44.289	.000
Airline provides online booking services (ASQ9)	16.289	5	.651	97	29.897	.000
Airline offers several incentive schemes for frequent fliers (ASQ10)	20.099	5	1.342	106	14.567	.000
Airline provides reasonable entry and exit transportation (ASQ11)	39.455	5	1.433	119	27.77	.000
Clear & precise cabin announcements (ASQ12)	5.099	5	.887	121	17.852	.000

Cabin safety (ASQ13)	41.009	5	1.211	129	28.887	.000
Clean and pleasant interior (ASQ14)	4.765	5	.541	98	4.762	.002
Good condition of the cabin equipments (ASQ15)	19.877	5	1.209	101	22.298	.000
Appearance of the cabin crew members (ASQ16)	33.651	5	1.341	139	40.091	.000
Cabin crew are courteous (ASQ17)	21.009	5	1.001	112	26.665	.000
Cabin crew are willing & providing services in time (ASQ18)	11.298	5	.899	99	18.213	.000
Cabin crew are knowledgeable & expert enough to deal to emergency situations (ASQ19)	10.998	5	1.039	129	16.887	.000
In-flight refreshment provision is acceptable (ASQ20)	1.211	5	.251	65	2.120	.396
Seat and space are comfortable (ASQ21)	29.081	5	1.223	134	39.871	.000
In-flight entertainment materials & services are acceptable (ASQ22)	2.034	5	.288	79	3.654	.239

Cluster analysis revealed five clusters. Cross-tabulation was conducted to assess the relationship between the brands of aviation services under study and the five clusters. The analysis showed (Table 4.18) that most of the Jet Konnect customers belong to cluster 3 and that of Indigo Airlines customer belongs to cluster 4. Cluster 1, 2 and 5 seems to be insignificant.

Cross tabulation between clusters and brands of aviation services

Aviation service provider	Cluster number of case					Total
	1	2	3	4	5	
Jet Konnect	4	15	86	24	20	149
Indigo Airlines	9	11	32	65	24	141
Total	13	26	118	89	44	290

Although the customers of Jet Konnect and Indigo Airlines significantly belong to two different clusters, most of their customers were found to be distributed across Cluster3 and Cluster4.

Summary

First of all, the study conducted at this chapter portrait the demographic profile of the JetKonnect and Indigo airlines' passengers travelling from the city of Kolkata. After that different analyses were performed for the purpose of the study which established the significant relationship between the customer satisfaction and quality of service perceived by the airline companies, customer loyalty and customer satisfaction in the aviation sector as well as the perfect positive linear relationship among the service quality, customer satisfaction and customer loyalty in the aviation sector. Study also affirmed the differences of passengers' perception of quality of services offered by Jet Konnect and Indigo Airlines in the present aviation sector. Results of this chapter ultimately explain the significant correlation among the variables of the present study.

The first objective of the research was to elucidate the relationship between service qualities delivered to passengers and their satisfaction as to different class of journey. For this purpose, an extensive literature survey was conducted which explored that in the aviation sector satisfaction of the airline passengers is very much influenced by the quality of the service. The literature survey explored that in the aviation sector satisfaction of the airline passengers is very much influenced by the quality of the service. The literature survey specified that customers' perceived service quality has a meaningful impact on the satisfaction of the airline passengers. At the present age of the society customers are very much conscious about the quality of services provided by the airline companies in the competitive aviation market. The simple regression analysis was performed to test the strength of the relationship of the customer satisfaction and service quality as well as to predict the dependent variable in respect of the independent variables (predictors). Here, customer satisfaction was considered as a dependent variable and service quality was considered as the independent variable. The above simple regression analysis indicates that the dependent variable customer satisfaction is strongly related with the independent variable service quality and the prediction of dependent variable (customer satisfaction) has successfully been taken place by the independent variable (service quality).

The first hypothesis testing result strongly established the significant relationship between the customer satisfaction and service quality in the aviation sector. Thus, it may be concluded that in the present perspective as customer satisfaction has now become as the ultimate goal to the service providers so as a service provider JetKonnect and Indigo airlines are now taking a lot of initiatives to satisfy their passengers through providing better quality of services than before.

The second objective of the research was to examine the impact of customers' satisfaction on customer loyalty in relation to airlines. To understand this, an indepth literature survey was conducted for this purpose. This literature survey indicated that in the aviation sector now a days customer loyalty is vastly influenced by the satisfaction of the airline customers. To understand the strength of the relationship between customer loyalty and their satisfaction, the simple regression analysis was performed through which the prediction of the dependent variable from the independent variable (predictor) would be possible. For this purpose customer loyalty was considered as a dependent variable and the customer satisfaction was considered as the independent variable. The simple regression analysis results established that the dependent variable customer loyalty has a strong relationship with the independent variable customer satisfaction. The result established the significance of the relationship between the customer loyalty and customer satisfaction in the aviation sector. Therefore, it may be stated that in order to survive in future as well as to maintain the market position both JetKonnect and Indigo airlines are fervently trying to give full satisfaction to their customers to develop the loyalty of their own customers to their airlines.

The third objective of the research was to understand the relationship among the service quality, customer satisfaction and customer loyalty in the aviation sector in present perspective. An extensive literature survey was conducted for this purpose. This literature survey pointed out the significant relationship among the service quality, customer satisfaction and customer loyalty in the aviation sector which also strongly established by the result of the third hypothesis testing. The acceptance of third hypothesis,

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therefore, explained that there exists perfect positive linear relationship among the service quality, customer satisfaction and customer loyalty in the aviation sector.Thus it may be explained that perfect positive linear relationship among the service quality, customer satisfaction and customer loyalty exist in the aviation sector especially in the business operation of the JetKonnect and Indigo airlines in the present context of the study.

The fourth and fifth objectives of the research was to study the perception of the customer with respect to service quality offered by the two airlines as well as to compare the service quality of the two airlines under study. The study revealed that the fundamental service quality dimensions identified by Parasuraman, Zeithaml and Berry (1985, 1988, 1991) resembled the identified service quality dimensions in the study.

One-way ANOVA was performed and the result displayed a significant difference except for the variables 'in-flight refreshment provision 146 (ASQ20)', 'loss of baggage (ASQ4)' and 'airline presents good check-in services' (ASQ6). Discriminant analysis (DA) was used instead of regression analysis as the dependent variable (aviation service quality) was categorical in nature and will minimize the possibility of misclassifying cases into their respective groups or categories. The specific objective of applying discriminant analysis is to investigate differences between the two aviation service providers on the basis of attributes of the cases identified, indicating which attributes or combination of attributes is responsible for group separation. DA exhibited significant differences between the aviation services under study. Four functions were observed. The first two functions were proved to be statistically significant. The third and the fourth functions were statistically insignificant

Therefore the differences in aviation service quality (ASQ) between two aviation service providers under study are schedule-time-compliance of flights with delay situation handling and handling of baggage, henceforth nomenclated as reliability dimension, additional financial benefits to the air passengers, physical evidence and tangibles related to the airplane, henceforth nomenclated as tangibles dimension, knowledge and expertise of the cabin crews, henceforth nomenclated as assurance dimension and behaviour & attitude of the cabin crews, henceforth nomenclated as empathy dimension. Online booking services (ASQ9) entry & exit transport facilities (ASQ11) and loaded highly on function 2 while delay-induced accommodation (ASQ8) exhibited high loading on function 3. Since statistical significance with regard to these factors is not achieved, it should be treated with caution. 147 Composite mean generated across the identified dimensions of perceived aviation service quality for both Jet Konnect and Indigo Airlines were obtained and compared. The results revealed differences in PASQ between the two aviation service providers under study. The respondents expressed better perception of aviation service quality in favour of Jet Konnect with regard to dimensions namely reliability (ASQ1, ASQ2, ASQ3), tangibles (ASQ10, ASQ14, ASQ15) and empathy (ASQ17) while Indigo Airlines seemed to provide better service quality across assurance dimension (ASQ19). Cluster analysis was used to find out the similarity between the brands. The ANOVA results revealed that the service quality variables are significantly different across the different clusters except for variables 'in-flight refreshment provision (ASQ20) and in-flight entertainment materials and services (ASQ22). Cluster analysis revealed five clusters. Cross-tabulation was conducted to assess the relationship between the brands of aviation services under study and the five clusters. The analysis showed that most of the Jet Konnect customers belong to cluster 3 and that of Indigo Airlines customer belongs to cluster 4. Cluster 1, 2 and 5 seems to be insignificant. Although the customers of Jet Konnect and Indigo Airlines significantly belong to two different clusters, most of their customers were found to be distributed across Cluster3 and Cluster4. The study showed that customers are comparatively more satisfied with Jet Konnect compared to Indigo Airlines when it came to critical service quality dimensions namely reliability, tangibles and empathy. The customers of Indigo Airlines were particularly found to be impressed by the expert knowledge and situation handling capability of the cabin crews. The study suggested that areas namely provision of online aviation services and provision of in-flight recreation, though proved to be insignificant to influence perception of service quality of customers, may be considered by the service providers to create differentiation and gain competitive advantage. Since 'incentive to customers' proved to be a significant tangible element of service quality perception, the aviation service providers may identify and design schemes for frequent fliers.

Recommendations Various predominant factors lead to attaining service quality. To identify the service quality, it is essential to evaluate the expectations and satisfaction level of service recipients. Based on the findings of the research the following recommendations can be made for the JetKonnect and Indigo airlines: (i) Ascustomer satisfaction is very much dependent on the service quality so both the airlines must try to improve their service quality on a continuous basis.

(ii) As customer loyalty depends on the satisfaction of the airline customers so both the airlines must try to give full satisfaction to their customers in each and every case.

(iii) They should provide the services as promised by them and take care of special needs and interest of the passengers which will convert them to loyal customers.

(iv) While designing customer experience the both the service providers must first focus on the customer's goals and tasks.

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