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Consumers' Perception regarding Service Quality in Aviation Sector in Agartala

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Abstract: This paper intend to identify the factors affecting the consumer perception (when people chooses the services by compulsion not by choice) regarding the service quality among three domestic airlines namely Spice Jet, Indigo and Kingfisher, service providers in Agartala and to identify the most important factor in case of each domestic airlines. For achieving this objective a questionnaire was framed according to SERVPERF model and data from 110 subjects. Factor analysis and then regression analysis was carried out for extracting the factors and identifying the most important factor. We found that among the three airline service providers the number of factors loaded is different. Additionally, in case of Spice Jet and Indigo 'assurance' and in case of Kingfisher 'safe and promptness' factor is found to be most important factor.

Keywords: *Consumers' perception, service quality, aviation sector, SERVQUAL, SERVPERF.*

1. Introduction

Consumer perception is one of the important tools for the marketer to evaluate their marketing activities. The marketers are keen on checking the consumer perception towards service, perception towards products quality, pricing, packaging and the sales promotion activities. Perception is the sum total of the immediate response of our sensory receptors. In this competitive world each and every company is competing for creating a good image in front of customers. Until and unless a consumer should perceive that the product/service is good then only they can survive in the market. If we compare the transportation facilities of north eastern states with other states of India, the condition in north eastern states is very poor. Roadways and the railways are not much developed and thus traveling is a big problem for the commuter in these states. Especially the states like Tripura are the worst hit by poor transportation facilities. This is one reason due to which most of the middle class people are forced to avail air services especially in case of some emergency. Though the states is very small (third smallest states in the north eastern states) the aviation sector is prospering in this state.

The paper intends to find the overall customers' satisfaction on service quality provided by the airlines in Agartala by analyzing the customers' satisfaction through evaluating the consumer perception of the airline services. For this purpose three most popular airline companies in India Spice jet, Indigo, Kingfisher is selected in order to identifying the factors regarding the service quality of the three airlines companies. The fright charges of the three companies do not have much difference and all the three companies are in private sector and quite popular in domestic airline in India. Considering the fact that Tripura is a state where other transportation facilities like road and railways are still not much developed and satisfactory, most of the people are choosing air services for travelling purpose not by choice but by compulsion. In this context the paper focuses on the consumer perception regarding the service quality by the service provider. Following are the objectives of the study:

- To identify the factors affecting consumers perception regarding service quality of the airline companies under study when people avail the services not by choice but by compulsion.
- Compare the service quality of the air line companies under study.

2. Literature Review

Clifford, Cunningham and Lee (1994) made a comparison on industry based and SERVOQUAL based dimensions to find out their effectiveness in predicting the level of satisfaction and intention to repeat availing the service in future. They found that SERVOQUAL is better than industry measure for knowing the customer satisfaction. Cronin and Taylor (1994) did a through comparison on the two different aspects of service quality measurement i.e. SERVOQUAL and SERVPERF. Both the tools are designed for measuring the specific long term attitude of service quality at a single point in time. They claimed that

based on the literature review SERVPERF has greater construct validity in comparison with SERVOQUAL and it also exhibits that convergent and discriminant validity. The study summarizing by conveying that the criticism identified for the SERVOQUAL measure is for interpreting the result than by substituting with SERVPERF.

Buttle (1996) critically reviewed the various studies done in the area of customer satisfaction on service quality using SERVOQUAL developed by Parasuraman, Zeithaml and Berry (1985). The author argued that perception measure of service quality is better than the perception minus expectation measure in terms of predictive validity and concluded that there is still a need for fundamental research regarding how consumers always evaluate the service quality measures in terms of expectation and perception. Clifford, Cunningham, and Lee (2002) studied the service quality on a cross cultural perspective. They have studied the service quality and the risk involved in air transportation based on SERVPERF and industry based measures on US and Korean consumers. The study found that there is a significant cultural difference. Van Pham and Simpson (2006) suggested Service quality should be measured in terms frequency of availing the service. This study focuses on the relative importance of the SERVQUAL operation dimensions relative to frequency of use and importance of frequency of use for giving service quality expectation by the respondent. The authors also addressed that past experiences will provide better prediction regarding service quality expectation and perception.

Bhagyalakshmi and Nargundkar (2006) studied the service quality of airlines among four air lines in India (Jet airways, Indian airlines, Air Deccan, Kingfisher) dividing the service in to three steps, preflight, on flight, post flight. They used a five point Likert scale for designing the questionnaire. And they have carried out one-way ANOVA, discernment analysis, cluster analysis and cross tabulation. The four airlines showed a significant difference in their pre-flight service. In case of 'in flight service' Jet airways, Indian airlines and Kingfisher rated high but Air Deccan rated poor. For 'post-flight service' in some of the services have no significant difference (online booking) but some services show significant difference among the companies. Michale *et al.* (2008) measured the factors influencing customer satisfaction and behavioral intentions in international air lines. They formulated seven service dimensions such as timeliness, assurance, convenience, helpfulness, comfort, meals, and safety and security. Confirmatory factor analysis was carried for analysis and they found seven dimensions that are positively significant to the perceived quality. Out of seven dimensions, safety and security was most important and timeliness was least important factor perceived by the consumer for travelling. Consumer's perception showed a significant difference according to their demographic profile.

After reviewing the existing literature we found that most of the studies are conducted in the context where the services availed by choice not by compulsion .where as in our study services availed due to compulsion. In Tripura since transportation facilities are very poor people are forced to avail air service generally in India air services is associated with higher middle income categories of people but because of the poor transportation facilities most of lower middle income people are forced to travel by air specially in case of some emergencies.

3. Research Methodology

Questionnaire Design: A questionnaire has been developed with the help of past literature on a five point Likert scale ranging from strongly agree to strongly disagree which is based on the five dimension of the SERVPERF model. The respondents were asked to respond on the basis of their perception about the quality of service offered by the airline companies. To finalize the questionnaire, we have conducted a pilot study with the 22 questions on a five dimensions of SERVPERF model among 30 respondents. The reliability statistics Cronbach's Alpha for Spice Jet, Indigo and King Fisher is 0.832, 0.804 and 0.912 respectively. It was quite satisfactory for all the three companies. So we proceed for data collection with the questionnaire after just making some changes in the wordings. For more details see the appendix.

Table 1: Reliability Statistics of questionnaire framed for the Pilot Study

Company	Spice jet	Indigo	Kingfisher
Cronbach's Alpha	0.832	0.804	0.912

Data Collection: Samples are collected from the working people and the management students of Tripura coming from outside Tripura and students of Tripura studying outside the state. We have

collected total 110 samples in that 90 of the people responded for all the three companies. Some of the respondent has exposed to travel only in one company so they have responded only for that company. In table 2 number of the respondent of each company is presented.

Table2: Sample Statistics of the Study

Company	Spice Jet	Indigo	Kingfisher
No of Respondents	91	100	94

In the first step, for each company factor analysis has been carried out using SPSS 17 software for extracting the factor. And to extract the factors and also to avoid the cross loading among the factors of the variables Eigen value criteria (greater than one) and Varimax Rotation criteria has been used respectively. First of all we will present sample adequacy result. Sample adequacy has been checked using KMO and Bartlett's test which is satisfactory for all the companies as for all companies' sample adequacy is more than 0.7. This shows that number of respondents in each companies sample collected is enough for study. Table 3 shows the summary results of the sample adequacy.

Table 3: Result of KMO and Bartlett's Test

Company	Spice Jet	Indigo	Kingfisher
KMO measure of sampling adequacy	0.846	0.79	0.885
Chi-square	1082.825	962.422	995.591
DF	231	231	171
Sig.	0	0	0

In the second step, summary of the extracted factors for each company and the total variance explained by total number of extracted factors has been presented. Notice that these extracted factors are obtained after avoiding the cross loadings. We found that five factors are loaded in Spice jet which explains 66.207% variance. Six factors are loaded in Indigo. With the help of six factors it explains 65.805% variance. Only three factors are loaded in Kingfisher and it explains 60.112% of variance. Details description about the variables loaded in different factors are presented in table 4.

Table 4: Total variance explained

Company	Spice Jet	Indigo	Kingfisher
No. Of Factor loaded	5	6	3
Variance explained (%)	66.207	65.805	60.112

4. Results and Discussion

Spice Jet: In this case five factors are loaded and we named them Empathy, Assurance, Reliability, Responsiveness and Tangibility respectively based on the past studies. In the table 5 the results of rotated component matrix of Spice jet are shown. In case of Spice jet, though the variables are loaded under five factors but there is a miss-match between the original model and present result. In this study six variables are loaded under the first factor i.e., empathy and among these six variables forth variable (i.e., having modern equipment and facility) should be loaded in Tangibility factor and the six variable (i.e., Provide service at promised time) should be loaded in Reliability factor as per the original model. Two variables from responsiveness (i.e., employees never too busy to help, Employees give prompt service) are loaded in assurance factor. The variable related to Empathy (Personnel attention is provided by company) and the variables related to Reliability (Show sincere interest in solving problem) are loaded in responsiveness factor.

Table 5: Varimax Rotated Loading (spice jet)

Factors and Variables	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5
Empathy					
Employees provide individual attention	0.741				
The airline offers real benefit to frequent fliers	0.74				
Operating hours is convenient	0.643				
Having modern equipment and facility	0.642				
Understand specific needs	0.625				
Provide service at promised time	0.519				
Assurance					
Feel safe in their transaction		0.748			
Create confidence in customers tangibles		0.729			
Provide the necessary information		0.696			
Employees have the knowledge to answer the question		0.575			
employees never too busy to help		0.535			
Employees give prompt service		0.507			
Reliability					
Promise do service by certain time			0.768		
Perform the service correctly at the first time			0.697		
Insist on error free service			0.663		
Responsiveness					
Employees say exactly when service will be performed				0.67	
Show sincere interest in solving problem				0.644	
Employees are always willing to help you				0.617	
Personnel attention is provide by company				0.576	
Tangibility					
Material associated with the services					0.852
Physical facilities are visually appealing					0.688
Employees are neat appearing					0.567

Indigo: Six factors are loaded in Indigo; the study named them Empathy, Reliability, Assurance, convenience& helpfulness, Tangibility and Responsiveness respectively. The result of rotated component matrix of indigo has shown on the table 6.

Table 6: Varimax Rotated Loading (Indigo)

Factors and Variables	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Factor 6
Empathy						
The airline offers real benefit to frequent fliers	0.742					
Understand specific needs	0.712					
Employees provide individual attention	0.703					
Personnel attention are provide by company	0.693					
Operating hours is convenient	0.563					
Reliability						
Promise do service by certain time		0.754				
Provide service at promised time		0.641				
Perform the service correctly at the first time		0.727				
Insist on error free service		0.557				
Assurance						
Provide the necessary information			0.835			
Feel safe in their transaction			0.800			
Create confidence in customers tangibles			0.594			
Employees have the knowledge to answer the question			0.549			

convenience& helpfulness			
Physical facilities are visually appealing	0.827		
Having modern equipment and facility	0.588		
Show sincere interest in solving problem	0.508		
Employees are always willing to help you	0.507		
Tangibility			
Employees are neat appearing		0.625	
Material associated with the services		0.606	
Responsiveness			
employees never too busy to help			0.741
Employees say exactly when service will be performed			0.648
Employees give prompt service			0.591

Comparing with the original model one additional factor is loaded in the case of Indigo if we compare with the factors loaded in Spice jet there is not much miss match in the loading of the variables. The forth factor included two variables from tangibility (i.e., Physical facilities are visually appealing and Having modern equipment and facility) and two variables from responsiveness (i.e., Show sincere interest in solving problem and Employees are always willing to help you). So we named this factor as convenience& helpfulness according to the nature of the variable.

King fisher: In the case of Kingfisher, only three factors are loaded. We named the three factors as safe& promptness, convenience and comfort respectively according to the nature of the variable loaded in the three factors. Because of cross loading the study reduced the variables to 19. Employees are always willing to help you, Create confidence in customers' tangibles and having modern equipment and facility are the avoided variable. The factors loaded under Kingfisher don't have any relation between the original models therefore; it shows evidence of weak discriminant validity. Additionally, we have performed regression analysis by taking overall customer satisfaction as depended variable with the factor score of each case. Results of regression analysis are presented in table 7

Table 7: Varimax Rotated Loading (king fisher)

Factors and Variables	Factor 1	Factor 2	Factor 3
safe& promptness,			
Promise do service by certain time	0.835		
Insist on error free service	0.745		
Perform the service correctly at the first time	0.737		
Employees have the knowledge to answer the question	0.655		
Provide the necessary information	0.595		
Provide service at promised time	0.594		
Feel safe in their transaction	0.594		
Material associated with the services	0.574		
Employees are neat appearing	0.573		
convenience			
Understand specific needs		0.792	
Operating hours is convenient		0.781	
Personnel attention are provide by company		0.748	
The airline offers real benefit to frequent fliers		0.729	
Employees provide individual attention		0.673	
Employees say exactly when service will be performed		0.646	
employees never too busy to help		0.639	
Employees give prompt service		0.528	
comfort			
Show sincere interest in solving problem			0.681
Physical facilities are visually appealing			0.68

Additionally, we have performed regression analysis by taking overall customer satisfaction as depended variable with the factor score of each case. Results of regression analysis are presented in table 8

Table 8: Result of regression analysis

Spice jet		**Indigo**		**King fisher**	
Factors	Coefficient (Std. Error)	Factors	Coefficients (Std. Error)	factors	Coefficients (Std. Error)
(Constant)	2.495*** -0.052	(Constant)	2.6 (0.067)***	(Constant)	2.237 (0.062)***
Empathy	0.287*** -0.053	Empathy	0.191 (0.067)***	safe& promptness,	0.686 (0.062)***
Assurance	0.311*** -0.053	Reliability	0.254 (0.067)***	convenience	0.128 (0.062)**
Reliability	0.285*** -0.053	Assurance	0.274 (0.067)***	comfort	0.158 (0.062)**
Responsiveness	0.201*** -0.053	convenience& helpfulness	0.123 (0.067)*		
Tangibility	0.167*** -0.053	Tangibility	0.161 (0.067)**		
		Responsiveness	0.105 -0.067		
R square	Adjusted R –square	R square	Adjusted R –square		Adjusted R –square
0 .764	0.558	0.594	0.311	R square - 0. .773	0. .584

*sig. at 10%, **sig. at 5%, ***sig. at 1%

The result showed that all the factors are positively significant at 1% for Spice Jet. R-square is 76.4% which indicates that 76.4% variation in overall satisfaction is explained by the factors of Spice Jet. However, in case of indigo out of six factors the first five factors are positively significant and the sixth factor is not showing significance. R-square is only 0.594 indicating that only around 60% of total variation is explained by the factors. Out of three factor in kingfisher, two (convenience, comfort) are positively significant at 5% and first factor is significant at 1%. R-square is comparatively higher vis-à-vis other companies as it is 0.773 which explains around 77% of the total variation in the overall satisfaction of customers is explained.

5. Conclusion and Recommendations:

Numbers of factors loaded in three companies are different. At the same time the variables loaded in the same factor also different: five factors are loaded in spice jet, six factors are loaded in indigo and three factors are loaded in king fisher. At the same time the first factor loaded in Spice jet and Indigo is empathy. Under spice jet six (Employees provide individual attention, The airline offers real benefit to frequent fliers, Operating hours is convenient, Having modern equipment and facility, Understand specific needs, Provide service at promised time) variables are loaded under first factor but in case of Indigo only five (The airline offers real benefit to frequent fliers , Provide service at promised time, Employees provide individual attention , Understand specific needs, Personnel attention are provide by company) variables are loaded among the variable itself it again differ. In case of Kingfisher discriminant validity is not shown: if we look in to the first factor itself it is a combination of reliability and assurance, second factor is again a mixture of empathy and responsiveness and the third factor include one variable from tangibility and reliability. As per the SERVPERF model depending on the company the consumer perception are different in the same category of service. The comparative study showing that kingfisher is providing good service followed by Spice jet and Indigo

Brand image has an impact on the service quality perception .it is evident from this study, the same respondents' (90) responses are loaded differently for different companies and the number of factors extracted from the responses also different. In India king fisher is having good brand name as better service provider than Spice jet and Indigo. So brand name has an influence on the perception level of the customers. Through this study on the consumer perception regarding the service quality we came to know that service quality dimensions (Tangibility, Assurance, Reliability, Responsiveness, Empathy) are differ not only in different industry it will differ within the industry. In this study we have studied only the

air services same study can be studied for adding other service industry. Study can conduct for evaluating brand has any influence on the perception regarding the service quality.

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