THE RELATIONSHIP BETWEEN SERVICE QUALITY AND CUSTOMER SATISFACTION - a comparative study among Indian and Europe passengers.

1A.Thirunavukkarasu, 2V.R.Nedunchezian, 3Dr. K. Kavitha,

1Research Scholar, Research & Development, Bharathiyar University, Coimbatore, Tamilnadu, India
2Professor, Department of Management, Kumaraguru College of Engineering, Coimbatore, Tamilnadu, India,
3Professor, Department of Electronics and Communication Engineering, Kumaraguru College of Technology, Coimbatore, Tamilnadu, India.
2vrn@kctbs.ac.in

Abstract

The relationship of service quality and customer satisfaction have been established in the airlines service management literature but there are few studies available to understand the difference in perception on the relationship of service quality and customer satisfaction. The previous studies used first order service quality dimensions in predicting the relationship with customer satisfaction. This study will used hierarchical second order service quality for predicting the relationship with Customer satisfaction. A survey questionnaire was used for the collected the response from the airlines passengers from developing country India and developed countries of Europe. A permutation Multi group analysis method was employed to assess the passenger group of developing and developed countries on the relationship between service quality and customer satisfaction.

Key words: Airqual, Service quality, Customer satisfaction. Multi group, Indian passengers, Europe Passengers
1. Introduction

The air transportation between India and European countries is considered to be one of the oldest air routes for more than 80 years in which Indian and Europeans passengers travelled for business, leisure, educational and political purpose. In measuring the customer satisfaction, culture plays a vital role as some of the elements are valued more in some countries than others. Customers from different cultures may have different preferences and expectations for tourism and hospitality services.

Most Asian culture prefer high context communication (non variable mode of communication) whereas most western culture prefer low context communication (explicit, direct unambiguous) (Mattila, 2000). Consumer from low contexts culture expects task completion and efficient delivery as compared to interaction between employees and customers by high context culture customers (Mattila, 2000). However, few studies confirmed insignificant effect of culture on tourist behaviour and their expectations for certain products/service attributes (Mok and Armstrong, 1998). On the basis of evidence currently available, culture is still making difference in the consumer behaviour and therefore understanding the needs of customers from different culture and responding and meeting this needs accordingly, determines the success of the business firm in the tourism and hospitality industry (Mok and Armstrong 1998).

Oh and Kim (2017) found that more studies on theoretical and practical integration of customer satisfaction with service quality to examine the relative impact on customer evaluation of the service as well as tendency to measure service quality and customer satisfaction at the global rather than attribute level are gaining ground in the literature in Hospitality and tourism studies. In regard to business journal, measuring concepts at the summary level (high abstraction) along with SEM approach are found support in the literature. Gap based Servqual model is losing support in the literature and development of new SQ Scale /model by adding context specific attributes or adopting hierarchical approach is gaining momentum in the latest studies. Park (2006) reported that the causality between the service quality and customer satisfaction have been examined in the literature and found that service quality leads to customer satisfaction (Parasuraman et al., 1988; Cronin & Taylor, 1992; Spreng& Mackoy, 1996). However, contrary to the above, research studies disputed the claim and argue that customer satisfaction impacts on service quality (Oliver, 1980; Bitner, 1990; Bolton & Drew, 1991). In the meanwhile, some researchers confirmed that there
is no relationship between service quality and customer satisfaction (Churchill & Surprenant, 1982; Fornell, 1992; Teas, 1993).

The cultural differences between Asian countries like India and Europe has been studied but there is limited study carried out in the context of airlines service industry on service quality and customer satisfaction. There is limited study available in the literature in comparing developing country population with developed countries population in establishing the relationship between service quality and customer satisfaction. India, being the developing country of Asia continent with low usage of airline service is compared with developed economy countries of European continent countries like UK, Germany and France on the relationship between service quality and customer satisfaction of Airlines. Therefore, the comparison of relationship between service quality and customer satisfaction among Indian and European passengers is significant for improving the service quality delivery of Airlines and enhancing the customer experience.

2. Objectives of the Study

1. Whether second orders Service Quality relationships on Customer Satisfaction are mediated by Indian and European passengers?

2. Whether second order service quality relationship on Customer Satisfaction is mediated by passengers travelling on Indian based airlines and European based Airlines?

3. Whether second order service quality relationship on Customer Satisfaction are mediated by Gender?

4. Whether second order service quality relationships on Customer Satisfaction are mediated by Age group?

5. Whether second order service quality relationship on Customer Satisfaction are mediated by Purpose of Travel?

6. Whether second order service qualities are relationship on Customer Satisfaction are mediated by frequency of travel?
3. Literature Review

The Cross Cultural studies done on measuring the perception of airlines service quality (SERVPERF) compared the airlines passengers (Lu and Ling, 2008; O’Connel, 2005). O’Connell (2005) examined the service quality perception between full service airlines and low cost airlines in a mature European market and rapidly growing Asian market. The study provides two contrasting markets differences of full service carrier and low cost carrier. The study found that there are differences between full service airlines and low cost airlines but there is no difference between perceptions of passengers between the two different continents in terms of service quality. Passengers travelling on full service carrier have strong emphasis on reliability, quality, frequent flier programme and comforts and travellers with low cost carriers focus on fare only. There is difference between the service quality of airline due to cultural differences between the countries (Lu and Ling, 2008) but the results was contradicted that there is no difference between them (O’Connel, 2005).

Barron and Kenny (1986) define moderation effect as variable which influences the strength or the direction of a relationship between an exogenous and endogenous variable. Moderator variable can be metric or categorical. Another form of moderating variables called as group comparison is a special case in which comparisons of model estimates are carried out with categorical moderating variable (Hensler, 2010). Chin et al (2003) emphasized that moderation analysis are seldom used in the structural equation models and it leads to lack of relevance while generalization of the relationship. Jaccard and Turrisi (2003) describes the various types of relationship in understanding causal models: (1) direct effects in which independent variable, X, cause dependent Variable, Y; (2) indirect effects (Mediating effects) in which third variable ‘Z’, along with Independent variable ‘X’, cause dependent variable, ; (3) spurious effects in which correlation between independent variable ‘X’ and dependent variables’Y’, comes from the same cause; (4) both independent variable ‘X’, and dependent variable ‘Y’, have bidirectional effects influencing each other; (5) unanalyzed effects; (6) moderating effects (indirect effects), which influence the strength of independent variableX and cause dependent variableY.

Hensler (2010) describes two common approaches to estimate the moderating effects. Product term approach and the group comparison approach. Product term approach requires metric data, needs control to both direct and focal effects, interaction effect is cumulative in nature and failed to differentiate the independent variable and moderating variable on
dependent variable. The group comparison is best employed when independent variable or moderator variable is not continuous or discrete. Both the product term and group comparison approach lead to same conclusion if the construct measurement is invariant across groups. The multi group comparison technique is known to be weaker than experimental approach but it is practically useful in those situation where it is difficult to the experimentally manipulate the construct of interest (Mackenzie, 2011). The multi group analysis provides correlational evidence than causal evidence. In case of formative indicators, the group of individuals that are high or low on specific attributes are chosen for group comparison. It is the individual sub dimensions that serve as a formative indicator of the second order constructs that differs. Therefore different known groups are required for establishing the validity of the scale.

Sarstedt (2011) argued that permutation based analysis of variance approach is better than multi group analysis as it overcomes family wise error rate beyond any prescribed acceptable type 1 error level and does not rely on distributional assumption for an acceptable level of statistical power. The primary concern in comparing the model estimates across groups is that constructs measures are in variance across the groups. Sarstedt (2011) identified three approaches to multi group analysis: (1) parametric approach by estimating model parameters for each group separately and using standard errors obtained from bootstrapping input for parameter tests; (2) Distribution free data permutation test by observing difference between group by comparing the difference to those between groups randomly assembled from the data; (3) A non-parametric procedure which directly compares groups specific bootstrap estimates from each bootstrap samples. MacKenzie (2011) suggested that multi group analysis comparing groups known to differ on the constructs will validate the indicator of the constructs. Sarstedt (2011) developed omnibus test of group (OTG) differences which used bootstrapping, permutations and random selection and asymptotic properties. The OTG approach follows the series of steps 1) encompasses Group wise bootstrapping a large number of bootstraps samples are drawn and estimated in order to obtain empirical distribution of the group specific model parameters. 2) The result of the previous bootstrap facilitates the variance ratio computation. The variance explained by the grouping variable is evaluated relatively to the overall variance.

Customer individualisation strengthens the service quality customer satisfaction relations with but weakens the service quality – attitudinal loyalty relationship and does not
affect the relationship between service quality and purchase intention. As the intensity of the customer processing decreases, the impact of service quality becomes stronger i.e. as a customisation and added value of the services increases its quality become more important in terms of customer satisfaction and purchase intentions. The translation of the service quality scale from English to other languages reduces the predictive power of translated service quality scale due to imperfect translation as language effects the thought process – linear thinking in English versus parallel thinking in semantic languages (Singer, 1998). Moreover, the meaning of words is context specific and cultural dependent. Individualism strengths the service quality – customer satisfaction relationship but weakens the service quality – attitudinal loyalty relationship. Consumers from individualistic countries such as US are self-oriented and motivated by self-actualization whereas consumers from collectivistic countries are group oriented and driven by achieving by group harmony and consensus. So the consumers from collectivistic countries will build relationship and strengthen the service quality attitudinal loyalty relationship. Service quality has a stronger impact on satisfaction and purchase intention in industry where the amount of customer processing is low than in a industry where the amount of customer processing is high. The study gives the pointer for the future research to examine the service quality and customer satisfaction V. Mathan Kumar and R. Velmurugan (2017) causality link.

**Hypothesis**

1. There is no significance difference in relationship between service quality and customer satisfaction among Indian and European passengers.

2. There is no significance difference in relationship between service quality and customer satisfaction among Indian based airlines and European based airlines.

3a. There is no significance difference in relationship between service quality and customer satisfaction of Indian Passenger travelled on Indian carrier (Air India and Jet Airways) and Indian Passenger travelled on European Carrier (Air France, British Airways, Lufthansa and Virgin Atlantic).

3b. There is no significance difference in relationship between service quality and customer satisfaction of Indian Passenger travelled on Indian carrier (Air India and Jet Airways) and European passengers travelled on Indian Carrier (Air India and Jet Airways).
3c. There is no significance difference in relationship between service quality and customer satisfaction of Indian Passenger travelled on Indian carrier (Air India and Jet Airways) and European passenger travelled on European Carrier (Air France, British Airways, Lufthansa and Virgin Atlantic).

3d. There is no significance difference in relationship between service quality and customer satisfaction of Indian Passenger travelled on European carrier (Air France, British Airways, Lufthansa and Virgin Atlantic) and European passenger travelled on Indian Carrier (Air India and Jet Airways).

3e. There is no significance difference in relationship between service quality and customer satisfaction of Indian Passenger travelled on European carrier (Air France, British Airways, Lufthansa and Virgin Atlantic) and European passenger travelled on European carrier (Air France, British Airways, Lufthansa and Virgin Atlantic).

3f. There is no significance difference in relationship between service quality and customer satisfaction of European Passenger travelled on Indian carrier (Air India and Jet Airways) and European passenger travelled on European carrier (Air France, British Airways, Lufthansa and Virgin Atlantic).

4a. There is no significance difference in relationship between service quality and customer satisfaction of Passenger travelled on Air India and Air France.

4b. There is no significance difference in relationship between service quality and customer satisfaction of Passenger travelled on Air India and British Airways.

4c. There is no significance difference in relationship between service quality and customer satisfaction of Passenger travelled on Air India and Jet Airways.

4d. There is no significance difference in relationship between service quality and customer satisfaction of Passenger travelled on Air India and Lufthansa.

4e. There is no significance difference in relationship between service quality and customer satisfaction of Passenger travelled on Air India and Virgin Atlantic.
4. f There is no significance difference in relationship between service quality and customer satisfaction of Passenger travelled on Air France and British Airways.

4. g There is no significance difference in relationship between service quality and customer satisfaction of Passenger travelled on Air France and Jet Airways.

4. h There is no significance difference in relationship between service quality and customer satisfaction of Passenger travelled on Air France and Lufthansa.

4. i There is no significance difference in relationship between service quality and customer satisfaction of Passenger travelled on Air France and Virgin Atlantic.

4. j There is no significance difference in relationship between service quality and customer satisfaction of Passenger travelled on British Airways and Jet Airways.

4. k There is no significance difference in relationship between service quality and customer satisfaction of Passenger travelled on British Airways and Lufthansa.

4. l There is no significance difference in relationship between service quality and customer satisfaction of Passenger travelled on British Airways and Virgin Atlantic.

4. m There is no significance difference in relationship between service quality and customer satisfaction of Passenger travelled on Jet Airways and Lufthansa Atlantic.

4. n There is no significance difference in relationship between service quality and customer satisfaction of Passenger travelled on Jet Airways and Virgin Atlantic.

4. o There is no significance difference in relationship between service quality and customer satisfaction of Passenger travelled on Lufthansa and Virgin Atlantic.

5. There is no significance difference in relationship between service quality and customer satisfaction of Passenger between Genders
6. a There is no significance difference in relationship between service quality and customer satisfaction of Business and Leisure Passenger.

6. b There is no significance difference in relationship between service quality and customer satisfaction of Business and other than Business and Leisure Passenger.

6. c There is no significance difference in relationship between service quality and customer satisfaction of Leisure and other than Business and Leisure Passenger.

7.a There is no significance difference in relationship between service quality and customer satisfaction of Passenger travelled with 1 trip and 2 trips between India and Europe.

7.b There is no significance difference in relationship between service quality and customer satisfaction of Passenger travelled with 1 trip and 3 trips between India and Europe.

7.c There is no significance difference in relationship between service quality and customer satisfaction of Passenger travelled with 1 trip and 4 trips between India and Europe.

7.d There is no significance difference in relationship between service quality and customer satisfaction of Passenger travelled with 2 trip and 3 trips between India and Europe.

7.e There is no significance difference in relationship between service quality and customer satisfaction of Passenger travelled with 2 trips and 4 trips between India and Europe.

7.f There is no significance difference in relationship between service quality and customer satisfaction of Passenger travelled with 3 trips and 4 trips between India and Europe.

4. Research Methodology:

The service quality model has been defined with five dimensions of Airqualscale: (1) Tangibility; (2) Reliability; (3) Responsiveness; (4) Assurance; (5) Empathy (Alotaibi, 2015). Tangibility was operationalized by 3 items, Reliability was operationalized by 4 items, Responsiveness was operationalized by 5 items, Assurance was operationalized by 4 items and Empathy was operationalized by 6 items. The customer satisfaction was operationalized by 4 items (Nedunchezian and Thirunavukkarasu, 2018).
In this research work, the population for the study is a finite one consists of passengers of all scheduled airlines operating between India and Europe. The defined population of the study is the total number of passengers travelled between India and Europe or vice-versa by any of scheduled carrier viz. Air-India and Jet Airways as well as European carriers viz. British Airways, Virgin Atlantic, Lufthansa and Air France. The defined population is excluding the passengers travelled from India to Europe or vice versa by indirect flights between India and Europe i.e. travelling to intermediate destination before reaching the final destination. The population elements are Indian passengers and European passengers travelling on India based airlines as well as Europe based airlines during one year period. All airlines operating from India to Europe or vice versa submit the total number of passengers travelled to Director General of Civil Aviation, Ministry of Civil Aviation, Government of India.

A survey type of measurement was used for collection of the data which is primary source of data collection. The sector between India and UK is one of the competitive route operated by 4 Airlines. Currently, 2 airlines each from India and UK based airlines are designated to operate between India and UK. British Airlines is operating between 5 ports in India (Delhi, Mumbai, Bangalore, Chennai and Hyderabad) in India and UK (London). Virgin Atlantic operates only one ports in India (Delhi) and London. Indian based airlines; Air-India is operating between two ports of India (Delhi and Mumbai) and 2 ports in UK (London and Birmingham). Jet Airways, another India based airlines, is operating at two ports in India (Delhi and Mumbai) and 1 port in UK (London). The sector between India and Germany are operated by 2 designated Airlines by both Governments. Air India (India) and Lufthansa (Germany) are operating between the routes. German Airline Lufthansa is operating between two ports in Germany (Munich and Frankfurt) and five ports in India (Delhi, Mumbai, Bengaluru, Chennai and Hyderabad). Air India is operating between Delhi and Frankfurt only. The sector between India and Paris are operated by 3 Airlines. Air-India operates between Delhi and Paris and Jet Airways is operating between Mumbai and Paris. However, Air France is operating between three ports in India, (Delhi, Mumbai and Bengaluru) and Paris.

The target population for the survey are (1) The passengers travelled once between the India and select European Sector namely London, Birmingham, Frankfurt, Munich and Paris or vice-a-versa. 2) Passengers travelled once on any of the followings Airlines; (a) Air India, (b) Jet Airways, (c) British Airways, (d) Virgin Atlantic, (e) Lufthansa, (f) Air France.
The passengers other than Indian nationality, British, German and French between India and Europe are excluded from the study. Similarly, India, British, German and French nationality passengers travelled on other than 6 Airlines; (a) Air India, (b) Jet Airways, (c) British Airways, (d) Virgin Atlantic, (e) Lufthansa, (f) Air France are excluded from the survey. As a result, the passengers departing to European cities namely London, Birmingham, Frankfurt, Munich and Paris were samples representing the target population as per the objective of the study.

The passengers profile consists of business, leisure and other business and Leisure travellers among these countries. The respondents were selected on non-probability judgemental basis as the objective of the study is to do multi group analysis. A self-administered questionnaire was administered to 1100 passengers who are waiting at the gate in the departure area during the period from Sept. 2016 to Dec. 2016. At the time of administering the questionnaire, the researcher explained to respondents that the survey was being carried out to measure the service quality and customer satisfaction of the airlines between India and Europe for the academic purpose and participation in this survey was voluntary. Most of the passengers agreed to participate in the survey. The respondents normally took not more than 10 minutes to complete all the questions. Most of the respondents found it easy to answer the questions and few of the respondents found difficulty in answering few of the questions. The responses with 5 missing values out of total 35 items of Service Quality and Customer satisfaction were excluded from the study. The total samples 902 comprising Indian and European passengers travelled with native country airline and foreign country airlines are collected.

Data Collection and Sampling:

Non probability sampling is used collection of data. A survey type of measurement is used for collection of the data which is primary source of data collection. As a result of this process, the final sample sizes are as follows:-

1) Indian passengers – 449. Out of which 223 are passengers travelled with India based airlines Air India and Jet Airways and rest of passenger travelled with European based airlines.
2) European passengers – 453. Out of which 228 travelled with Indian airlines and rest of passenger travelled with European based Airlines

Data Analysis

AMOS-20 software was used for the data analysis. Non-parametric procedure which directly compares groups specific bootstrap estimates from each bootstrap samples was used for analysis.

Table 1: Comparison between combined Indian and Europe Passengers on relationship between Second order Service Quality and Customer Satisfaction

<table>
<thead>
<tr>
<th>S.No</th>
<th>Comparison between</th>
<th>Indian Pax</th>
<th>European Pax</th>
<th>Beta difference</th>
<th>P value</th>
<th>Hypothesis</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Indian Pax Vs European Pax</td>
<td>0.73</td>
<td>0.54</td>
<td>0.8</td>
<td>0.6</td>
<td>-0.07</td>
</tr>
</tbody>
</table>

There is no significance on path relationship between Service quality and Customer satisfaction as the p value is more than 0.05. Hence, the hypothesis that there is no significance difference in relationship between service quality and customer satisfaction among Indian and European passengers is failed to be rejected. Indian and European passengers, belonging to different cultural groups have no difference in path relationship between service quality and customer satisfaction.

Table 2: Comparison between combined India based airlines (Air India and Jet Airways) and European Airlines (Air France, British Airways, Lufthansa and Virgin Atlantic) on relationship between second order Service Quality and Customer Satisfaction

<table>
<thead>
<tr>
<th>S.No</th>
<th>Comparison between</th>
<th>Group 1</th>
<th>Group 2</th>
<th>Beta difference</th>
<th>P value</th>
<th>Hypothesis</th>
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<tr>
<td></td>
<td></td>
<td>Beta</td>
<td>R^2</td>
<td>Beta</td>
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</table>
There is no significance on path relationship between Service quality and Customer satisfaction as the p value is more than 0.05. Hence, the hypothesis that there is no significance difference in relationship between service quality and customer satisfaction among Indian based airlines and European based airlines, is failed to be rejected. Indian based airlines and European based airlines belonging to different management groups have offering the similar service delivery to the passengers and alternate hypothesis that there is difference in path relationship between service quality and customer satisfaction does not hold good.

**Table 3 : Comparison among Indian Pax travelled on Indian carrier ( Air India and Jet Airways ) Vis European Carrier ( Air France, British Airways, Lufthansa and Virgin Atlantic) and European passenger travelled on Indian Carrier ( Air India and Jet Airways ) and European carrier ( Air France, British Airways, Lufthansa and Virgin Atlantic) on relationship between Second order Service Quality and Customer Satisfaction**

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<tr>
<th>S.No</th>
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<tr>
<td></td>
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<td>Beta</td>
<td>R^2</td>
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<tr>
<td>a</td>
<td>Indian Pax - Indian Carrier Vs Indian Pax-European Carrier</td>
<td>0.803</td>
<td>0.644</td>
<td>0.733</td>
<td>0.537</td>
<td>0.07</td>
</tr>
<tr>
<td>b</td>
<td>Indian Pax - Indian Carrier Vs European Pax-Indian Carrier</td>
<td>0.803</td>
<td>0.644</td>
<td>0.698</td>
<td>0.488</td>
<td>0.105</td>
</tr>
<tr>
<td>c</td>
<td>Indian Pax - Indian Carrier Vs European Pax-</td>
<td>0.803</td>
<td>0.644</td>
<td>0.775</td>
<td>0.6</td>
<td>0.028</td>
</tr>
<tr>
<td>European Carrier</td>
<td>European Pax - Indian Carrier Vs European Carrier</td>
<td>0.733</td>
<td>0.537</td>
<td>0.698</td>
<td>0.488</td>
<td>0.035</td>
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<td>d</td>
<td>Indian Pax - European Carrier Vs European Carrier</td>
<td>0.733</td>
<td>0.537</td>
<td>0.775</td>
<td>0.6</td>
<td>0.035</td>
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<td>e</td>
<td>Indian Pax - European Carrier Vs European Carrier</td>
<td>0.698</td>
<td>0.488</td>
<td>0.775</td>
<td>0.6</td>
<td>0.077</td>
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<tr>
<td>f</td>
<td>European Pax - Indian Carrier Vs European Carrier</td>
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There is no significance on path relationship between Service quality and Customer satisfaction as the p value is more than 0.05. Accordingly, the following hypothesis are not supported:

i. There is no significance difference in relationship between service quality and customer satisfaction of Indian passengers travelled on Indian carrier (Air India and Jet Airways) and Indian passengers travelled on European Carrier (Air France, British Airways, Lufthansa and Virgin Atlantic).

ii. There is no significance difference in relationship between service quality and customer satisfaction of Indian passenger travelled on Indian carrier (Air India and Jet Airways) and European passenger travelled on Indian Carrier (Air India and Jet Airways).

iii. There is no significance difference in relationship between service quality and customer satisfaction of Indian passenger travelled on European carrier (Air France, British Airways, Lufthansa and Virgin Atlantic) and European passenger travelled on Indian Carrier (Air India and Jet Airways).
iv. There is no significance difference in relationship between service quality and customer satisfaction of Indian passenger travelled on European carrier (Air France, British Airways, Lufthansa and Virgin Atlantic) and European passenger travelled on European carrier (Air France, British Airways, Lufthansa and Virgin Atlantic)

There is significance on path relationship between Service quality and Customer satisfaction as the p value is less than 0.05. Accordingly, the following hypothesis are supported:

i. There is significance difference in relationship between service quality and customer satisfaction of Indian passenger travelled on Indian carrier (Air India and Jet Airways) and European passengers travelled on Indian Carrier (Air India and Jet Airways).

ii. There is significance difference in relationship between service quality and customer satisfaction of European passenger travelled on Indian carrier (Air India and Jet Airways) and European passenger travelled on European carrier (Air France, British Airways, Lufthansa and Virgin Atlantic).

Table 4: Comparison among Indian and Europe Airlines on path relationship between Second order Service Quality and Customer Satisfaction

<p>| S.N o | Comparison between | Group 1 | | | Group 2 | | | Beta | R^2 | Beta | R^2 | Beta difference | P value | Hypothesis |
|-------|------------------|---------|----|---|---------|---|--------|----------------|-----|-----|----------------|---------|-----------|
| a     | Air India Vs Air France | 0.788   | 0.621 | 0.784 | 0.615 | 0.004 | 0.801 | Not Supported |
| b     | Air India Vs British Airways | 0.788   | 0.621 | 0.856 | 0.733 | 0.068 | 0.25  | Not Supported |
| c     | Air India Vs Jet Airways | 0.788   | 0.621 | 0.696 | 0.485 | 0.092 | 0.03  | Supported |
| d     | Air India Vs Lufthansa | 0.788   | 0.621 | 0.712 | 0.507 | 0.076 | 0.096 | Supported |
| e     | Air India Vs Virgin | 0.788   | 0.621 | 0.775 | 0.6  | 0.013 | 0.589 | Not Supported |</p>
<table>
<thead>
<tr>
<th></th>
<th>Atlantic</th>
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<th>Supported</th>
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<tbody>
<tr>
<td>f</td>
<td>Air France Vs British Airways</td>
<td>0.784</td>
<td>0.615</td>
<td>0.856</td>
<td>0.733</td>
<td>0.072</td>
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<td>g</td>
<td>Air France Vs Jet Airways</td>
<td>0.784</td>
<td>0.615</td>
<td>0.696</td>
<td>0.485</td>
<td>0.088</td>
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<td>h</td>
<td>Air France Vs Lufthansa</td>
<td>0.784</td>
<td>0.615</td>
<td>0.712</td>
<td>0.507</td>
<td>0.072</td>
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<tr>
<td>i</td>
<td>Air France Vs Virgin Atlantic</td>
<td>0.784</td>
<td>0.615</td>
<td>0.775</td>
<td>0.6</td>
<td>0.009</td>
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<tr>
<td>j</td>
<td>British Airways Vs Jet Airways</td>
<td>0.856</td>
<td>0.733</td>
<td>0.696</td>
<td>0.485</td>
<td>0.16</td>
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<tr>
<td>k</td>
<td>British Airways Vs Lufthansa</td>
<td>0.856</td>
<td>0.733</td>
<td>0.712</td>
<td>0.507</td>
<td>0.144</td>
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<tr>
<td>l</td>
<td>British Airways Vs Virgin Atlantic</td>
<td>0.856</td>
<td>0.733</td>
<td>0.775</td>
<td>0.6</td>
<td>0.081</td>
</tr>
<tr>
<td>m</td>
<td>Jet Airways Vs Lufthansa</td>
<td>0.696</td>
<td>0.485</td>
<td>0.712</td>
<td>0.507</td>
<td>0.016</td>
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<tr>
<td>n</td>
<td>Jet Airways Vs Virgin Atlantic</td>
<td>0.696</td>
<td>0.485</td>
<td>0.775</td>
<td>0.6</td>
<td>0.079</td>
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<tr>
<td>o</td>
<td>Lufthansa Vs Virgin Atlantic</td>
<td>0.712</td>
<td>0.507</td>
<td>0.775</td>
<td>0.6</td>
<td>0.063</td>
</tr>
</tbody>
</table>
There is no significance on path relationship between Service quality and Customer satisfaction as the p value is more than 0.05. Accordingly, the following hypothesis are not supported:

i. There is no significance difference in relationship between service quality and customer satisfaction of Passenger travelled on Air India and Air France.
ii. There is no significance difference in relationship between service quality and customer satisfaction of Passenger travelled on Air India and British Airways.
iii. There is no significance difference in relationship between service quality and customer satisfaction of Passenger travelled on Air India and Virgin Atlantic.
iv. There is no significance difference in relationship between service quality and customer satisfaction of Passenger travelled on Air France and British Airways.
v. There is no significance difference in relationship between service quality and customer satisfaction of Passenger travelled on Air France and Jet Airways.
vi. There is no significance difference in relationship between service quality and customer satisfaction of Passenger travelled on Air France and Lufthansa.
vii. There is no significance difference in relationship between service quality and customer satisfaction of Passenger travelled on Air France and Virgin Atlantic.
viii. There is no significance difference in relationship between service quality and customer satisfaction of Passenger travelled on British Airways and Virgin Atlantic.
ix. There is no significance difference in relationship between service quality and customer satisfaction of Passenger travelled on Jet Airways and Lufthansa.
x. There is no significance difference in relationship between service quality and customer satisfaction of Passenger travelled on Jet Airways and Virgin Atlantic.
xi. There is no significance difference in relationship between service quality and customer satisfaction of Passenger travelled on Lufthansa and Virgin Atlantic.

There is significance on path relationship between Service quality and Customer satisfaction as the p value is more than 0.05. Accordingly, the following hypothesis are supported:

i. There is significance difference in relationship between service quality and customer satisfaction of Passenger travelled on Air India and Jet Airways.
ii. There is significance difference in relationship between service quality and customer satisfaction of Passenger travelled on Air India and Lufthansa.
iii. There is significance difference in relationship between service quality and customer satisfaction of Passenger travelled on British Airways and Jet Airways.

iv. There is significance difference in relationship between service quality and customer satisfaction of Passenger travelled on British Airways and Lufthansa.

**Table 5: Comparison between Gender on relationship Second order Service Quality and Customer Satisfaction**

<table>
<thead>
<tr>
<th>S.No</th>
<th>Comparison between</th>
<th>Group 1</th>
<th>Group 2</th>
<th>Beta difference</th>
<th>P value</th>
<th>Hypothesis</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Beta</td>
<td>R^2</td>
<td>Beta</td>
<td>R^2</td>
<td></td>
</tr>
<tr>
<td>a</td>
<td>Male Vs Female</td>
<td>0.763</td>
<td>0.583</td>
<td>0.732</td>
<td>0.536</td>
<td>0.031</td>
</tr>
</tbody>
</table>

It is observed that there is no significance difference in relationship between service quality and customer satisfaction between gender.

**Table 6: Comparison among traveler types on relationship Second order Service Quality and Customer Satisfaction**

<table>
<thead>
<tr>
<th>S.No</th>
<th>Comparison between</th>
<th>Group 1</th>
<th>Group 2</th>
<th>Beta difference</th>
<th>P value</th>
<th>Hypothesis</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Beta</td>
<td>R^2</td>
<td>Beta</td>
<td>R^2</td>
<td></td>
</tr>
<tr>
<td>a</td>
<td>Business Vs Leisure</td>
<td>0.79</td>
<td>0.624</td>
<td>0.732</td>
<td>0.535</td>
<td>0.058</td>
</tr>
<tr>
<td>b</td>
<td>Business Vs Others</td>
<td>0.79</td>
<td>0.624</td>
<td>0.738</td>
<td>0.544</td>
<td>0.052</td>
</tr>
<tr>
<td>c</td>
<td>Leisure Vs Others</td>
<td>0.732</td>
<td>0.535</td>
<td>0.738</td>
<td>0.544</td>
<td>0.006</td>
</tr>
</tbody>
</table>

There is no significance on path relationship between Service quality and Customer satisfaction as the p value is more than 0.05. Hence, the hypothesis that there is no significance difference in relationship between service quality and customer satisfaction among type of travelers.
Table 7: Comparison among frequency of trips on relationship second order Service Quality and Customer Satisfaction

<table>
<thead>
<tr>
<th>S.No</th>
<th>Comparison between</th>
<th>Group 1</th>
<th>Group 2</th>
<th>Beta difference</th>
<th>P value</th>
<th>Hypothesis</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Beta</td>
<td>R^2</td>
<td>Beta</td>
<td>R^2</td>
<td></td>
</tr>
<tr>
<td>a</td>
<td>1 Trip Vs 2 Trips</td>
<td>0.697</td>
<td>0.486</td>
<td>0.745</td>
<td>0.555</td>
<td>0.048</td>
</tr>
<tr>
<td>b</td>
<td>1 Trips Vs 3 Trips</td>
<td>0.697</td>
<td>0.486</td>
<td>0.729</td>
<td>0.531</td>
<td>0.032</td>
</tr>
<tr>
<td>c</td>
<td>1 Trips Vs 4 Trips</td>
<td>0.697</td>
<td>0.486</td>
<td>0.845</td>
<td>0.713</td>
<td>0.148</td>
</tr>
<tr>
<td>d</td>
<td>2 Trips Vs 3 Trips</td>
<td>0.745</td>
<td>0.555</td>
<td>0.729</td>
<td>0.531</td>
<td>0.016</td>
</tr>
<tr>
<td>e</td>
<td>2 Trips Vs 4 Trips</td>
<td>0.745</td>
<td>0.555</td>
<td>0.845</td>
<td>0.713</td>
<td>0.1</td>
</tr>
<tr>
<td>f</td>
<td>3 Trips vs 4 Trips</td>
<td>0.729</td>
<td>0.531</td>
<td>0.845</td>
<td>0.713</td>
<td>0.116</td>
</tr>
</tbody>
</table>

There is no significance on path relationship between Service quality and Customer satisfaction as the p value is more than 0.05. Accordingly, the following hypothesis are not supported:

i. There is no significance difference in relationship between service quality and customer satisfaction of Passenger travelled with 1 trip and 2 trips.
ii. There is no significance difference in relationship between service quality and customer satisfaction of Passenger travelled with 1 trip and 3 trips.
iii. There is no significance difference in relationship between service quality and customer satisfaction of Passenger travelled with 2 trips and 3 trips.

There is significance on path relationship between Service quality and Customer satisfaction as the p value is more than 0.05. Accordingly, the following hypothesis are supported:

i. There is no significance difference in relationship between service quality and customer satisfaction of Passenger travelled with 1 trip and 4 trips.
ii. There is no significance difference in relationship between service quality and customer satisfaction of Passenger travelled with 2 trips and 4 trips.
iii. There is no significance difference in relationship between service quality and customer satisfaction of Passenger travelled with 3 trips and 4 trips.
Managerial implications:

The study will help airlines management to compare the service delivery process of airlines on India – Europe sectors. Since the service quality leads to business performance, the airlines management can develop strategies and tactics to improve upon the marketing programme as well as change the service culture of the organisation for the effectiveness and improve performance of the service employees. The major contribution is to provide more insights on comparative assessment on perception of relationship between Service quality and customer satisfaction; 1) Indian and European passengers; 2) India and Europe airlines operating between India and Europe; 3) Demographic factor such as Age and Gender; 4) Purpose of trips; 5) Frequency of travel.

4. Conclusion

The study was aimed to compare the relationship between service quality and customer satisfaction among Indian and European passengers. This is the first study performed to compare the relationship of second order service quality with customer satisfaction as the previous study used first order dimensions of service quality to assess the relationship with customer satisfaction. The study found that there is no difference of relationship between Service quality and Customer satisfaction among Indian and European passengers but there exist difference in relationship between India based Airlines and European based Airlines.

The study will help airlines management to understand the difference in the service quality delivery process, which is leading to customer satisfaction.

5. REFERENCES


