CHAPTER 7

SUMMARY OF FINDINGS AND IMPLICATIONS

The present study is summarized and the major findings are given in this chapter. The managerial and academic implications derived from the study’s findings and the avenues for further research are also discussed.

7.1 SUMMARY OF OBJECTIVES AND ANALYSIS

The analysis of large literature on different models of SQ developed over the years has helped in the development of the initial development of the inventory for SQ in Indian Airline Services for designing the questionnaire. The list of dimensions was further refined by conducting a focused group interview. From this, the questionnaire for developing the measurement scale for Service Quality was developed. This accomplished the first objective.

The second objective of assessing the empirical validity of the SQ inventory developed has been achieved through the application of Exploratory Factor Analysis and Confirmatory Factor Analysis.

The third objective of identifying any difference in SQ inventory among various demographic variables has been accomplished.

The fourth objective was to establish the relationship between Productivity, Use of technology and SQ, which is also done.
The fifth and the final objective was to test the model using SEM which was also done.

The implication of the research is reported in two forms, namely the academic implication and managerial implication.

### 7.2 SUMMARY OF HYPOTHESIS TESTING RESULTS

The summary of the results of hypothesis testing is given in the below table:

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>Testing method</th>
<th>Findings</th>
</tr>
</thead>
<tbody>
<tr>
<td>$H_A$: Productivity achieved through increasing companies input will result in increased Service Quality</td>
<td>SEM</td>
<td>Strongly supported</td>
</tr>
<tr>
<td>$H_B$: Productivity achieved through decreasing customer input will result in increased Service Quality</td>
<td>SEM</td>
<td>Strongly supported</td>
</tr>
<tr>
<td>$H_C$: Use of Technology is an important component of Company’s input</td>
<td>SEM</td>
<td>Strongly supported</td>
</tr>
<tr>
<td>$H_D$: Use of Technology has a positive effect on company input</td>
<td>SEM</td>
<td>Strongly supported</td>
</tr>
<tr>
<td>$H_E$: Use of Technology has a negative effect on customer’s input</td>
<td>SEM</td>
<td>Strongly supported</td>
</tr>
<tr>
<td>$H_F$: Use of Technology enhances the performance of Pilots</td>
<td>SEM</td>
<td>Strongly supported</td>
</tr>
<tr>
<td>$H_G$: Use of Technology enhances the performance of the cabin crew</td>
<td>SEM</td>
<td>Strongly supported</td>
</tr>
<tr>
<td>$H_H$: Use of Technology enhances the performance of airline staff at the airport</td>
<td>SEM</td>
<td>Strongly supported</td>
</tr>
<tr>
<td>$H_I$: Use of Technology enhances the performance of aircrafts</td>
<td>SEM</td>
<td>Strongly supported</td>
</tr>
<tr>
<td>$H_J$: Use of Technology enhances the performance of associated equipments</td>
<td>SEM</td>
<td>Strongly supported</td>
</tr>
</tbody>
</table>
Table 7.1 (Continued)

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>Testing method</th>
<th>Findings</th>
</tr>
</thead>
<tbody>
<tr>
<td>$H_K$ Use of Technology enhances the performance of communication tools</td>
<td>SEM</td>
<td>Strongly supported</td>
</tr>
<tr>
<td>$H_L$ Use of Technology enhances the performance of flight routes</td>
<td>SEM</td>
<td>Not supported</td>
</tr>
<tr>
<td>$H_M$ Use of Technology enhances the performance of flight timings</td>
<td>SEM</td>
<td>Not supported</td>
</tr>
<tr>
<td>$H_N$ Use of Technology enhances the performance of On time flight take off</td>
<td>SEM</td>
<td>Strongly supported</td>
</tr>
<tr>
<td>$H_O$ Use of Technology enhances the performance of On time flight arrival</td>
<td>SEM</td>
<td>Strongly supported</td>
</tr>
<tr>
<td>$H_P$ Use of Technology enhances the performance of utilities provided at the airport provided by the airlines</td>
<td>SEM</td>
<td>Strongly supported</td>
</tr>
<tr>
<td>$H_Q$ Use of Technology reduces the time spent by the customer in availing the service</td>
<td>SEM</td>
<td>Strongly supported</td>
</tr>
<tr>
<td>$H_R$ Use of Technology reduces the effort put in by the customer in availing the service</td>
<td>SEM</td>
<td>Strongly supported</td>
</tr>
<tr>
<td>$H_S$ Use of Technology reduces the price for the customer in availing the service</td>
<td>SEM</td>
<td>Strongly supported</td>
</tr>
<tr>
<td>$H_T$ Use of Technology reduces the time spent by the customer in booking for the service</td>
<td>SEM</td>
<td>Strongly supported</td>
</tr>
<tr>
<td>$H_U$ Use of Technology reduces the time spent by the customer in the actual use of the service</td>
<td>SEM</td>
<td>Strongly supported</td>
</tr>
</tbody>
</table>
7.3 MAJOR FINDINGS OF THE STUDY

The summary of the major findings of the study is presented in this section

1. The travel by airlines differs across age groups

2. The travel by airlines also differs across educational background

3. The travel by airlines also differs across income group

4. The travel by differs across gender group

5. The frequent traveler is likely to use the airlines even more

6. The demographic variable “income” has a significant negative impact on customers’ intention to travel by airlines

7. Price, Politeness of the crew members, consistency between communication and experience, luggage check in facility and convenience of flight timings are the top five inventory of SQ in Indian airline services

8. The next inventories of SQ are image of airline, guidance of airline staff at interchange point, facilities during check in, On time take off of fights and ease of booking

9. The final six inventories of SQ are Time of delivery of food, Handling of misplaced luggage, on time landing of flight, Communication regarding of Frequent Flyer Programme, Providing messages regarding flight delay and providing food during flight delays.
10. The customers feel that use of Technology by Indian Airlines service providers will help in improving the check in facility for the baggages

11. Customers feel that Technology can help the Airline staff in guiding them at interchange points during the journey.

12. Customers feel that technology can help them during check-in

13. Customers feel that technology can ensure on time take off of flights

14. Customers feel that technology can help them in booking tickets

15. Customers feel that technology can help them in handling of misplaced luggages

16. Customers feel that increasing the companies input for the services will result in increased service quality

17. Customers feel that decreasing their input for the services will result in increased service quality

18. Customers feel that technology is an important component of company’s input

19. Customers feel that feel that Companies can increase their input through use of technology

20. Customers feel that Companies can decrease my input through use of technology

21. Use of Technology enhances the performance of Pilots

22. Use of Technology enhances the performance of crew members
23. Use of technology has no role in timings of flights
24. Technology enhances the performance of aircrafts
25. Technology enhances the performance of associated equipments
26. Use of Technology enhances the performance of communication tools
27. Use of Technology does not enhance the flight routes available for an airline
28. Use of Technology enhances the performance of flight timings
29. Use of Technology enhances the performance of On time flight take off
30. Use of Technology enhances the performance of On time flight arrival
31. Use of Technology enhances the performance of utilities provided at the airport provided by the airlines
32. Use of Technology reduces the time spent by customers in availing the service
33. Use of Technology reduces the effort put in by customers in availing the service
34. Income and Age of the customers has a strong impact. Education has no impact on Flight Delay dimension of Service Quality.
35. Age of the customers has a strong impact but Income and Education has no impact on Flight Connection dimension of Service Quality.

36. Age and Income of the customers has a strong impact but Education has no impact on Frequent Flyer Programme dimension of Service Quality.

37. Neither Age, Income nor Education of the customers has a strong impact on Baggage dimension of Service Quality.

38. Neither Age, Income nor Education of the customers has a strong impact on Crew members dimension Service Quality.

39. Age, Income and Education of the customers has a strong impact on Seating Arrangement dimension of Service Quality.

40. Age, Income and Education of the customers has a strong impact on Pre-flight dimension of Service Quality.

7.4 RESEARCH IMPLICATION OF THE STUDY

The research on modeling the relationship between Use of Technology, Productivity and Service Quality is being done from the perspective of the customer. This way, the influences of use of technology on Service Quality and Productivity can be studied in detail with empirical validity. This would result in providing empirical evidence for organizations to invest in technology wherein they enhance both Productivity and Service Quality.
7.4.1 **Research Implications**

Among several implications which could significantly impact the research on modeling the relationship between Use of technology, Productivity and Service Quality, the important ones are listed below.

1) This research is a preliminary attempt to address an issue that has important implication for services management theory and practice. The major features of the present study are:

   a. Consideration of large number of dimensions in measuring Service Quality.

   b. This is a first time attempt to model a relationship between Use of Technology, Productivity and Service Quality.

   c. A adequate sample size of 655 numbers has been used

   d. Selection of advanced statistical techniques like Structural Equation Modeling, Multivariate ANOVA in assessing the model.

   Thus, this study turned out to be unique in nature and hence the research implication from this study can be far reaching.

2) The research resulted in the development of Service Quality inventory suitable for Indian Airline service providers.

3) The purification process of the scale developed was dictated by the desire to develop a parsimonious as well as reliable measure of Service Quality that could be extensively used in the Airlines services industry. Academic researchers in a developing economy like India can gain further by using this
methodology for developing similar suitable inventories of Service Quality for other service industries too. Also, academic researchers interested in further studying Airline services can use the dimensions of Service Quality that has been developed.

4) The role of technology in enhancing Service Quality has been studied. This would further provide inputs for researchers to conduct further research on Use of Technology and the relationship between Use of Technology, Productivity and Service Quality.

5) The model developed to establish the relationship between Productivity, Use of Technology and SQ can be used for establishing such relationships for other industries too.

6) The relationship between Service Quality and Use of Technology has been established, which can be used for establishing similar relationships for other industries. However, while using it for other industries care should be taken to use it for service sector which uses technology for both Productivity enhancement and improving Service Quality. The Software sector, Health care sector, Banking, Insurance and Shipping services are such examples.

The study betokens a new horizon in analyzing the relationship between Use of Technology, Productivity and Service Quality from the perspective of the customer. The research implications to this end can be explored further by dissecting the result on the basis of type of customers and their respective relationship models.
7.4.2 Managerial Implication of the Study

Several managerial implications emerge from the study and the significant ones are presented here.

1. The results enable managers of Indian Airline services to understand the nuances of Service Quality.

2. The marketing strategy of the airline service providers should focus on the inventory of Service Quality identified, namely Ease of booking, Flight timings, Guidance of staff at airport and Check in facilities.

3. The results give an idea of the role of technology in enhancing the Service Quality inventory.

4. The results give an idea of the areas in which Airlines should use Technology without compromising on Productivity and Service Quality.
7.5 SUGGESTIONS OF THE STUDY FOR THE INDIAN AIRLINE SERVICE PROVIDERS

Based on the key findings of the study, the following suggestions are outlined for the policy makers of the Indian Airline industry and the Indian Airline Service Providers.

There is a difference in usage of airline services among the age groups. Hence the marketing strategy of the airline Service providers should take into account the age of customer.

Similarly, there is a difference in usage of airline services among the various educational groups. The communication of the airline service providers should be focused towards the highly educated who are seen often to use the services.

There is a difference in usage of airline services among the various income groups. The demographic variable “income” has a significant negative impact on customers’ intention to travel by airlines.

Price, Politeness of the crew members, consistency between communication and experience, luggage check in facility and convenience of flight timings are the top five inventory of SQ in Indian airline services. The next inventories of SQ are image of airline, guidance of airline staff at interchange point, facilities during check in, On time take off of fights and ease of booking.

The check in at the airport is of major concern for the customer. Any information in advance regarding check in is most welcome by the customers. The Airlines can use technology in helping customers to check in.
Also, the same concern is expressed by the customer during the check-in of the luggages. Any technological investments in this direction will certainly improve the Service Quality of the Airline service provider.

On time take off and on time landing of flights is also a major concern for the customer with customers perceiving that the airline service provider can better use technology for the above two.

The Airlines have started to technology in a big way for booking of tickets. Any further use of technology in this area would only result in better Service Quality as perceived by the customer.

The way in which airlines handle the situation of misplaced luggages is of paramount concern for the customer and they perceive that use of Technology can help the airlines handle the situation of misplaced luggages better.

7.6 LIMITATIONS OF THE STUDY

A number of suggestions in respect of the limitations identified in this study are cited here with the hope that future researchers would address these issues more concretely. They are as follows

1. The first limitation of the study is in generalizing the result obtained. The SQ inventory developed is specific to Indian Airlines services and it cannot be used for other Services. The role of Technology on inventories of SQ have been measured only from the customer’s perspective and not from the employees or top management perspective.
2. The impact of use of technology from the perspective of the customer is studied. However, the impact of use of technology on company’s financial performance is not assessed.

3. The proposed model is for Indian Airline services only and may not be generic in nature.

4. Another limitation of study is that the different types of customers in terms of purpose of travel or frequency of travel have not been taken into account. All customers are treated alike and the data was analyzed. There is scope for furthering the research on the basis of type of customers.

5. The employee perception is not considered while measuring SQ.

6. Also the employees view on use of technology, Productivity and SQ are taken into account.

7. Separate SQ inventory need to be developed for the customers who travel for personal and official needs

8. Literature review is restricted to a select few which was found to be relevant for the study

7.7 FUTURE DIRECTIONS OF THE STUDY

Based on the suggestions made and the limitations of the study, the future directions of study are given below.

1. By using the research methodology in this study, SQ inventory can be developed for other services too.
2. While developing SQ inventory, the employee perception can also be included

3. Differences in SQ inventory on the basis of frequency of travel and reason for travel can also be studied

4. The procedure adopted for modelling the relationship between Productivity, Use of Technology and SQ can be used for establishing similar models for other services such as Banking, Software, Insurance, Healthcare, Shipping and Logistics

5. The procedure adopted for modeling the relationship between Productivity, Use of Technology and SQ can be used for establishing similar models for other services such as Banking, Software, Insurance, Healthcare, Shipping and Logistics

6. The above study can be done on the basis of international and domestic travel too.

7.8 CONCLUSION

Excellence in Service will result in benefits to customers, employees, management, shareholders and the society at large. Since the service industry plays a major in the Indian economy, the focus on service excellence has become a National priority. There have been extensive studies made on the topics of productivity, the role of technology and service quality. The role of Technology in improving productivity is also well documented. The extensive use of Technology to enhance productivity may result in poor service quality as perceived by the customer.
However, there has not been much research on establishing the relationship between the three. This study has made a small but significant step in that direction. Due the extensive use of Technology for productivity improvements and for delivering the service to the customer, the Indian Airline Services was selected to establish the relationship between the three. After the introduction of open skies policy by the Indian Government, the Airline services industry got a huge boost with the entry of many players. The consequent increase in competition has made both the use of technology and service quality as a key differentiating factor for Airline service providers to improve their market and profit positions.

The study models the relationship between Productivity, Use of Technology and Service Quality among Indian Airline service providers. This model would provide valuable information for the Indian Airline service providers. This information would help them to invest in Technology for enhancing productivity but without compromising on service quality. The model would also provide them with insights into components of service quality which are related to Technology.

The objectives of the study were; to develop an inventory for Service Quality measurement for Indian Airline Services; to assess the empirical validity of the developed inventory of Service Quality for Indian Airline Services; to develop a model establishing the relationship between Productivity, Use of Technology and SQ and; to test the model using Structural Equation Modeling.

Based on the data collected and the analysis made, the following conclusions were derived. The customers feel that use of Technology by Indian Airlines service providers will help in improving the check in facility for the baggages, help the Airline staff in guiding them at interchange points during the journey, help them during check-in and can ensure on time take
off of flights. Customers feel that technology can help them in booking tickets, help them in handling of misplaced luggages. Customers feel that increasing the companies input for the services will result in increased service quality. Customers feel that decreasing their input for the services will result in increased service quality. Use of Technology enhances the performance of Pilots, the performance of crew members, the performance of aircrafts, the performance of associated equipments and the performance of communication tools. The use of technology has a positive influence on the flight timings, On time flight take off and On time flight arrival. However the Use of technology has no role in timings of flights nor does it enhance the flight routes available for an airline.

The Indian Airline service providers should focus on the inventory of SQ identified, namely Ease of booking, Flight timings, Guidance of staff at airport and Check in facilities. The Airlines should use technology in helping customers to check in, during check in of luggages, for on time take off and on time landing of flights The Airlines should use technology for helping customers book tickets, in handling of misplaced luggages.

This study is a humble step in the direction towards establishing the relationship between Productivity, Use of Technology and Service Quality. The link between Use of Technology and Service Quality would provide key insights for the managers and the policy makers of the Indian Airline services. Also, the relationship between the three would help the Airline service providers to invest in the right technology wherein they have both productivity improvements and also better service quality. It is indeed possible to use technology to enhance productivity and at the same time use technology to improve Service Quality.