SERVICE QUALITY OF LOW-COST INTERNATIONAL AIRLINES IN INDIA: A KERALA BASED STUDY

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By

ROSINA BABY V.

Under the guidance of
Prof. (Dr) N. K. BABU

PG & Research Department of Commerce and Management Studies
Sri C. Achutha Menon Government College, Thrissur
University of Calicut, Kerala
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Cherpulassery College of Science & Technology
(Affiliated to the University of Calicut)
Recognised by the Govt of Kerala

Karalmanna, Cherpulassery
Palakkad Dist, Kerala State. Pin: 679506
0466-2281877, 2284700
8606151387,9072318877
Website www.ccst.ac.in
E-mail: info@ccst.ac.in

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Dr. Deepa Paul
Doctoral Co-Guide
Dr. DEEPA PAUL (PEN-671728)
Associate Professor & Research Guide
PG & Research Department of
Commerce and Mgt. Studies
Sri. C. Achutha Menon Govt. College
Thrissur, Kuttanellur - 680 014

Prof (Dr.) N K Babu
Doctoral Guide

Prof. (Dr) N. K. BABU
Research Guide
Department of Commerce & Management Studies
Sri. C. Achutha Menon Govt. College, Thrissur

SRI. C. ACHUTHA MENON GOVERNMENT COLLEGE
Date.....
THRISSUR-680 014

Place: Thrissur
Date: 03/05/2025

Rosina Baby V.
Assistant Professor
PG and Research Department of Commerce &
Management Studies
Sree Neelakanta Government Sanskrit College,
Pattambi, Palakkad

DECLARATION

I hereby declare that the work presented in the thesis entitled **Service Quality of Low-Cost International Airlines in India: A Kerala Based Study** is based on the original work done by me under the guidance of **Prof (Dr.) N K Babu** and has not been included in any other thesis submitted previously for the award of any degree. The contents of the thesis are undergone plagiarism check using *iThenticate software at C.H.M.K. Library, University of Calicut, and the similarity index found within the permissible limit. I also declare that the thesis is free from AI generated contents.*

Rosina Baby V.

Dr. DEEPA PAUL (PEN-671728)
Associate Professor & Research Guide
PG & Research Department of
Commerce and Mgt. Studies
Sri. C. Achutha Menon Govt. College
Thrissur, Kuttanellur - 680 014

Signature of the Co-Supervising Teacher

Name of the Co-Supervising Teacher

Signature of the Supervising Teacher

Name of the Supervising Teacher

Prof. (Dr) N. K. BABU
Research Guide
Department of Commerce & Management Studies
Sri. C. Achutha Menon Govt. College, Thrissur

Place: Thrissur
Date: 03/05/2025

SRI. C. ACHUTHA MENON GOVERNMENT COLLEGE ★ THRISSUR-680 014 ★ Date.....

Research Department of Commerce
Sri C Achutha Menon Government College
Thrissur

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It is hereby certified that both of the Adjudicators have not suggested any corrections in the Ph.D. thesis entitled "Service Quality of Low-Cost International Airlines in India: A Kerala Based Study" prepared by my doctoral candidate, Smt. Rosina Baby V., Assistant Professor of Commerce, Sree Neelakanta Government Sanskrit College, Pattambi, Palakkad under my guidance and supervision.

Also certified that both the hard copy and soft copy of the thesis are one and the same.

Cherpulasseri,
30/07/2025.

Prof. (Dr) N. K. Babu

Prof. (Dr) N. K. BABU
Research Guide
Department of Commerce & Management Studies
Sri. C. Achutha Menon Govt. College, Thrissur

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Rosina Baby V.

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LIST OF ABBREVIATIONS

A	-	Assurance
AGFI	-	Adjusted Goodness of Fit Index
AMOS	-	Analysis of Moment Structures
ANOVA	-	Analysis of Variance
AVE	-	Average Variance Extracted
B	-	Baggage
C	-	Conduct
CB	-	Check-in & Boarding
CFA	-	Confirmatory Factor Analysis
CFI	-	Comparative Fit Index
CL	-	Cleanliness
CM	-	Comfort
CMIN	-	Chi-square minimum
CN	-	Convenience
CR	-	Composite Reliability
CRM	-	Customer Relationship Management
CSAT	-	Customer Satisfaction Score
DV	-	Dependent Variable
E	-	Empathy
EFA	-	Exploratory Factor Analysis
EX	-	Expertise
F	-	Flight
FCA	-	Full-Cost Airline
FCC	-	Full-Cost Carrier
FSA	-	Full Service Airline
GFI	-	Goodness of Fit Index
H	-	Hypothesis
IF	-	In-flight Service
IFI	-	Incremental Fit Index
IN	-	Information
IT	-	Information Technology

IV	-	Independent Variable
KMO	-	Kaiser- Meyer-Olkin Measure of Sampling Adequacy
LCA	-	Low-Cost Airline
LCAI	-	Low-Cost International Airline
LCC	-	Low-Cost Carrier
MSV	-	Maximum Shared Variance
MV	-	Moderating Variable
NFI	-	Normal Fit index
NPS	-	Net Promoter Score
O	-	Overall Experience
PC	-	Passenger Choice
PCA	-	Principal Component Analysis
PCM	-	Principal Component Method
PP	-	Passenger Problems
PS	-	Passenger Satisfaction
PS	-	Problem Solving
R	-	Reliability
RFI	-	Relative Fit Index
RMR	-	Root Mean Square Residual
RMSEA	-	Root Mean Square Error of Approximation
RS	-	Responsiveness
SEM	-	Structural Equation Modeling
SPSS	-	Statistical Package for Social Sciences
SQ	-	Service Quality
SS	-	Safety & Security
SWOT	-	Strengths, Weaknesses, Opportunities & Threats
TA	-	Tangibles
TF	-	Ticketing & Flight Fare
TLI	-	Tucker Fit Index
TVM	-	Thiruvananthapuram
V	-	Valence
W	-	Waiting Time

ABSTRACT

The aviation sector in India is one of the fastest growing segments in the world. The sector has seen tremendous change as a result of privatisation initiatives and technological improvements for seamless travel with major players like IndiGo, Air India, and SpiceJet. Low-Cost Carriers increase air connectivity both in regional and international sector and it provides affordable overseas travel. The improvement of service quality is the main step that should be taken by the Indian LCCs to retain in the highly competitive international air travel market. Indian LCCs offering international services should frequently measure the service quality in order to identify the areas for improvement. The primary aim of the study is to evaluate the service quality of Low-Cost International Airlines in India. It also assesses the satisfaction level of international passengers of LCCs and the various problems faced by them during their air travel.

The research work is both descriptive and analytical in nature. The primary data were collected based on a pretested structured questionnaire. The data were collected from the international passengers travelling from and to three international airports in Kerala namely Thiruvananthapuram, Cochin and Calicut. The international passengers of Air India Express, IndiGo and SpiceJet were selected as samples. Purposive sampling method was used to select the sample. A sample size of 405 passengers was taken for the analysis and SSQAI model was used in the study to measure the service quality.

The study found that the interaction quality and physical environment quality of Low-Cost International Airlines are good and outcome quality and the access quality of Low -Cost International Airlines are only at moderate level. The results indicate that passengers have good level of satisfaction on assurance and empathy and there is average level of satisfaction on tangibles, reliability and responsiveness. The level of passenger satisfaction is average in case of the overall experience from the airlines. It is found that the passenger problems of Low-Cost International Airlines are big in case of Ticketing & Flight Fare, Flight and Check-In & Boarding. But,

moderate level of passenger problems persists in case of In-Flight Services and Baggage. The study revealed that all dimensions of service quality have a positive impact on the passenger satisfaction and all passenger problem factors have a negative impact on both service quality and passenger satisfaction. Frequent rescheduling and cancelation of flights, unreasonable increase in airfare, poor quality meals provided in the cabin, lack of refreshments during long delay etc. are the main areas where the airline companies should take necessary steps for the improvement of service quality of Low-Cost International Airlines.

Key Words: *Service Quality, Passenger Satisfaction, Passenger Problems, Low-Cost Airlines, International Airline.*

സംഗ്രഹം

ലോകത്തിലെ അതിവേഗം വളരുന്ന വിഭാഗങ്ങളിലൊന്നാണ് ഇന്ത്യയിലെ വ്യോമയാന മേഖല. സ്വകാര്യവൽക്കരണ സംരംഭങ്ങളുടെയും സാങ്കേതിക മെച്ചപ്പെടുത്തലുകളുടെയും ഫലമായി ഈ മേഖല വലിയ മാറ്റത്തിന് സാക്ഷ്യം വഹിച്ചു. ഇൻഡിഗോ, എയർ ഇന്ത്യ, സ്പൈസ് ജെറ്റ് തുടങ്ങിയ പ്രധാന കമ്പനികളുടെ സഹായത്തോടെ സുഗമമായ വിമാന യാത്ര ഉറപ്പ് വരുത്താൻ സാധിച്ചു. കുറഞ്ഞ നിരക്കിലുള്ള എയർലൈനുകൾ (ബജറ്റ് എയർലൈനുകൾ) പ്രാദേശിക, അന്തർദ്ദേശീയ മേഖലകളിൽ വിമാന കണക്റ്റിവിറ്റി വർദ്ധിപ്പിക്കുകയും കുറഞ്ഞ ചെലവിലുള്ള വിദേശ യാത്ര നൽകുകയും ചെയ്യുന്നു. ഉയർന്ന മത്സരാധിഷ്ഠിത അന്താരാഷ്ട്ര വിമാന യാത്രാ വിപണിയിൽ നിലനിൽക്കാൻ ഇന്ത്യൻ ബജറ്റ് എയർലൈനുകൾ സ്വീകരിക്കേണ്ട പ്രധാന നടപടി സേവന ഗുണനിലവാരം മെച്ചപ്പെടുത്തുക എന്നതാണ്. അന്താരാഷ്ട്ര സേവനങ്ങൾ വാഗ്ദാനം ചെയ്യുന്ന ഇന്ത്യൻ എൽസിസികൾ മെച്ചപ്പെടുത്തേണ്ട മേഖലകൾ തിരിച്ചറിയുന്നതിന് സേവന ഗുണനിലവാരം പതിവായി വിലയിരുത്തണം. ഇന്ത്യയിലെ കുറഞ്ഞ നിരക്കിലുള്ള അന്താരാഷ്ട്ര വിമാനക്കമ്പനികളുടെ സേവന നിലവാരം വിലയിരുത്തുകയാണ് പഠനത്തിന്റെ പ്രാഥമിക ലക്ഷ്യം. എൽസിസികളിലെ അന്താരാഷ്ട്ര യാത്രക്കാരുടെ സംതൃപ്തി നിലയും വിമാന യാത്രയിൽ അവർ അഭിമുഖീകരിക്കുന്ന വിവിധ പ്രശ്നങ്ങളും ഈ പഠനം വിലയിരുത്തുന്നു.

ഗവേഷണ പ്രവർത്തനങ്ങൾ വിവരണാത്മകവും വിശകലനപരവുമാണ്. മുൻകൂട്ടി പരീക്ഷിച്ച ഘടനാപരമായ ചോദ്യാവലിയുടെ അടിസ്ഥാനത്തിലാണ് പ്രാഥമിക ഡാറ്റ ശേഖരിച്ചത്. തിരുവനന്തപുരം, കൊച്ചി, കോഴിക്കോട് എന്നീ മൂന്ന് അന്താരാഷ്ട്ര വിമാനത്താവളങ്ങളിൽ നിന്ന് യാത്ര ചെയ്യുന്ന അന്താരാഷ്ട്ര യാത്രക്കാരിൽ നിന്നാണ് വിവരങ്ങൾ ശേഖരിച്ചത്. എയർ ഇന്ത്യ എക്സ്പ്രസ്, ഇൻഡിഗോ, സ്പൈസ് ജെറ്റ് എന്നിവയുടെ അന്താരാഷ്ട്ര യാത്രക്കാരെയാണ് സാമ്പിളുകളായി തിരഞ്ഞെടുത്തത്. സാമ്പിൾ തിരഞ്ഞെടുക്കാൻ പർപ്പോസിവ് സാമ്പിൾ രീതി ഉപയോഗിച്ചു. വിശകലനത്തിനായി 405 യാത്രക്കാരുടെ ഒരു സാമ്പിൾ സൈസ് എടുക്കുകയും സേവന ഗുണനിലവാരം അളക്കാൻ പഠനത്തിൽ എസ്എസ്ക്യുഎഐ മോഡൽ ഉപയോഗിക്കുകയും ചെയ്തു.

ലോകോസ്റ്റ്- ഇന്റർനാഷണൽ എയർലൈനുകളുടെ പരസ്പര ഇടപെടലിന്റെ ഗുണനിലവാരവും ഭൗതിക പരിസ്ഥിതി ഗുണനിലവാരവും നല്ലതാണെന്നും ഫല ഗുണനിലവാരവും ആക്സസ്

ഗ്രണനിലവാരവും മിതമായ തലത്തിൽ മാത്രമാണെന്നും പഠനം കണ്ടെത്തി. ഉറപ്പിലും സഹാനുഭൂതിയിലും യാത്രക്കാർക്ക് നല്ല സംതൃപ്തിയുണ്ടെന്നും സ്പഷ്ടത, വിശ്വാസ്യത, പ്രതികരണശേഷി എന്നിവയിൽ ശരാശരി സംതൃപ്തി ഉണ്ടെന്നും ഫലങ്ങൾ സൂചിപ്പിക്കുന്നു. എയർലൈനുകളിൽ നിന്നുള്ള മൊത്തത്തിലുള്ള അനുഭവത്തിന്റെ കാര്യത്തിൽ യാത്രക്കാരുടെ സംതൃപ്തിയുടെ നില ശരാശരിയാണ്. ടിക്കറ്റിംഗ്, ഫ്ലൈറ്റ് നിരക്ക്, ഫ്ലൈറ്റ്, ചെക്ക്ഇൻ-, ബോർഡിംഗ് എന്നിവയുടെ കാര്യത്തിൽ കുറഞ്ഞ നിരക്കിലുള്ള ഇന്റർനാഷണൽ എയർലൈൻസിന്റെ യാത്രക്കാരുടെ പ്രശ്നങ്ങൾ വളരെ വലുതാണെന്ന് കണ്ടെത്തി. എന്നാൽ, ഇൻഫ്ലൈറ്റ് സർവീസുകളുടെയും ബാഗേജുകളുടെയും കാര്യത്തിൽ - സേവന .നിലനിൽക്കുന്ന യാത്രക്കാരുടെ പ്രശ്നങ്ങൾ മിതമായ തോതിൽ ഗ്രണനിലവാരത്തിന്റെ എല്ലാ ഘടകങ്ങളും യാത്രക്കാരുടെ സംതൃപ്തിയിൽ നല്ല സ്വാധീനം ചെലുത്തുന്നുവെന്നും യാത്രക്കാരുടെ എല്ലാ പ്രശ്ന ഘടകങ്ങളും സേവന ഗ്രണനിലവാരത്തെയും യാത്രക്കാരുടെ സംതൃപ്തിയെയും പ്രതികൂലമായി ബാധിക്കുന്നുവെന്നും പഠനം വെളിപ്പെടുത്തി . ഫ്ലൈറ്റുകൾ പതിവായി പുനഃക്രമീകരിക്കുകയും റദ്ദാക്കുകയും ചെയ്യുക, വിമാന നിരക്കിലെ യുക്തിരഹിതമായ വർദ്ധനവ്, ക്യാബിനിൽ നൽകുന്ന ഗ്രണനിലവാരമില്ലാത്ത ഭക്ഷണം, നീണ്ട കാലതാമസത്തിൽ ലഘുഭക്ഷണങ്ങൾ നൽകാതിരിക്കുക എന്നിവയാണ് ചെലവ് കുറഞ്ഞ അന്താരാഷ്ട്ര എയർലൈനുകളുടെ സേവന ഗ്രണനിലവാരം മെച്ചപ്പെടുത്തുന്നതിന് എയർലൈൻ കമ്പനികൾ ആവശ്യമായ നടപടികൾ സ്വീകരിക്കേണ്ട പ്രധാന മേഖലകൾ.

സൂചക പദങ്ങൾ: സേവന നിലവാരം, യാത്രക്കാരുടെ സംതൃപ്തി, യാത്രക്കാരുടെ പ്രശ്നങ്ങൾ, കുറഞ്ഞ നിരക്കിലുള്ള എയർലൈനുകൾ, ഇന്റർനാഷണൽ എയർലൈൻ

CHAPTER 1

INTRODUCTION

1.1 Introduction

Aviation acts as a global bridge by connecting markets and industries across international boundaries. It has revolutionised the movement of goods by enabling fast delivery and minimising supply chain bottlenecks. Moreover, the aviation industry has made travel more inclusive, making it more reachable to people from all walks of life. It enhances business growth, tourism and trade across the economy. It has emerged as the most crucial area for a country's economic growth. Air transport improves connection due to its reliability and speed, enabling countries with a robust aviation sector to attract foreign direct investment. As a result, the aviation sector supports numerous services that have experienced rapid expansion. Previously seen as an expensive mode of transportation accessible to a select few, air travel has become affordable and widely available due to the emergence of low-cost carriers. The emergence of LCCs has facilitated sector growth through enhanced infrastructure and rise in operational airlines.

The aviation sector in India is one of the fastest growing segments in the world. It has experienced significant transformation subsequently to the deregulation of the aviation sector in India. The sector has seen tremendous change as a result of privatisation initiatives and technological improvements for seamless travel with major players like IndiGo, Air India, and SpiceJet. India will be the world's third largest air passenger market by overtaking UK by the end of 2025 as per the report of International Air Transport Association (IATA). The industry has recovered fully from the covid 19 pandemic. The passenger traffic, both domestic and international has been increased tremendously in the FY 2024-25 which stood at 196.91 million till December 2024. It has increased significantly as a result of number of causes including the growing number of airports in the country, the expansion of middle class population and the cheap airfare. The Indian government has taken several initiatives to promote the aviation industry. The government has introduced UDAN scheme and regional connectivity scheme to provide regional connectivity and to enhance the affordability of air travel to the people. The airline companies have ordered more number of flights and the government has been taking steps to

increase the number of airports to cater to the rising needs of passenger traffic. Now the Indian aviation industry is fully owned by private airlines both in full-service airlines and low-cost airlines.

Low-cost carriers also known as budget airlines are airlines that offer lesser amenities with low ticket fare as compared to full-service airlines. They aim to attract cost conscious travellers by minimising operation cost and maximising aircraft utilisation. They provide point-to-point travel and no frill services. The history of budget airlines began in the mid 20th century when a need for affordable air travel had emerged. As a result, innovative models had been shaped to meet the market need. Airlines such as Southwest Airlines and Ryanair emerged by focusing on cost effective operations. They targeted leisure travellers and business travellers seeking affordable rates. The success of Southwest Airlines and deregulation policies accelerated the growth of low-cost carriers worldwide. They transformed aviation industry and air travel globally. With the entry of Air Deccan in 2003, the idea of low-cost airlines entered the Indian market. The success of Air Deccan made it possible for other low-cost airlines like IndiGo to enter the market. Presently, LCCs operating both domestic and international services in India are Air India Express, IndiGo, SpiceJet and Akasa Air.

Service quality refers to the overall assessment of how well a service meets or surpasses customer expectations. Delivering high service quality means consistently fulfilling or exceeding what customers anticipate, which in turn fosters satisfaction and loyalty. It requires a deep understanding of customer needs and the implementation of effective systems and processes to ensure consistent service excellence. Every organisation should measure service quality to improve customer satisfaction, maintain competitiveness and attain long term success. Services are intangible and customers experience services subjectively. Measuring service quality is a necessity to understand the performance level and to identify key areas for improvement. Organisations can implement various strategies to improve service quality and deliver exceptional customer experience. Service quality of airlines refers to the overall experience rendered to airline passengers, from the moment of

booking a ticket to the time of reaching the final destination. It consists of both tangible aspects such as leg space & seat comfort, cleanliness, in-flight meals and in-flight entertainments and intangible factors like airline staff behaviour, communication, and responsiveness to customer needs. Service quality is the most influential factor for the success of airline industry in both public and private sectors.

1.2 Significance of the Study

The existing market environment of all industries has fundamentally reshaped from seller's to a buyer's market. The airline industry has also experienced a significant transformation during the past two decades. The affordable fare of low-cost airlines attracts even middle-income people to the air travel. The international passengers have to depend on the airlines to reach their international destinations. Low-cost airline companies provide discounts, offers and flash sales to attract international passengers. . The airline industry is facing a tough competition among various airlines, particularly low-cost airlines, due to the privatisation of airlines in India. Foreign airline companies also operate low-cost airlines to and from various international airports in India. Indian LCCs like Air India Express, IndiGo, SpiceJet, and Akasa Air compete with foreign LCCs such as Air Asia, Fly Dubai, Air Arabia etc. In order to have competitive advantage, Indian airline companies operating low-cost international airlines should provide better service quality to the passengers.

The international passengers consider various factors to choose a low-cost airline for having a safe and comfortable air travel. It is necessary for the airline companies to have an understanding of these influencing factors and thereby pay more attention to these areas. The airline services include pre–flight, in–flight and post–flight services. The airline companies should provide standardised services at each and every point in order to meet the passenger expectations. The management of Indian low-cost airlines should continuously monitor, assess and evaluate the level of service quality offering to the international passengers. The poor service quality will lead to customer dissatisfaction and the passengers may shift to foreign low-cost international airlines which provide better service quality. The evaluation of service

quality will help the companies to identify the areas where service quality should be improved. They can take proper steps to improve the service quality and customer satisfaction. Even though studies were conducted with regard to service quality of low-cost airlines, no studies have been conducted with regard to service quality of low-cost international airlines in India. This study will help Indian airline companies to understand the level of service quality and passenger satisfaction of low-cost international airlines. Therefore, the evaluation of service quality of low-cost international airlines in India is highly significant in the present competitive scenario.

1.3 Statement of the Research Problem

Air travel plays an important role in India's economic development by a substantial contribution to the county's GDP. Low-cost carriers have transformed air travel by making it more affordable and reachable to a larger segment of the population. LCC increases air connectivity both in regional and international sector. It provides affordable overseas travel by offering short-haul and medium-haul services and it makes international air travel possible to middle-class people. Expatriate workers, students, and tourists largely depend on LCCs for budget-friendly international travel. India's growing economy and increasing middle-class population have led to a remarkable increase in international air travel demand. With the deregulation policies of the government, more foreign airlines operate services to India, which also increases connectivity to global destinations. As a result, the competition among low-cost international airlines operating in and out of India has tremendously increased in past few years. To capture the market share and sustain in the market, both Indian and foreign LCCs adopt various strategies such as competitive fares, increased international connectivity and improved services.

The improvement of service quality is the main step that should be taken by the Indian LCCs to retain in the highly competitive international air travel market. Service quality is a key determinant of an airline's success. High service quality ensures a good travel experience that leads to positive customer feedback. Passengers who are satisfied are more likely to prefer the same airline for their

future travels. It helps to create positive word of mouth and customer loyalty. By offering an excellent service quality, LCCs can differentiate themselves from competitors. Therefore, Indian LCCs offering international services should frequently measure the service quality in order to identify the areas for improvement. Hence, the present study has been undertaken to find a solution for the research problem that what is the level of service quality of Low-Cost International Airlines in India.

1.4 Research Questions

The present research work attempts to investigate into the following research questions:

1. What are the factors influencing the selection of Low-Cost International Airlines?
2. What is the level of service quality of Low-Cost International Airlines?
3. What is the level of passenger satisfaction towards Low-Cost International Airlines?
4. What are the different problems faced by the international passengers of Low-Cost Airlines?
5. Is there any relationship between service quality and passenger satisfaction of Low-Cost International Airlines?
6. Do the passenger problems influence the service quality of Low-Cost International Airlines?
7. Is there any relationship between passenger problems and passenger satisfaction of Low-Cost International Airlines?
8. Do passenger problems play any moderating role in the relationship between service quality and Passenger Satisfaction of Low-Cost International Airlines?

1.5 Scope of the Study

Scope of the present study is limited to the measurement of the service quality of Indian Low-Cost Airlines operating international services to and from Kerala international airports. It does not cover the service quality of Indian LCCs which are operating only domestic services. It covers four international airports in Kerala namely, Thiruvananthapuram, Cochin, Calicut and Kannur. The service quality of Indian Low-cost Airlines providing international services from all these three airports, such as Air India Express, IndiGo and SpiceJet have included in the study for the purpose of airline-wise comparison. It measures the service quality from the perspective of international travellers in Kerala. It covers only the perception of passengers who have travelled in direct international flights as it is different from the perception of passengers who have travelled in connection flights. The study is limited to the perceptions of passengers who have travelled at least three times in LCAIs.

The service quality of airline services are covered in the study such as pre-flight, in-flight and post flight services and the airport tangibles and services are not included. It includes quality of services from booking of services to the baggage delivery. The study tries to identify the various factors influencing the selection of LCAIs. It also examines the satisfaction level of passengers of LCIAs. The various problems faced by the international travelers of LCCs during their travel are identified and measured in the study.

1.6 Objectives of the Study

1. To examine the factors (choices) influencing the selection of Low- Cost International Airlines.
2. To evaluate the service quality of Low-Cost International Airlines.
3. To measure the level of passenger satisfaction of Low-Cost International Airlines.

4. To explore the various problems faced by passengers in Low- Cost International Airlines.

5. To evaluate the extent to which the passenger choices, service quality, passenger satisfaction and passenger problems of Low-Cost International Airlines vary among demographic and travelling profiles of the passengers.

6. To assess the impact of service quality on passenger satisfaction of Low-Cost International Airlines.

7. To check the impact of passenger problems on service quality and passenger satisfaction of Low-Cost International Airlines.

8. To test the moderating role of passenger problems on the relationship between service quality and passenger satisfaction of Low-Cost International Airlines.

1.7 Hypotheses

- $H1_1$: There is not an average (above or below average) influence of Passenger Choices on the selection of Low-Cost International Airlines.

- $H1_2$: There is not an average (above or below average) level of Service Quality in Low-Cost International Airlines.

- $H1_3$: There is not an average (above or below average) level of Passenger Satisfaction in Low-Cost International Airlines.

- $H1_4$: There is not an average (above or below average) level of Passenger Problems in Low-Cost International Airlines.

- $H1_5$: There is significant difference in the Passenger Choices, Service Quality, Passenger Satisfaction and Passenger Problems of Low-Cost International Airlines among demographic and travelling profiles of passengers.

- $H1_6$: The Service Quality has significant impact on Passenger Satisfaction of Low-Cost International Airlines.
- $H1_7$: The Passenger Problems have significant impact on Service Quality and Passenger Satisfaction of Low-Cost International Airlines.
- $H1_8$: The Passenger Problems significantly moderate the relationship between Service Quality and Passenger Satisfaction of Low-Cost International Airlines.

1.8 Operational Definitions

The operational definitions of the important terms used in the study are given below:

Low-Cost Airlines

Low-Cost Airlines are airlines that offer comparatively cheap airfares to passengers by reducing costs and simplifying services. They simplify services to cut down costs like removing free meals and in-flight entertainments, reducing leg room and charging extra for each additional service.

Low-Cost International Airlines

Low-Cost International Airlines are airlines which provide services to international destinations and offer low fares to passengers by reducing costs and simplifying services.

Full-Cost Carriers

Full-Cost Carriers also known as traditional airlines are airlines that provide a large range of services comparatively at a high cost. FCCs provide multiple classes of service such as economy, premium economy, business and first class.

Service Quality

Service quality refers to the level of excellence or superiority of a service provided by the Low-Cost International Airlines. The service quality of airlines is measured by analysing various dimensions of service quality.

Passenger Satisfaction

Passenger satisfaction refers to the satisfaction of international passengers of Low-cost Airlines. It refers to the degree to which a passenger's expectations, needs and desires are met or exceeded during their air travel experience.

Passenger Choices

Passenger choices are the factors influencing the selection of Low-Cost International Airlines. The international passengers consider several factors to choose a low-cost carrier.

Passenger Problems

Passenger problems are the problems faced by the passengers during their international travel. It includes all problems from the booking of ticket to the delivery of baggage.

Pre-flight Services

Pre-flight Services are the services and amenities provided by the airlines before the flight. It includes online check-in, counter check-in, priority check-in, baggage drop-off, seat selection etc.

In-flight Services

In-flight services indicate the services and amenities offered to the passengers during a flight. These services can vary depending on the flight, domestic or international route and class of travel. It includes meal options, in-flight entertainments, seat comfort, legroom etc.

Post-flight Services

Post-flight services are the services and amenities offered to passengers after their flight. It includes baggage claim, baggage assistance, loyalty program benefits etc.

Direct Flight

Direct flight is a flight that operates between two destinations without any intermediate stops. The flight takes off from the origin airport and lands at the destination airport without stopping at any other airport along the way.

Connection Flight

Connection flight is a flight that involves a change of aircraft at an intermediate airport before reaching to the final destination.

1.9 Chapter Scheming of the Research Report

The entire research report is divided into eight chapters. Brief explanation of the chapters is given below:

Chapter 1 Deals with a brief introduction for the study, significance of the study, statement of the research problem, research questions, scope, objectives of the study, hypotheses, operational definitions and chapter scheme.

Chapter 2 Includes literature review. The literature pertaining to the topic is thoroughly reviewed in this chapter, which also outlines the research gap. A literature review was undertaken based on four primary variables and the relevant studies are classified into the following four heads:

1. Passenger Choices
2. Service Quality
3. Passenger Satisfaction
4. Passenger Problems

Chapter 3 Gives the theoretical framework of the study. This chapter deals with the theoretical background of Low-Cost Carriers and profile of Low-Cost International Airlines in India. It also presents a detailed

explanation of service quality, customer satisfaction and passenger problems of airlines.

Chapter 4 Presents the methodology used for the study. It explains research methods, sources of data, sampling design, service quality model used, variables used in the study, conceptual model, data collection instrument, normality test, validation of measurement scale of passenger choices, service quality, passenger satisfaction and passenger problems and data analysis tools.

Chapter 5 Includes the data analysis and interpretation based on first five objectives. The chapter is divided into five sections, comprised as demographic and travelling profile of passengers (section A), Passenger Choices (section B), Service Quality (section C), Passenger Satisfaction (section D) and Passenger Problems (section E).

Chapter 6 Deals with the data analysis and interpretation showing empirical relationship among service quality, passenger satisfaction and passenger problems.

Chapter 7 Shows summary of the study, findings and conclusions.

Chapter 8 Consists of recommendations, implications of the study, limitations of the study and scope for further research.

CHAPTER 2

REVIEW OF LITERATURE

2.1 Introduction

Review of literature refers to a detailed analysis of existing research on a particular topic and it helps the researcher to find out the research gap in the existing literature. It gives background information on a particular topic and information about the methodology of the study. Here the researcher is concerned with reviewing the similar studies done so far in the area of service quality of airlines in order to acquire more knowledge about service quality of Low-Cost International Airlines and to identify the variables of the study. It has been done by reviewing published national and international research articles, theses, reports published by airline companies and Ministry of Civil Aviation and text books in the area. The researcher has included 105 literature reviews in the chapter. Review of literature has been done on the basis of four main variables and the relevant studies are classified into the following four heads:

1. Passenger Choices
2. Service Quality
3. Passenger Satisfaction
4. Passenger Problems

2.2 Passenger Choices

Diggines (2010) conducted a case study to understand the perceptions of South African passengers about low-cost airlines and full-cost airlines. It analysed the factors which the passengers were taken into consideration for selecting low-cost and full-cost airlines. It also discussed the reasons for switching to low-cost carriers. The results of the study indicate that the passengers of full-cost airlines give more importance to quality, safety, and reliability. Even though the passengers of low-cost carriers are highly price sensitive, they measure the quality and safety before flying in the airline. The study concluded by trying to spotlight the need for a better pricing strategy and a good design of customer loyalty programmes for low-cost carriers.

Thanasupsin, Chaichana and Pliankarom (2010) explored the different factors affecting the mode selection by Thai travellers. The study also tried to understand travellers' perceptions of LCC and the FSA. The results of the study indicate that both LCC and FSA satisfied travellers with regard to two main attributes that is fair and safety which are the main concerns of travellers. Group size, fair deviation to income ratio, waiting time deviation multiplied by income, punctuality and safety are the main factors influencing the selection of travelling modes. The study showed that punctuality, on-board food and beverage and on-board entertainment are the dominant features of FSA. Whereas fare and fare promotion are the strengths of LCC.

Kankaew (2012) had used importance-performance analysis [IPA] technique to measure the service quality of legacy airlines in Thailand. The study also tried to find out the factors that are considered by passengers for the airlines' selection. Ground service, in-flight service, overall importance, and performance of services were the main attributes taken for analysis in the study. The results of the study revealed that even though passengers' expectations on service quality is high, Thai Airways International and Bangkok Airways try to come up to the expectations of passengers. So, passengers are satisfied on the service quality provided by these two airlines. Safety, suitable price, ease of reservation and payment, effectiveness of baggage handling and courtesy of airline staff are the main factors that customers prefer most while making an airline choice.

Manivasugen and Nova (2013) in their article entitled 'Factors affecting customer preferences while choosing a Low-cost Airline' discussed various factors affecting customer preferences while choosing the low-cost airlines in Indonesia. The main factors which the authors had analysed include price, comfort, safety, personnel behaviour, on time performance etc. Findings of the study indicate that the factors that customers prefer most are safety, convenience of schedules, price and comfort and least preference is given to food and drinks, cabin services and baggage handling services.

Agarwal and Dey (2014) made a pioneering attempt to study the factors considered for evaluating the experience of domestic air travel. The study also analysed passengers' prioritisation of services offered by an airline. It considered variables such as quality and service, price of the ticket, flexibility, connectivity and on-time performance. It found out that price of the ticket is the factor that customers bother most, and flexibility is the factor that they bother least. Baggage loss is the main problem the passengers face during air travel. IndiGo and SpiceJet have done well in respect of value for money.

Rajeswari (2014) examined the factors influencing the selection of airlines and assessed the level of customer satisfaction towards various airline services in Coimbatore city. Chi-square test and rank analysis were the tools used to analyse the collected data. The results revealed that availability of ticket, departure and arrival time, air fare and seat availability are the predominant factors that influence airline choice. The average time taken by airlines for baggage check-in and boarding is around 20 minutes. The level of customer satisfaction towards accuracy of flight and fare information given by travel agent is medium. From the results it can be understood that airlines give high value for money paid by customers by offering good service quality and thereby ensures overall satisfaction of customers.

Ayantoyinbo and Boye (2015) made an attempt to understand the Nigerian passengers' preferences in the selection of domestic airlines. The study concentrated on five airline service attributes to determine passenger's preferences. The results of the study indicate that price is the prime priority of the passengers in the selection of domestic airlines. Findings of the study indicate that second priority factor is flight convenience followed by frequency of flight and comfort. Passengers have last priority to the attribute airlines staff courtesy. The study concluded with the point that passengers' travelling experience, family size and occupational status are significantly influenced the passengers' decision of airline selection.

Deepa and Ganapathi (2016) conducted a study to identify factors affecting customers' preference of low-cost carriers. The study also observed the relationship between the demographic profile of the customers and factors of customer

preferences. The study identified four main factors affecting customers' preference of low-cost carriers by applying exploratory factor analysis namely convenience, service, efficiency, and brand name. Findings of the study indicate that factors affecting customers' preference of low-cost carriers are varying according to the difference in socio economic characteristics of customers.

Soma (2016) conducted a research to explore the factors affecting the selection of airlines in India. The findings of the study showed that though airline passengers are interested to keep brand loyalty, sales promotional offers and price of airlines affect their decision of airline choice. It pinpointed that price and satisfactory service are the foremost influential factors of customer loyalty. Customers are highly satisfied with the attributes such as availability and accessibility of services, skills of employees and sales promotional tools.

Faiyetole and Temitope (2018) examined different factors influencing international airline choices of passengers in Nigeria. The results of the study revealed that passengers' international airline choices are influenced mainly by five latent factors with eleven variables. Five influencing factors are primary pre-flight considerations, essential in-flight services, post flight receptions and airlines' related services, timeliness of receiving checked-in luggage and ease of online booking. Primary pre-flight considerations are the foremost influencing factor in international airline choices which includes ticketing price, airlines safety and flight availability and scheduling. Passengers give priority to essential in-flight services particularly in international travel. All other three factors are considered important by passengers while selecting international flights.

Santhosh and Varun Kumar (2019) tried to identify the influencing factors of airline travellers' perception. Independent variables identified in the study were customers' expectations, service quality and experience. Customer perception was taken as dependent variable. The study identified that there are differences in the perceptions of airline passengers. The results of the study indicate that airport services, reservation and ticketing, in-flight services and intangibles are the prime factors that influence on customers' perception.

Ruthswamy (2022) examined main factors considered for airline selection by air travellers of low-cost airlines in India. The study's findings indicate a strong correlation between travellers' qualification and their purpose of travel. The main factors considered by air travellers for airline selection are availability of destinations, convenient flight timings, allowances & discounts and online seat booking facility. Data was collected from passengers of domestic airlines operating in Delhi. The study also showed that advertisement has a significant role for selecting the airline where private low-cost carriers are more attracting passengers through innovative and creative advertisements than public low-cost carrier. The study revealed that the passengers give more focus on promised service delivery as compared to other factors of service quality.

2.3 Service Quality

Cunningham and Young (2002) conducted a comparative study about service quality perceptions of US and Korean airline passengers. The researchers proved the applicability of SERVPERF dimensions in airline industry to measure service quality by incorporating industry based measures. The study also analysed the perceptions of different risks involved in airline selection. The findings of the study revealed that service reliability, in-flight comfort and connections are the predominant determinants of customer satisfaction to US airline passengers. At the same time, reliability, assurance and risk factors are the key determinants of customer satisfaction to Korean airline passengers. US passengers perceive more risks in performance and finance whereas Korean passengers focus more on social risks involved in air travel.

Gilbert and Wong (2003) made an attempt to trace the service dimensions that has top priority to airline passengers in Hong Kong International Airport. The study measured service quality by splitting the tangible dimension of SERVQUAL model into three i.e. facilities, employees and flight patterns and by changing empathy as customisation. The results of the study showed that the service expectations of different ethnic groups/nationalities or Travellers who travel for different purposes are different. The study pinpointed that assurance is the top tier priority factor of

airline passengers which emphasized that passengers are more concerned about the safety and security aspect of airline travel. The study suggested that good service culture should be developed by giving prompt response, willingness to help and having a courteous behaviour of airline staff. The study also revealed that passengers have given high rank to the online on-time performance of flights and airline management should give attention to this attribute.

Kozak, Karatepe and Avci (2003) assessed the service quality and customer satisfaction of National Airline passengers in Northern Cyprus. The study showed that SERVPERF model is more accurate predictor of customer satisfaction than SERVQUAL model. The results of the study showed a large gap in the reliability dimension particularly in the attribute 'performing the service right the first time'. Passengers have low perceptions in modern aspects of service like modern looking aircraft, visually appealing brochures etc. This revealed that passengers give priority to visual aspects of service quality. Passengers face lot of problems in service delivery as a result of lack of competition in airline industry in Northern Cyprus, this in turn resulted in low overall customer satisfaction. The study urged the need for staff training, improvements in staff pay and working conditions as a remedy for improving service quality.

Prayag (2007) analysed international tourist perceptions about service quality of Air Mauriius. The researcher also tried to find out the important service quality attributes of international tourists. The research revealed that service efficiency and affect is the primary factor which influences international tourists' perception. They give less importance to reliability and tangibles. Empathy attribute is more important to international tourists than assurance attribute. Service efficiency and affect is the main factor which influences the customer satisfaction. Tourists show their willingness to recommend the airline to others only if they are satisfied with the service efficiency and affect. The study pointed out that the expectations of airline customers vary depending on the destination and purpose of travel.

Nadiri et al (2008) investigated the service quality perceptions of passengers of North Cyprus national airline. The study used AIRQUAL model for measuring

service quality. It also analysed the impact of service quality on customer satisfaction and repurchase intention. The results of the study indicate that airline tangible is the most influencing factor of both customer satisfaction and repurchase intention. Findings also revealed that customer satisfaction has a positive correlation with both repurchase and word of mouth intentions. The study suggested that more attention is needed in catering service facilities and aircrafts' technical maintenance at regular intervals.

Raj (2008) assessed service quality of domestic airlines in India. The researcher made an attempt to develop an instrument for measuring service quality of airlines. The findings of the study revealed that passengers of low-cost carrier have low perceptions on tangibility and empathy attributes. As result there exists a big gap between customer perceptions and expectations in case of low-cost carriers. There is a significant difference in the customer's perceptions on service quality among different categories of airlines. The study also observed that the use of IT in various areas of services increases customer satisfaction. It established the acceptability of low-cost carrier in Indian context. It emphasised that even though the low-cost airline passengers are price sensitive, full-cost airline passengers give priority to quality service over price.

Saha and Theingi (2009) examined the relationship between variables such as service quality, customer satisfaction and behavioural intentions. The study focused on three low- cost carriers operating in Thailand. The study found out that flight schedules, flight attendance, tangibles and ground staff are the main influencing factors of service quality which leads to passengers' satisfaction. These passenger satisfaction determinants are also important in determining behavioural intentions. The researcher prepared a revised set of service quality dimensions in SERVPERF model exclusive for LCCs in Thailand. The result of the study revealed that word-of- mouth publicity of satisfied customers has positive impact on repurchase intentions. There is a tendency to change airlines by the dissatisfied passengers instead of giving feedback to the LCCs. Passenger satisfaction was measured with three main variables that is fair, service and airline. The results of the study indicate

that flight schedule is the foremost influencing factor of service quality dimension. On the other hand, service of ground staff has least importance on determining service quality.

Francis and Balasubramanian (2010) conducted a study to identify top priority factors contributing to service quality of Indian Airlines. The study used twelve variables for ranking purpose after checking their reliability. The five foremost service quality factors as per results of the study are price, politeness of crew members, consistency between communication and experience, check-in of luggage and convenience of flight timings. Passengers give least importance to food and accommodation during flight delays, communication regarding the frequent flyer program and on-time landing of flights.

Adam Lambert (2011) examined long haul airlines managers' perceptions on passengers' service quality expectations. The study included perceptions of both airline managers and travel industry managers and examined whether there is any difference in perceptions of both groups. It also investigated the matching of airline investment strategies with the passenger expectations. The findings of the study indicate that there is no significant difference in the perceptions of both the groups. The both groups ranked reliability as the prime service quality factor of long haul airlines. The study identified trust and safety is the important element of reliability dimension. The tangible dimension is the least important factor as per airline managers' perception. The study concluded that there is no significant difference in airline managers' perceptions about passengers' service quality expectations and passengers' perceptions.

Ahn and Lee (2011) assessed the factors affecting service quality, customer satisfaction and loyalty and examined whether there is any variation in these factors between full-cost and low-cost airlines. Data was collected by conducting field survey in Central London and London Gatwick airport, United Kingdom. The study revealed that passengers' perceptions of service quality towards traditional and low-cost airlines are significantly different. Airline tangibles have more positive impact than other factors on service quality of low-cost airlines. But behavioural intentions

are not much affected by service quality of low-cost airlines. At the same time, it is affected much in case of traditional airlines. However, customers exhibit same loyalty related behaviour for both the airlines. The study concluded that the service quality of both traditional and low-cost airlines has a positive influence on customer satisfaction.

Erdil & Yıldız (2011) in their study assessed two important service quality models SERVQUAL and SERVPERF in terms of its ability to explain deviation in the overall service quality. Both weighted and unweighted versions of two scales were measured by collecting data from airline passengers in Turkey. The study found that the unweighted servqual assessed service quality more accurately than the unweighted servperf. This indicates that unweighted servqual is better than the unweighted servperf. At the same time, weighted servperf is more accurate in measuring service quality than weighted servqual. This indicates that weighted servperf is better than the weighted servqual in measuring service quality of airlines. The study concluded that weighted servperf scale will be more precise in measuring service quality in airline industry.

Güre, Arslan & Yılmaz (2011) conducted a comparative study to analyse the service expectations about service quality between domestic airline passengers and international airline passengers in Turkish airports. The findings of the study indicate that there exist significant differences between international and domestic airline passenger groups with respect to their demographic profiles, behavioural features and expectations about service quality dimensions. The study pointed out that age and flight frequency have no positive relationship in case of international travellers whereas such a relationship exists in case of domestic travellers. There is a positive relationship between age and flight purpose, between education level and flight purpose and between flight frequency and flight purpose in case of international as well as domestic travellers. Reliability is the priority dimension to international passengers whereas domestic passengers rank assurance as most priority factor for their airline travel.

Krishnanutty & Kalita (2011) measured service quality of three domestic airlines SpiceJet, Indigo and Kingfisher by using SERVPERF model. The study used factor analysis and regression analysis to find out foremost service quality factors of each domestic airline. The study ascertained that service quality of Kingfisher is good as compared to other two airlines. SpiceJet passengers give importance to assurance whereas Kingfisher passengers give priority to safety and promptness. It revealed that consumer perceptions are different in same category of service as per SERVPERF model depending on the company. The study pointed out that brand name has a positive impact on consumers' perceptions of service quality.

Liou et al (2011) tried to measure service quality of four main domestic airlines in Taiwan by using modified grey relational model. The results of the study indicate that cabin services are the top most influencing factor of service quality. Baggage claim is the least influencing attribute of service quality as majority of respondents are business class travellers. The results showed there are small grey gaps in highly computerized service variables. The variables which have large grey gaps are courtesy of employees in baggage claim, complaint handling and delay handling. The study recommended that computerization level could be increased by the airline in order to reduce labour cost in certain processes.

Souca (2011) critically evaluated SERVQUAL model. The researcher made an attempt to measure the superiority of SERVUAL model to other service quality models in relation to its practical usage. From the study, it is clear that usefulness of service quality model is entirely depends on the objectives of the research study. If the study intends to measure perceived service value and intention for purchase, SERVPERF is more suitable. The modified SERVUAL model is best suited for studies intended to measure customer satisfaction. Also, the number of dimensions of service quality may vary from one service to another service industry depending on contextual circumstances and analytical procedures. The study found out that SERVQUAL model is best fit for the research which aims to identify critical service shortfalls.

Abdullah, Jan, & Manaf (2012) made an attempt to validate SERVPERF dimensions in the context of Malaysian Airline industry. The study validated the SERVPERF measurements in the airline industry. The findings of the study pinpointed the applicability of validated items of the study for further researches in airline industry. The research study found that tangibility, reliability and assurance are the predominant factors of service quality. The study concluded by emphasizing the need for improving employees' knowledge and keeping courtesy in employees' behaviour.

Archana & Subha (2012) made an attempt to identify the service quality attributes in international air travel and assessed their impact on customers' perception of service quality in international air travel. Data was collected from passengers of Indian airlines travelling in three classes economy, business and premium. Main three service quality facets in international air travel were identified in the study namely in-flight service, in flight digital service and back office operations. The study found that all the three service quality facets have a significant influence on service quality perceived by customers. Cuisines provided, seat comfort and safety are the foremost influential factors of service quality in in-flight services. Personal entertainment in in-flight digital service has prime impact on service quality. Among back office operations, online ticket booking is considered as an important factor of service quality by customers.

Aydin (2012) made an attempt to identify the gap between service quality expectations and perceptions of Turkish airline passengers based on SERVQAL model. The study identified a significant gap between these two. The results show that modern equipment and physical facilities are more relevant to passengers. Passengers are looking for latest technology particularly for the variables safety and reliability. In conclusion the study specified that airline company should focus on providing high tech facilities as expected by passengers.

Baby P (2012) conducted a study entitled 'Perceptions of airline passengers and service quality, a study with reference to domestic airlines in Tamil Nadu'. The researcher examined passengers' expectations on service quality and measured

perceived service quality of domestic airlines. The study identified three different factors of airline service quality namely confidence building, safety and security and promptness. The study also identified other factors which have high impact on service quality that are ticket booking, flight scheduling, check-in, boarding entry, flight services, service of attendants, comfort and cleanliness of seats, leg room, cleanliness of toilets, checkout and settling and baggage claim. Customer satisfaction is the most important factor that determines the degree of service quality. The result of the study indicates that airlines provide better service quality to the customers as the overall satisfaction of customers is found to be satisfactory.

Ahmed (2013) investigated the influence of low-cost airlines on tourists' perception of service quality. The study analysed the relationship between air ticket price and tourists' air travel satisfaction. As per the findings of the study, passenger's nationality, annual income, frequency of air travel, airline service level and air ticket prices are the main factors that influence the marketing of low-cost airlines. The study concluded with the main finding that air fare has a great influence on tourists' perception of quality. Tourists are more bother about the airline schedules and punctuality rather than supplementary services. Majority of tourists depend on low-cost airlines for their transportation rather than full service airlines.

Amiruddin (2013) made an attempt to study the correlation between service quality and customer loyalty and also price and customer loyalty in case of low-cost airline, Air Asia. Service quality was analysed through gap analysis and a highest gap was found in tangibility dimension particularly in comfort of plane seats. Even though Air Asia staffs are inefficient in handling delays as per customer perceptions, lowest gap was found in responsiveness dimension. The study found that service quality and price have positive correlation with customer loyalty. The results indicate that price has more impact than service quality on customer royalty in case of Air Asia.

Ariffin et al (2013) in their study discussed the relationship between the dimensions of airline service quality and passenger satisfaction. Convenience sampling technique was used to collect data from passengers of low-cost carrier travelling from Kuala Lumpur International Airport, Malaysia. In this study, service quality

was measured in a different dimension i.e., airline service operation. The repetitive purchase intention, service loyalty and benefit-cost judgment were the three variables taken into consideration in the study for measuring passenger satisfaction. It found that caring and tangible are the most influential factors of service quality of low-cost airlines.

Harriet (2013) studied how airline service quality influences the passenger satisfaction and loyalty. Data was collected from the international airline passengers in Entebbe International Airport, Uganda. It analysed the pre-flight, in flight and post flight services. The study found that these variables have a positive influence on passenger satisfaction. Also there is a positive correlation between passenger satisfaction and the passenger loyalty. The study pointed out that satisfaction is different from passenger to passenger as per their outlook on different services. Some passengers prefer off board facilities, others look for on board services and others need quality food, extra luggage etc.

Khraim (2013) investigated the effects of airline image and service quality on customers' behavioural intentions in Jordan. The study used marketing variables to analyse customers' behavioural intentions and statistical package for social science was used by the author to analyse the effect. The results of the study indicate that airline image has a positive impact on customers' behavioural intentions. It also observed that service quality has positive influence on customers' behavioural intentions.

Yunus (2013) studied how different service quality dimensions affect the customer loyalty in low-cost airlines in Malaysia. The conceptual framework developed by the researcher depicts the interrelationship between service quality, customer satisfaction and customer loyalty. The results of the study confirmed the interrelationship of the main variables such as service quality, customer satisfaction and customer loyalty. It revealed that reliability, tangibles, responsiveness, assurance and empathy have positive impact on customer loyalty. The study pointed out that attention should be given on the proper management of service quality by airline operators to avoid customers' switch to competitors' offer.

Ali, Dey & Filieri (2014) used AIRQUAL model to assess the service quality of Pakistan International Airlines. The study also investigated the effect of different service quality attributes on customer satisfaction. The study included 29 items under five dimensions of AIRQUAL model. The results of the study indicate that every dimension of service quality positively influences customer satisfaction. Tangibility of aircraft and terminal has a strong influence on customer satisfaction of Pakistan International Airlines. The study recommended that customer satisfaction can be improved by improving the quality of interaction with the passengers and by ensuring empathy.

Archana (2014), in her study entitled 'An empirical assessment of low-cost domestic airlines and its relationship with service quality evidence from passengers of South India', assessed the service quality of Indian low-cost domestic airlines. The SERVQUAL model was used to measure the service quality. The researcher also made an attempt to identify the SERVQUAL GAP. The study found out that the service quality factors which passengers value most are information on tickets, flight schedule, communication in case of flight delay and baggage delivery. There exists a gap between expectation and perception of passengers on service quality of domestic flights. It concluded that the domestic airlines should pay more attention in areas like safety, support in reducing problems due to critical incidents and time commitments.

Malyadri and Sathyanarayana (2014) conducted an empirical study to examine the service quality perceptions of domestic airline customers in India. Data was collected from passengers of six domestic airlines. The study compared the quality expected and the quality perceived by passengers of six domestic airlines in India viz., Air India, Jet Airways, IndiGo, SpiceJet, GoAir and Kingfisher airlines .It found that Kingfisher airlines and IndiGo airlines provide better service quality as compared to other domestic airlines. The study highlighted the fact that airline companies do not provide services up to the expectations of customers and the customers feel an exaggeration of promotional activities when it comes to reality.

Ghotbabadi, Feiz, and Baharun (2015) analysed different measurement models of service quality. The researchers tried to understand the advantages and disadvantages of different models. The study examined various service quality models like SERVQUAL, SERVPERF, hierarchical model and various industry specific service quality models. The study described that both specific and generic models are suitable and acceptable for measuring airline service quality .Several researchers like Chang Yeh (2002), Liou & Teng (2007), Cunningham, Young and Moonya etc. suggested new specific models for measuring service quality in airline industry . Even though SERVQUAL and SERVPERF are most popular models, hierarchical-multilevel structure for service quality perception is mostly used by researchers recently. Many researchers emphasised that assessing the perception of service delivered is of great use and significance than comparing customer expectations with their perceptions. The study concluded by observing that the outcome of service quality measurement varies depending on service settings, situations, time and needs.

Joemon (2015) conducted a research entitled 'Influence of frequent flyer programme and airline service quality on re-buy intentions of airline frequent passengers'. The research also discussed the impact of service quality and frequent flyer programmes of an airline on airline customer satisfaction. Re-buy intentions of the passengers were assessed with the aspects such as service quality, loyalty attribute level performance, effect of frequent flyer program, passenger satisfaction, passenger trust on airline and brand image. Findings of the study show that employee services are given priority by passengers among various service attributes. It revealed that re-buy intention behaviour of customers is significantly influenced by the satisfaction from both service quality and frequent flyer programmes. Customers' perceived value has also a positive impact on airline service quality satisfaction and loyalty programme satisfaction.

Kalaiarasan, Appannan and Doraisamy (2015) studied the factors influencing the service quality of low-cost airlines in Malaysia. The variables considered for this study were service environment, employee approaches, efficiency of services and

consumer behavioural intentions. It found that service environment is the most influencing factor of service quality followed by employee approach. All the four variables have a positive influence on service quality and that ultimately lead to customer satisfaction of low-cost airlines. The study suggested that low-cost airlines should focus more on service environment in future to attract and retain more customers.

Mutlu and SesliOkuyucu (2015) tried to establish relationship among ground service quality, loyalty, firm satisfaction and firm trust. The study's findings indicate that there is a notable correlation between service quality and loyalty. The results highlighted the fact that customer loyalty can be formed only by providing good ground services like reservation/ticket offices, check-in counters, lounges, cabins, baggage handling etc. The study revealed that the trust of the ground services has no influence on service quality and satisfaction. On the other hand, trust to the personnel serving ground services has a positive impact on satisfaction and loyalty.

Singh (2015) examined relationships among different variables such as service quality, perceived image, perceived value and passenger satisfaction. The study also analysed their effect on passengers' future behavioural intentions of domestic passengers in India. The study used SERVPERF after some modifications and identified three main dimensions as convenience and promptness with reliability, in-flight services & facilities and customer services with empathy. The dimension convenience and promptness with reliability is positively influenced the factors perceived image, perceived value and passenger satisfaction, which have in turn an influence on future behavioural intentions. The study revealed that passengers' future behavioural intentions can be influenced only by increasing the passenger satisfaction.

Gambo (2016) discussed the relationship between airline service quality and customer satisfaction among domestic airline passengers in Nigeria. The researcher measured the service quality with five main factors i.e., check-in process, in-flight service, reliability, responsiveness, and baggage handling services. The study found that check-in process has no significant effect on customer satisfaction. But all other

four dimensions under study have positive effect on customer satisfaction. It emphasised that proper training should be given to maintain good customer relations. It also suggested that timely departure and arrival should be ensured to improve service quality of airlines.

Mukherjee & Mita (2016) observed the influence of service quality and customer satisfaction on customer loyalty. To achieve this aim, the researcher conducted a comparative study in between Jet Konnet and IndiGo airlines. The study found out a positive correlation between customer satisfaction and service quality in the aviation sector. It also pointed out that customer loyalty can be created by satisfying the airline customers. The study established a significant positive association among the service quality, customer satisfaction and loyalty in airline industry. Customers of Jet Konnet are highly satisfied with the prime service quality attributes i.e., reliability, tangibles, and empathy. Whereas passengers of IndiGo airlines are more satisfied with professional expertise and situational skills of the cabin staff. The study suggested that online services and in-flight recreation facilities might be improved as a part of gaining competitive advantage and having a different sales strategy.

Rajaguru (2016) investigated whether value for money and service quality have influence on passenger satisfaction of both low-cost airlines and full-cost airlines. The study also explored the influence of service quality and value for money on behavioural intention from the opinions of customers. The results of the study indicate that value for money is a prime factor for enhancing passenger satisfaction and behavioural intention in case of LCCs. Whereas, both value for money and service quality determine customer satisfaction of traditional full-cost airlines. In order to achieve a competitive advantage, full-cost airlines should ensure balance between service quality and value for money. Behavioural intentions of full-cost airline passengers are positively influenced by both service quality and value for money.

Alsini (2017) analysed the impact of service quality on customer satisfaction. The study used AIRQUAL model to evaluate service quality of Saudi Arabia's National

Airline. The study found that all seven distinct service quality dimensions have a positive impact on overall service quality. Airline tangible has the strongest influence on service quality followed by personnel dimension. Airline image has the lowest influence on service quality among other factors. The study suggested that airline managers should give attention to select crew with proper interpersonal skills. Further, it recommended that airlines should invest in aircraft facilities and terminal facilities as they have strong impact on service quality.

Barnes (2017), in his thesis entitled 'Measuring service quality in the low-cost airline industry', investigated the relationship between service quality and airline profitability. The author made an attempt to construct an AQR (Airline Quality Rating) type metric of service quality suitable to UK low-cost airline industry. Brady and Cronin's (2001) hierarchical model HiQUAL was used in the study for measuring service quality and it made the research indifferent and unique from other literatures. In HiQUAL model, the primary three second-order variables of service quality (interaction quality, service environment and outcome quality) are measured with the third order factors like attitude, behaviour, expertise, ambient conditions, etc. An airline service quality indicator [ALSI] was developed by the author with a given set of variables and assessed quantitative secondary data in order to find out a service quality score for each airline. The study found that baggage handling policy, boarding and check-in, penalty fees and application of policy and staff behaviour are the key attributes that determine airline quality. In general, passengers are ignorant about the baggage rules and they are charged for non- compliance of the same. It stated that good staff behaviour and value for money will certainly add more to airline service quality.

Bogicevic et al (2017) investigated the effects of service quality dimensions on customers' e-WOM communication. The study identified service attributes value, seat comfort, staff/service and catering have a positive effect on consumers' recommendations. It revealed that entertainment attribute has no significant effect on consumers' recommendations. Air fare is the foremost predictor of e-WOM followed by service and seat comfort. It highlighted the fact that passengers expect

more improvements in variety foods and comfortable leg space than up to date technology. At the end, the study suggested that company should give emphasis on seat comfort and service components rather than in-flight entertainment systems as these are low-cost features and company can increase perceived value without much adding to cost.

Deeppa, Ganapathi and Dwivedi (2017) in their study entitled 'Services of low-cost carriers in India : the customers' perspective', made an attempt to study the customers' expectations and perceptions about services of low-cost carriers. The research also analysed customer gap by using T test. The study revealed that customers have high perceptions towards the services like efficient check-in process, well organised information of flight schedule, non-stop services to various destinations and employees' capabilities to respond in emergency. It concluded that a significant gap exists between the expected and perceived services of low-cost airlines.

Haghighat (2017) conducted a research to design a new service quality model for assessing the service quality of airlines. After a detailed evaluation, the researcher selected SSQAI model with necessary modification to suit the Iranian Airline context. As many as 64 items were included in the study under eleven criteria of four dimensions of service quality. Fuzzy decision making theory was used in the study to reduce subjective evaluation of respondents. Service quality performance was ranked by using Fuzzy TOPSIS. The study had done a comparative analysis about service quality of three major Iranian Airlines with high passenger transfer volume. The results of the study revealed that age has no positive influence on passenger satisfaction. On the other hand, educational level has a negative influence on passenger satisfaction.

Harish (2017) has made an attempt to understand the perceptions of passengers on five important service quality factors of different airlines in India. Data was collected from five main international airports in India by using stratified random sampling. The study found that IndiGo flights perform much better than other flights in majority areas of services. Passengers ranked SpiceJet first in case of crew

friendliness and knowledge in dealing with passenger queries. GoAir flights lead in the use of vernacular or foreign language skills. The study concluded that passengers rate IndiGo flights first for the overall service quality provided by selected airlines.

Simsek and Demirbag (2017) studied the relationship between service quality, customer satisfaction and behavioural intentions in airline industry. The researchers developed a model by blending the main dimensions of SERVPERF & AIRQUAL models. The analysis was done on the basis of seven service quality variables. Flight attendance and ground staff were the independent variables used in the study other than five service quality dimensions of AIRQUAL model. The study found that image dimension is the foremost determinant of service quality and customer satisfaction. Customer satisfaction has a positive correlation with word of mouth advertisements and repurchases intentions. Satisfied customers are ready to give negative feedbacks to rectify the negative situation or events and customer satisfaction is negatively influenced by the negative feedback of customers.

Suhail (2017) in his thesis investigated the impact of service quality attributes on airline image, tourist satisfaction and tourist post purchase behavioural intentions. It also examined how airline image affects tourist post purchase behaviours. Data was collected from Srinagar International Airport through purposive sampling. The study used SERVQUAL model by adding some more relevant variables such as refreshment during delay of flight, absence of grievance redressal, accommodation of passengers due to flight cancellation, free SMS service alerts etc. The study revealed that tourist passenger satisfaction has a significant positive impact on customer loyalty. Certainly, service quality is the foremost factor that leads to tourist satisfaction. If tourists are experienced better service quality, that will create a positive image among them. This positive image affects significantly on the tourists post purchase behavioural intention. It pinpointed the need for implementing various strategies for enhancing the existing service quality particularly modern in-flight technology facilities, management of emergency, safety performance, sincerity and patience of employees in resolving customer problem etc.

Usha and Kusuma (2017) conducted a study on service quality and passenger satisfaction on Air India services. The study analysed passenger perceptions of service quality of Air India in three dimensions such as in-flight service, in-flight digital service, and back-office operation. The study's conclusions showed that the most influencing factors of in-flight service quality are cuisines provided, seat comfort and safety. Passengers prefer personal entertainment most in in-flight digital services and online ticket booking in back-office operations.

Bhuvaneswaran, Venkatasamy and Ramarajan (2018) in their study made an attempt to establish a positive relationship between service quality and customer satisfaction. The study also analysed the important factors such as the seat comfort, flight punctuality, staff services and attractive promotion in order to identify most influential factors of service quality. The results showed that seat comfort and flight punctuality are the two factors which influence the service quality most. Seat comfort and attractive promotion are the two main factors which increases customer satisfaction of low-cost airlines.

Thirunavukkarasu , Nedunchezian and Kavitha (2018) made an attempt to study the relationship between service quality and passenger satisfaction between Indian and Europe passengers. The researchers analysed the second order service quality dimensions for establishing relationship between service quality and passenger satisfaction. A permutation multi group analysis method was used to examine perceptions of passengers on service quality. The study found that a significant relationship exists in between service quality and customer satisfaction in both the countries. At the same time, it showed a significant difference in its relationship between Indian based airlines and European based airlines.

Hassan, Khan and Farooqi (2019) conducted a critical review of available literatures on service quality and customer satisfaction in-low-cost airlines. The author tried to include the literatures relating to repurchase consumer behaviour intentions of low-cost carriers in India. The study examined 84 relevant papers and analysed country of study, variables used, and service quality measurement models applied in the study. From the results of the study it is found that majority of the

studies were conducted in North America, Europe, and South East Asia. Limited numbers of studies were conducted in developing markets of the Asian region, particularly in India. The important tools for measuring service quality used in most of the studies are SERVQUAL, SERVPERF and AIRQUAL.

Jebakumar (2019) conducted a study on the impact of service quality on passenger loyalty among Indian international airline passengers. The study examined the relationship between service quality and customer satisfaction. It also explored the correlation between trust and commitment on passenger loyalty. It has proved that a positive significant relationship exists among the variables such as service quality, customer satisfaction, trust, commitment, and passenger loyalty. It found that customers in different income groups have different perceptions on passenger loyalty programs.

Kumar and Kumar (2019) conducted a study to identify the impact of perceived airlines service quality on passenger satisfaction of low-cost airlines operating in India. The study pointed that safety, baggage handling and quality of food served are the main areas where the management should pay more attention. It emphasised that all aspects of assurance should be improved to increase quality of service. Employee service is another important dimension that can be made more qualitative by providing proper training programmes to the employees.

Singh (2020) measured level of domestic airlines' service quality in India. The service gap was measured from passengers' expectations and perceptions. The variables from both SERVQUAL and AIRQUAL were used in the study. The results of the study showed that substantial gap exists in the expected and perceived service quality. A significant gap exists in all dimensions of service quality. The study also revealed the interdependence of three variables such as service quality, customer satisfaction and customer retention. At the same time, the customer satisfaction has no strong influence on customer retention. It also found that aged and high income passengers are more satisfied than youngsters and low income group.

Shen and Yahya (2021) investigated the impact of service quality and price on passengers' loyalty towards low-cost airlines. The study adopted AIRQUAL model

for measuring service quality of low-cost airlines in Southeast Asia. Among the variables of service quality, airline tangibles, empathy and airline image have more influence on customer satisfaction. The results of the study revealed that both service quality and price have positive impact on passenger satisfaction and thereby it leads to passengers' loyalty. Moreover, it proved the mediating role of passenger satisfaction on the relationship of service quality and loyalty & price and loyalty. It concluded that passenger satisfaction has a remarkable role for the long term success and growth of LCCs in the highly competitive market.

Gokale (2022) measured the service quality of full-service airlines and low-cost airlines. It also investigated the relationship between service quality and customer loyalty. AIRQUAL model was used in the study to measure service quality. The study revealed that the mean values of service quality variables of full-cost airlines are higher than that of low-cost airlines. Significant differences are found in service quality dimensions between low-cost and full-cost airline. The overall satisfaction of passengers is high in case of full-cost airlines. Customer loyalty towards low-cost carrier is lower than that of full-cost carrier. The study concluded that all dimensions of service quality have strong influence on customer loyalty.

Kumar (2023) evaluated the services of selected Indian domestic airlines and its relationship with the passenger satisfaction and behavioural intention. The study analysed six factors of service quality such as airline employees' performance, tangibility, assurance, reliability and check-in. It found out that customer satisfaction and service quality are strongly and significantly correlated. Airline employees' service performance and assurance are the most influencing factors of customer satisfaction. Other factors such as attributes, tangibles, reliability and on-board services are moderately influencing the customer satisfaction level. The researcher also compared the service quality between low-cost and full-service airlines. According to the results, the quality of services of both airlines does not significantly differ in case of all factors except reliability. There is significant difference in service quality between the two airlines with respect to reliability and the low-cost airline provides more reliable services than the full-cost airlines.

Huang (2023) examined the relationship among travel motivation, service quality and satisfaction and also evaluated the moderating role of perceived value. The findings of the study shows that while the passengers choose low-cost airlines based on its affordability, the customer satisfaction depends on various factors and their satisfaction and overall experience may vary depending on these factors. The study emphasised that the customer satisfaction and perceived value can be increased only by improving the service quality of low-cost airlines.

2.4 Passenger Satisfaction

Kaushik (2008) made an attempt to explore the factors that determine the customer satisfaction of domestic airlines in India. The study also aimed to develop a model for estimating customers' repurchase intentions. The results show that there exists a wide gap between customer expectations and perceptions in all variables except on-time departure and arrival, convenient operating hours, personal attentions of employees and understanding of customers' specific needs. It revealed that the customers are highly satisfied with the accessibility of services, skills of employees and sales promotional tools and majority of customers are dissatisfied with price fare, performance of agents, performance of in-flight personnel and refund case. The study pinpointed the need for staff training solutions and efficient passenger grievance redressal.

Kim and Lee (2011) tried to establish a relationship between perceived service quality, customer satisfaction and customer behavioural intention. A survey was conducted to collect data from both LCC and FSC passengers at three major domestic South Korean airports. The study found that responsiveness is the top-tier attribute of customer satisfaction. This indicates that customers of LCC passengers give top priority to responsiveness in the services provided by the airlines. It revealed that three factors namely word of mouth communication, purchase intention and complaining behaviour are mainly contributing to service quality of airlines. At the same time, price loyalty has no significant effect on service quality. The study concluded by trying to spotlight that even though the airlines offer better

prices to retain customers, they can increase customer loyalty only by giving value for money paid by passengers.

Mun (2011) made a comparative study between Malaysia Airlines and AirAsia to examine the differences in brand satisfaction. The study found out seven brand satisfaction variables. Data was collected from two airline terminals in Kuala Lumpur. Passengers of both airlines are not satisfied with all variables of brand satisfaction. Passengers of Malaysian airlines have more dissatisfaction in brand as compared to AirAsia passengers. The passenger perception of AirAsia is better than Malaysian airlines in price, publicity and word of mouth. Whereas passenger perception of Malaysian airlines is better in tangibles, reputation, core service and employee. The study concluded that both airlines should give more focus on the variables reputation, employees and tangibles as they have lowest mean scores.

Dwisuhartanto and Noor (2012) conducted a study to understand the level of customer satisfaction in full-cost airlines and low-cost airlines in Indonesia. The study considered various variables such as price, service quality, employee attitude, promptness, and accuracy of service and physical evidence to examine their relationship on customer satisfaction. The results of the study pointed out that employee's attitude and price are the predominant factors that affect customer satisfaction. Though the promptness and accuracy of service is an influential factor of customer satisfaction in low-cost airlines, it is insignificant in case of full-cost airlines. Customer expectations on physical evidence are not so high in case of low-cost airlines, so it does not affect much on customer satisfaction. Contrary to this, customers of full-cost airlines give importance to physical evidence particularly modernity and age of aircraft and this attribute leads to customer satisfaction.

Du (2012) analysed customer satisfaction of Nigerian airline passengers. SERVQUAL model was used to identify different service gaps. The study found that tangibles, reliability and responsiveness dimensions show a high servqual gap that negatively affects the level of customer satisfaction. Customers are satisfied with technical and empathy dimensions as these attributes have positive gap. The study pointed out that response to emergency situation is the area where urgent

attention is needed. At the same time, customers are highly satisfied with reliable on-time assistance and pilot's technical skill.

Tirimba & Nyaoga (2013) examined the key factors which determine the customer satisfaction of Kenya Airways. The results of the study showed that safety of luggage, appropriate customer service to inform passengers about flight status, proper communication about the weather in arrival destination to passengers and availability of variety food are the key determinants of customer satisfaction. The results also added that airline crews' attitude towards differently abled passengers and weather conditions prevailing at the destination are the factors which increases customer satisfaction considerably. Group travellers and family travellers prefer online seat booking facility.

Chilembwe (2014) conducted a study to explore the level of passengers' satisfaction on Air Malawi's International and Domestic flights. The study revealed that passengers are moderately satisfied with all dimensions of service quality and their expectations are very high. Malawi Air passengers gave high score to assurance even though they have no opinion about the airlines' website. Passengers opined that punctuality and lateness in reliability dimension was the main problem they had faced. The study proved the association among the main variables such as service quality, passenger satisfaction and behaviour. The study concluded that the management should give more attention to improve service delivery and external communication to remain competitive in the field.

David (2014) in his article reviewed airline management models and customer satisfaction. The article also discussed the various strategies implemented by the LCCs to gain competitive advantage. It analysed secondary data collected from the US Department of Transportation monthly air travel consumer report. Customer satisfaction was measured with variables such as mishandled baggage, passengers denied boarding, customer complaints and on-time performance. The analysis of the study revealed that though the customers had big complaints particularly in baggage handling, refunds and flight problems during the period 2006 -2012, the airlines has been improving much better in their service quality since 2012. As a result, the

customer satisfaction level has been increased with the service variables under study.

Gures, Arslan, and Tun (2014) made an attempt to study the relationship between customer expectation, satisfaction and loyalty in Turkish Airline industry. The study included both domestic airlines and international airlines and used SEM for data analysis. The results of the study pointed out that reliability and facilities are the main factors influencing customer satisfaction. The assurance factor has no effect on customer satisfaction. Further, the study revealed that customer loyalty can be enhanced only by improving customer satisfaction. The study suggested that airline companies should ensure on-time departure and arrival and consistent ground/in-flight services. Modernization of airline facilities and maintenance of quality of physical equipments are the other areas where airlines give more attention.

Suki (2014) investigated into how service quality dimensions affect customer satisfaction. It analysed the relationship between customer satisfaction and word of mouth recommendations. The study was conducted among the passengers of Malaysian airlines and AirAsia in Malaysia. The results from SEM revealed that significant relationship exists among customer satisfaction, service quality and word of mouth recommendations. The empathy variable strongly affects the customer satisfaction. Air travellers give priority to flight punctuality and good transportation between city and airport. They give least priority to tangible variables like design of aircraft, cleanliness of cabin toilet, air conditioning and comfort level of plane seats.

Sukri, Abdullah and Waemustafa (2014) studied the difference of customer satisfaction and customer loyalty between Malaysia Airlines (full-cost airline) and Air Asia (low-cost airline). Customer satisfaction and loyalty were assessed in the study with three dimensions such as service quality, price, and service scapes. The result of the study indicates that service quality of Air Asia has a strong positive correlation with passenger satisfaction and loyalty. But customers' perceptions on service quality of Malaysia Airlines are low as they are not come up to the expectation of the customers. The results tried to spotlight that price does not lead to customer satisfaction as low-cost airline has always a low-price strategy. On the

other hand, customers focus on price strategy of full- cost airline and the fair price offered by full-cost airline definitely leads to customer satisfaction. Service scapes have no significant impact on customer satisfaction of both types of airlines.

Snyder and Tai (2014) investigated into the influence of factors on customer satisfaction and measured customer satisfaction level of low-cost airlines in Vietnam. The study identified three prime factors that influence the customer satisfaction i.e., behaviour- performance, price-convenience, and tangibility-commitment. The findings of the study indicate that behaviour-performance factor is the topmost influential factor of customer satisfaction. Customers of Jestar Pacific Airlines are not so satisfied with this factor. Price- convenience is the second factor which has also a significant relationship on customer satisfaction. Customers rated JPA top on this variable. The last factor tangibility-commitment has least impact on customer satisfaction.

Bhatnagar and Mittal (2015) studied customer satisfaction level of passengers of IndiGo and SpiceJet. The study examined the customer satisfaction under two dimensions. First dimension is time performance, check-in or out and in-flight experience. Second dimension is used with the attributes namely baggage handling and booking ease. The results of the study indicate that passengers' perceptions are different in IndiGo and SpiceJet. The customers choose airlines on the basis of their purpose of travel. Business travellers depend more on IndiGo airlines. On the other hand, customers choose SpiceJet to visit their friends and relatives. It found that IndiGo is much better than SpiceJet in case of overall service quality. As a result, customers of IndiGo airlines are more satisfied than the customers of SpiceJet.

Sowmya (2015) measured the level of satisfaction of passengers towards service quality of Jet Airways' domestic flights. The researcher also explored the predominant service quality attributes and their impact on customer satisfaction. The results of the study revealed that travel comfort, price, duration of travel, easy booking, frequent travel benefits, prestige and off-seasonal benefits are the factors in the order of customer priority, which affect the selection of airline. Tangibility is the top-most service quality attribute that has high impact on customer satisfaction. The

study suggested that Jet Airways should focus on empathy and assurance attributes in order to increase the satisfaction level of customers. The study concluded by highlighting the point that all service quality dimensions have contributed towards airline's quality of service, which in turn contributed towards customer satisfaction.

Wahab, Sukati and Li (2015) conducted a study to assess passenger satisfaction of low- cost airlines in Malaysia. Correlation analysis was done for proving the relationship between service quality and passenger satisfaction. The study's findings demonstrate that dimensions of service quality positively impact the satisfaction of passengers of Malindo Airline which has a correlation coefficient score of 0.894. The results of the study also revealed that customer loyalty is determined by passenger satisfaction.

Anand (2016) explored the important dimensions of airport services, airline preferences and customer satisfaction. The researcher also analysed the impact of various variables on airline preference and customer satisfaction. Among the airport services, customers have high priority to the factors such as quick access, clean environment, clear sign boards, avoiding crowded checking areas, proper security screening, efficient boarding processes, and immigration processes. The study suggested that the airport authorities should focus more on these services to enhance customer satisfaction. It found that ticket fare, staff services, in-flight services and ground services are the foremost factors that have significant influence on customer satisfaction. Overall satisfaction of airline passengers is found to be good on both functional quality and operational quality of airline services.

Zaharias (2016) explored the factors that affect customer satisfaction rating as per sky-trax, a world airline audit for developing service quality improvement programmes for airline industry. The study monitored customer satisfaction based on three attributes that is food and beverages, seat comfort and staff service. The results of the study indicate that seat comfort is the predominant factor based on which customers rate high on service quality of airlines. In case of FSC, food and beverages is a significant factor that the customers consider for rating. Whereas, it is not an important factor in case of the passengers of LCCs. The third important factor

considered for airline rating is staff service. The study spotlighted the point that if customers are dissatisfied with the services of airline staff, it will affect their repurchase intentions adversely.

Rani (2017) conducted a research entitled 'Comparative analysis between Air India Express and Air Arabia'. The study measured the level of customer satisfaction on the basis of airline service quality dimensions, airline image and value of the customers. It also made an attempt to develop a model of customer satisfaction on the basis of airline service quality dimensions and customer commitment. The study's findings show that passenger satisfaction is significantly impacted by every aspect of service quality. It also established strong relationship between customer satisfaction and repurchase intention. Customer satisfaction has positive correlation with word of mouth referral and customer commitment. The word of mouth referral is the important influential factor of airline image. The study concluded that passengers' preferences towards airline service quality attributes have no significant differences in case of Air India Express and Air Arabia.

Saadat, Tahbet and Mannan (2018) made a pioneering attempt to understand the impact of service strategy on customer satisfaction in AirAsia, Malaysia. Variables such as tangible features, services of ground employees and flight attendants, online services and food services were used in the study to analyse the service strategy. Based on these independent variables, the dependent variable customer satisfaction was measured in the study. Data was collected from business and leisure travellers of AirAsia, Malaysia through convenience sampling. The study found that only two variables such as food service and ground staff have a positive impact on customer satisfaction. It concluded that AirAsia should not focus more on the improvement of other variables such as online services, tangible features and flight attendants as they do not affect much on customer satisfaction.

Tanomsin and Chen (2018) in their article discussed the important factors affecting customer satisfaction of low-cost airlines in Thailand. It also analysed the impact of service quality and price towards customer satisfaction and airlines loyalty. The findings indicate that passenger satisfaction and loyalty are positively impacted by

both pricing and service quality. It pointed out that high customer satisfaction indicates good service quality and that ultimately leads to customer loyalty. There is a connecting link between these three variables under study. Even though the price has an influence on these three factors, the study revealed that price is not the most influential factor in choosing LCA in Thailand. LCAs in Thailand give value for money paid by customers, so customer satisfaction is high. There is no customer gap as the airline services are up to the expectation of customers.

Vandayullrlorinl and Caturwideyati (2018) conducted a study to analyse whether service quality, corporate image, price fairness and airline safety act as a stimulus of customer satisfaction. The study also examined whether the customer satisfaction leads to brand loyalty. Samples were collected from 350 LCC passengers at Sukarno-Hatta International Airport Domestic Terminal, Jakarta in Indonesia. Tool used for analysis was Structural Equation Modelling technique from AMOS program. The results of the study show that the factors such as service quality, corporate image, price fairness and airline safety stimulate the customer satisfaction of LCCs. Among these, corporate image is the strongest factor which influences the customer satisfaction. Another major finding is that airline brand loyalty enhances as a result of increased customer satisfaction.

Dogra (2019) assessed customer satisfaction of three airlines namely Air India, Indigo and Jet Airways and also examined customer satisfaction has any effect on customer loyalty. Servperf model was used in the study to assess airline services. The study found that there is significant difference in customer satisfaction of three flights. The customer satisfaction of Indigo Airlines is higher than that of other two airlines. It also indicates that customer satisfaction has a great influence on customer loyalty and found a strong positive correlation between them. Customer loyalty of Indigo is more than that of other two airlines.

Efthymiou (2019) in their study examined management of airline delays of British Airways and how it affects the overall passenger satisfaction .The study measured passenger expectation in order to compare it with their perceived service. Majority of passengers opined that the safety performance and convenience of flight schedule

of British Airways are much better than expected. Even though delayed departure of flights occurs frequently, the airline company takes necessary steps to avoid arrival delays by reducing running time. Hence passengers are not dissatisfied in flight delays and they are expecting a normal delay in the departure. In conclusion, flight delays do not adversely affect the passenger satisfaction of British Airways.

Wong and Ho (2019) tried to establish the relationship between customer satisfaction and service quality of budget airlines through demographic attributes by using Kano Model. Kano Model suggests five variables to measure service quality namely must be, one dimensional, attractive, in different and reverse. From the results it is identified that air ticket fare, airline staff's ability to understand and answer customers' questions and professional knowledge of staff are the first order priorities of customers that affect customer satisfaction significantly. From the demographic analysis, it is found that price and online booking system are the priorities of male, whereas females consider safety and flight schedule as important. When middle aged customers focus more on price, youngsters are not so price sensitive. The study tried to spotlight a major issue of budget airlines that is flight delay. It suggested that airline should analyse the reasons of flight delays and take actions to reduce such delays as far as possible.

R. I. (2020) investigated the structural relationship between service quality, passenger satisfaction and customer relationship management. The study also explored the effect of CRM on customer satisfaction. Cluster sampling was used to collect data from different airports in Tamil Nadu. The findings revealed that there is a substantial correlation among CRM, passenger satisfaction and service quality. The path analysis in the study showed that more attention should be given by LCCs to improve service quality to gain more passenger satisfaction. The study pinpointed that quality services, proper communication, quality ancillary services and friendliness of staff are the main factors that will contribute more to the passenger satisfaction of LCCs.

T. D. (2020) measured the level of satisfaction of airline passengers in Coimbatore City. The study also looked at how customer loyalty, customer satisfaction and

service quality related to one another. The mean value of overall satisfaction in the study depicts that passengers are not so satisfied with the airline services. Passengers' satisfaction is significantly different based on their demographic profile. Also, passenger problems are significantly different based on their demographic profile. As per their opinion, lack of co-operation from the part of flight attendants is the main problem in air travel. The study also found out that there exists a significant relationship among service quality, customer satisfaction and loyalty.

Hassan and Salem (2021) examined how airline image, passenger satisfaction and loyalty are influenced by service quality of low-cost airlines during covid-19. The results revealed that service quality dimensions have an impact on these three variables and the responsiveness is the most influencing dimension on customer satisfaction. Customer loyalty could be enhanced by handling customer complaints properly and by providing reliable airline website. Likewise, reliability is the second predictor of customer loyalty. The study also found out that the responsiveness and tangibles dimensions have high role in changing the airline image among passengers.

Devi (2022) studied the level of satisfaction of passengers availing the services of Chennai airport. Passengers travelling to and from Chennai airport were taken as samples and selected at random. The results of the study indicate that the dimensions aircraft tangibles, terminal tangibles and airport personnel are very good as per the opinions of passengers. Perceived value of the airlines in Chennai is highly influenced by aircraft tangibles, airport personnel and airports' image. The study also revealed that customer satisfaction and behavioural outcomes are strongly determined by the factors aircraft tangibles, airport personnel and airports' image. The study observed a significant inter-relationship among service quality, customer satisfaction and behavioural outcomes.

Bagwell and Kellerman (2023) compared customer satisfaction and service quality of fourteen US Airlines. The study used secondary data collected from the Department of Transportation Air Travel Reports in between 2007 to 2011. The data on four dimensions such as on-time arrival, denied boarding to passengers,

mishandling of baggage and passenger complaints of four years were collected. The results indicate that there is significant variation in the service quality among the different U. S. airlines and traditional carriers are increasing the level of service quality when compared with the benchmark applied in the study. In 2011, industry performance across all four variables exceeded that of prior years. It found out that the service quality and customer satisfaction among LCAs is observed to be higher than that of FCAs.

Koharudin and Simarmata (2024) examined the effect of punctuality of flights, service quality and safety standards on customer satisfaction of low-cost carriers operating services at Soekarno Hatta Airport. The punctuality of flight is measured by using three variables such as the average delay time metric, flight cancellation rate and on-time performance. The results indicate that punctuality of flight has positive impact on customer satisfaction of LCCs. It also shows that customer satisfaction can be enhanced by focusing on various dimensions of service quality including the provision of supplementary options, adherence to check-in and boarding protocols and engagement with cabin staff. Lastly, it revealed that aviation safety standards positively affect customer satisfaction of LCCs and safety standards include the allocation of fund towards airline employee training, implementation of strict safety inspections and the maintenance of aircraft to ensure optimal performance.

2.5 Passenger Problems

Poonam (2012) studied various types of service failures and their impact on customer satisfaction in airline industry. The study analysed the customer complaint behaviour intentions of airline passengers. For analysis purpose consumer's complaint behaviours are categorised into three that i.e., voice, private and third party. The results of the study revealed that majority of passengers complain directly to the airline staff, that is they raise voice against service failures of airlines. It found that male passengers in age group 40-60 years are more likely to complain to airline staff. Passengers fall under above 60 years category are more likely to talk to friends

and relatives about their bad experience and to complain to a consumer agency about the service failure.

Gures, Arslan and Baker (2013) made an investigation about complaining behaviours of Turkish Airline passengers and service recovery efforts taken by Turkish Airlines. The study also analysed whether gender, age and educational level have any influence on complaint behaviour and satisfaction with service recovery efforts of airlines. The study's findings revealed that age & educational level exerts significant influence on passengers' complaint behaviour. A service failure was experienced by majority of the respondents. The main areas, where Turkish Airline passengers had complaints were aircraft comfort, food and beverage, in-flight entertainment facilities etc. The study found that highly educated passengers have more complaints and less satisfaction with airline's service recovery efforts. So airline company should give more attention while serving highly educated passengers. The study concluded with the point that only customers who are satisfied with service recovery efforts of airline will recommend the airlines to others.

Saparsudradjat, Kumara and Nilasusandi (2014) conducted an exploratory study on complaint handling and service recovery analysis of low-cost airline and their effects on customer satisfaction in Indonesia. The study analysed various consumer complaint factors like flight cancellation, check-in rejection, delay, lost luggage, ticket service etc. The results of the study indicate that a standardised complaint handling system is not implemented by LCCs in Indonesia, and customers' rating on this system is low. The research described three attributes of service recovery such as procedural justice, interactive justice, and justice outcomes. Procedural justice indicates the rules and policies of handling complaints. Interactive justice refers to quick response, courtesy, and empathy of employee at the time of service recovery. Outcome justice is the actual result received by customers for their complaints. Outcome service is the prime factor that determines the customer satisfaction after the process of service recovery. In this study, Air Asia comes topmost in case of outcome justice attribute. It highlighted the fact that both complaint handling and service recovery have significant impact on customer satisfaction.

Fatima (2015) identified the common complaints in airline industry. The researcher also studied the severity and controllability of the complaint situations from the experience of airline passengers. From the field study the researcher prepared a list of common complaints of airline passengers, which consist of 47 common complaints under 13 main areas. Flight delay, cancellation of flights, baggage related problems, staff behaviour and denied boarding are some important areas of complaints. Among these 47 complaints, the researcher found that 18 complaints are aroused out of outcome failures and the remaining are out of process failures. Also, the study revealed that 35 complaints are due to internal failures and 12 complaints are due to external failures.

Gupta, Raj, and Sharma (2015) analysed the main complaints of airline passengers and also examined whether consumer complaint intentions are influenced by demographic variables. The study revealed that passengers were experienced more service failures in flight delays, non-availability of right information about flight delay and less leg space. The study analysed the customer complaint behaviour intentions in three areas such as voice, private and third party. The study also revealed that more complaints were received from young passengers than the old aged passengers. Old age groups were not interested in time consuming complaining process instead they indulged in private actions for their complaints. The study also pointed out that customer satisfaction is negatively influenced by the service failures and they can be traced out by examining the customer complaints.

Murugeswari (2018) made an attempt to identify various problems of passengers of domestic airlines in Coimbatore city. The researcher used ten variables for assessing the major problems faced by airline passengers. Among the ten variables, flight cancellation is the foremost problem faced by passengers. Second main problem ranked by passengers is refunds due to cancellation. Reservations and boarding announcements have third and fourth ranks respectively. Delay in departure, food options, baggage handling and airport services are the other problems in their order as per customers' experience. Service of cabin crew and security check-up have low level rank as customers did not face much difficulty in these areas.

Selvi (2018) analysed various problems faced by passengers during their air travel in India. Ticketing problems, refunds on flight delay, mishandling of baggage, flight

schedule delay and poor response to passengers' complaints are some of the important variables used in the study to analyse passenger problems. From the analysis of the study, it is identified that disarrangement of any alternative flights in case of delay or cancellation of the actual flight, ticket booking problems, poor customer care and poor response to passenger complaints are the major issues faced by airline passengers. Even though the customers face some problems during air travel, the overall customer satisfaction towards airline service quality is found to be good. The study pointed out that airline should give quick response to customers' complaints and make an alternative arrangement for delayed and cancelled flights as early as possible.

Fahriza (2019) examined passengers' perception on paid baggage policy imposed by Indonesian domestic airlines. The results of the study indicate that passengers are disagreed with the imposing of baggage fees. Even though airlines operational results increased, the level of customer complaints had increased. Flight delays were not reduced after the implementation of new fee. Passengers are ready to carry luggage as per allowed weight. Baggage fee is helpful to business travellers not to vacation travellers. In short, passengers of Indonesian Airlines are dissatisfied with the airline's decision.

2.6 Research Gap

The literature review presented above revealed that good number of studies have been conducted in the area of service quality of airlines and low-cost domestic airlines. No studies have found in literature in the area of service quality of low-cost international airlines and there is a gap in the literature on the service quality of low-cost international airlines in India. Also, the service quality models like SEVQUAL, SERVPERF and AIRQUAL have been extensively used in literatures for measuring service quality. The present study is used the SSQAI model for measuring service quality and this model is specifically designed for the comprehensive analysis of service quality of airlines with eleven dimensions. This model has been used in very few international journal articles.

The customer satisfaction of low-cost domestic airlines has widely investigated in the available literatures, but customer satisfaction of low-cost international airlines hasn't explored by the researchers. This research could investigate into the satisfaction level of international passengers of low-cost carriers. The various factors influencing the selection of low-cost domestic airlines and low-cost international airlines may vary and the factors influencing the selection of low-cost domestic airlines have been examined in the literatures. The present study could examine the factors considered by the international travellers to choose low-cost airlines.

Despite the problems faced by airline passengers during their air travel have explored in few literatures, no studies have found in passenger problems of low-cost international airlines in India. So, another area of research that could be explored is the passenger problems of low-cost international airlines. As per the knowledge of the researcher, few studies have conducted in the area of impact of passenger problems on service quality and passenger satisfaction. Also, there is lack of studies employing the moderation effect of passenger problems on the relationship between service quality and passenger satisfaction. The present study could explore these two areas.

Hence, the Research Gap can be summarized as follows:

- The service quality of low-cost international airlines.
- The satisfaction level of international passengers of LCAs.
- The factors influencing the selection of low-cost international airlines.
- The passenger problems of low-cost international airlines.
- The impact of passenger problems on service quality and passenger satisfaction.
- The moderation role of passenger problems on the relationship between service quality and passenger satisfaction.

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CHAPTER 3

SERVICE QUALITY OF LOW-COST INTERNATIONAL AIRLINES- A THEORETICAL FRAMEWORK

3.1 Introduction

Present study examines service quality, customer satisfaction and the passenger problems of Low-Cost International Airlines in India. This chapter gives a theoretical background to the study. It includes history of civil aviation and low-cost airlines in India. It depicts the SWOT analysis of Indian LCCs and profile of four Low-Cost international airlines in India namely, IndiGo, Air India Express, SpiceJet and the Akasa Air. The service quality of airlines, models used to measure the service quality of airlines, customer satisfaction of airlines and problems faced by airline passengers are discussed in detail in the chapter.

3.2 History of Civil Aviation in India

The first domestic air route was introduced in Karachi and Delhi in December 1912, which was established through a collaboration between Indian Air Services and Imperial Airways of UK. Three years later, a regular airmail service between Karachi and Madras was started by Tata Sons Ltd. In 1918 an Indian Air Board was formed for giving advices on the ways of assisting and encouraging civil aviation. A separate Department of Civil Aviation was set up in 1927 on the recommendations of the Indian Air Board. Apart from Tata Airlines, two more airlines started regular airmail services and almost all parts of the country were connected through airmail services by 1939.

In 1946, a public company was formed by renaming the Tata Airlines as Air India. To start air services on international routes, Government of India and the Air India established a joint sector company, Air India International Ltd in 1948. In March 1953, the Air Corporation Act was passed in the Indian Parliament and Indian Airlines and Air India International were established by nationalising the entire airline industry. For this, the Government of India merged eight formerly independent domestic airlines such as Deccan Airways, Airways India, Bharat Airways, Himalayan Aviation, Kalinga Airlines, Indian National Airways, Air India and Air Services of India.

Entry of Private Airlines

In 1986, Indian aviation industry was opened to private airlines and the government granted permission to private players to function as air taxi operators. Air Sahara, Jet Airways, Damania Airways, East West Airlines, ModIi-Luft and NEPC Airways were the private players who were allowed to operate as air taxi operators. After the Air Corporation Act was repealed, the Indian government gave six private air taxi companies scheduled carrier status in 1994. However, Jet Airways and Air Sahara were able to continue their business and all other private airlines were closed. Another turning point in the history of Indian Civil Aviation Industry was the entry of first Low-Cost Carrier, which was started by Air Deccan in the year 2003. The year 2007 was the year of mergers and acquisitions, which was another milestone in the history of Indian civil aviation sector. Jet Airways acquired Air Sahara, Kingfisher took over Air Deccan and Air India and Indian Airlines declared their merger as well.

Air India began to struggle financially after the entry of private airlines. Even though Air India had merged with Indian Airlines in 2007, it continued to announce huge losses. As a result of accumulated huge losses, the Government made attempts to privatise the airline from the year 2017. Finally it was sold to Tata Group in 2021. Another remarkable point in the history of Indian aviation is the entry of Vistara, which is a full service carrier. The airline, which started operations in January 2015, is a joint venture between Singapore Airlines and Tata Sons. Vistara started international services in 2019. Later it was decided to merge the airline with Air India in 2022. The airline received approval from National Company Law Tribunal and the merger completed on 12th November 2024. Now private airlines are the players of Indian aviation market. Presently, LCCs such as indiGo, Air India Express, SpiceJet and Akasa Airline occupy major market share in domestic as well as international segment in India.

3.3 History of Low-Cost Airlines

The concept of low-cost airlines first emerged in United States when its first low-cost airline Pacific Southwest Airlines began its operations in 1949. But LCC

market witnessed a true revolution in 1973 when South West Airlines started its operations. In 1970s, US airline industry had deregulated by passing Airline Deregulation Act which paved the way for the substantial growth of low-cost airlines in US. Airlines got an opportunity for privatisation by deregulation. Through privatisation, airlines enjoyed the freedom for bringing different business models and implementing various operational strategies. It also led to an increase in price variations, price competition and brand loyalty. The act lifted the entry restrictions of airlines which altered airline industry market structure.

Within the time span of 1990 to 2020, the revolution of low cost airlines extended all over the world. LCCs began their operations in Europe in the 1990s and Asia in the 2000s. The pioneers of today's low-cost model are Southwest Airlines in USA, Air Asia in Asia and the Easyjet and Ryanair in Europe. Today, low-cost airlines are gaining market share of airline industry which magnifies the competition in the industry. LCCs gave attention only on cost reduction in earlier years. But they realised that long term substantial growth and high profitability can be achieved through customer satisfaction and give more attention on customer relationship management strategies.

3.3.1 History of Low-cost Carriers in India

In India, the first low-cost carrier was started by Air Deccan on 24th September 2003. Captain Gopinath, a retired captain of Indian Army, was the owner of Air Deccan, who is the pioneer of budget airlines in India. The vision of Captain Gopinath was to facilitate "every Indian to fly at least once in his lifetime". Air Deccan was the first LCC which shifted people from the rail travel to air travel. It made flying more accessible and reasonably priced for the public. In the starting stage, Air Deccan operated to long distances connecting metros in the southern part of India with seven ATR aircraft. Subsequently, it spread its operations across other regions by expanding its fleet size and seat capacity. Air Deccan flights lowered airfare by avoiding in-flight meals, business lounges, upper class seats and similar amenities. The company maintained minimum aircraft staff. Air Deccan was the first airline in the country which introduced e-ticketing facility to their customers. It

also launched a dynamic pricing policy, which aims to sell air tickets at a high price during busy season and to sell at comparatively low prices during the off seasons. It brought innovation and the reformation in the aviation industry that led to a remarkable growth in Indian aviation sector.

Air Deccan was merged with Kingfisher Airlines in April 2008. Mr Vijay Mallya was the chairman and Mr Gopinath was the vice-chairman of Kingfisher Airlines. After merging, Air Deccan was renamed as Simplify Deccan and later it changed to Kingfisher Red. Kingfisher Red was maintained as the Kingfisher Airlines' low-cost carrier. The merger didn't go ahead with success and Kingfisher Airlines ceased its operations in 2011. Gopinath relaunched the airline as new Air Deccan in 2017 by regaining the rights to Air Deccan's brand. Subsequently, Air Deccan got thirty four new routes under Government's UDAN scheme. Covid-19 pandemic hit the operations of Air Deccan and suspended its operation in 2020.

Air Deccan's launch in 2003 actually revolutionised India's low-cost airline market by attracting price sensitive customers. As a result, there was 25% increase in domestic air travel, which opened the way to the emergence of other LCCs in India. In 2005, Go Air entered the market. Royal Airways, later rebranded as SpiceJet, was established in the year 2005. In 2006, IndiGo was started its operations and later it became a highly successful low-cost airline in India. Air India's low-cost brand Air India Express commenced its operation in 2005. The airline was later acquired by Tata Group in 2021 and launched a rebranded Air India Express logo in 2023. Air Asia India commenced its operations in 2014 as domestic LCC of Air Asia with the shareholdings of Air Asia, Arun Bhatia and Tata Sons Group. It was fully taken over by Tata Sons Group in 2022. Later it was merged with Air India Express in the year 2023. Go Air was officially renamed as Go First in May 2021. An application was filed by Go First for insolvency resolution with India's National Company Law Tribunal (NCLT) on 2nd may 2023. NCLT approved the application of Go First for resolution and the insolvency resolution process of the corporate had commenced on 10th may 2023 after availing LCC bankruptcy protection.

Notable present players of Indian low-cost airline market are IndiGo, SpiceJet, Air India Express and Akasa Air. Presently, LCCs occupy 70% of Indian domestic market and India has moved forward to the third largest aviation market in the world.

3.4 Low-cost Carrier

3.4.1 Low-cost Carrier-Meaning

A low-cost carrier or low-cost airline is an airline that offers lower fares and fewer amenities than traditional full service airlines. These are also called no frills airlines or budget airlines. The main aim of LCC's is to minimise operating cost by giving fewer comforts. The principle behind the LCC business model is that cutting costs in order to be able to give the customers a low price product with the bare essentials .They do not provide any in-flight entertainments free and charge extra for the same. All non-essential amenities are cut down in order to reduce air fare. In low-cost carriers, there is only one class of service that is economic class and no provision for business or premium class. Most budget airlines operate on a point-to-point route network without any alliances with other airlines. They are charging extra fees for each additional services like in-flight meals, carry-on bags, pre-flight seat selection etc.

3.4.2 Characteristics of Low-Cost Carriers

Low-cost carrier has various characteristics apart from traditional airlines. Main features of LCCs are:

1. Lower Ticket Price

Low ticket price is the main feature of LCCs. They offer lower fares by minimising operating costs and maintenance costs. By offering lower fares LCCs attract middle class and budget conscious travellers for air travel.

2. Point-to-Point Service

Most of the LCCS are providing point-to-point service by avoiding connection flights. Point-to-point services maximise the aircraft and personnel utilisation by avoiding the problems of complex flight schedules for connecting passengers.

3. Reduced Labour Cost

Labour cost for various processes like baggage handling, cleaning etc is minimised to the possible extent by holding minimum number of staff. Also employees are fulfilling numerous duties, for example flight attendants also clean the airlines or operate as gate attendants.

4. Single Cabin Service

LCCs offer only economic class not the premium or business class. Offering of multi- class services will result to high price and pricing complexity and they offer single cabin service.

5. No Frequent Flyer Loyalty Programmes

Usually LCCs do not offer frequent flyer programmes and low price strategy is followed by them. A frequent flyer programme is a programme offered by airlines to encourage air travellers to travel more in same flight. It offers reward points to customers which can be cumulated and redeemed for air travel. Recently, some low-cost airlines offer frequent flyer programmes as a part of their marketing strategy

6. No Frills

Unnecessary amenities and extras are not provided in LCCs. They offer only essential services and amenities and avoid services like in-flights entertainments, meals, beverages, gifts etc. They are charging extra fees for each additional service like in-flight meals, carry-on bags, pre-flight seat selection etc.

7. Reduced Seating Space

LCCs accommodate more number of passengers by reducing available space for each passenger's seat. That means less leg space is available to each passenger. An increase in seats results in a higher income per seat/mile for each flight, which in turn reduces operational expenses.

8. Simple Ticket Reservation System

Passengers can purchase e-tickets from the concerned websites or over the telephone. This eliminates the travel agent based distribution system and lowers ticket price by avoiding travel agents fee. Above all, ticket issue becomes more simple and customer friendly. Airline authorities have connections and communications with passengers regarding changes of travel itinerary.

9. Fleet Commonality

LCCs usually use a single type of aircraft or a fleet of equipment from the same family of aircraft. Use of single type aircraft leads to significant savings in crew training, servicing aircraft downtimes and spare inventory holding costs.

10 Using Secondary Airports

Usually LCCs use secondary airports that reduce direct landing and parking charges. Secondary airports are cheap and less congested which enables cost savings and faster aircraft turnarounds.

11. Rapid Flight Turnaround

It refers to preparation of an aircraft for its next flight without much delay on the ground. Standardised fleet of aircraft and usage of secondary airports enable the landing of more flights per day, less ground time and increased revenue.

Apart from the above features, LCCs follow simple fare scheme and give no option for seat reservation which motivates passengers to board earlier and rapidly. But some airlines provide seating reservation option by charging additional fee. LCCs add more to cost savings by maintaining minimum set of optional equipment on the aeroplane and excluding modern equipments. Fuel hedging techniques are also used to minimise fuel cost.

3.4.3 Drawbacks of LCC

1. Hidden Charges

The presence of hidden charges like insurance, taxes etc. might be there in case of some airlines in addition to the original fare at the time of booking. Also some LCCs allow only hand baggage and they charge additional fares for luggage

2. Extra Charges

Passengers are incurred extra charges for seat reservation, meal booking, pillows and blankets etc. All these services are not free of cost in LCCs. They can avail these facilities by paying through online.

3. Less Convenient Schedules

Majority of the low-cost carriers fly in late night or early morning. Passengers' flight options are limited to non-peak hours/days. The flight schedules are not so convenient to passengers, particularly to family travellers and senior citizens.

4. Difficulty in Rescheduling and Cancellation

In some flights, there is no option for cancellation and travellers can reschedule their travel. Otherwise, passengers get back fewer amounts as airfare on account of cancellation after a long procedure. Apart from complex procedure, rescheduling of flights may become costly depending on aircraft and season.

5. Baggage Restrictions

Some airlines only allow carry-on luggage and incur high fee for extra luggage. Passengers are allowed to carry only restricted luggage and charge high fee for over weight of luggage.

6. Less Accessible Airports

LCCs use secondary airports instead of main airports which add more cost on the part of passengers to get to the airport for takeoff and get to their final destination after landing. Secondary airports are less accessible as compared to primary airports.

7. Less Movements

Smaller aircrafts with minimum seat space are used by LCCs. This may cause some difficulty for travellers who are above average in body size or those with medical requirements.

8. Costly In-flight Services

Usually LCCs do not offer refreshments and entertainment facilities at free of cost and provide options for paid entertainment and refreshments which are more costly than normal fare.

9. Limited Amenities

LCCs offer only essential amenities and do not provide non-essential amenities like in- flight entertainment, in-flight meals, extra legroom etc. They charge extra for each additional facility offered.

3.4.4 Full-Cost Airlines Vs Low-cost Airlines

Full-cost airlines (FCA) are those airlines which provide a wide range of services for a flat ticket price like meals, in-flight entertainments, checked baggage, in-flight amenities (eg: blankets, pillows etc.). These airlines have diverse fleet, multiple travel class and frequent flyer programmes. FCAs are different from LCCs in various aspects. The following are the main differences between FCAs and LCCs.

1. Airfare: LCCs offer tickets with low fare whereas FCAs offer more amenities with high ticket fare.

2. Aircraft Type: LCCs use one type of aircraft with a standardised fleet but FCAs use different types of aircrafts with diverse fleet.

3. Airport: LCCs are running services to secondary airports but FCAs are providing services to big city airports.

4. Travel Class: LCCs provide only economic class of travel and multiple travel classes are available in FCAs like economic class, first class, business class etc.

5. In-flight Meals: LCCs charge extra for in-flight meals with less variety. Wide variety of meals is available in FCAs by including in ticket fare.

6. Amenities: Fewer amenities are offered in LCCs and they charge extra fee for any additional in-flight service whereas FCAs offer more amenities without any extra cost like seat selection, pillows, blankets, in-flight entertainments etc.

7. Frequent Flyer Programme: LCCs do not focus on frequent flyer programmes but FCAs attract travellers by giving frequent flyer programmes and thereby create customer loyalty.

8. Seating and Leg Space: LCCs have more number of seats in the cabin with less leg space. However, FCAs provide more seat comfort and leg space.

9. Luggage: Passengers can carry luggage by paying extra fees through add-ons in LCCs, whereas check-in luggage is free in case of FCAs

10. Distribution Channel: LCCs sell their ticket mainly through their website by avoiding travel agents. But the distribution channel of FCAs includes both direct online sales and indirect sales through travel agents.

3.5 SWOT Analysis of Low-cost Airline Industry

SWOT analysis means analysis of strengths, weaknesses, opportunities and threats of an organisation or industry. Here the strengths, weaknesses, opportunities and threats of low-cost airline industry in India are discussed. The following are the strengths, weaknesses opportunities and threats of low-cost airlines in India.

3.5.1 Strengths

1. Growth of Tourism

India's tourism sector is growing and had a significant rebound in 2023 with foreign tourist arrivals (FTAs) showing an increase of 64% as compared with 2022. Aviation sector has shown significant growth, but 15.5% below pre-pandemic levels shown in 2019, as per the data of Ministry of Tourism. Also foreign travellers prefer India for medical tourism. Due to significant growth in tourism, both domestic and international passengers in LCCs are increasing.

2. Increasing Middle Class

Middle income groups mainly depend on budgeted airlines for air travel. Also middle income group shifted from train to LCCs for fastest and comfort journey. India's growing middle class is choosing LCCs for air travel increasingly.

3. Private Players

Indian aviation industry was opened to private airlines in 1986 which stimulates the growth of LCCs. Indian airline industry was fully privatised by selling Air India to Tata Sons Group in 2022. Also airport infrastructure which is an important part of airline industry is developing through public-private partnership.

4. Modern and Standardised Fleet

LCCs are using modern aircrafts with standardised fleets. This helps for cost efficiency and thereby attracts price conscious travellers. Modern aircrafts are up-to-date with the technology, safety measures and design and it helps to enhance customer experience.

5. High Quality

LCC passengers get value for money through modernisation of aircraft, new facilities and advanced technologies. In order to survive in the competitive market, LCCs are trying to provide high quality services to passengers.

6. Political Stability

Government of India maintains a separate ministry for regulating airline industry. India's present political stability is also good for the smooth governance and for addressing the problems of mergers, insolvency etc. of Indian LCCs.

7. Increasing Population

India has fastest population growth and majority of population lies in working age group. LCC market has an advantage that there is adequate supply of labour with low cost. In India, increased population of middle income group enhances airline

passenger traffic as they are ready to explore international countries for job, education and tourism purposes.

3.5.2 Weaknesses

1. Lack of Airport Infrastructure

Even though private investment in airport is increasing, modern infrastructure facilities at airport are not up to the needs of aviation sector. In many countries, seperate low-cost terminals were constructed to support low-cost carriers and it helps to reduce airport fees. No such low-cost terminals are there in India.

2. High Operational Cost

LCCs are working with high operational cost. High fuel price, high salary of pilots and skilled personnel, high lease rent of aircrafts are some of the reasons of high operational costs. Most of LCCs are working on thin profit margin due to high operational cost.

3. Shortage of Trained Pilot

Indian LCCs are facing the problem of securing and retaining trained pilots. They demand a high salary pack and LCCs couldn't offer attractive salary pack as offered by full service carriers due to financial instability.

4. Shortage of Skilled Personnel

There is a shortage of skilled personnel in the aviation sector. LCCs find it difficult to retain skilled employees as they are attracted to the high salary package of FSAs within the country and abroad.

5. Financial Instability

In the post covid 19 period, the balance sheets of all LCCs are bleeding. LCCs have a high operational cost and are operating on thin profit margins. So, even slight interruption may lead to balance sheet losses. Many LCCs faced financial crisis. Go First is under insolvency resolution process due to financial crisis. India's national

airline's LCC, Air India Express was merged to Air Asia India after the acquisition by Tata Sons Group in the year 2023 due to huge financial loss.

6. Operational and Strategic Complexity

LCC market is much affected by the seasonality and cyclicality. The unbooked seats cannot be reused and high fixed cost in off-season affects the profitability of the company. Time required for taking decision about the acquisition of aircraft is too long and investment is also high. All these operational and strategic factors make the industry more complex.

7. Monopoly Provider

The suppliers in airline industry enjoy monopoly in the market. It reduces the bargaining power of airline company and negatively impacts their profitability. Boeing and Airbus are the only two aircraft manufacturers. Apart from this, there is monopolistic condition in airports. Airline companies have to pay high airport charges for its function.

3.5.3 Opportunities

1. Increasing Demand for Air Travel

More Indians are travelling for leisure, business and family reasons. Majority of them prefer low budget airlines as they are price conscious. Middle class families shifted their travel from trains to airlines by considering time and comfort. It also raises the demand for budgeted airlines.

2. Regional Connectivity

LCCs particularly domestic airlines are providing services to airports in remote and rural regions. LCCs connect people in remote areas and give them more opportunity for air travel. By increasing regional connectivity, LCCs increased domestic passenger traffic during last few years.

3. Foreign Investments

Government of India allowed as much as 100% FDI in scheduled and non scheduled airline services. Government approval is mandatory only for FDI beyond 49%. This policy attracts foreign investors to invest in Indian airlines.

4. Employment Opportunities

LCCs provide job opportunities to a large number of pilots and co-pilots by operating services to almost all domestic airports and many international cities. With a certain increase in the number of LCCs, cabin crews and pilots are of great demand. LCCs also create job opportunities to airline managers, ground handling staff, flight dispatchers etc.

5. Market Size

Asia Pacific region is the world's fastest growing LCC market in the current decade. India became one of the largest aviation markets in the world. Low-cost carrier IndiGo had the largest domestic market share in the year 2023 with around 54.7%. The airline handled over 188 million passengers at domestic airports in India the same year.

6. Competitive Fare

LCCs are operating with cost efficiency by utilising the resources at its maximum and reducing operational cost. So LCCs can offer competitive fares as compared to full service airlines and thereby attract more price conscious passengers.

7. Government Initiatives

Government of India has taken many initiatives for the growth of LCCs. In 2016, UDAN scheme was launched to increase regional connectivity by subsidising airlines to smaller airports. This initiative is a great support for Indian LCCs.

3.5.4 Threats

1. High Fuel Prices

The air fuel price is hiking year by year in India. It significantly affects the operational cost and profit margin of LCCs. Consequently, Indian LCCs are forced to increase air fare which definitely affects the demand for LCC market.

2. Government Regulations

Indian airlines should comply with the rules and regulations of Directive General of Civil Aviation (DGCA) and Bureau of Civil Aviation Security (BCAS). Certain government policies, regulations and taxation may adversely affect the growth of LCCs in India. For instance, for getting international route permission LCCs should operate domestic services for five years and have a fleet of 20 aircrafts.

3. Competition from Foreign LCCs and FSCs

Foreign LCCs are operating services to and from almost all airports in India. Many foreign LCCs have more competitive advantage as they adopt good customer relationship management strategies. Full service airlines retain customers with attractive frequent flyer programmes. So Indian LCCs are struggling to lead in the market due to stiff competition from foreign LCCs and FSCs.

4. Inability to Manage Expectations of Different Workgroup

The different work group of airline industry are pilots, co-pilots, cabin crew, ground handling staff, airline managers, flight dispatchers etc. LCCs find it difficult to satisfy the different expectations of various workgroup. Sometimes LCCs face mergers and acquisitions. Integrating workforce in airline mergers is a difficult task. Sudden strike from the part of cabin crew members of Air India Express led to the cancellation of flights in the first week of May 2024.

5. Safety and Security Concern

There had been a surge of reports about declining safety standards of SpiceJet. DGCA was issued a notice to the airline to inform about the concern. Lack of adequate workforce and training are the main reasons behind this issue. Passengers may shift to other LCCs if this concern is not properly addressed.

6. Rise in Misbehaviour and Mishandling

Recently, there were many cases of mishandling and missing of luggage of both domestic and international passengers. Lack of communication from the part of

airline staff, passengers' behaviour with airline staff in case of flight cancellation/delay etc are the problems faced by LCCs. These cases may give a bad impression about Indian LCCs to both domestic and international travellers including international tourists.

7. Poor Services

LCCs like SpiceJet and Air India Express are frequently cancelled and delayed flights due to operational and technical issues. They are poor in on-time performance. At the same time, foreign LCCs score high in on time-performance. Passengers may shift to other foreign LCCs by loosing trust in LCCs in India.

3.6 Low-cost International Airlines in India

At present, the following four low-cost airlines are operating both domestic and international services in India.

1. Air India Express
2. IndiGo
3. SpiceJet
4. Akasa Air

3.6.1 Air India Express

Air India Express is an Indian low-cost carrier and it was fully owned subsidiary of Indian flag carrier airline Air India. Presently, its headquarters is situated in Gurgaon, Haryana. Air India Express and its parent company Air India is now fully owned by Tata Group after the privatisation of the company in January 2022. It is operating over 2500 flights weekly and providing airline services to 45 destinations (31 domestic and 14 international airports) with a fleet of over 70 aircrafts. The airline offers in-flight entertainment AirFlix and hot meals as paid add-ons. It also attracts customers through its exclusive loyalty benefits through Tata Neu Pass rewards programme. It has been awarded for excellence in in-flight food, most

preferred airline website & mobile app and most preferred loyalty programme in 2022.

Foundation

Air India Express was founded in 2004 and started its operations on 29th April 2005 by taking off three flights from Thiruvananthapuram, Cochin and Kozhikode. In earlier stage, the objective of Air India Express was to serve Indian expatriate community by providing airline service to short-haul international routes in the Southeast Asia as well as Middle East.

Privatisation

On 8th October 2021, Government of India sold Indian flag carrier airline Air India and its low-cost carrier Air India Express to Talace Pvt Ltd and later they were handed over to the Tata Group.

JRD Tata was the founder of Tata Airlines and it was founded in 1932. India's first flight service began with JRD Tata and he became the pioneer of civil aviation in the country. Later Tata Airlines was nationalised in the year 1956 and renamed as Air India. In January 2022, the ownership of Air India and its subsidiary Air India Express was returned back to Tata Group by privatising the two airlines.

AirAsia India and its merging with Air India Express

AirAsia India started its journey in June 2014 as a joint venture between AirAsia Aviation Group Limited and Tata Sons Private Limited and it was grown as one of the leading domestic airlines in India with its operating base in Bangalore. In 2020, AirAsia Aviation Group started to disinvest its shares in joint venture. In December 2022, Tata Sons acquired the entire shares of AirAsia India and renamed as AIX connect. The AirAsia brand was withdrawn on 31st October 2023.

Tata Group started the process of merging AIX connect with Air India Express in November 2022. Tata Group Airlines declared that it had completed the merging of AIX connect with Air India Express on 1st October 2024 and the merger of Vistara

with Air India completed on 12th November 2024. This merger of four airlines into two is an important milestone in the Tata Group Airlines Company.

The present management of Air India and Air India Express is moving forward with five year transformation roadmap under the guidance of Vihacon.AI for establishing the airline as a world class global one. After consolidation, Air India Express is expected to bring more revenue, cost and operational benefits by the adoption of best practices and systems of both the airlines.

3.6.2 SpiceJet

SpiceJet is India's budgeted airline which is headquartered in Gurgaon, Haryana. It connects to the remote test corners of India with a vision to make travel affordable and approachable for the citizens. It provides flight service to 73 destinations including 13 international destinations. SpiceJet is popular for its excellent customer support. Safety, environmental sustainability and customer satisfaction are the top priorities of this airline company. Airlines fleet consists of a mix of Boeing 737 max, Boeing 700 and Q 400. It offers special care to differently abled passengers and offers frequent flyer programme called Spice Club. Passengers can enjoy priority check-in, extra luggage and other benefits through Spice Club.

History

The journey of SpiceJet started back from March 1984 when an Indian industrialist SK Modi started the company to offer air taxi services. The company was renamed as MG Express in 1993 and German flag carrier Lufthansa partnered with MG Express. Passenger and cargo services were provided by the company under the name of Modiluft before stopping its operations in 1996

In 2004, the entrepreneur Ajay Singh acquired the company and renamed as SpiceJet. By leasing Boeing 737-800, airline operated its flight between Delhi and Mumbai in 2005. In 2008, SpiceJet was declared as the third largest low-cost carrier in India in terms of market share. The airline was permitted to operate international services by Airport Authority of India in 2010. As a result of high rise in fuel prices and high competition, the airline started to suffer losses in 2012. In August 2014,

Spice Max was introduced by the airline which gives more comfort to passengers with little more money. In 2019, the collapse of Jet Airways gave a way to SpiceJet to grow its fleet and acquired 42 aircrafts, the majority of which were from Jet Airways. The airline suffered huge losses during pandemic period, even if it tried to withstand with its cargo operation Spice Xpress. In post pandemic period, the airline is trying to rebuild itself and is operating with more financial strength. SpiceJet's total income increased by 30% in the financial year 2022-23 as compared to the financial year 2021-22.

Awards and Recognitions

SpiceJet got the best domestic airline award at the 4th West India Awards and also at the Wings India Awards for excellence in aviation sector in the year 2018. It bagged safety performer award given by DIAL and Wings India Aviation Innovation award in 2022. 'Bronze Stevie' award for customer service department was won by the airline in 2023. DGCA recognised SpiceJet as the best airline in addressing customer grievances in the year 2024.

3.6.3 IndiGo

IndiGo is an Indian low-cost airline founded in 2006 by Rakesh Gangwal, an NRI and Rahul Bhatia, the head of Inter Globe Enterprises. Its headquarter is situated in Gurgaon, Haryana and its primary hub is in Indira Gandhi International Airport, Delhi. It operates over 2200 daily flights by connecting 130 destinations including 40 international with its fleet of over 400 aircrafts. IndiGo started international operations in the year 2011. It is the largest airline in India with a domestic market share of 61.6% as of May 2024. IndiGo is the largest individual Asian airline in terms of passengers carried.

History

IndiGo started its operations on 4th August 2006 by flying from New Delhi to Imphal. In December 2010, IndiGo became third largest airline in India after Kingfisher Airlines and Jet Airways in terms of passenger market share. In 2011,

DGCA granted permission to IndiGo to operate international services. Indigo was the largest airline in India in terms of market share in 2012.

IndiGo buys only one type of aircraft to keep operational cost low and emphasises on punctuality. In 2013, IndiGo was the second fastest growing low-cost airline in Asia, behind Indonesian Airline Lion Air. The airline was included in 10 biggest low-cost airlines in the world by Centre for Asia Pacific Aviation in 2013. The airline became the largest airline in India in terms of passengers flown as of September 2015, with a market share of 36.5%. In 2017, IndiGo became the first Indian airline which operates thousand flights a day. In December 2019, it distinguished itself as the first airline in India which operates a fleet exceeding 250 aircrafts .The airline purchased Boeing 777-300ER, first wide body aircraft in February 2023. In the financial year 2023-24, the company earned a net profit of 82 billion rupees as compared to three billion net loss last year. In December 2023, IndiGo became the first Indian airline in terms of number of passengers flown (100 million passengers in the calendar year). It was the most punctual airline in India in 2023. It has a very low flight cancellation rate with 0.3% which is top among nine top airlines in the world.

Awards and Recognitions

IndiGo won the following awards in the year 2023:

- Best low-cost airline in Central Asia and India at the Skytrax World Airline Awards
- 5^{th} most punctual airline in the world by OAG
- Asia Environmental Sustainability Airline of the year
- Most punctual airline in India by DGCA

IndiGo bagged '2024 Airline of the Year' award by CAPA-Centre for Aviation at the prestigious Global Aviation Awards for Excellence.

3.6.4 Akasa Air

The Indian low-cost airline Aakasa Air was established by Vinay Dube and Aditya Ghosh and Rakesh Jhunjhunwala owns 46% share in the company. The airline commenced its operation in August 2022 by flying from Mumbai to Ahmedabad. Currently, it offers services to 27 destinations including 5 international destinations. The airline started international services in March 2024 by taking off flight from Mumbai to Doha. Now Akasa Air has 24 youngest aircrafts in reducing fuel use and carbon emissions. The airline has placed an order of 226 Boeing 737 Max aircrafts with CFM fuel efficiency. Being an environmentally progressive company, the airline offers quieter cabin with 40% lesser noise and greenest fleet in the Indian skies. The airline offers Café Akasa where travellers can purchase food on board. It also provides delayed luggage protection services by partnering with Blue Ribbon Bags.

History

Akasa Air, a brand of SNV Aviation Private Limited, got NOC from Ministry of Civil Aviation in October 2021. 'It's your sky' is the tag line of the airline which was disclosed with logo in December 2021. The symbol 'rising A' indicates the warmth of rising sun, dependability of an airline wing and smooth flight of a bird. Flight booking on website was stated in July 2022. The airline operated its first flight between Mumbai and Ahmedabad on 7th August 2022. It started international services in March 2024 after getting permission from DGCA.

3.7 Present and Future of LCCs in India

Indian aviation market has very bright future. India is a fastest growing market in the world as a result of growing number of passengers. In domestic market, low-cost airlines are dominating with low fare. In India, the customer base for airline travel is increasing tremendously with an expansion of middle class and improvement of household incomes. Additionally, younger generations are more interested to travel amidst of environmental concerns. LCC market had established itself affordable alternative to the monotonous long rail or road journeys. Indian

passengers are highly price sensitive and this factor paved the way to the success of LCCs in India. High connectivity is another avenue for the growth of LCC. IndiGo and SpiceJet ordered a large number of flights to add to their fleets and thereby they can offer services to new routes and more flights on high frequency routes. India is the third largest aviation market in the world and would become third largest air passenger market in the world by 2030.

Financial struggles of some airlines and mergers between others in post pandemic period leads to a considerable reduction in Indian airline companies. The airline Go First had stopped its operations in 2023 and the operations of Jet Airways had hampered. Merging of Tata Group Airlines Air India and Vistara came to an end by the end of 2024. Even though SpiceJet has struggled financially, the airline tried to strengthen its position by settling its lessors and by acquiring fresh capital.

In India, airline capacity had reached near about 230 million departing seats in 2024, almost double as compared to departing seats in 2014. It indicates that capacity growth of Indian airlines during post pandemic period is back on track. In India, airline capacity in domestic market has significantly grown much faster than that of international capacity with an average annual growth of 8.7% (in between 2005 - 2024) against 6% annual growth of international capacity. Past restrictions imposed by regulatory authorities and permissions to foreign based carriers for international services from India are the major reasons for the low international airline capacity of the Indian airlines.

IndiGo has largest domestic market share of 61.6% followed by Air India Group. Indian LCC's domestic market share is largest with 78% of seats in April 2024. But Indian airlines are far below as compared to foreign carriers in international aviation market. In April 2024, Air India has a seat capacity of 24% followed by IndiGo with 17% seat capacity at international sector. However, foreign carriers are dominating by occupying more than half of India's international capacity. As much as 66% of international seats are still operated by overseas based carriers.

3.7.1 Domestic Aviation Market

India is the third largest country in terms of domestic aviation market and USA and China are the first two largest domestic aviation markets in the world. However, India had the small domestic aviation market with 5th position in the world in 2014. After ten years, India has grown much in terms of domestic aviation market. With an airline capacity of 15.6 million seats as of April 2024, India has surpassed Indonesia and Brazil to become the third largest domestic aviation market. India's domestic airline capacity has doubled over the last 10 years with an annual growth rate of 6.9%. In India, LCC's share of domestic airline capacity is 78.4% in April 2024. India has the largest LCC share in the world followed by Indonesia.

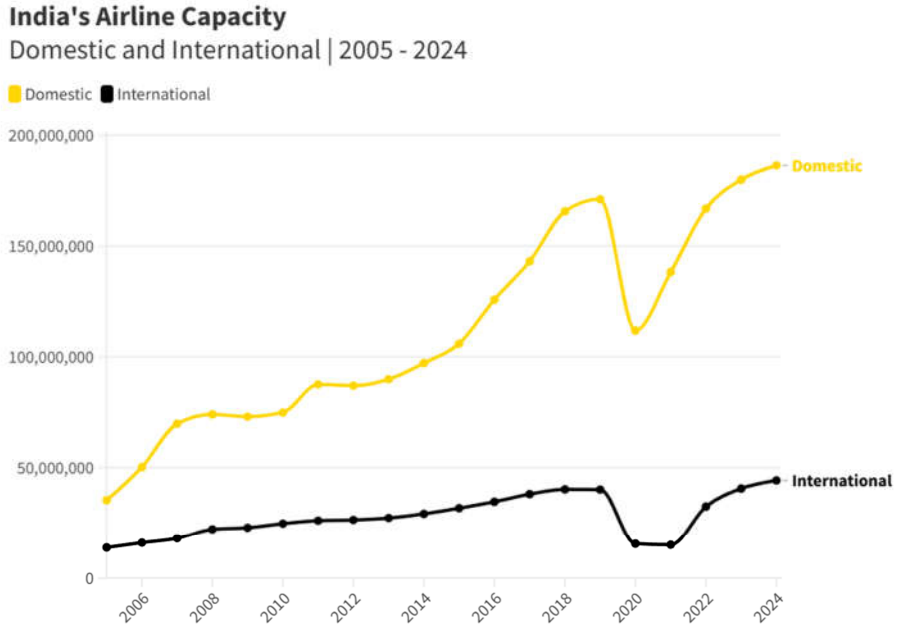
LCCs have contributed a major share to the growth of Indian domestic aviation market. indiGo has the largest domestic market share with an annual capacity growth rate of 13.9% . Air India group (including air India Express) occupies second position in domestic airline capacity in India. Indian airline companies were ordered 1124 aircrafts in the year 2023. As much as 30% of aircraft orders in the world were from Indian airline companies. IndiGo ordered 500 aircrafts which accounted for 45% of total aircraft orders from India.

3.7.2 International Aviation Market

In April 2024, India's International airline capacity showed an increase of 17% with 7.3 million seats as compared to 2019. It indicates that India's international aviation market has strengthened after pandemic period. India has an average annual growth of 4.5% in international airline capacity over last ten years. Middle East region has a notable and unchangeable dominance in India's international airline capacity. In April 2024, 50% of international services had provided to Middle East region as against 48% in 2014. This is because of significant migration of Indians to Middle East particularly to UAE and Saudi Arabia.

Figure 3.1

India's Domestic and International Airline Capacity

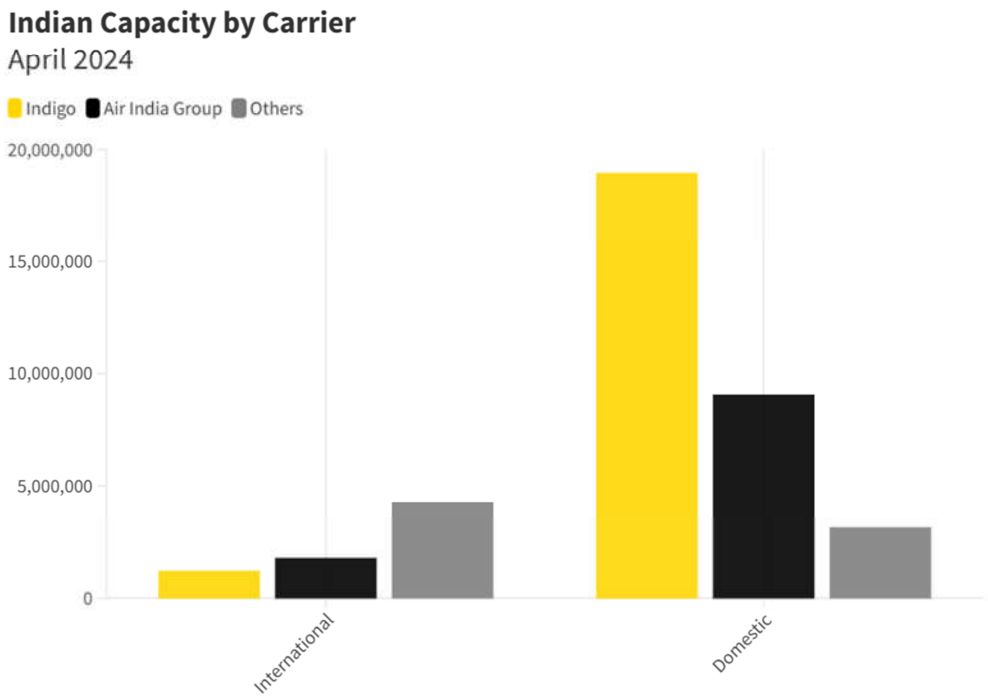


Source: OAG Analyser

Based on capacity, India's top five international markets are United Arab Emirates, Singapore, Saudi Arabia, Thailand and Qatar consecutively in April 2024. Air India including Air India Express has largest international capacity with 24%. IndiGo has placed second in terms of international airline capacity with 17% followed by Emirates airlines (7%), Dubai National Flag carrier. In Indian international traffic market, there is an increase in direct traffic flows of two million passengers over the last five years. Also, there is an increase of one million in indirect passengers using Indian hubs for transfers. Apart from this, 52 new international routes were added by Indian carriers over the last five years.

Figure-3.2

Indian Domestic and International Airline Capacity by Carrier

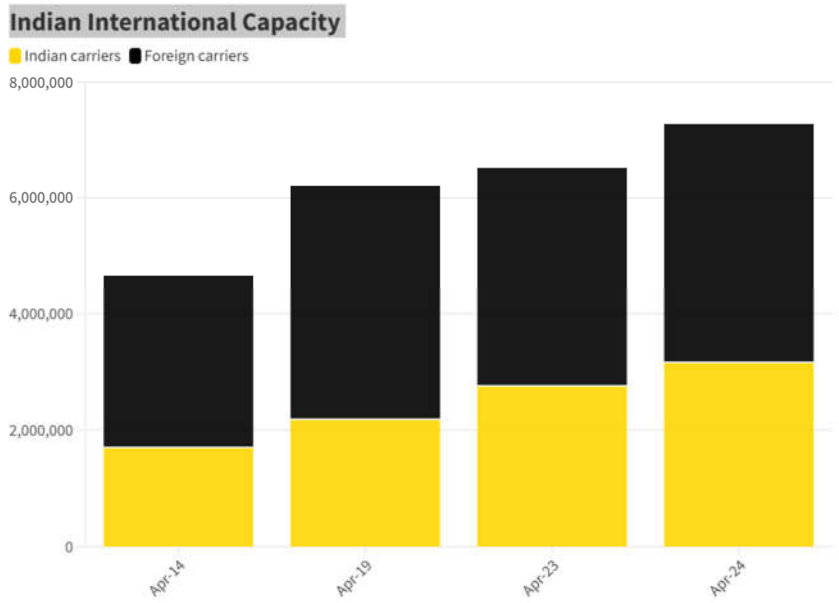


Source: OAG Analyser

Foreign carriers are dominating at international sector during last ten years. India's international airline capacity has increased significantly during last ten years. However, foreign carriers occupy largest international market share in India by providing more than half of India's international capacity.

Figure-3.3

Indian International Airline Capacity



Source: OAG Analyser

3.7.3 Future of LCCs in India

As per CAPA research, Indian airline passengers will be doubled by 2030 in domestic as well as international sector. In India, high population living outside the nation accelerates the growth of international airline passengers of Indian airlines. Indian airports and aircrafts should be increased to cope up with the emerging increase in the number of both domestic and international passengers. The number of Indian airports is expected to reach 220 within next five years from 140 in 2019. The Ministry of Civil Aviation has revealed that India is going to invest one lakh crore in greenfield and brownfield airports across the country. Some of these are the initiatives from the part of government and also private investment is increasingly taking place. The Adani Group is planning to invest USD 7.2 billion in eight airport expansion projects including new Navi Mumbai Airport, which is expected to be open in June 2025. In addition to this, Delhi Airport is under expansion to deal 100 million passengers. There should be corresponding growth in supporting

infrastructure such as access roads, metros and surface transport. Otherwise, passengers may face difficulty to access these developed airports.

Indian airlines had ordered 1124 aircrafts in total in the year 2023, of which IndiGo had a major order of 500 aircrafts. Indian airlines ordered 30% of all aircrafts orders in the world in 2023. Air India had an order of 480 aircrafts in April 2024 including 72 wide body aircrafts. The wide body aircrafts are meant to expand international network in the future. IndiGo has an order of 950 narrow body aircrafts in April 2024. IndiGo is also planning to extend international routes to Europe and other parts of the world by including 69 air bus A321XLRs in its aircraft order.

In domestic market, LCCs share is 76.4% in May 2024. The Indian airlines' share in international passenger traffic is expected to be increased to 50% by 2027-28 from 43% in 2023 as per CRISIL report. Indian airlines' superior domestic connectivity, more aircraft orders and adding of new international routes would be the major driving forces for this improvement. The report pointed out that Indian carriers will strengthen financially as a result of rising share in international passengers and international sector would be more profitable than domestic sector. In post pandemic period, Indians have changed their spending patterns and has increased international leisure travel. Indian airlines could have a compound annual growth rate of 14 to 15% in international sector by the end of the financial year 2027-28 through a planned fleet addition and network expansion strategy.

3.8 Service Quality

Service quality denotes the extent to which a service fulfils or surpasses customer expectations. It measures how well the delivered service satisfies the customer's needs and desires. It compares customers' service expectations with the perceptions of actual service delivered, that is SQ = P – E.

Parasuraman et. al., (1988) define the service performance gap as the discrepancy between the specification of service and delivery. Zeithaml (1988) defined service quality as "the consumer's judgement about a product's overall excellence or superiority". Kotler and Armstrong (1996) defined service quality as "the totality of

features and characteristics of a product or service that bear on its ability to satisfy stated or implied needs".

3.8.1 Importance of Measuring Service Quality

1. Meet or exceed customer expectations: Customer expectations can be understood by measuring service quality. It helps business organisations to satisfy customers by providing services up to or more than their expectations.

2. Competitive advantage: Measuring and improving service quality is essential to have competitive advantage in the market. A service organisation can gain competitive edge in the market only by improving the quality of services rendered.

3. Increased customer relationship and retention: Customer relationship can be enhanced by meeting their expectations and by providing complaint free services. Further, customer retention is only possible through improving service quality. An organisation can retain customers through customer satisfaction and loyalty.

4. Increased brand reputation: A business can increase brand reputation by measuring and improving service quality as it leads to positive word of mouth, ratings and online reviews. Constant improvement of service quality creates trust among customers.

5. Increased sales and revenue: Measuring and improving service quality can create and retain more customers which helps service providers to increase sales and revenue.

6. Informed decision making: Gathering data on customer expectations and perceptions enables business to take better decisions such as investments in staff training, technology upgrades and process improvements.

7. Reduced complaints and errors: Proper grievance redressal mechanism is possible through the measurement of service quality. If customer complaints

are properly addressed by taking corrective actions, it will reduce customer complaints and errors.

8. Staff motivation and development: A business can identify the areas where employees need training and development through the measurement of service quality. It also helps the employees to have better motivation and job satisfaction.

9. Improved operational efficiency: A business can redesign systems and processes, reduce wastes and errors and improve operational efficiency by identifying the areas for improvement.

10. Continuous improvement: Measuring service quality cultivates a culture of continuous improvement, thereby helps business to work for excellence and to have competitive advantage.

3.8.2 Measures of Service Quality

In a service organisation, quality refers to the extent to which the delivered service meets the customers' expectations. Customers have actual experience in the service delivery process. Service outcome and service process affect the perception of service quality. Service outcome is the end result of the service delivery process and service process is the way in which the service is delivered. Perceived quality is also influenced by the prior expectations of customers.

Prior Customer Expectation + Actual Process Quality + Actual Outcome Quality = Perceived Quality

Prior Expectation: Customers evaluate the process and outcome of service delivery against their expectations. This process framed the perceived quality of customers. Customer expectations are influenced by various factors such as word of mouth, past experience, needs, price etc. The service provider can take steps to shape customer expectations by proper marketing of services.

Actual Quality: It indicates the actual level of service quality rendered by the service provider. The service provider can determine and control the actual service

to be provided and can fix some standards for the different aspects of service quality. The quality of service is fundamentally determined by consumer's perception. But the service provider can identify the consumer requirements and can design service delivery and outcome accordingly.

Perceived Quality: It is the actual feeling of customers about the quality of service that they have got. It has an effect on the satisfaction and loyalty of customers. Satisfactory quality, ideal quality and unacceptable quality are the possible three outcomes of perceived quality.

1. Satisfactory Quality: The customers' expectations are fully satisfied.
2. Ideal Quality: The perceived quality is higher than the customers' expectations.
3. Unacceptable Quality: The perceived quality is less than the customers' expectations.

The service providers should try to achieve either satisfactory or ideal quality each time the service is rendered. For this, they have a clear understanding about customers' expected quality and general determinants of service quality.

3.8.3 Factors affecting Service Quality

1. Service reliability: This is the capacity to consistently perform and keep promises. It refers to providing the appropriate service when it is needed.
2. Service accessibility: It involves approachability and ease of contact. Customers can easily accessible the service without much waiting time and there should be convenience in operational hours and location of service facility.
3. Service security: Security is the absence of fear of risk, danger or safety. It involves physical protection, financial stability and confidentiality.
4. Service credibility: It refers to the dependability and reliability of a service provider. It involves taking the customers' best interest at heart.

5. Service responsiveness: It is an important aspect of customer service that focuses on how quickly the needs and enquiries of customers are met by the service provider. It involves the willingness or readiness of employees to provide service.

6. Service competence: It refers to the necessary abilities and expertise that the service personnel need in order to provide the service. It also includes professional skill of operational support staff and the research capability of the service provider.

7. Service tangibles: It comprises physical facilities, staff appearance, tools or equipment needed to deliver the service and other tangible aspects of the service. It is the physical evidence of the service.

8. Service courtesy: It refers to kindness, respect, care and friendliness of service personnel. It involves manners of the cabin crew while dealing with the passengers.

9. Service communication: It is the process of listening to customers and providing them with information in a language they can understand. Service personnel have the capacity to vary its use of languages for different customers. They have to communicate with educated as well as illiterate customers simply and effectively.

3.9 Management of Service Operations

The services cannot be separated from its operations. The marketability of a service largely depends on the way the services are produced. Service facilities have to be managed properly by managing service quality and maintain customer expectations. It should promote customer care and enhances the efficiency and effectiveness of the service facilities.

A. Managing service quality

Even though companies have high rates in terms of market share growth, it may find difficult to achieve high standards of service quality. A big gap exists between

customers' expected and perceived levels of service. This gap can be reduced only by understanding the different barriers that contribute to this gap. The service provider should understand these barriers and thereby reduce the gap to manage and improve the service quality.

(i) Ignorance of customer requirements

It is difficult to understand what customers actually want from the service encounter. The variability of attributes is very high as service attributes are not well defined and standardised. The behaviour of customers towards services is unpredictable and it is difficult to make inferences about customer choice. But the service provider can understand customer's preferences through market research. He can understand the important service attributes that customers prefer in service encounter and the way in which customers use these attributes in evaluation.

(ii) Bad Delivery

In addition to the technical and academic credentials, a service employee has the ability to empathise and to give personal attention to each customer by keeping away his own worries and discomforts. Otherwise the employees are not able to give the required level of service to the customers. So hiring the right personnel is a frustrating experience to the companies who want excel in service delivery. The companies should take proper time to get right people and they should train and reward them appropriately.

(iii) Absence of resources

Large investment is needed in technology and in hiring and training talented employees for improving the service quality. But the service providers are unwilling to invest large amount for the improvement of service encounters. They might believe that large investments are not needed in running a service business and customers are not very bothered about small shortcomings in the quality of service they receive. This is because the service provider is more focused on reducing costs and improving productivity.

(iv) Management's will

A company's determination to improve the quality of its services is the most important factor for giving best quality service to the customer. For a determined company, it is very easy to find the right resources, equipment and people to satisfy the customers.

(v) Exaggerated Expectations

The company has to be careful in hyping its good services as it may create problem. The customer is dissatisfied when advertising and marketing try to build customer expectation to a level that cannot be fulfilled. At the same time, adequate promotion should be given to raise expectation of customers. The customers are ready to buy the service only when they expect good service from the service provider. So proper promotion should be done to raise the expectations of customers to buy the service and the service provider should be able to fulfil those expectations.

B. Meeting Customer Expectations

It is important to understand and meet customer expectations. A company should be aware of the different criteria that the customers consider to evaluate whether his expectations have been met or not. Both outcome and experience are important for a customer. Some customers focus more on outcomes and less on experience and vice versa. The following criteria are considered by the customers to assess outcome and experience of service encounters.

(i) Accessibility

A customer can access the service locations easily at their own convenient time without much waiting. A customer may travel to distant locations to avail a service if the service is urgent, critical and is not available locally. The reputation of service provider is another factor that the customer considers while availing a service.

(ii) Reliability

The service should be consistent and dependable. The service provider should ensure that services are delivered at promised time each time the customer decides

to avail it. The effectiveness of service process should be tested and the equipments should be well maintained to avoid shortfalls in service. The service professionals should be competent in their work and should avoid misbehaviours.

(iii) Credibility

The systems and processes should be effective so that the customers have positive opinions. Credibility of the service provider is more important when the business is dependent on repeat customers. Providing good services consistently is the only way to build credibility.

(iv) Security

The services should be provided without a risk. The company should demonstrate that customer security is of its concern and adequate steps are taken to prevent any mishap from happening. The service provider should take precautions to eliminate or reduce the risk.

(v) Knowing the Customer

The company should understand the expectations of the customer. The customer is satisfied with the service outcome only when the company serves them as per their expectations. The company should politely decline to serve the customer if it has no capacity to serve them. Otherwise the customer will spread negative stories about the company that may ruin its credibility.

(vi) Responsiveness

Service staff should respond to customer problems, requests and questions quickly. The customers should be served promptly. It is better to encourage customers to take appointments to avoid waiting.

(vii) Behaviour of Employees

Service staff should act friendly and politely. Good behaviour of service staff adds to the value that the customer is getting from the service facility. Behaviour of the

service provider is the most important factor that the customer considers during service encounter.

(viii) Competence

The performance of service primarily depends on the knowledge and competency of the service provider. The service staff should update their knowledge and skills. They should participate in seminars and courses and their participation should be well publicised.

(ix) Communication

The service provider should describe the service facilities clearly and accurately. If the service is not properly represented and described in the communications, the customer will be dissatisfied and that will affect negatively on the reputation of the company.

(x) Physical evidence

The tangible aspects of a service should be well managed. They are the physical evidence of a service. It is important that the company should provide physical evidence to customers which will assure them that they will be provided a good service.

3.10 Service Quality of Airlines

Airline service quality refers to the extent to which airlines collaborate with relevant civil aviation enterprises to provide airline services that use value to meet the needs of passengers for safety, punctuality, convenience and comfort and it is the subjective impression of passengers on the efficiency and utility of the service provider's services (Lu et al., 2017). It is a measure of how an airline delivers its service compared to the expectation of its passengers. Airline service quality is an important component of aviation industry as it directly affects customer satisfaction and loyalty. It is a complex concept encompassing various aspects that contribute to passenger experience. Skytrax, an international air transport rating organisation, rates the airlines all over the world based on 5 star rating. It is a comprehensive

evaluation of service quality of airlines and airports all over the world and it helps them to improve customer experience.

3.11 Service Quality Models Used in Airline Industry

A number of service quality models have been developed to measure customer's expectation and perception about services provided by various service industries. SERVQUAL and SERVPERF are widely used in researches to measure service quality of airlines. At the same time, airline industry specific service quality models like AIRQUAL, IFSQUAL and SSQAI were also used to measure service quality of airlines.

(i) SERVQUAL

Parasuraman, Zeithaml and Berry (1985) developed a model which is commonly known as GAP model. The GAP model tries to find out the gaps between expectations of customers about services being offered and the perceptions about actual service rendered. As many as 10 dimensions were included in the model, but it was modified by Parasuraman et. al., with five dimensions and named it as SERVQUAL. The five dimensions of SERVQUAL include reliability, assurance, tangibles, empathy and responsiveness.

Reliability refers to the ability to perform the promised service accurately. Assurance indicates the knowledge and ability of employees to convey confidence among its customers. Tangibles show the appearance of physical facilities and staff. Empathy refers to the individualised attention and caring to customers. Responsiveness indicates willingness to address its customers' needs and to provide quick services. The model is applied with 22 items presented in seven point likert scale. The model is widely used in different industries, even if it was developed to measure banking services, telephone services and repair and maintenance.

(ii) SERVPERF

Cronin and Taylor (1992) developed a service quality model which is a variation of SERVQUAL. It is a performance based model of service quality that measures

service quality through the evaluation of customers' perceptions not the expectations. That means SERVPERF evaluates the perception part of the SERVQUAL model. The model uses same five dimensions of service quality like the SERVQUAL model with 22 items. Cronin and Taylor argued that performance determines service quality and there is no need to measure performance-expectation separately as customer expectations are pre-determinants of customer perceptions. This model has gained wide applicability because it reduced the number of items by 50% and explains more variance in the measurement of service quality. This model was used by many researchers to assess service quality of airlines.

(iii) AIRQUAL

AIRQUAL is a comprehensive model to measure service quality of airlines, which was developed by Ekiz et. al., (2006). It was developed by adapting from SERVQUAL model and was measured airline service quality in Turkish Republic of Northern Cyprus. Nadiri et. al., (2008) validated the model later and suggested that the model can be applied in different cultural settings. It consists of five dimensions from airlines namely airline tangibles, terminal tangibles, personnel services, empathy and image. It is a process based assessment of service quality and was developed from SERVQUAL and SERVPERF models.

Airline tangibles: It includes physical aspects of airline services such as cabin interior, cleanliness, seat comfort, in flight entertainments etc.

Terminal tangibles: Airport terminal facilities also plays a significant role in the overall service quality of airlines. Terminal aspects include airport infrastructure, waiting launches, baggage handling, availability of duty free shop and restaurants etc.

Empathy: It indicates responsiveness to passenger complaints, ability to understand passenger needs and emotions, personalised interactions and concern for passengers' problems.

Image: It represents overall reputation and brand perception of the airline. Reliability, punctuality, on-time performance, safety records, consistency of ticket prices etc. contribute to the image of an airline.

(iv) IFSQUAL

Rose et. al., (2016) developed in-flight service quality (IFSQUAL) for measuring airline service quality. This model was developed to measure service quality of Malaysian Airlines from the point of view of customer satisfaction. The model measures service quality with four dimensions such as personal attributes, in-flight services, flight safety and customer satisfaction. As in-flight services are intangible, measurement of IFSQUAL is more complicated. At the same time, it measures different dimensions from different angle. It measures whether the in-flight services meet the customer satisfaction. IFSQUAL is more relevant as in-flight services are most important to measure airline service quality.

(v) Hierarchical Model

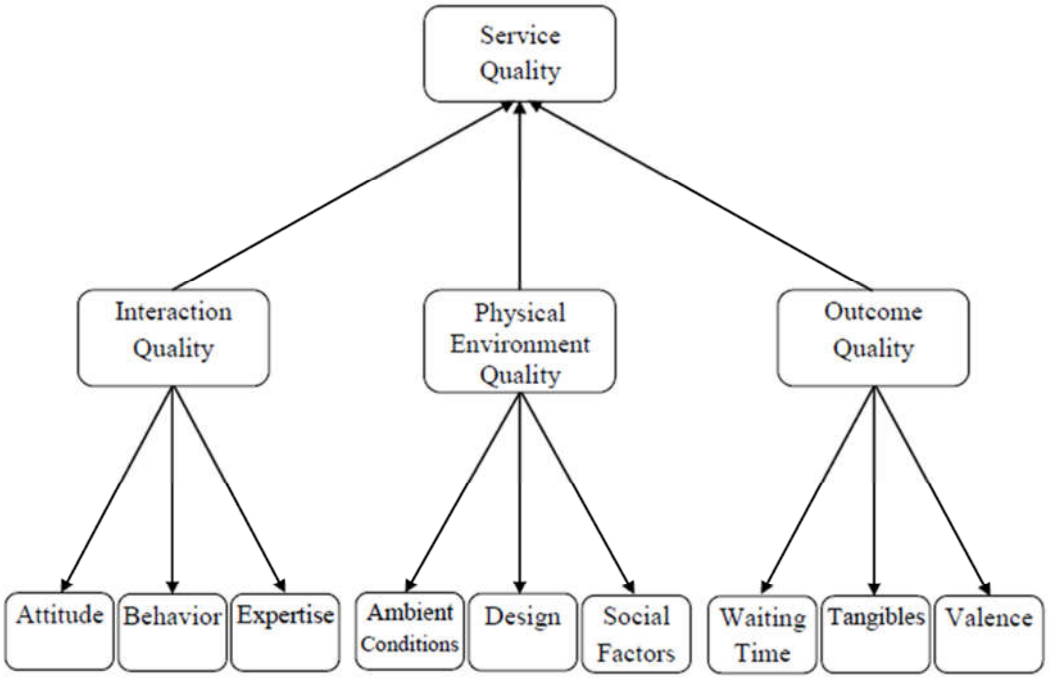
Dabholkar et. al., (1996) developed a hierarchical structural model for service quality based on SERVQUAL and SERVPERF models. This model has three stages: service quality, primary dimensions and sub dimensions. Later, Brady and Cronin proposed a new model based on the model developed by Dabholkar et. al., (1996). This model has been developed by specifically defining the dimensions of SERVQUAL and other models. The model has three primary dimensions such as interaction quality, physical environment quality and outcome quality.

Interaction quality represents interaction quality between service providers and customers. Physical environment quality indicates the physical aspects of the service environment. Outcome quality focuses on the quality of results or outcomes that a customer experiences from a service. Each primary dimension is again divided into sub dimensions. Interaction quality has three sub dimensions: attitude, behaviour and expertise. Physical environment quality includes ambient conditions, design and social factors. Outcome quality includes waiting time, tangibles and valence. This model is generic and can be applied to measure service quality of a

variety of service industries. Many researchers adopted this model by modifying the dimensions and sub dimensions based on specific service industries.

Figure-3.4

Hierarchical Model



Source: (Brady & Cronin 2001a)

(vi) SSQAI Model

Wu and Cheng (2013) introduced SSQAI model which specifically evaluates airline service quality. The model focuses on four dimensions with eleven criteria. The model was developed on the hierarchical models proposed by Dabholkar et. al., (1996) and Brady and Cronin (2001). It is a performance based service quality model based on hierarchical structure. The four dimensions used in this model are interaction quality, physical environment quality, outcome quality and access quality. Interaction quality is the quality of communication and interplay between service providers and customers. It consists of three sub dimensions: conduct, expertise and problem solving. Conduct refers to attitude and behaviour of airline staff. Expertise means the extent to which the employees' task oriented abilities

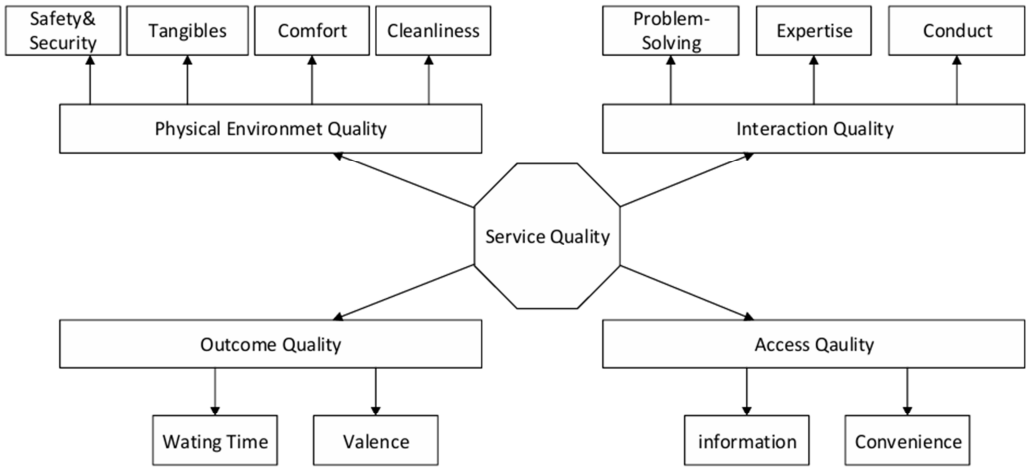
influence their interaction. Problem solving indicates how efficiently and quickly airline employees resolve the complaints of passengers.

The second primary dimension physical environment quality refers to the physical aspects of service environment. It consists of four sub dimensions as cleanliness, comfort, tangibles and safety & security. The third primary dimension outcome quality measures whether the customers' needs and wants are satisfied through the outcome quality. It consists of two dimensions as waiting time and valence. Valence evaluates whether the passengers accept the service outcome or not. Customers' waiting time also affects the overall evaluation of service.

The last primary dimension access quality indicates the ease and quickness with which the travellers arrive at their destinations. It is based on two sub variables namely information and convenience. Information provides up to date information about the variety of services and delivery of services. Convenience focuses on saving resources like time, energy etc.

Figure-3.5

SSQAI Model



Source: (Wu and Cheng, 2013)

3.12 Customer Satisfaction

Customer satisfaction is a measure of how products and services given by a company meet or surpass customer expectation. It refers to the level of happiness that a customer experienced with the products or services that are offered by an organisation. Customers are satisfied only when their expectations are met or exceeded. Otherwise it may lead to complaints, negative reviews and loss of business. Achieving high levels of customer satisfaction is crucial for businesses as it influences customer retention, loyalty and positive word of mouth. The company can get valuable insights about how well they meet or exceed customer expectations by measuring customer satisfaction and identify areas for improvement.

Kotler (2000) defined satisfaction as: "a person's feeling of pleasure or disappointment resulting from comparing a product's perceived performance (or outcome) in relation to his or her expectations". Tse and Wilton (1988) defines it as "consumer's response to the evaluation of the perceived discrepancy between prior expectation and the actual performance of the product as perceived after its consumption".

3.12.1 Importance of Customer Satisfaction

Customer satisfaction helps the business to understand the areas where they have to excel. It also helps to identify satisfied customers and to improve the overall customer experience. It is a key to business growth, increases customer lifetime value and ensures customer retention. High customer satisfaction leads to customer loyalty and word of mouth referral. Even low customer satisfaction scores help the business to identify areas for improvement.

(a) Gains Competitive Advantage

A business can gain competitive advantage by satisfying customers. Customer satisfaction leads to customer loyalty and customer retention. A business can increase its market size through the satisfaction of customers.

(b) Reduces Customer Churn Rates

Customer churn is the percentage of customers who stopped purchasing a company's products or services during a particular period. A business should avoid high churn rate as it shows high customer dissatisfaction with the service they are providing. High customer satisfaction helps to reduce customer churn rates.

(c) Reduces Cost

Customer satisfaction helps to maintain the existing customers and also leads to positive word of mouth referrals. So companies do not want to spend more on marketing and for maintaining their customer base. Customer retention is cheaper than customer acquisition. It helps to reduce the overall cost of product or service.

(d) Improves Brand Reputation

Customer satisfaction increases a company's likelihood of favourable word-of-mouth and referrals and they are more loyal to the company. A company can increase its brand reputation by satisfying the customers.

(e) Boosts Customer Loyalty

According to marketing metrics, selling to an existing customer has a 14-fold higher chance than selling to a new one. According to research, existing customers spend 31% more on average and are 50% more willing to try new products as compared to new customers. Higher customer loyalty is an indicator of high customer satisfaction level.

(f) Increases Customer Lifetime Value

Customer lifetime value refers to the expected profit that a company can make from a single customer as long as he stays with the company. As much as 75% of happy customers are ready to buy more from the company that give them a good customer experience. Satisfied customers are more likely to remain in business and less likely to churn.

(g) Boosts New Customer Acquisition

Satisfied customers are more likely to speak positively about the business and their word of mouth referrals help the business to acquire new customers quickly. Nowadays, customers expect a premium service to be built in throughout the customer journey, from the first sales to post purchases. A business organisation should support the existing customers that would bring new potential customers to their business.

(h) Provides Valuable Feedback

Business organisations get valuable feedback from customer satisfaction data. They can understand fall points, identify new opportunities and make more efficient decisions as per the customer feedback. Negative feedback also helps the business to identify the different aspects where improvement is needed. It also gives a chance to address the concerns of customers and pay immediate attention to the concerned issues.

3.12.2 Customer Satisfaction of Airlines

Customer satisfaction in airline industry measures how well an airline meets or exceeds the expectation of its passengers. It is an evaluation on the experience of airline passengers from purchasing ticket to the delivery of luggage at final destination point. Customer satisfaction of airline is affected by various factors from booking to baggage claim. It is affected by various factors like booking and check-in experience, pricing, comfort and convenience, safety and cleanliness, handling of irregularities, personalization etc. The airline should take proper steps to improve these factors to achieve high levels of customer satisfaction.

Customer satisfaction is a crucial metric for airline industry like any other service industry and it is particularly relevant for service industries because of intangible feature of services. Only satisfied customers have more repurchase intentions and that will lead to customer loyalty. If the airline passengers' actual experience meets or exceeds their expectations, it helps to get positive word of mouth and attract new customers. Both full-service carriers and low-cost carriers make the airline industry

more competitive. Enhancing customer satisfaction is the best way of gaining competitive advantage in the market. The airlines are required to fulfill various regulatory requirements and customer satisfaction ensures the compliance of these regulations. Satisfied customers are less likely to have complaints and issues and more likely to recommend the airlines with their friends, relatives and on social media. So, time and resources should be spend for resolving the problems of passengers. In short, customer satisfaction is crucial for the airline industry for the overall success in the competitive market.

Customer satisfaction of airlines can be measured by using various methods and metrics. Surveys are the most common method used to measure the customer satisfaction of airlines. Post-flight surveys and in-flight surveys can be conducted to know immediate reactions of the passengers. Customer Satisfaction Scores (CSAT) and Net Promoter Score (NPS) are the other methods in which the customers rate their satisfaction with various aspects of the service. The airlines can also collect feedback and complaints from the customers immediately after the flight and also monitor reviews from social media and other online platforms to identify the areas for improvement. They can avail data from frequent flyer programmes to analyse passenger preferences and satisfaction. Analysing operational metrics like on-time performance, baggage handling efficiency etc is another way to measure the customer satisfaction of airlines. Researchers are used various models for measuring customer satisfaction of airlines. SERVQUAL and SERVPERF are the commonly used models to measure customer satisfaction and it is evaluated by measuring satisfaction on various services provided.

3.12.3 Service Quality and Customer Satisfaction

Service quality has a strong influence on customer satisfaction. When a company meets or exceeds customer expectations through high levels of service quality, it can differentiate its service from competitors. Customers are more satisfied when the perceived service is greater than the expected service. The various dimensions of service quality affect the customer satisfaction and a company can increase the customer satisfaction by improving the various dimensions of service quality.

Customers have their own expectation about quality before interacting with the organization. The expectancy-confirmation paradigm holds that customers compare their perception with the actual experience to determine their level of satisfaction from the interaction (Teas, 1993). These evaluations are based on different criteria that affect quality. The factors which are used to assess the service quality are being used by many researchers to measure customer satisfaction. Satisfied customers can give positive feedback on service quality and are more possibly to become loyal customers. Even though service quality and customer satisfaction are independent constructs, they are closely related. This relationship makes service quality a crucial focus for companies aiming to achieve high levels of customer satisfaction. So companies who work continuously on improving service quality can improve customer satisfaction.

3.13 Problems of Airline Passengers

Problems of airline passengers refer to various issues or concerns that passengers may experience during their travel with an airline. These problems can arise at different stages of the travel process, including pre-flight, check-in and boarding, in-flight services, baggage handling, flight disruption and customer service. The airlines who focus on improving service quality can address the grievances of passengers. This led to the improvement of passenger experience and loyalty. Service failures may happen due to unforeseen events, but they have to be addressed quickly in order to maintain a strong customer relationship. The following are the main problems faced by airline passengers:

(a) Flight Delays and Cancellations

The most frequent problems that airline passengers encounter are flight delays and cancellations. The most common reasons for flight delays and cancellations are change in weather condition, mechanical issues, staffing shortage, plane arriving late and air traffic control restrictions. Its effects are exceptionally high as this lead to financial loss to both customers and airlines. Any change in flight schedules may cause significant disruption to customer's plans, particularly when they are planning to attend once in a lifetime event or have a non refundable reservation somewhere.

Customers may feel a loss of confidence in the airline's reliability as a result of frequent disruptions and this will adversely affect the airline's brand reputation.

(b) Overbooking and Denied Booking

Overlooking happens when an airline sell more tickets than available seats by anticipating some passengers will not come up. There are so many situations where all passengers arrive and the customers are denied the boarding by the airlines, creating a frustrating experience to them. Denied boarding creates significant problems to passengers, who may miss important events or meetings. Customer's loyalty and trust may be damaged for long time as a result of denied boarding.

(c) Uncomfortable Airline Seats

Discomfort in the seating arrangement is another major problem that airline passengers face during travel. Lack of legroom, closeness to fellow passengers and thinness of the seat are some of the reasons for this discomfort. Differently abled passengers face more difficulties if airlines do not consider their needs properly. The airline should have optimum seating arrangement to minimise discomfort, particularly during long journeys.

(d) Lost or Damaged Luggage

Mishandling of luggage such as lost, delayed or damaged luggage is another major issue for airline passengers. These issues typically stem from human error, insufficient tracking systems or complex logistics involved in connecting flights. If their bag contains valuable items like gadgets, jewellery or essential medicines, it will end to frustrated or angered customer experience. If the customer service is slow and uncooperative in resolving this problem, the issue will again shoot up. This will result to compensation costs and loss of future business for the airline company.

(e) Poor In-Flight Services

Poor in-flight services like unfriendly staff, poor quality meals, lack of sufficient food or beverage options, poor quality of headset etc. affect negatively on passengers' experience. Overpricing of food and incurring high charges for

entertainment systems are other problems faced by economic class passengers. The main reasons of poor in-flight services are inadequate staff training, understaffing, lack of upgradation in in-flight entertainment systems and cost cutting measures by airlines.

(f) Hidden Fees and Charges

The airlines are advertised basic fares as a part of their sales promotion and incurred additional charges for the services such as baggage, seat selection, in-flight meals etc. The passengers are unaware about all these hidden charges until they get into the booking process. This ambiguity in airline pricing will affect the customer's trust and repurchase intentions. Transparency in pricing is critical for maintaining long term customer relationship.

(g) Long Queue in Security and Boarding

Long queue in security and boarding create problems to airline passengers, particularly to women and children. This may cause stress, anxiety and tiredness to the passengers even before the flight take off. These problems arise due to understaffing in security checkpoints, inefficient boarding process, overbooked flights etc.

(h) Inflexible Fare Terms and Conditions

The average passengers are confused by the complex fare structures and booking terms & conditions of airlines. For instance, a passenger may book a flight with lower fare without knowing he cannot cancel or change the booking when an emergency arises. This will create lot of problems and frustrations to the airline passengers. Inflexibility and misleading related to the terms and conditions of fares may create a lot of difficulties to passengers after booking.

(i) Trouble with Refunds

The passengers face difficulties in getting refunds when they cancel flights during emergencies. Sometimes they experience long processing time and high transaction fee for each cancellation. In case of flight cancellations by the company, passengers

face difficulty in getting the refund of their ticket fare as refund process is very slow and inconvenient.

3.14 Service Recovery

Service failures are inevitable in service industry. Even best service provider may make mistakes because of unforeseen events. The mistakes become more serious when they are happened in front of customers. But each mistake should not necessarily create a disappointed or dissatisfied customer. A prompt and apt service recovery can make them more loyal than if the mistake had not happened. Mistakes are opportunities to create good relationship with customers. A customer's problem is an opportunity to convince the customers that the company is willing to serve the dissatisfied customers even if it is not the fault of the company. The service provider should pay attention to resolve even in case of small problems like faulty bills, late deliveries etc. It will reduce temptations and unnecessary reactions from the part of customers and will influence their repurchase intentions positively.

Some customers are ready to open up their problems and some others suffer in silence. Customers are asked to complaint when they have encountered a service failure. They are requested to fill up the feedback forms or to call at the customer service centre. The service provider can use formal methods like questionnaires and customer suggestions only if it has a separate department to monitor them and acts on complaints. The employees who have a direct contact with customers should be properly trained and empowered. They can improve their communication skills and creative thinking, which is needed to deal with aggressive customers, through training. Recovery training should be given to the employees in order to empower them to make quick decisions and to have an awareness of customers' concerns. Recovery skills can be developed through simulated real life situations and role playing. Frontline employees should anticipate the real problems that might happen and prepare a plan to resolve such contingencies. So service recovery is the ultimate responsibility of frontline employees. The service provider must delegate proper authority and responsibility to them to deal with the emergencies. Finally, corrective

measures are to be taken on customer complaints and customers are to be informed about the improvement.

3.15 Conclusion

The present chapter has dealt with the theoretical overview of service quality of Low-cost International airlines. The chapter has included the history of civil aviation industry and low-cost carriers in India, SWOT analysis of the industry and present and future of the industry. The details of Indian LCCs operating international services have been included in the chapter. The theoretical background of the study has discussed the service quality of airlines and the relationship between service quality and customer satisfaction. The various problems faced by the airline passengers during their international travel have also examined in this chapter.

CHAPTER 4

RESEARCH METHODOLOGY

4.1 Introduction

This chapter describes an overview of the methods and procedures used by the researcher to find and analyze the data regarding the research problem. It encompasses all the important aspects of research, including research design, methods of collecting data, data analysis tools, statistical methods used to analyze and the overall structure within which the study is carried out. The methodology followed in the present research work is briefly explained below:

4.2 Research Methods

The present research work is both descriptive and analytical in nature. It focuses on the characteristics, attitudes, opinions, or perceptions of a group or population being studied. Also it attempts to identify different dimensions of the problem by explaining the descriptive information about the population. Therefore, it is described as descriptive research. The study investigates the cause-and effect relationship between the variables using first-hand data. It critically evaluates information to draw conclusions and quantitative data is being measured by using statistical tools. So the study is also called analytical study.

4.3 Sources of Data

Both the Secondary and Primary data were collected and used for the research work. The data sources are given below:

Secondary Data

Secondary data used in the study were collected from the following sources:

- Websites of Directorate General of Civil Aviation (DGCA), Centre for Asia Pacific Aviation (CAPA), Airport Authority of India, IATA, OAG and IBEF
- Websites of Air India Express, IndiGo, SpiceJet and Akasa Air.
- Reports published by Ministry of Civil Aviation

- Reports published by IATA
- Books related to the study area
- Published Theses
- Newspaper Articles
- Conference Proceedings.
- Journals, Publications, Study Reports, Periodicals, Research Papers, Aviation Statistics etc.

Primary Data

Primary data were collected from the passengers of Indian low-cost international airlines travelling from and to the three Kerala airports namely Thiruvananthapuram, Cochin and Calicut. A structured questionnaire was prepared to collect primary data. The researcher tried to collect data through online by email and also by meeting passengers directly from the airports. The questionnaire was distributed to the passengers at the arrival and departure hall of the airports. The period of data collection was from June 2023 to January 2024. The questionnaire consists of dimensions related to airline service quality, passenger satisfaction, and passenger problems.

4.4 Sampling Design

A specific plan for selecting samples from a specific population is referred to as sample design. It gives suggestions regarding the methods or procedures the researcher would follow in choosing items for the sample. Sample design also describes the procedure to be followed for determining the size of the sample. It is practically difficult to study the entire population due to various constraints and a sample is selected that truly represents the population. The study aims to describe and analyse the service quality of different low-cost international airlines in India.

(i) Population

Population consists of all passengers of Indian low-cost international airlines, who travel from and to Kerala international airports. It consists of passengers of Air India Express, IndiGo, SpiceJet and Akasa Air, which are operating international services from and to the Kerala international airports. There are four international airports in Kerala i.e., Thiruvananthapuram, Cochin, Calicut and Kannur.

(ii) Determination of Sample Size of Airline Passengers

The sample size of the customers was determined by using Cochran (1977) formula for infinite population (where the population is greater than 50,000).

The formula applied to calculate the sample size is;

$$n_0 = \frac{Z^2 pq}{e^2}$$

Where:

- e = the desired level of precision (i.e. the margin of error),
- p = the (estimated) proportion of the population which has the attribute in question, i.e., 0.5
- q = 1 – p.
- Z = Z value (e.g.: - 1.96 for a 95% confidence level)

Therefore, $n_0 = ((1.96)^2 (0.5) (0.5)) / (0.05)^2 = 384$.

The calculated sample size is 384. To get an equal division of airline passengers' sample from each airport, 405 airline passengers were selected. 135 passengers from each airport (45 passengers from each airline) were taken as samples.

(iii) Sampling Technique

Purposive sampling method was used to collect data as population is not known. Airline passengers who had travelled at international sector in Low-cost Indian Airlines from and to Kerala airports were taken for sampling. Three international airports in Kerala were selected for data collection i.e., Thiruvananthapuram, Cochin

and Calicut. Kannur airport was excluded and only Calicut airport was taken from North Kerala region. Here, three criteria (purposes) are used to select the airline passengers such as:

1. Passengers who have travelled at least three times in these airlines are purposefully selected as samples.
2. Passengers who have travelled in direct flights of Low-Cost International Airlines are purposefully selected as samples.
3. Passengers of Low-cost Indian Airlines providing services from all airports selected are taken for sampling such as Air India Express, IndiGo and Spice Jet.

(iv) Selection of Sample Passengers

Table 4.1

Selection of Sample Passengers

Airports	Questionnaires Distributed				Questionnaires Received				Questionnaires after removing Non-sampling Errors			
	Air India Express	IndiGo	Spice Jet	Total	Air India Express	IndiGo	Spice Jet	Total	Air India Express	IndiGo	Spice Jet	Total
TVM	56	57	57	170	49	48	48	145	45	45	45	135
Cochin	57	56	57	170	51	49	50	150	45	45	45	135
Calicut	57	57	56	170	53	49	51	153	45	45	45	135
Total	**170**	**170**	**170**	**510**	**153**	**146**	**149**	**448**	**135**	**135**	**135**	**405**

Source: Primary Data

4.5 Service Quality Model Used

SERVQUAL is the most commonly used measurement model in various industries. The SERVQUAL model measures service quality in terms of gaps between customer's expectations of a service and actual perception about the service. The SERVQUAL scale has been applied to the airline industry (Gilbert & Wong, 2003; Nel, Pitt, & Berthon, 1997; Park et al., 2004). However, this scale has been highly

criticized. Several researchers (Bitner, 1990; Bolton & Drew, 1991; Cronin & Taylor, 1992, 1994) consider SERVQUAL to be paradigmatically flawed because of its ill-judged adoption of this disconfirmation model, which is based on the disconfirmation paradigm. Through the disconfirmation paradigm, customers evaluate a service by comparing their perceptions of the service received with their expectations (Robledo, 2001). Park et al. (2006) note that five dimensions and 22 item scales in the measurement of SERVQUAL are difficult to apply to the airline industry because this scale has not addressed other important aspects of airline service quality, such as in-flight meals, seating comfort, seat space and leg room.

Cronin and Taylor (1992) designed a performance-based model of service quality called SERVPERF. This model measures service quality only based on the perceptions of the service performance that customers have experienced. This model is a variant of SERVQUAL as it employs the same constructs of SERVQUAL model. SERVPERF is a practical and effective instrument for assessing the service quality. However, Cunningham, Young, and Lee (2004) mentioned that since SERVPERF uses the same dimensions and items of SERVQUAL, it has failed to measure industry-specific dimensions of service quality in the airline industry. As Ghobadian et al. (1994) stated, service quality is a multi-dimensional phenomenon and utility values of its determinants are situation-dependent.

Ekiz et al (2006) developed AIRQUAL model, a service quality model adapted from SERVQUAL model, to measure service quality of airlines in the Turkish Republic of Northern Cyprus (TRNC). Nadiri et al (2008) validated the model to measure perceived service quality in Norther Cyprus, but Nadiri et al contended that the model should be used in different cultural settings. Also, the measurement methods earlier developed were not industry specific and AIRQUAL gained popularity on the context of being industry-specific, meant only for the measurement of service quality in airlines. (Ekiz et al., 2006; Nadiri et al., 2008 ;Babakus&Mangold, 1992). . However, the AIRQUAL model should be applied based on culture and context as service quality measurement is culture and context specific.

Ghotbabadi A. R. et al (2015) suggested Hierarchical/Multidimensional models & industry-specific models and emphasised the importance of developing industry specific models with pertinent constructs to the particular services, as the constructs

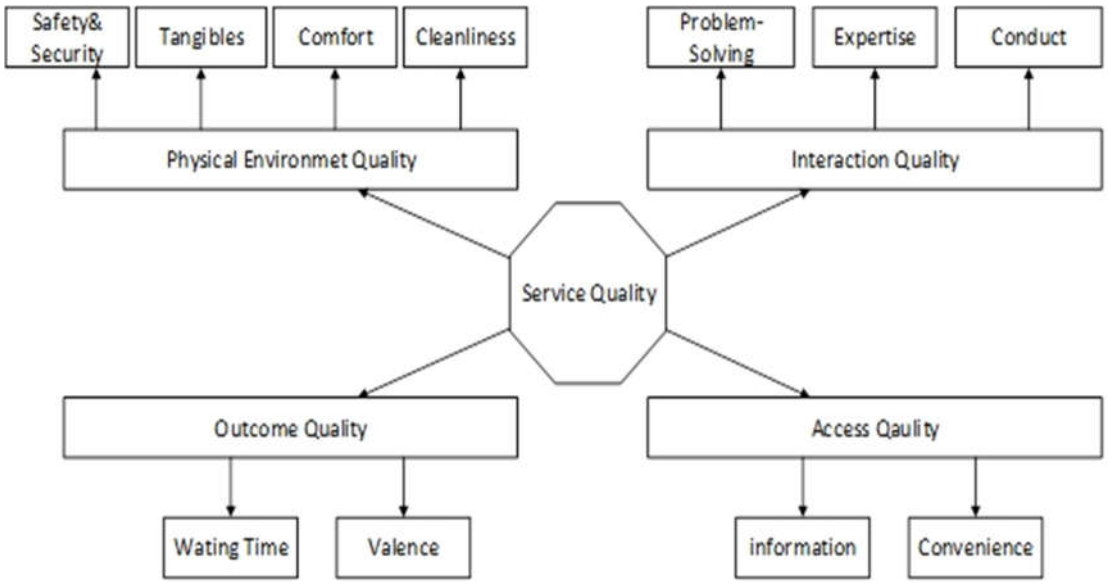
proposed by generic models sometimes fail to address the comprehensive requirements of distinct service industries. Measuring service quality based on the hierarchical concept has gained relative importance by researchers recently. Dabholkar, Thorpe &Rentz's (1996), Brady and Cronin (2001) and Wu, Lin and Hsu (2011) suggest that service quality should be based on a hierarchical concept. In hierarchical concept, customers evaluate service quality based on a number of factors that are specific to the particular service. Wu and Cheng (2013) developed SSQAI model on the basis of hierarchical structures, which is a performance-based measurement scale for evaluating airline service quality. This model has eleven criteria in four dimensions namely interaction quality, physical environment quality, outcome quality and access quality.

The **SSQAI model** was chosen for this study after an evaluation of various service quality models because it is a valid and trustworthy instrument for evaluating service quality in the airline sector. The researcher tried to redesign the model to fit with Indian low-cost airline industry and made necessary changes in statements in order to measure Indian low-cost international airlines' service quality.

4.5.1 SSQAI model

Figure 4.1

SSQAI model



Source: (Wu and Cheng, 2013)

4.6 Variables used in the study

Based on the review of the available literature and the discussions with the industry experts and academicians, the following variables were identified and used in the study. The variables used in the study, such as passenger choices, service quality, passenger satisfaction and passenger problems, are listed below.

Table 4.2

Passenger Choices

Passenger Choices of Low-Cost Airline
Low price of flight tickets
Better in-flight services
On-board comfort and cleanliness
Safety and security measures taken by the airline
Flights' on-time arrival and departure
Convenient flight schedules
Efficient check-in process and boarding
Easy reservation/cancellation facilities
Call centre facilities
Friendly behaviour and prompt services of airline staff
Reliable and prompt delivery of baggage
Overall value for money

Table 4.3

Service Quality

Dimensions	Factors
Conduct	The airline employees' attitude demonstrates their willingness to help me
	Cabin Crew are kind and polite to me
	Check-in & boarding staff behave respectfully and politely with me
	The employees pay attention to every single traveller
	The employees give consideration to women, children and the physically challenged passengers
	Airline ensures clear and precise cabin announcement

	The employees try their best to provide services to me
Expertise	The airline procedures of check-in and boarding are quick and accurate
	The airline employees of baggage delivery are quick and accurate
	The airline employees are competent
	The employees have knowledge in dealing with passenger queries
Problem solving	The employees have proper skills to handle emergency situation
	The employees are able to handle my complaints directly and immediately
	When I have a problem, the airline employees show a sincere interest in solving it
Comfort	The seat and leg space in the cabin are comfortable
	I feel comfortable with the air condition in the cabin
	I feel comfortable in flying with this airline
Cleanliness	The cabin is tidy and clean
	The toilet in the cabin is clean
	The employees have clean and neat appearance
Tangibles	The airlines facilities are well designed
	The interior of the cabin is good
	In-flight entertainment materials and services are acceptable
	The quality of meals and drinks on the flight is good
	Food is available in the flight at reasonable price
	Airline offers online seat booking facility at low price
Safety& security	I feel safe in travel with the airline
	The airline ensures higher privacy and security in online payment
	The cabin crew describe how to use safety equipment very well and precisely
	There are noticeable sprinkler systems in the cabin
Valence	I believe that the airline tries to give me what I want
	I would say that I feel good about what I receive from airlines
	I will recommend travelling with this airline to my friends and relatives
	Airline employees provide services quickly and in the shortest time

Waiting time	There is rare delay before or during aircraft flight and the flight schedules are accurately according to the announced time.
	I wait less time for getting check-in and boarding.
	Waiting time required for getting luggage is acceptable.
Information	The airline tells me the accurate time on which it provides service
	The airline keeps me well-informed about the services I need
	The airline provides call centre facilities 24/7
	The airline website provides suitable and updated information of various services the company offers.
	The airline informs me about flight delay through SMS/call/email
Convenience	The airline provides me with enough flights and convenient flight schedules
	The reservation and ticketing systems are convenient
	The airline's ticket price is reasonable and affordable
	There is consistency in airline's ticket prices with given service
	I can cancel and reschedule my ticket easily without much cost
	The airline's website is efficient and user-friendly
	Compensation procedure in case of flight delays/cancellation/accidents is proper and convenient

Table 4.4

Passenger Satisfaction

Dimensions	**Factors**
Tangibles	Physical appearance, dress code and attitude of employees of the airline
	Physical appearance and modern facilities of the airline
	Variety, quality and price of in-flight meals of the airline
	Level of comfort of aircraft seats and leg space
	Cleanliness of the cabin and toilets
Reliability	Sincerity and patience of employees in resolving your problems
	On-time arrival and departure of airlines
	Safety measures taken by the airline

	Airline services which are provided at the promised time
	Hassle free check –in and boarding by the airlines
Responsiveness	Refreshment policy of the airline for its customers if the flight is delayed
	Promptness and accuracy of baggage delivery
	Speed in handling requests/complaints of passengers
	Communication about when services will be performed
Assurance	Call centre facilities given by the airline
	Website updation and information provided by the airline
	Crew friendliness /courtesy
	Knowledge of airline staff in dealing with passenger queries
	Ticket rescheduling and cancellation procedure of the airline
Empathy	Operating hours and flight schedules of airline
	Prompt attention taken by the airline staff towards passenger specific needs
	Consideration given by the airline to women, children and the physically challenged
	Employees' personal/individual attention towards passengers
Overall experience	Overall value for money
	Overall services provided by the airline

Table 4.5

Passenger Problems

Dimension	**Factors**
Ticketing and flight fare	There is unreasonable increase in airline's fare
	There is inconsistency in airline's fare especially during seasons
	I experience much delay in refund of cancelled ticket
	The airline imposes hidden charges while booking a ticket
	The airline charges high amount for ticket rescheduling and cancellation
Flight	The airline reschedules/cancels flights without prior notice
	The flight is delayed frequently due to weather

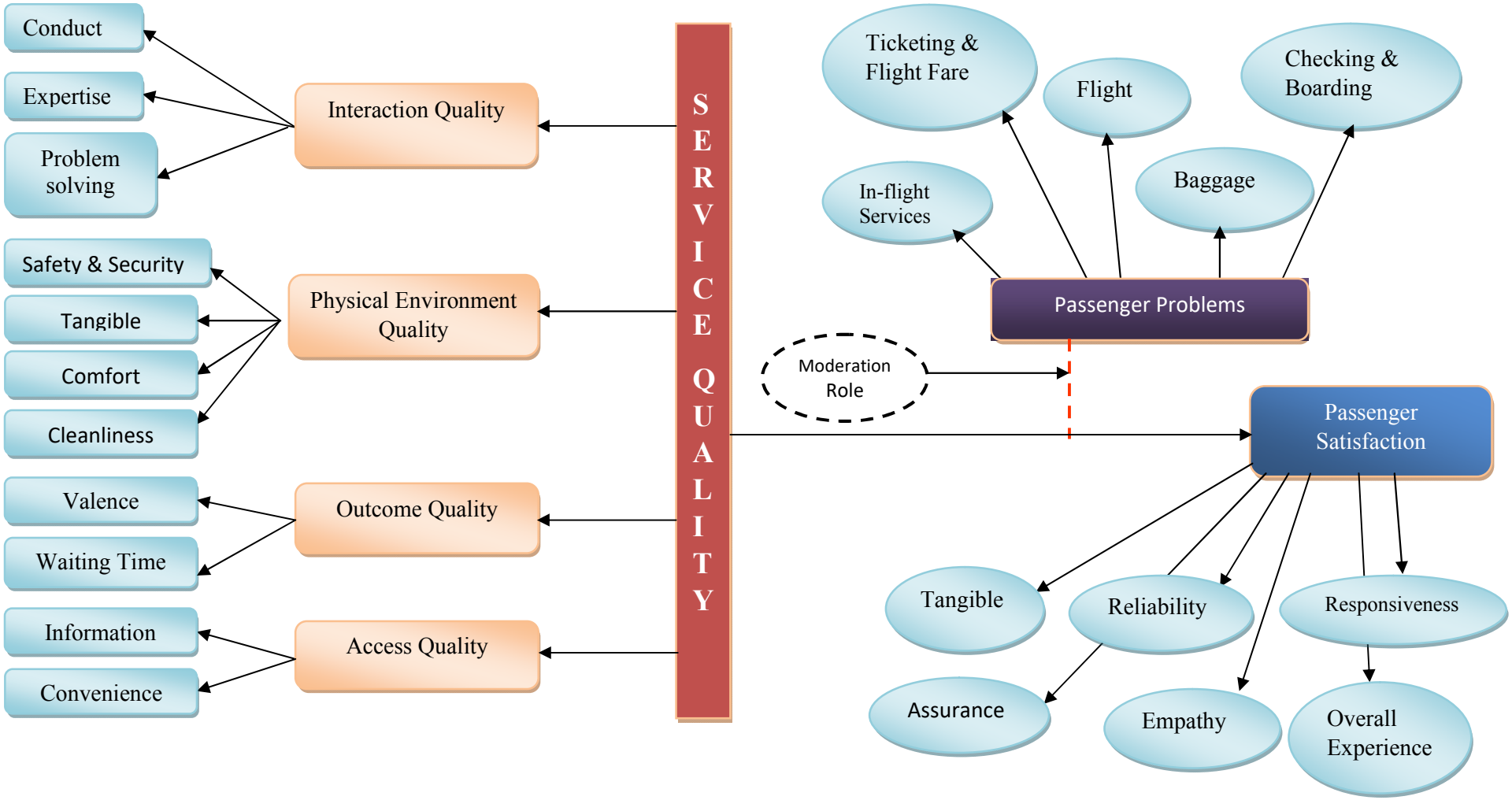
	conditions/technical fault
	The airline doesn't give me proper information about flight delay through SMS/call/email
	I missed an event/meeting/job due to cancelled/delayed flight
	The airline doesn't provide any refreshment when there is long delay of flight
Check-in and boarding	The airline hasn't sufficient number of counters for check-in
	Check-in and boarding employees are not friendly and helpful
	The airline imposes high amount for overweight of baggage and luggage
	The employees are unwilling to assist the passengers in solving the problems arises due to passenger error
In-flight services	The airline serves poor quality meals and beverages in the cabin at high cost
	Crew members are not friendly and helpful
	The cabin and toilets in the cabin are dirty
	I feel uncomfortable due to non-working of air condition in the aircraft
Baggage	There is much delay for getting my luggage after flight
	I have an experience of mishandling/missing of my luggage
	The airline doesn't give proper compensation for luggage loss
	I have lost some items from my luggage after flight

4.7 Conceptual Model

A conceptual model is a model that represents the relationships among the study variables. The researcher developed the conceptual model to show the relationship among service quality, customer satisfaction and passenger problems of Low-cost International Airlines in India. The model was developed with the help of the above mentioned variables.

Figure 4.2

Conceptual Model of the Study



4.8 Data Collection Instrument

A structured questionnaire was designed for the collection of primary data to fulfil the objectives. Necessary modifications were made after consulting with industry experts, travel agents and other subject experts. Five sections are included in the questionnaire, such as:

1. First section is for demographic and travelling profiles of passengers.
2. Second section contains variables related to passenger choices, which are the factors influencing the selection of low-cost international airlines.
3. Third section includes dimensions and sub dimensions for evaluating the service quality of low-cost international airlines.
4. Fourth section consists of variables to assess the passenger satisfaction of low-cost international airlines.
5. Fifth section contains variables relating to the different problems faced by the passengers of low-cost international airlines.

The questionnaire was developed with the help of past literature on a five point Likert scale ranging from strongly agree to strongly disagree. The researcher tried to collect data through online i.e. by email and also by meeting passengers directly from the airports. The questionnaires were distributed to the passengers at the arrival and departure hall of the airports and also approached travel agents for the distribution of questionnaire. The pilot study revealed that larger distribution would be necessary to receive required sample size of valid responses. Based on the response rate of the pilot study, a total of 510 questionnaires were distributed to passengers. Only 448 (response rate of 87.8%) questionnaires were returned back and out of which 28 questionnaires were not properly filled. To get an equal division of airline passengers from each airport and airline for the purpose of comparison, 405 questionnaires were taken for the analysis after removing the extremes. This sample size exceeded the calculated minimum sample size.

4.9 Pilot Study

The feasibility of the instrument was checked by carrying out pilot study. For Pilot study, as many as 120 international passengers of LCCs were selected from Thiruvananthapuram, Cochin and Calicut international airports. The responses were

collected and Reliability Analysis was conducted using the SPSS 25. The Cronbach's Alpha Reliability Coefficient was used to confirm the validity of the data collected and statements with the values below 0.7 were removed from the survey. Alpha values for the variables retained are above the threshold of 0.70. Thus the factors included are of reliable and relevant to represent the construct.

4.10 Scale Evaluation and Validation

Validity explains how well the collected data covers the actual area of investigation (Ghauri & Gronhaug, 2010). There are two types of validity, Content and Construct Validity. The Construct Validity further divided into Convergent and Discriminant Validity. Content validity is defined as "the degree to which items in an instrument reflect the content universe to which the instrument will be generalized" (Straub et al., 2004). Construct Validity explains the empirical relationship between measuring instruments & theoretical concepts.

The scale used to measure the dimension of '**Service Quality of Low-Cost International Airlines** is validated in two steps. Firstly, an Exploratory Factor Analysis (EFA) is performed on 120 sample passengers collected for pilot study and then Confirmatory Factor Analysis (CFA) is performed on total 405 samples. Here, the factors derived from Exploratory Factor Analysis (EFA) are confirmed by applying Confirmatory Factor Analysis (CFA) and then check its reliability and construct validity by using appropriate methods. It is applied to assess the quality of the factor structure by statistically testing the significance of the overall model, as well as relationships among items and scales based on sample data.

Here, the validation of measurement scale is done for the Likert scale items namely, Passenger Choices (PC), Service Quality (SQ), Passenger Satisfaction (PS) and Passenger Problems (PP). Here, Exploratory and Confirmatory Factor Analysis are employed to test the validity requirements. The results of each variable are presented below.

4.10.1 Validation of Measurement Scale of Passenger Choices (PC)

The scale is used to measure the dimension of **'Passenger Choices (PC)'** of Low-Cost International Airlines is validated in two steps. Firstly, an Exploratory Factor Analysis (EFA) and then Confirmatory Factor Analysis (CFA) are performed

accordingly. It is applied to assess the quality of the factor structure by statistically testing the significance of the overall model, as well as relationships among items and scales based on sample data.

4.10.1.1 Exploratory Factor Analysis (EFA) – Passenger Choices (PC)

Exploratory Factor Analysis (EFA) requires certain assumptions to be fulfilled namely correlation and sampling adequacy. The KMO Bartlett test includes Bartletttest of sphericity that measures the multivariate normality of variables in addition to analyzing whether the correlation matrix is an identity matrix. The Kaiser-Meyer-Olkin (KMO) test can measure whether the sample size is adequate for conducting factor analysis, (George &Paul Mallery, 1999).

The Cronbach's alpha Co-efficient is used to test the reliability. A Cronbach's alpha value of greater than or equal to 0.70 is considered acceptable for the factor to be reliable (Hair et. al.2010) regarding the proposed variable of the study.

There are **15 statements administered** for identifying the passenger choices. After item analysis, **3 statements are deleted** which have low level of reliability to measure the passenger choices. Finally, **12 statements are taken to measure the passenger choices** of Low- Cost International Airlines. Exploratory Factor Analysis (EFA) using Principal Component Method (PCM) is employed for analyzing the factor structure and correlation between 12 statements included in the scale for measuring the **'Passenger Choices (PC)'** of Low-Cost International Airlines. The results are presented below.

Table 4.6

Result ofKMO and Barlett's Test –Passenger Choice (PC)

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.943
Bartlett's Test of Sphericity	Approx. Chi-Square	3652.128
	df	66
	Sig.	<0.001

Source: Primary Data

A Principal Component Analysis is conducted on the 12 statements without Rotation (The rotation of variables is not needed here, because the proposed variable has no sub-dimensions). The Kaiser-Meyer-Olkin (KMO) measure verifies the sample

adequacy for the analysis, KMO value is 0.943 which is above the recommended limit of 0.70. Bartlett's test is another indication of the strength of the relationship among variables. Barlett's Test of Sphericity Chi-Square = 3652.128, $p<0.001$ indicates that the correlation between the items is sufficiently large for Principal Component Analysis (PCA).

An initial analysis is run to obtain Eigen Values for each component in the data. One component has Eigen values over and **above Kaiser's criterion of 1** and in combination explained **62.377%** of the variance. The result of Exploratory Factor Analysis is presented below.

Table 4.7

Result of Exploratory Factor Analysis – Passenger Choices

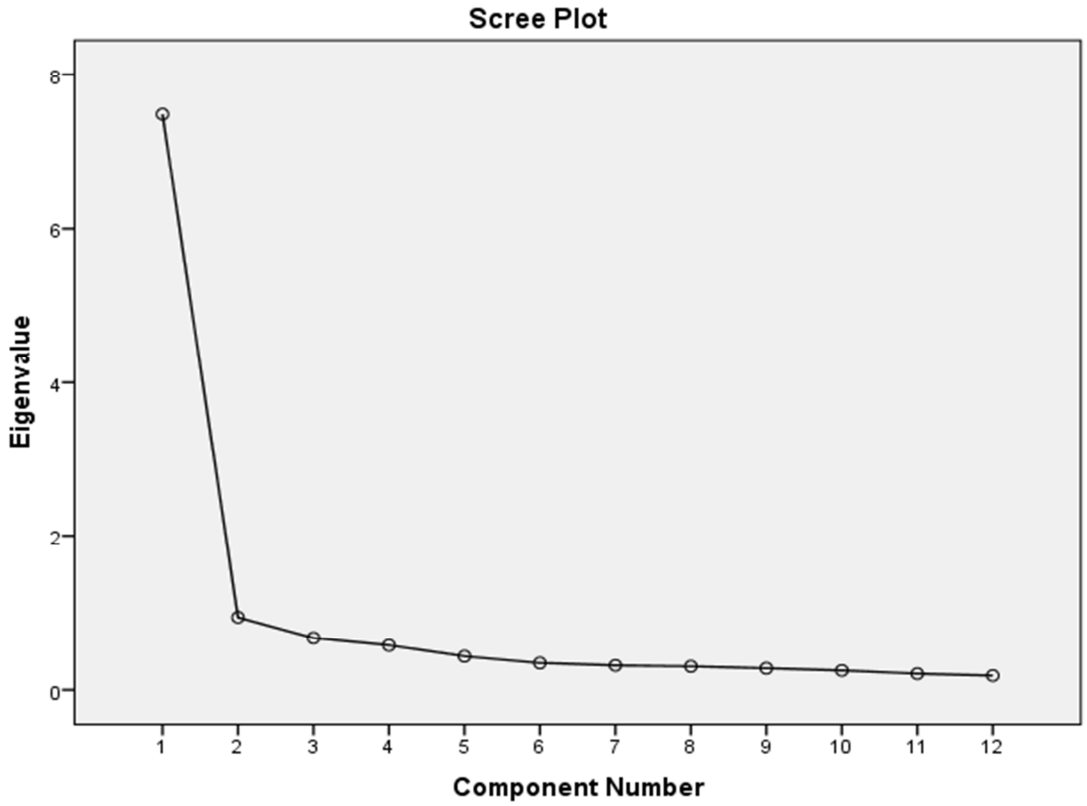
Construct	Statements	Code	Factor Loadings	Eigen Value	Variance Explained	Cronbach's Alpha
Passenger Choices	Low price of flight tickets	PC1	.664	7.485	62.377%	0.944
	Better in-flight services	PC2	.810			
	On-board comfort and cleanliness	PC3	.836			
	Safety and security measures taken by the airline	PC4	.825			
	Flights' on-time arrival and departure	PC5	.831			
	Convenient flight schedules	PC6	.789			
	Efficient check-in process and boarding	PC7	.824			
	Easy reservation/cancellation facilities	PC8	.848			
	Call centre facilities	PC9	.674			
	Friendly behaviour and prompt services of airline staff	PC10	.775			
	Reliable and prompt delivery of baggage	PC11	.795			
	Overall value for money	PC12	.782			
Total Variance Explained – 62.377%						

Source: Primary Data

In this result of EFA, one construct is derived to measure the passenger choices, it explain the 62.377% of the total variance. It is called as one-factor solution for measuring the passenger choices of Low-Cost International Airlines.

Figure: 4.3

Scree Plot of Exploratory Factory Analysis - Passenger Choices



Source: Primary Data

The above mentioned scree pot of EFA displays the downward curve of Eigen value which is greater than 1. Here only one construct has Eigen value greater than 1 and the elbow shape of the curve denotes the same.

Construct Validity: -

The above table shows all the factor loadings are above 0.40, and criteria of ***Construct Validity*** including both the ***Discriminant Validity*** (loading of at least 0.40, no cross-loadings of items above 0.40) and ***Convergent Validity*** (Eigen value of >1, loadings of at least 0.40, items that load on posited constructs) (Straub et al., 2004) are satisfied. The result of EFA shows that the selected indicators under the dimension **'Passenger Choices'** have good level of validity.

Reliability: -

The reliability of the scale 'Passenger Choices' is measured by using the Reliability Statistics i.e. **Cronbach's Alpha Co-efficient**. Here, the construct which shows the value of **0.944** which is higher than that of threshold limit of 0.70. Hence, the internal consistency of the construct is proved and said to be highly reliable.

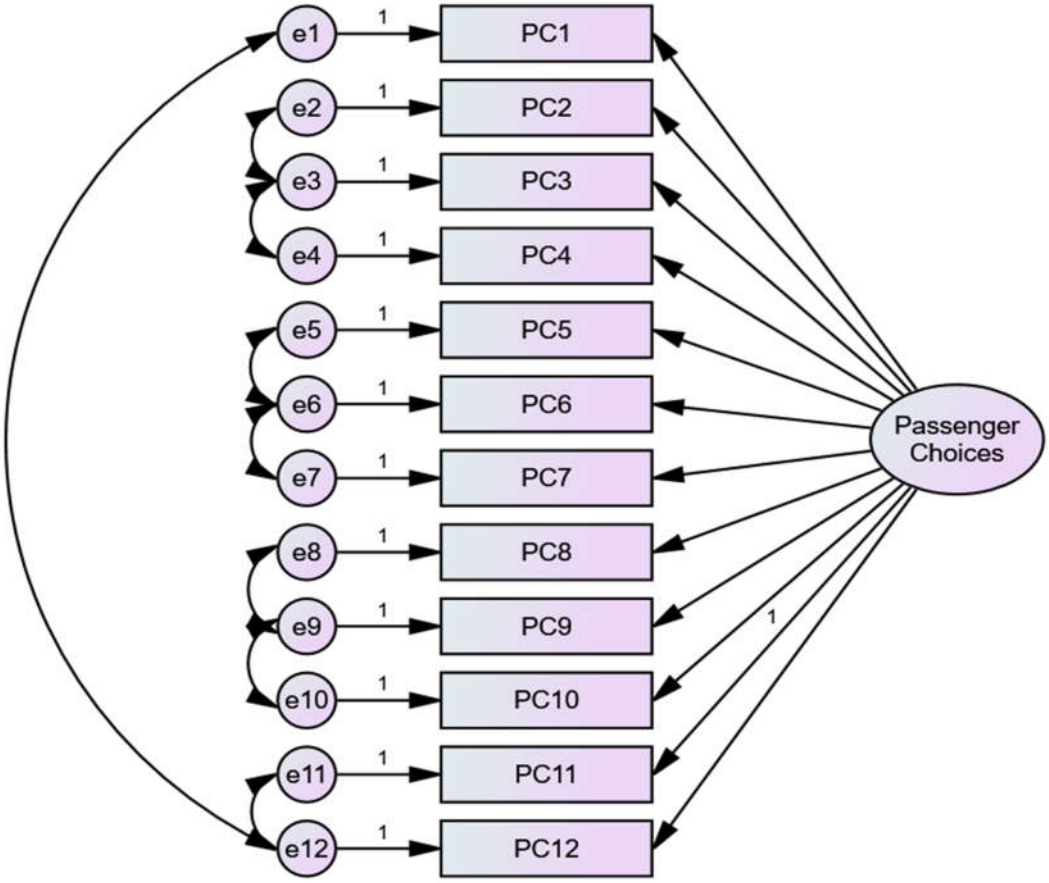
After EFA, there is a need to confirm the construct using CFA to identify the structure of the indicators derived to measure the variable. Hence the underlying factor structure is identified accordingly.

4.10.1.2 Confirmatory Factor Analysis – Passenger Choices (PC)

A Confirmatory Factor Analysis (First Order CFA) is employed to authenticate the proposed construct of 'Passenger Choices' (PC) regarding Service Quality of Low-Cost International Airlines. It explains the authenticity of structure of indicators for measuring the variable. The result of CFA is explained with the help of proposed & measurement model, model fitness indices and validity & reliability results.

Figure 4.4

The Proposed Model of First Order CFA – Passenger Choices



The above mentioned proposed model of Passenger Choices of Low-Cost International Airlines is tested with the help of model fit indices including Normed chi-square (CMIN/df), Root Mean Square Residuals (RMR), Comparative Fit Index (CFI), Goodness of Fit Index (GFI), Adjusted GFI (AGFI), Incremental Fit Index (IFI), Tucker Fit Index (TLI), Normed Fit Index (NFI) and Root Mean Square Error of Approximation (RMSEA). Accordingly, the result of Model Fitness Indices, Measurement Model and Reliability & Validity requirements of the model are presented below.

Table 4.8

Model Fit Indices – Passenger Choices

Indices	Value Obtained	Recommended Values of Good Fit	Recommended Values of Acceptable Fit
Normed chi-square (CMIN/df)	3.344	≤3	≤5
Root Mean Square Residuals (RMR)	0.042	≤0.05	≤0.08
Comparative Fit Index (CFI)	0.954	≥0.90	≥0.80
Goodness of Fit Index (GFI)	0.915	≥0.90	≥0.80
Adjusted GFI (AGFI)	0.856	≥0.90	≥0.80
Incremental Fit Index (IFI)	0.955	≥0.90	≥0.80
Tucker Fit Index (TLI)	0.934	≥0.90	≥0.80
Normed Fit Index (NFI)	0.943	≥0.90	≥0.80
Relative Fit Index (RFI)	0.918	≥0.90	≥0.80
Root Mean Square Error of Approximation (RMSEA)	0.074	≤0.08	=0.08

Source: Primary Data

The suitability of first order CFA (Figure 4.4) is measured with the help of the above specified modification indices. Here, all the important indices (CFI, GFI, AGFI, IFI, TLI, NFI and RFI) are above the threshold limit of good fit with values of greater than 0.90. Likewise, the value of CMIN/df is 3.344 lies within the limit of suggested value of acceptable fit of less than 5. Besides, the value of RMR (0.042) is within the limit of mentioned value of good fit of less than 0.05 and the value of RMSEA (0.074) is also within the limit of acceptable fit. **T**herefore, the model used to measure the 'Passenger Choices (PC) regarding Service Quality of Low-Cost International Airlines is acceptable to measure the validity of scale with good fit indices.

Figure 4.5

Measurement Model of CFA- Passenger Choices

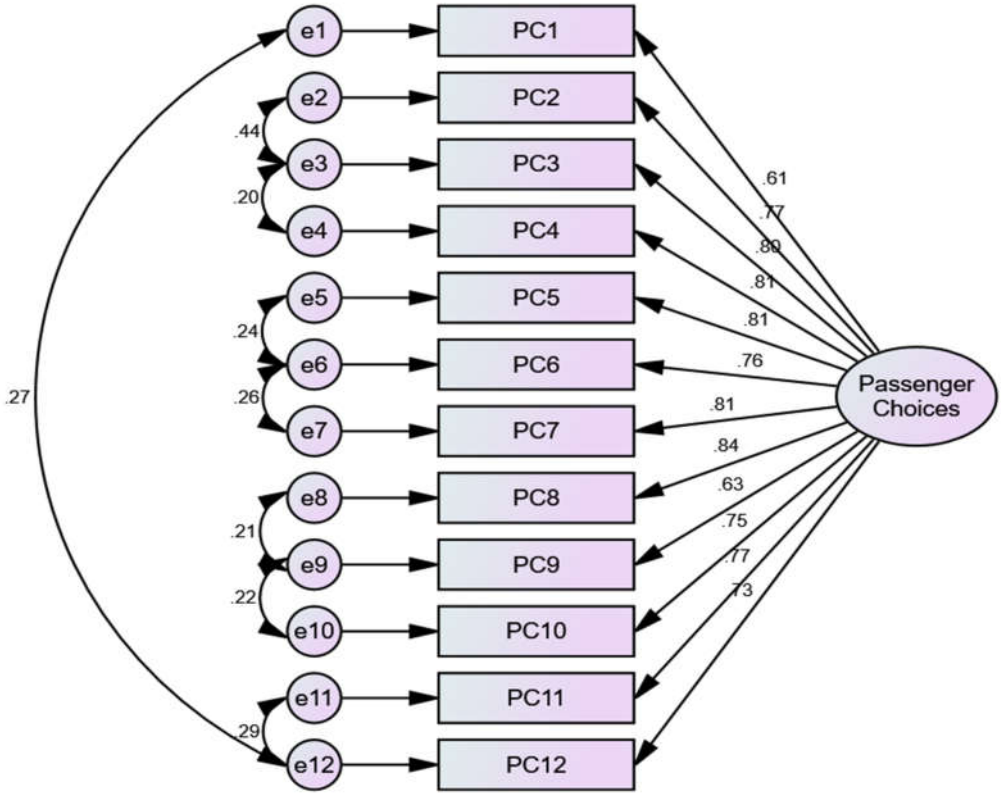


Figure- 4.5 is the measurement model used to explain the interrelationship between the constructs and items used to measure the 'Passenger Choices' (PC). Here, one construct derived from Exploratory Factor Analysis is analyzed with the help of latent variables or factors. All the factor loadings (except PC1) are above 0.70 and the model said to be good fit with the indices specified above. It means, all the factors are satisfactorily contributed for the variable 'Passenger Choices'. More precisely, 'safety and security measures taken by the airline', 'flights' on-time arrival and departure', 'on-board comfort and cleanliness', 'efficient check-in process and boarding' and 'easy reservation/cancellation facilities' are the main choices of passengers for considering Low-Cost Airlines as their medium of transportations. Furthermore, result of validity and reliability statistics are presented below.

Table 4.9

Validity and Reliability Statistics – Passenger Choices

Construct	**Statements**	**Factor Loadings**	**CR** $CR = \frac{(\sum \lambda_i)^2}{(\sum \lambda_i)^2 + \sum Var(\varepsilon_i)}$	**AVE** $AVE = \frac{\sum_{i=1}^{n} \lambda_i^2}{n}$
Passenger Choices (AC)	PC1	.614	0.942	0.578
	PC2	.775		
	PC3	.798		
	PC4	.810		
	PC5	.809		
	PC6	.755		
	PC7	.811		
	PC8	.835		
	PC9	.630		
	PC10	.748		
	PC11	.772		
	PC12	.734		

Source: Primary Data

Table- 4.9 describes the Standardized Factor Loadings, Composite Reliability (CR) and Average Variance Extracted (AVE) of the construct 'Passenger Choices' (PC). Here all the Standardized Factor Loadings are above 0.70 (except PC1), it means the indicators of Passenger Choices are effectively contributing for the construction of the variable.

In order to prove the Convergent Validity, three conditions need to fulfil namely, the value of Composite Reliability (CR) should be greater than 0.70, the value of Average Variance Extracted (AVE) should be greater than 0.50 and the value of Composite Reliability (CR) should be greater than Average Variance Extracted (AVE). Here, the value of CR = 0.942 and value of AVE = 0.578 fulfilled the above specified three main criteria. Hence, the Convergent Validity is proved. The measurement model of 'Passenger Choices' is fit with the validity and reliability requirements.

4.10.2 Validation of Measurement Scale of Service Quality (SQ)

The scale is used to measure the dimension of **'Service Quality' (SQ)** of Low-Cost International Airlines is validated in two stages. Firstly by using Exploratory Factor Analysis (EFA) and then Confirmatory Factor Analysis (CFA). It is applied to

assess the quality of the factor structure by statistically testing the significance of the overall model, as well as relationships among items and scales based on sample data. The sub variables are: - Conduct (C), Expertise (EX), Problem Solving (PS), Comfort (CM), Cleanliness (CL), Tangibles (TA), Safety & Security (SS), Valence (V), Waiting Time (W), Information (IN) and Convenience (CN).

4.10.2.1 Exploratory Factor Analysis (EFA) – Service Quality

Exploratory Factor Analysis (EFA) requires certain assumptions to be fulfilled namely correlation and sampling adequacy. The KMO Bartlett test includes Bartlett test of sphericity that measures the multivariate normality of variables in addition to analyzing whether the correlation matrix is an identity matrix. The Kaiser-Meyer-Olkin (KMO) test can measure whether the sample size is adequate for conducting factor analysis, (George &Paul Mallery, 1999).

The Cronbach's alpha Co-efficient is used to test the reliability. A Cronbach's alpha value of greater thanor equal to 0.70 is considered acceptable for the factor to be reliable (Hair et. al.2010) regarding the proposed variable of the study.

There are **54 statements taken** for recognizing the Service Quality. After item analysis, **5 statements are deleted** which have low level of reliability to measure the Service Quality. Finally, **49 statements are taken to measure the Service Quality** of Low- Cost International Airlines. EFA using Principal Component Method (PCM) with Varimax Rotation is used for analysing the relationship between construct Service Quality of Low-Cost International Airlines and its 49 indicators. The results are presented below.

Table 4.10

Result ofKMO and Barlett's Test – Service Quality

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.957
Bartlett's Test of Sphericity	Approx. Chi-Square	18419.066
	df	1176
	Sig.	<0.001

Source: Primary Data

A Principal Component Analysis is conducted on the 49 statements with Varimax Rotation. The Kaiser-Meyer-Olkin (KMO) measure verifies the sample adequacy for the analysis, KMO value is **0.957** which is above the recommended limit of **0.70**. Bartlett's test is another indication of the power of the relationship among indicators. Barlett's Test of Chi-Square = **18419.066, p<0.01** specifies that the correlation between the indicators is sufficiently large for Principal Component Analysis (PCA). A primary analysis is run to obtain Eigen Values for each construct in the data. Eleven constructs have Eigen values **over & above Kaiser's criterion of 1** and combination explained **79.135%** of the variance. The result of Exploratory Factor Analysis is presented below.

Table 4.11

Result of Exploratory Factor Analysis – Service Quality

Constructs	Statements	Code	Factor Loadings	Eigen Value	Variance Explained	Cronbach's Alpha
Conduct (C)	The airline employees' attitude demonstrates their willingness to help me	C1	.699	22.00	44.91%	0.925
	Cabin Crew are kind and polite to me	C2	.798			
	Check-in & boarding staff behave respectfully and politely with me	C3	.772			
	The employees pay attention to every single traveller	C4	.666			
	The employees give consideration to women, children and the physically challenged passengers	C5	.734			
	Airline ensures clear and precise cabin announcement	C6	.677			
	The employees try their best to provide services to me	C7	.728			
Expertise (EX)	The airline procedures of Check-in and boarding are quick and accurate	EX1	.699	3.724	7.600%	0.897
	The airline employees of baggage delivery are quick and accurate	EX2	.754			
	The airline employees are competent	EX3	.837			

	The employees have knowledge in dealing with passenger queries	EX4	.652			
Problem Solving (PS)	The employees have proper skills to handle emergency situation	PS1	.746	2.171	4.431%	0.928
	The employees are able to handle my complaints directly and immediately	PS2	.748			
	When I have a problem, the airline employees show a sincere interest in solving it	PS3	.750			
Comfort (CM)	The seat and leg space in the cabin are comfortable	CM1	.722	1.771	3.613%	0.858
	I feel comfortable with the air condition in the cabin	CM2	.733			
	I feel comfortable in flying with this airline	CM3	.844			
Cleanliness (CL)	The cabin is tidy and clean	CL1	.762	1.587	3.238%	0.884
	The toilet in the cabin is clean	CL2	.761			
	The employees have clean and neat appearance	CL3	.794			
Tangibles (TA)	The airlines facilities are well designed	TA1	.669	1.501	3.064%	0.946
	The interior of the cabin is good	TA2	.714			
	In-flight entertainment materials and services are acceptable	TA3	.792			
	The quality of meals and drinks on the flight is good	TA4	.802			
	Food is available in the flight at reasonable price	TA5	.799			
	Airline offers online seat booking facility at low price	TA6	.696			
Safety & Security (SS)	I feel safe in travel with the airline	SS1	.640	1.390	2.838%	0.883
	The airline ensures higher privacy and security in online payment	SS2	.765			
	The cabin crew describe how to use safety equipment very well and precisely	SS3	.819			
	There are noticeable sprinkler systems in the cabin	SS4	.730			
Valence (V)	I believe that the airline tries to give me what I want	V1	.718	1.312	2.677%	0.903
	I would say that I feel good about what I receive from airlines	V2	.772			
	I will recommend travelling with this airline to my friends and relatives	V3	.725			

Waiting Time (W)	Airline employees provide services quickly and in the shortest time	W1	.602	1.204	2.457%	0.904
	There is rare delay before/ during aircraft flight and flight schedules are accurately according to the announced time.	W2	.729			
	I wait less time for getting check-in and boarding.	W3	.744			
	Waiting time required for getting luggage is acceptable.	W4	.675			
Information (IN)	The airline tells me the accurate time on which it provides service	IN1	.774	1.064	2.171%	0.925
	The airline keeps me well-informed about the services I need	IN2	.780			
	Airline provides call centre facilities 24/7	IN3	.697			
	The airline website provides suitable and updated information of various services the company offers.	IN4	.662			
	The airline informs me about flight delay through SMS/call/email	IN5	.732			
Convenience (CN)	The airline provides me with enough flights and convenient flight schedules	CN1	.694	1.045	2.133%	0.950
	The reservation and ticketing systems are convenient	CN2	.708			
	The airline's ticket price is reasonable and affordable	CN3	.808			
	There is consistency in airline's ticket prices with given service	CN4	.810			
	I can cancel and reschedule my ticket easily without much cost	CN5	.766			
	Airline website is efficient & user-friendly	CN6	.737			
	Compensation procedure in case of flight delays/cancellation/accidents is proper and convenient	CN7	.766			
Total Variance Explained – 79.135%						

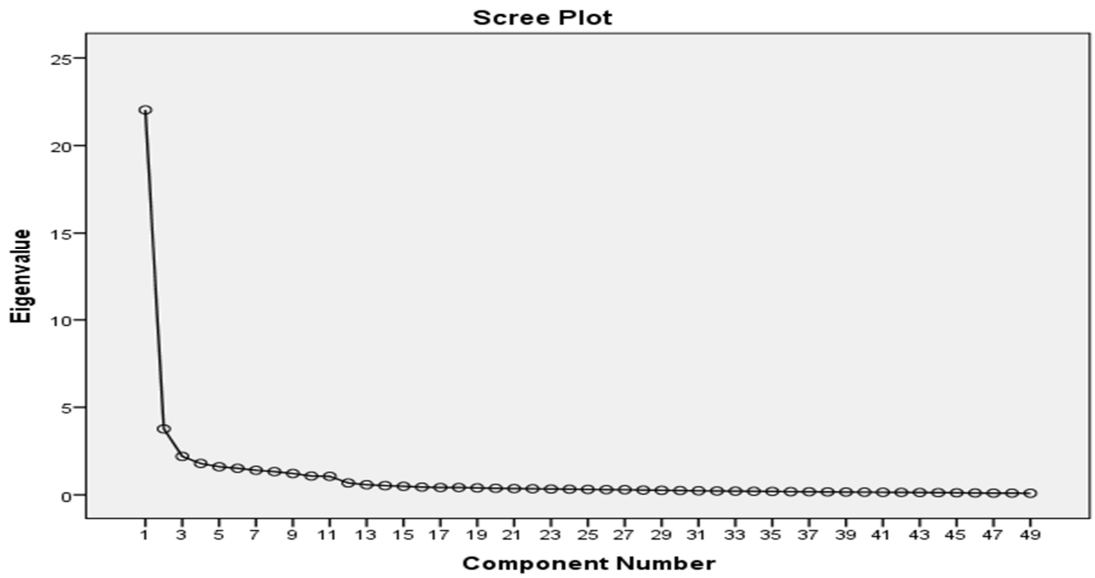
Source: Primary Data

The result of Exploratory Factor Analysis (EFA) shows that the solution is based on **11 constructs** and all items are loading on their own factors. The **eleven-factor solution** is explaining 79.135% of variance of the total variance. A total of seven

items/statements are included in first factor 'Conduct' (C) which explaining over **44.91**% of variance, four indicators are included in the second construct 'Expertise' (EX) which explaining over **7.600**% of variance, three indicators are included in the third construct 'Problem Solving' (PS) which explaining over **4.431**%of variance, three indicators are included in the fourth indicators 'Comfort' (CM) which explaining over **3.613**% of variance, three indicators are included in the fifth construct 'Cleanliness' (CL) which explaining over **3.238**%of variance, six indicators are included in the sixth construct 'Tangibles' (TA) which explaining over **3.064**% of variance, four indicators are included in the seventh construct 'Safety & Security' (SS) which explaining over **2.838**% of variance, three indicators are included in the eighth construct 'Valence' (V) which explaining over **2.677**% of variance, four indicators are included in the ninth construct 'Waiting Time' (W) which explaining over **2.457**% of variance, five indicators are included in the tenth construct 'Information' (IN) which explaining over **2.171**% of variance and seven indicators are included in the eleventh construct 'Convenience' (CN) which explaining over **2.133**% of the total variance. In total, eleven- factors explanation explaining over **79.135**% of variance of the total variance explained.

Figure 4.6

Scree-Plot of Exploratory Factor Analysis – Service Quality



Source: Primary Data

The above specified scree plot of EFA shows downward elbow shaped curve of Eigen values. It explains the **eleven constructs** of Service Quality is formed having **Eigen values of greater than 1.**

Construct Validity: -

The above table (Table –4.11) shows all the factor loadings are above 0.40, and criteria of ***Construct Validity*** including both the ***Discriminant Validity*** (loading of at least 0.40, no cross-loadings of items above 0.40) and ***Convergent Validity*** (Eigen values of 1, loadings of at least 0.40, items that load on posited constructs) (Straub et al., 2004) are satisfied. Accordingly, all the constructs of **Service Quality** have good level of validity requirements.

Reliability: -

Reliability of the constructs is measured using Reliability Statistics of ***Cronbach's Alpha Co-efficien****t*. The threshold limit of reliability statistics is 0.70. Here, all the constructs of Service Quality have crossed the limit and hence internal consistency is ensured. More precisely, the *Cronbach's Alpha Reliability Co-efficient* values of all the constructs of the study namely, Conduct (0.925), Expertise (0.897), Problem Solving (0.928), Comfort (0.858), Cleanliness (0.884), Tangibles (0.946), Safety & Security (0.883), Valence (0.903), Waiting Time (0.904), Information (0.925) and Convenience (0.950) are above 0.70, hence strong internal consistency is ensured.

The next stage of validity is to confirm the scales of measurement of Service Quality by using Confirmatory Factor Analysis. Following section is related with confirmation of constructs and indicators of the variable.

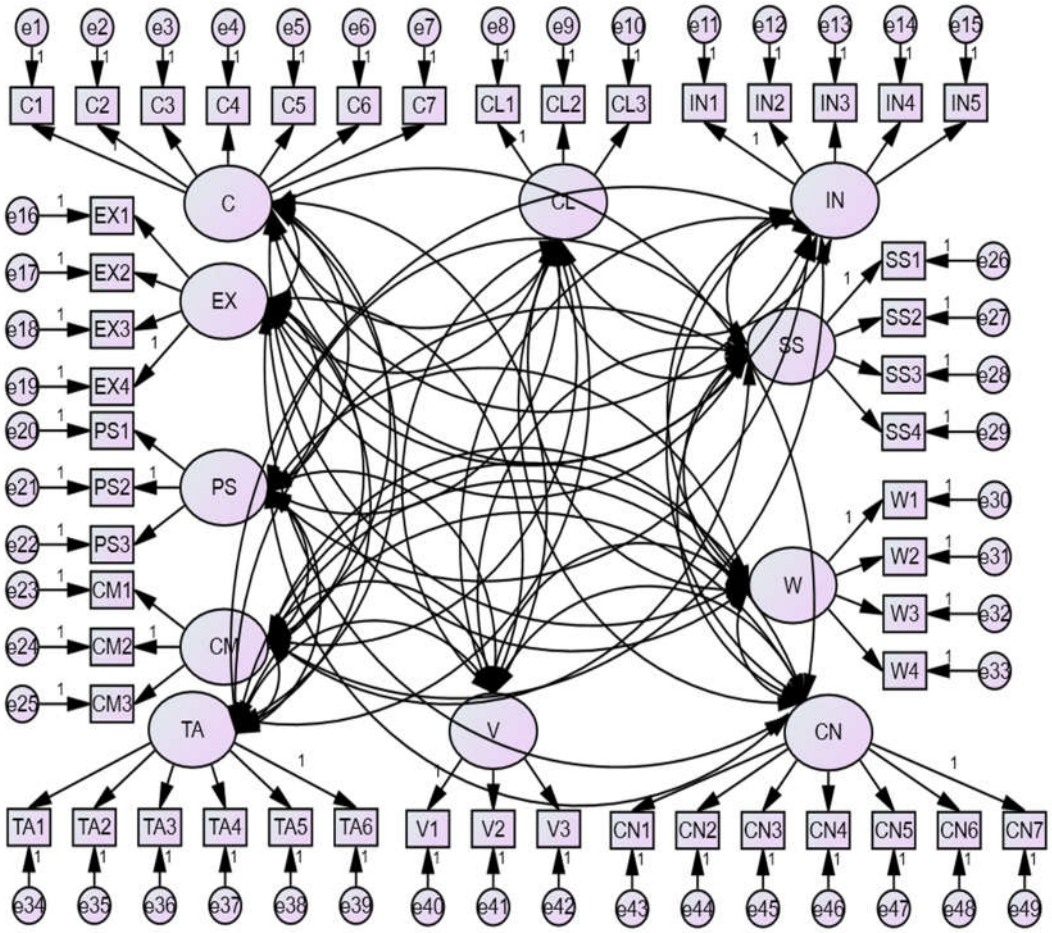
4.10.2.2 Confirmatory Factor Analysis – Service Quality

A Confirmatory Factor Analysis (First Order CFA) is followed to confirm the measurement scales of 'Service Quality' (SQ) of Low-Cost International Airlines. CFA is a multivariate analysis tool to measure the linkage between variable and its constructs as well as indicators. It explains the value of the structure of the indicator

for measuring the construct. The result of CFA is elucidated with the help of proposed & measurement model, model fit indices and validity & reliability results.

Figure 4.7

The Proposed Model of First order CFA – Service Quality



Source: Primary Data

The proposed model of Service Quality is checked with the with the help of model fitness indices including Normed chi-square (CMIN/df), Root Mean Square Residuals (RMR), Comparative Fit Index (CFI), Goodness of Fit Index (GFI), Adjusted GFI (AGFI), Incremental Fit Index (IFI), Tucker Fit Index (TLI), Normed Fit Index (NFI) and Root Mean Square Error of Approximation (RMSEA). Regarding the testing procedure following requirements are fulfilled.

Table 4.12

Model Fit Indices – Service Quality

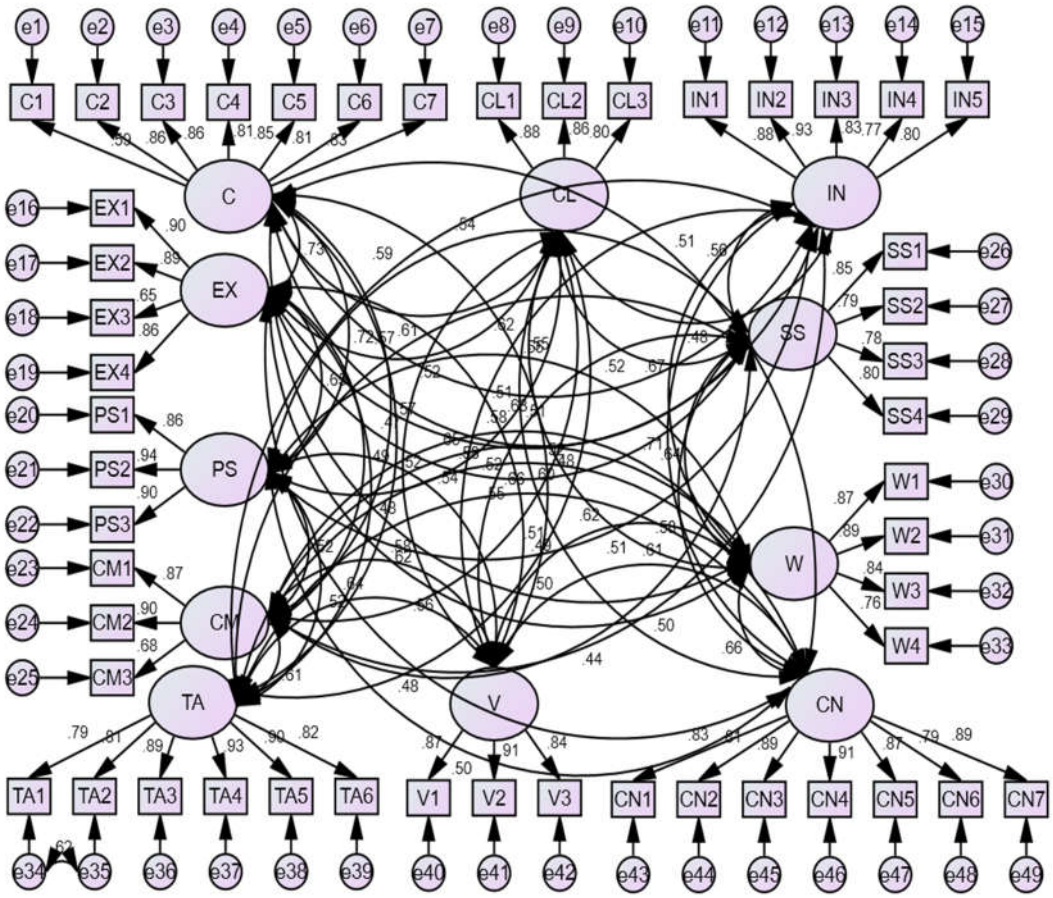
Indices	Value Obtained	Recommended Values of Good Fit	Recommended Values of Acceptable Fit
Normed chi-square (CMIN/df)	2.105	≤3	≤5
Root Mean Square Residuals (RMR)	0.044	≤0.05	≤0.08
Comparative Fit Index (CFI)	0.934	≥0.90	≥0.80
Goodness of Fit Index (GFI)	0.808	≥0.90	≥0.80
Adjusted GFI (AGFI)	0.880	≥0.90	≥0.80
Incremental Fit Index (IFI)	0.935	≥0.90	≥0.80
Tucker Fit Index (TLI)	0.928	≥0.90	≥0.80
Normed Fit Index (NFI)	0.883	≥0.90	≥0.80
Relative Fit Index (RFI)	0.871	≥0.90	≥0.80
Root Mean Square Error of Approximation (RMSEA)	0.052	<0.08	=0.08

Source: Primary Data

The appropriateness of first order CFA (Figure – 4.7) is verified with the help of the important model fitness indices. Here, all the important measures (CFI, IFI and TLI) are above the mentioned limit of good fit with values of greater than 0.90. Further, GFI, AGFI, NFI and RFI are above the mentioned limit of acceptable fit with values of greater than 0.80. Similarly, the value of CMIN/df is 2.105 lies within the limit of mentioned value of good fit of less than 3. Furthermore, the value of RMR (0.044) is within the limit of mentioned value of good fit of less than 0.05 and the value of RMSEA (0.052) is also within the limit of less than 0.08. Therefore, the constructs are accepted to verify the 'Service Quality' (SQ) of Low-Cost International Airlines.

Figure 4.8

Measurement Model of CFA- Service Quality



Source: Primary Data

Figure 4.8 is the measurement model used to explain the interrelationship between the constructs and items used to measure the 'Service Quality' (SQ). Here, eleven constructs derived from Exploratory Factor Analysis are analyzed with the help of latent variables. The above measurement model comprised eleven sub-dimensions of Service Quality namely, Conduct, Expertise, Problem Solving, Comfort, Cleanliness, Tangibles, Safety & Security, Valence, Waiting Time, Information and Convenience. All the factors loadings are greater than 0.50 and hence the constructs are effectively contributing for the Service Quality variable. In addition, the results of path estimates and validity and reliability requirements are presented below.

Table 4.13

Validity and Reliability Statistics – Service Quality

Constructs	Statements	Factor Loadings	CR $CR = \frac{(\sum \lambda_i)^2}{(\sum \lambda_i)^2 + \sum Var(\varepsilon_i)}$	AVE $AVE = \frac{\sum_{i=1}^{n} \lambda_i^2}{n}$	MSV = square of highest correlation b/w latent constructs
Conduct (C)	C1	.794	0.928	0.651	0.529
	C2	.856			
	C3	.865			
	C4	.806			
	C5	.854			
	C6	.807			
	C7	.832			
Expertise (EX)	EX1	.898	0.897	0.689	0.529
	EX2	.887			
	EX3	.654			
	EX4	.858			
Problem Solving (PS)	PS1	.864	0.929	0.813	0.522
	PS2	.942			
	PS3	.897			
Comfort (CM)	CM1	.870	0.860	0.676	0.374
	CM2	.897			
	CM3	.682			
Cleanliness (CL)	CL1	.876	0.885	0.720	0.369
	CL2	.864			
	CL3	.805			
Tangibles (TA)	TA1	.790	0.944	0.737	0.440
	TA2	.810			
	TA3	.886			
	TA4	.931			
	TA5	.900			
	TA6	.825			
Safety & Security (SS)	SS1	.851	0.882	0.651	0.414
	SS2	.790			
	SS3	.784			
	SS4	.800			

Valence (V)	V1	.869	0.906	0.764	0.409
	V2	.915			
	V3	.836			
Waiting Time (W)	W1	.866	0.906	0.707	0.444
	W2	.894			
	W3	.839			
	W4	.759			
Information (IN)	IN1	.882	0.926	0.715	0.498
	IN2	.926			
	IN3	.835			
	IN4	.774			
	IN5	.802			
Convenience (CN)	CN1	.826	0.951	0.734	0.498
	CN2	.811			
	CN3	.886			
	CN4	.913			
	CN5	.874			
	CN6	.792			
	CN7	.887			

Source: Primary Data

Table 4.13 defines the Standardized Factor Loadings, Composite Reliability (CR), Average Variance Extracted (AVE) and Maximum Shared Variance (MSV) of each construct used to measure the variable 'Service Quality' (SQ) of Low-Cost International Airlines. All the Standardized Factor Loadings are above 0.70, which indicates all the indicators are reasonably confirms to the constructs.

In order to verify the Convergent Validity, three requirements need to satisfyi.e., the value of Composite Reliability (CR) should be greater than 0.70, the value of Average Variance Extracted (AVE) should be greater than 0.50 and the value of Composite Reliability (CR) should be greater than Average Variance Extracted (AVE). Here, the values of CR and AVE of Conduct = 0.928 & 0.651, Expertise = 0.897 & 0.689, Problem Solving = 0.929 & 0.813, Comfort = 0.860 &0.676, Cleanliness = 0.885 & 0.720, Tangibles = 0.944 & 0.737, Safety & Security = 0.882 & 0.651, Valence = 0.906&0.764, Waiting Time = 0.906&0.707, Information =

0.926&0.715 and Convenience = 0.951 &0.734 are fulfilled the above mentioned criteria. Hence, the Convergent Validity is achieved.

Moreover, the Discriminant Validity of the scale is verified with the conditions of Average Variance Extracted (AVE) should be greater than Maximum Shared Variance (MSV). Here this condition is fulfilled with the Average Variance Extracted (AVE) of all the constructs is greater than the value of Maximum Shared Variance (MSV). In detail, 0.651 >0.529 of Conduct, 0.689 >0.529 of Expertise, 0.813 >0.522 of Problem Solving, 0.676>0.374 of Comfort, 0.720 >0.369 of Cleanliness, 0.737 >0.440 of Tangibles, 0.651 >0.414 of Safety & Security, 0.764 >0.409 of Valence, 0.707 >0.444 of Waiting Time, 0.715>0.498 of Information and 0.734 >0.498 of Convenience are fulfilled the above specified conditions. Hence, the standards for Discriminant Validity are also verified. The variable 'Service Quality' (SQ) of Low-Cost International Airlines is validated with all the requirements.

4.10.3 Validation of Measurement Scale of Passenger Satisfaction (PS)

The scale used to measure the dimension of '**Passenger Satisfaction' (PS)** of Low-Cost Airlines is validated in two phases. Firstly, an EFA and then Confirmatory Factor Analysis (CFA) are performed. It is applied to assess the quality of the factor structure by statistically testing the significance of the overall model, as well as relationships among items and scales based on sample data. The sub variables are: - Tangibles (T), Reliability(R), Responsiveness(RS), Assurance (A), Empathy (E) and Overall Experience (O).

4.10.3.1Exploratory Factor Analysis (EFA) – Passenger Satisfaction (PS)

Exploratory Factor Analysis (EFA) requires certain assumptions to be fulfilled namely correlation and sampling adequacy. The KMO Bartlett test includes Bartlett test of sphericity that measures the multivariate normality of variables in addition to analyzing whether the correlation matrix is an identity matrix. The Kaiser-Meyer-Olkin (KMO) test can measure whether the sample size is adequate for conducting factor analysis, (George &Paul Mallery, 1999).

The Cronbach's alpha Co-efficient is used to test the reliability. A Cronbach's alpha value of greater than or equal to 0.70 is considered acceptable for the factor to be reliable (Hair et. al.2010) regarding the proposed variable of the study.

There are **30 statements taken** for ascertaining the Passenger Satisfaction, after item analysis, **5 statements are deleted** which have low level of reliability to measure the Customer Satisfaction. Finally, **25 statements are taken to measure the Passenger Satisfaction** of Low- Cost International Airlines. Exploratory Factor Analysis (EFA) using Principal Component Method (PCM) with Varimax Rotation is used for checking the linkage between 25 indicators and constructs for measuring the 'Passenger Satisfaction' (PS) of Low-Cost Airlines. The results are presented below.

Table 4.14

Result of KMO and Barlett's Test – Passenger Satisfaction (PS)

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.954
Bartlett's Test of Sphericity	Approx. Chi-Square	9983.581
	df	300
	Sig.	<0.001

Source: Primary Data

A Principal Component Analysis is conducted on the 25 statements with Varimax Rotation. The Kaiser-Meyer-Olkin (KMO) measure verifies the sample adequacy for the analysis, KMO value is **0.954** which is above the recommended limit of **0.70**. Bartlett's test is another suggestion of the power of the association among variables. Barlett's Test of Sphericity, Chi-Square = **9983.581, p<0.01** indicates that the association between the indicators is sufficiently large for Principal Component Analysis (PCA).

Here, six constructs have **Eigen values of greater than 1** and the combination explains the **82.114**% of the variance.

Table 4.15

Result of Exploratory Factor Analysis – Passenger Satisfaction (PS)

Constructs	Statements	Code	Factor Loadings	Eigen Value	Variance Explained	Cronbach's Alpha
Tangibles (T)	How far you are satisfied with the physical appearance, dress code and attitude of employees of the airline you travelled in?	T1	.833	14.00	56.03%	0.937
	How far do the physical appearance and modern facilities of the airlinemeet your level of satisfaction?	T2	.792			
	Are you satisfied with the variety, quality and price of in-flight meals of the airline?	T3	.711			
	Are you satisfied with the level of comfort of aircraft seats and leg space?	T4	.756			
	Are you satisfied with the cleanliness of the cabin and toilets?	T5	.727			
Reliability (R)	Are you satisfied with the sincerityand patience of employees in resolving your problems?	R1	.760	1.960	7.84%	0.947
	Are you satisfied with the on-time arrival and departure of airlines	R2	.755			
	How far you are satisfied with the safety measures taken by the airline?	R3	.779			
	Are you satisfied with the	R4	.754			

	airline services which are provided at the promised time?					
	How do you feel about the hassle-free check –in and boarding by the airlines?	R5	.736			
Responsiveness (RS)	What is your opinion about the refreshment policy of the airline for its customers if the flight is delayed?	RS1	.754	1.310	5.23%	0.942
	Are you satisfied with the promptness and accuracy of baggage delivery?	RS2	.742			
	How far you are satisfied with the speed in handling requests/complaints of passengers?	RS3	.746			
	Are you satisfied with the communication about when services will be performed?	RS4	.739			
Assurance (A)	Are you satisfied with the call centre facilities given by the airline?	A1	.760	1.140	4.56%	0.916
	Are you satisfied with the website updating and information provided by the airline?	A2	.777			
	How far are you satisfied with the crew friendliness /courtesy?	A3	.747			
	Are you satisfied with the knowledge of airline staff in dealing with passenger queries?	A4	.743			
	Are you satisfied with the ticket rescheduling and cancellation procedure of the airline?	A5	.638			

Empathy (E)	Are you satisfied with operating hours and flight schedules of airline?	E1	.702	1.085	4.34%	0.909
	Are you satisfied with the prompt attention taken by the airline staff towards passenger specific needs?	E2	.785			
	What is your opinion about the consideration given by the airline to women, children and the physically challenged?	E3	.823			
	What is your opinion about the employees' personal/individual attention towards passengers?	E4	.730			
Overall Experience (O)	How far are you satisfied with the overall value for money?	O1	.858	1.026	4.10%	0.910
	Are you satisfied with the overall services provided by the airline?	O2	.829			
Total Variance Explained – 82.114%						

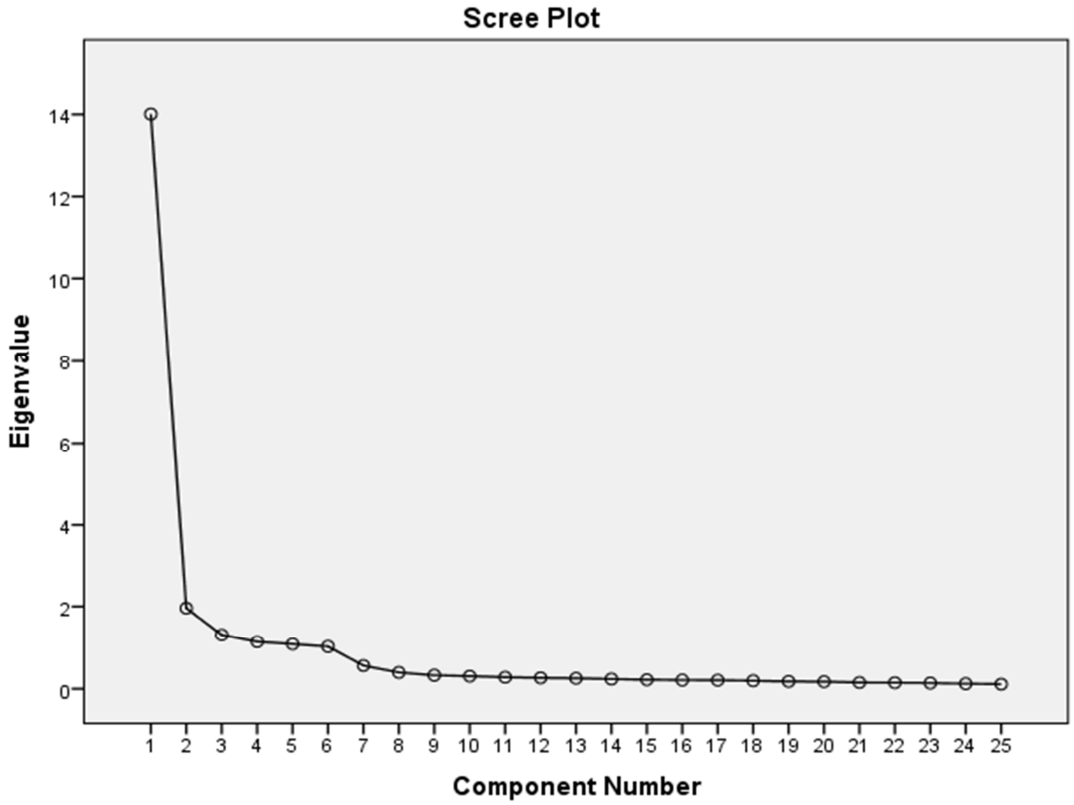
Source: Primary Data

The result of Exploratory Factor Analysis (EFA) shows that the solution is based on **six dimensions** and all items are loading on their own factors. The **six-factor solution** is explaining **82.114**% of variance of the total variance. A total of five indicators are included in first construct 'Tangibles' (T) which explaining **56.030**% of variance, five indicators are included in the second construct 'Reliability' (R) which explaining **7.841**% of variance, four indicators are included in the third construct 'Responsiveness' (RS) which explaining **5.238**% of variance, five indicators are included in the fourth construct 'Assurance' (A) which explaining **4.562**% of variance, four indicators are included in the fifth construct 'Empathy' (E) which explaining **4.340**% of variance and two indicators are included in the last construct 'Overall Experience' (O) which explaining **4.102**% of the total variance.

In total, six - factors result explaining over **82.114**% of variance of the total variance explained.

Figure 4.9

Scree-Plot of Exploratory Factor Analysis –Passenger Satisfaction



Source: Primary Data

The above mentioned scree plot of EFA explains the downward elbow shaped curve of Eigen values. Here, **six constructs have Eigen values of greater than 1**, which is explained the significant changes of Passenger Satisfaction.

Construct Validity: -

The above table (Table – 4.15) shows all the factor loadings are above 0.40, and criteria of ***Construct Validity*** including both the ***Discriminant Validity*** (loading of at least 0.40, no cross-loadings of items above 0.40) and ***Convergent Validity*** (Eigen values of 1, loadings of at least 0.40, items that load on posited constructs) (Straub et

al., 2004) are satisfied. Accordingly, the 'Passenger Satisfaction' has fulfilled all the requirements of validity under Exploratory Factor Analysis.

Reliability: -

The internal consistency of the construct of the variable Passenger Satisfaction is measured with the help of Reliability Statistics. The result depicts that**,** the ***Cronbach's Alpha Reliability Co-efficient*** values of all the variables coming under the constructs of the study namely, Tangibles (0.937), Reliability (0.947), Responsiveness (0.942) Assurance (0.916), Empathy (0.909) and Overall Experience (0.910) are above 0.70, hence strong internal consistency is assured and the questionnaire is considered as highly reliable.

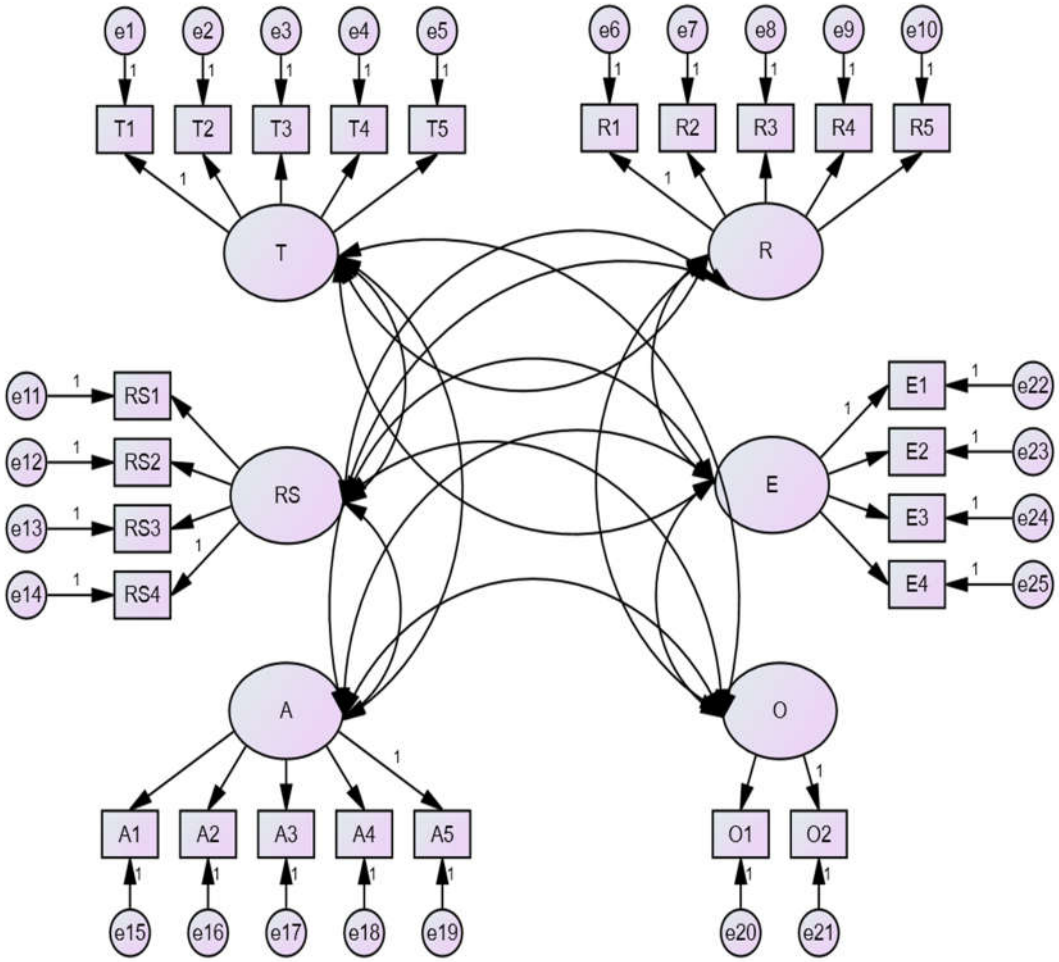
After the EFA, there is a need to confirm the constructs used for measuring the Passenger Satisfaction. Hence CFA is conducted for this purpose and the results are presented in the following section.

4.10.3.2 Confirmatory Factor Analysis – Passenger Satisfaction (PS)

A Confirmatory Factor Analysis (First Order CFA) is applied to confirm the measurement scales of 'Passenger Satisfaction' (PS) of Low-Cost Airlines. Confirmatory Factor Analysis is a multivariable analysis done for checking the association between the constructs and indicators of the variable. The result of CFA is clarified with the help of proposed & measurement model, model fit indices and validity & reliability requirements.

Figure 4.10

The Proposed Model of First order CFA – Passenger Satisfaction



Source: Primary Data

The proposed model of Passenger Satisfaction is checked with the with the help of model fitness indices including Normed chi-square (CMIN/df), Root Mean Square Residuals (RMR), Comparative Fit Index (CFI), Goodness of Fit Index (GFI), Adjusted GFI (AGFI), Incremental Fit Index (IFI), Tucker Fit Index (TLI), Normed Fit Index (NFI) and Root Mean Square Error of Approximation (RMSEA). Regarding the testing procedure following requirements are fulfilled.

Table 4.16

Model Fit Indices – Performance Factors

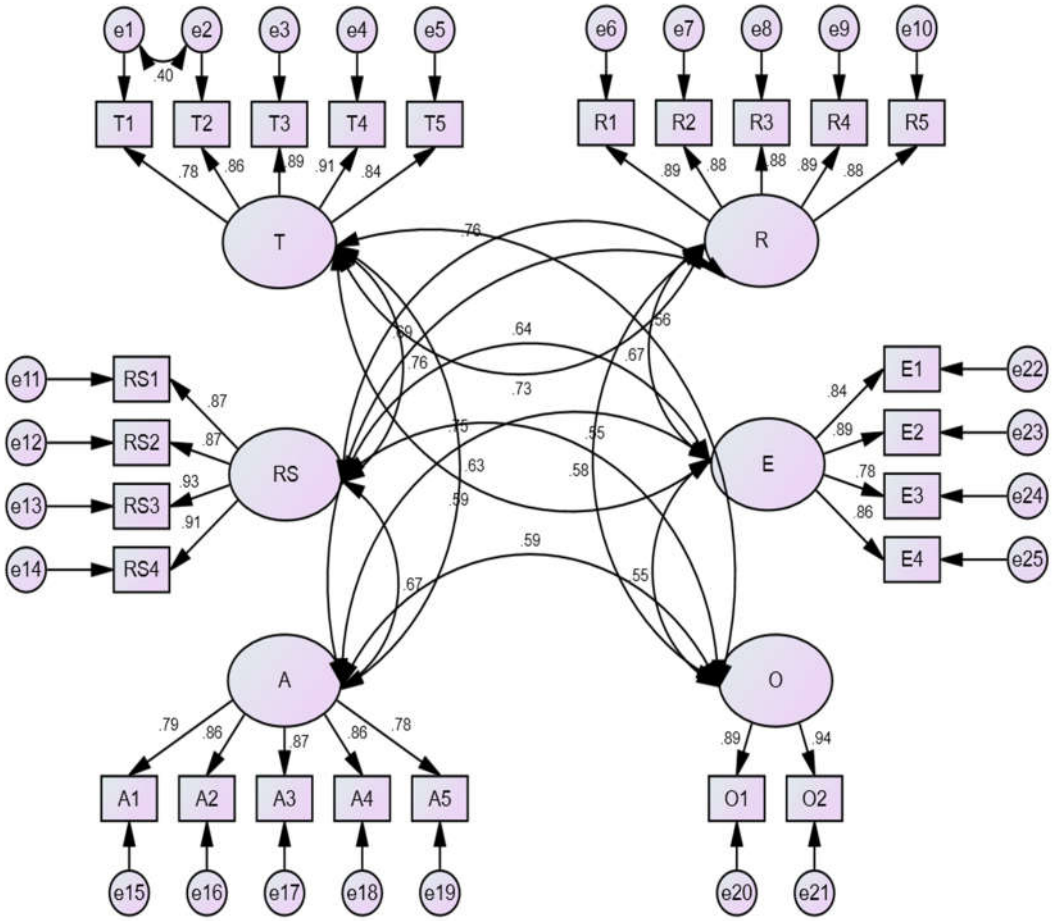
Indices	**Value Obtained**	**Recommended Values of Good Fit**	**Recommended Values of Acceptable Fit**
Normed chi-square (CMIN/df)	2.692	≤3	≤5
Root Mean Square Residuals (RMR)	0.031	≤0.05	≤0.08
Comparative Fit Index (CFI)	0.956	≥0.90	≥0.80
Goodness of Fit Index (GFI)	0.963	≥0.90	≥0.80
Adjusted GFI (AGFI)	0.928	≥0.90	≥0.80
Incremental Fit Index (IFI)	0.956	≥0.90	≥0.80
Tucker Fit Index (TLI)	0.949	≥0.90	≥0.80
Normed Fit Index (NFI)	0.932	≥0.90	≥0.80
Relative Fit Index (RFI)	0.921	≥0.90	≥0.80
Root Mean Square Error of Approximation (RMSEA)	0.065	<0.08	=0.08

Source: Primary Data

The appropriateness of first order CFA (Figure-4.10) is verified with the help of the the important model fit indices. Here, all the important measures (CFI, IFI, TLI, NFI and RFI) are above the mentioned limit of good fit with values of greater than 0.90. Further, GFI, AGFI, NFI and RFI are above the mentioned limit of acceptable fit with values of greater than 0.80. Similarly, the value of CMIN/df is is 2.692 lies within the limit of mentioned value of good fit of less than 3. Furthermore, the value of RMR (0.031) is within the limit of mentioned value of good fit of less than 0.05 and the value of RMSEA (0.065) is also within the limit of less than 0.08. Therefore, the constructs are accepted to verify the 'Passenger Satisfaction' (SQ) of Low-Cost International Airlines.

Figure 4.11

Measurement Model of CFA- Passenger Satisfaction



Source: Primary Data

Figure-4.11 is the measurement model used to explain the interrelationship between the constructs and items used to measure the 'Passenger Satisfaction' (PS) of Low-Cost Airlines. Here, six - constructs derived from Exploratory Factor Analysis are analyzed with the help of latent variables. The above measurement model comprised as six sub-factors of Passenger Satisfaction namely, Tangibles (T), Reliability (R), Responsiveness (RS), Assurance (A), Empathy (E) and Overall Experience (O). All the factors loadings are greater than 0.50 and hence the constructs are effectively contributing for the Passenger Satisfaction variable. In addition, the results of path estimates and validity and reliability requirements are presented below.

Table 4.17

Validity and Reliability Statistics – Passenger Satisfaction

Constructs	Statements	Factor Loadings	CR $CR = \frac{(\sum \lambda_i)^2}{(\sum \lambda_i)^2 + \sum Var(\varepsilon_i)}$	AVE $AVE = \frac{\sum_{i=1}^{n} \lambda_i^2}{n}$	MSV = sqaure of highest correlation b/w latent constructs
Tangibles (T)	T1	.785	0.933	0.735	0.574
	T2	.855			
	T3	.894			
	T4	.905			
	T5	.844			
Reliability (R)	R1	.895	0.948	0.784	0.580
	R2	.875			
	R3	.883			
	R4	.894			
	R5	.880			
Responsiveness (RS)	RS1	.875	0.943	0.807	0.580
	RS2	.873			
	RS3	.935			
	RS4	.908			
Assurance (A)	A1	.787	0.918	0.692	0.568
	A2	.863			
	A3	.868			
	A4	.859			
	A5	.778			
Empathy (E)	E1	.843	0.910	0.716	0.568
	E2	.893			
	E3	.781			
	E4	.864			
Overall Experience (O)	O1	.893	0.911	0.836	0.345
	O2	.936			

Source: Primary Data

Table 4.17 describes the Standardized Factor Loadings, Composite Reliability (CR), Average Variance Extracted (AVE) and Maximum Shared Variance (MSV) of each construct used to measure the variable 'Passenger Satisfaction' (PS) of Low-Cost International Airlines. All Standardized Factor Loadings are above 0.70, which indicates all the indicators are reasonably confirms to the constructs.

In order to verify the Convergent Validity, three requirements need to satisfy i.e., the value of Composite Reliability (CR) should be greater than 0.70, the value of Average Variance Extracted (AVE) should be greater than 0.50 and the value of Composite Reliability (CR) should be greater than Average Variance Extracted (AVE). Here, the values of CR and AVE of Tangibles = 0.933 & 0.735, Reliability = 0.948 & 0.784, Responsiveness = 0.943 & 0.807, Assurance = 0.918 & 0.692, Empathy = 0.910 & 0.716, and Overall Experience = 0.911 & 0.836 are fulfilled the above mentioned criteria. Hence, the Convergent Validity is achieved.

Moreover, the Discriminant Validity of the scale is verified with the conditions of Average Variance Extracted (AVE) should be greater than Maximum Shared Variance (MSV). Here this condition is fulfilled with the Average Variance Extracted (AVE) of all the constructs is greater than the value of Maximum Shared Variance (MSV). In detail, 0.735>0.574 of Tangibles, 0.784>0.580 of Reliability, 0.807>0.580 of Responsiveness, 0.692>0.568 of Assurance, 0.716>0.568 of Empathy, and 0.836>0.345 of Overall Experience are fulfilled the above specified conditions. Hence, the standards for Discriminant Validity are also verified. The variable 'Passenger Satisfaction' (PS) of Low-Cost International Airlines is validated with all the requirements.

4.10.4Validation of Measurement Scale – Passenger Problems (PP)

The scale is used to measure the dimension of '**Passenger Problems' (PP)** of Low-Cost Airlines is validated in two phases. Firstly, an EFA and then Confirmatory Factor Analysis (CFA) are performed. It is applied to assess the quality of the factor structure by statistically testing the significance of the overall model, as well as relationships among items and scales based on sample data. The sub variables are

the problems faced in the areas of Ticketing & Flight Fare (TF), Flight (F), Check-in & Boarding (CB), In-flight Service (IF) and Baggage (B).

4.10.4.1 Exploratory Factor Analysis (EFA) – Passenger Problems (PP)

Exploratory Factor Analysis (EFA) requires certain assumptions to be fulfilled namely correlation and sampling adequacy. The KMO Bartlett test includes Bartlett test of sphericity that measures the multivariate normality of variables in addition to analyzing whether the correlation matrix is an identity matrix. The Kaiser-Meyer-Olkin (KMO) test can measure whether the sample size is adequate for conducting factor analysis, (George &Paul Mallery, 1999).

The Cronbach's alpha Co-efficient is used to test the reliability. A Cronbach's alpha value of greater thanor equal to 0.70 is considered acceptable for the factor to be reliable (Hair et. al.2010) regarding the proposed variable of the study.

There are **25 statements taken** for discovering the Passenger Problems, after item analysis, **3 statements are deleted** which have low level of reliability to measure the Passenger Problems. Finally, **22 statements are taken to measure the Passenger Problems** of Low- Cost International Airlines. Exploratory Factor Analysis (EFA) using Principal Component Method (PCM) with Varimax Rotation is used for checking the linkage between 22 indicators and constructs for measuring the **'Passenger Problems' (PP)** of Low-Cost Airlines. The results are presented below.

Table 4.18

Result of KMO and Barlett's Test – Passenger Problems (PP)

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.900
Bartlett's Test of Sphericity	Approx. Chi-Square	6336.075
	df	231
	Sig.	<0.001

Source: Primary Data

A Principal Component Analysis is conducted on the 22 statements with Varimax Rotation. The Kaiser-Meyer-Olkin (KMO) measure verifies the sample adequacy for the analysis, KMO value is **0.900** which is above the recommended limit of **0.70**. Bartlett's test is another suggestion of the power of the association among variables. Barlett's Test of Sphericity Chi-Square = **6336.075, p<0.01** indicates that the correlation between the items is sufficiently large for Principal Component Analysis (PCA).

Here, five constructs have **Eigen values of greater than 1** and the combination explains the **75.272**% of the variance.

Table 4.19

Result of Exploratory Factor Analysis –Passenger Problems

Constructs	Statements	Code	Factor Loadings	Eigen Value	Variance Explained	Cronbach's Alpha
Ticketing & Flight Fare (TF)	There is unreasonable increase in airline's fare	TF1	.899	8.276	37.61%	0.819
	There is inconsistency in airline's fare especially during seasons	TF2	.888			
	I experience much delay in refund of cancelled ticket	TF3	.758			
	The airline imposes hidden charges while booking a ticket	TF4	.657			
	The airline charges high amount for ticket rescheduling and cancellation	TF5	.764			
Flight (F)	The airline reschedules/cancels flights without prior notice	F1	.793	3.164	14.38%	0.905
	The flight is delayed frequently due to weather conditions/technical fault	F2	.784			
	The airline doesn't give me proper information about flight delay through SMS/call/email	F3	.798			

	I missed an event/meeting/job due to cancelled/delayed flight	F4	.802			
	The airline doesn't provide any refreshment when there is long delay of flight	F5	.733			
Check-In & Boarding (CB)	The airline hasn't sufficient number of counters for check-in	CB1	.748	2.182	9.919%	0.864
	Check-in and boarding employees are not friendly and helpful	CB2	.801			
	The airline imposes high amount for overweight of baggage and luggage	CB3	.827			
	The employees are unwilling to assist the passengers in solving the problems arises due to passenger error	CB4	.811			
In-flight Service (IF)	The airline serves poor quality meals and beverages in the cabin at high cost	IF1	.750	1.709	7.768%	0.891
	Crew members are not friendly and helpful	IF2	.787			
	The cabin and toilets in the cabin are dirty	IF3	.847			
	I feel uncomfortable due to non-working of air condition in the aircraft	IF4	.790			
Baggage (B)	There is much delay for getting my luggage after flight	B1	.779	1.229	5.587%	0.907
	I have an experience of mishandling/missing of my luggage	B2	.886			
	The airline doesn't give proper compensation for luggage loss	B3	.811			
	I have lost some items from my luggage after flight	B4	.835			
Total Variance Explained – 75.272%						

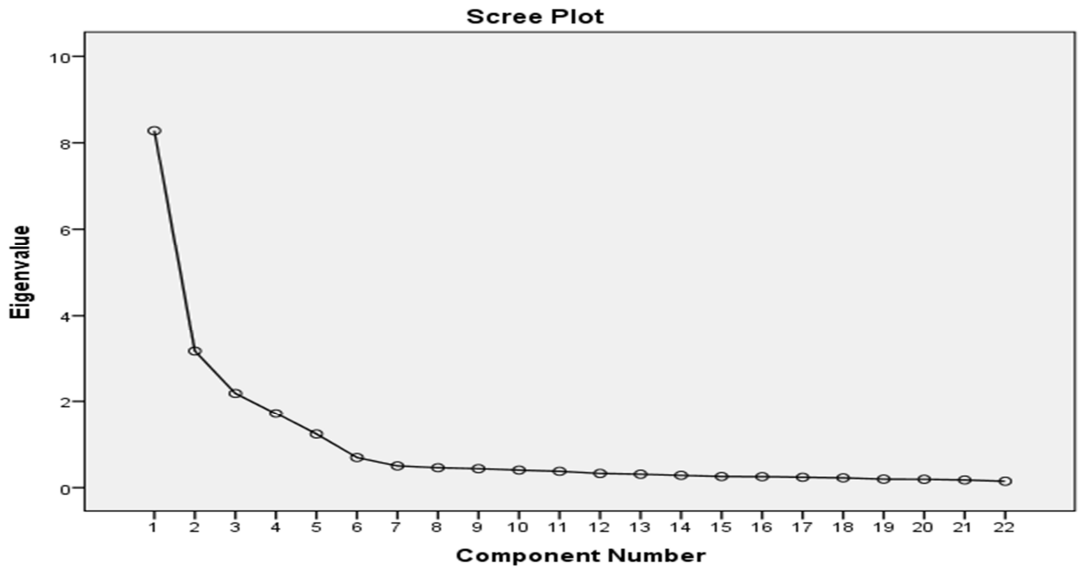
Source: Primary Data

The result of Exploratory Factor Analysis (EFA) shows that the solution is based on **five dimensions** and all items are loading on their own factors. The **five-factor**

solution is explaining **75.272%** of variance of the total variance. A total of five indicators are included in first construct 'Ticketing & Flight Fare' (TF) which explaining over **37.61**% of variance, five indicators are included in the second construct 'Flight' (F) which explaining over **14.38**% of variance and four indicators are included in the third construct 'Check-in & Boarding' (CB) which explaining **9.919**% of variance, four indicators are included in the fourth construct 'In-flight Service' (IF) which explaining over **7.768**% of variance and four indicators are included in the last construct 'Baggage' (B) which explaining over **5.587**% of the total variance. In total, five- factors result explaining over **75.272%** of variance of the total variance explained.

Figure 4.12

Scree-Plot of Exploratory Factor Analysis – Passenger Problems



Source: Primary Data

The above mentioned scree plot of EFA explains the downward elbow shaped curve of Eigen values. Here, five constructs have **Eigen values of greater than 1**, which is explained the significant changes of Passenger Problems.

Construct Validity: -

The above table shows all the factor loadings are above 0.40, and criteria of ***Construct Validity*** including both the ***Discriminant Validity*** (loading of at least

0.40, no cross-loadings of items above 0.40) and ***Convergent Validity*** (Eigen values of 1, loadings of at least 0.40, items that load on posited constructs) (Straub et al., 2004) are satisfied. Accordingly, the **'Passenger Problems'** have fulfilled all the requirements of validity under Exploratory Factor Analysis.

Reliability: -

The internal consistency of the construct of the variable Passenger Problems is measured with the help of Reliability Statistics. The result depicts that**,** the ***Cronbach's Alpha Reliability Co-efficient*** values of all the variables coming under the constructs of the study namely, Ticketing & Flight Fare (0.819), Flight (0.905), Check-in & Boarding (0.864), In-flight Service (0.891) and Baggage (0.907) are above 0.70, hence strong internal consistency is assured and the questionnaire is considered as highly reliable.

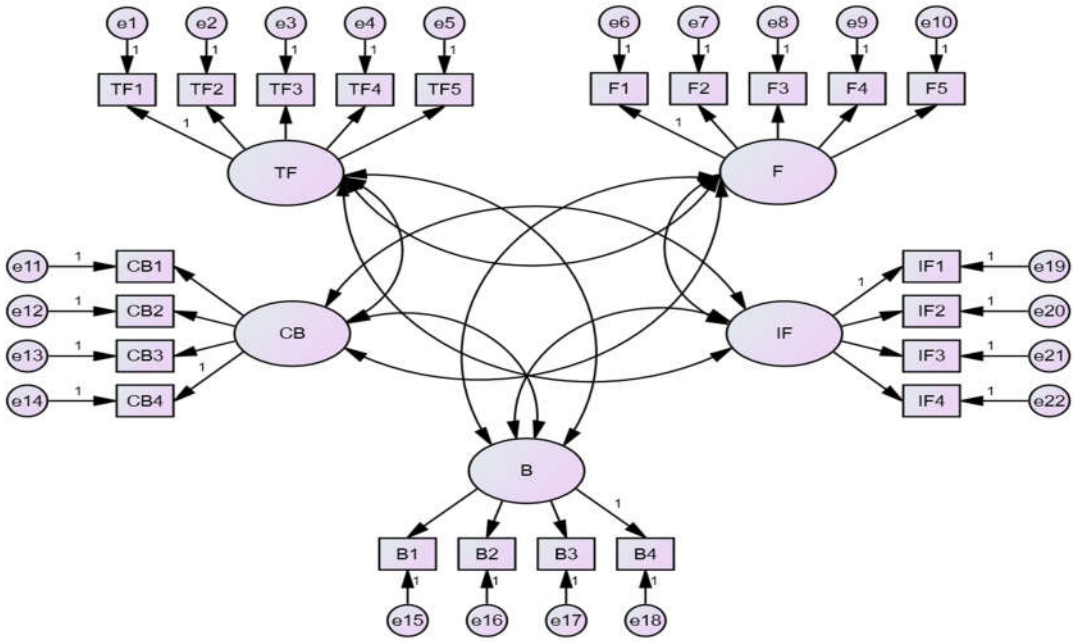
After the EFA, there is a need to confirm the constructs used for measuring the Passenger Problem. Hence CFA is conducted for this purpose and the results are presented in the following section.

4.10.4.2 Confirmatory Factor Analysis – Passenger Problems (PP)

A Confirmatory Factor Analysis (First Order CFA) is applied to confirm the measurement scales of 'Passenger Problems' (PP) of Low-Cost Airlines. Confirmatory Factor Analysis is a multivariable analysis done for checking the association between the constructs and indicators of the variable. The result of CFA is clarified with the help of proposed & measurement model, model fit indices and validity & reliability requirements.

Figure 4.13

The Proposed Model of First order CFA – Passenger Problems



Source: Primary Data

The proposed model of Passenger Problems is checked with the with the help of model fitness indices including Normed chi-square (CMIN/df), Root Mean Square Residuals (RMR), Comparative Fit Index (CFI), Goodness of Fit Index (GFI), Adjusted GFI (AGFI), Incremental Fit Index (IFI), Tucker Fit Index (TLI), Normed Fit Index (NFI), Relative Fit Index (RFI) and Root Mean Square Error of Approximation (RMSEA). Regarding the testing procedure following requirements are fulfilled.

Table 4.20

Model Fit Indices – Passenger Problems (PP)

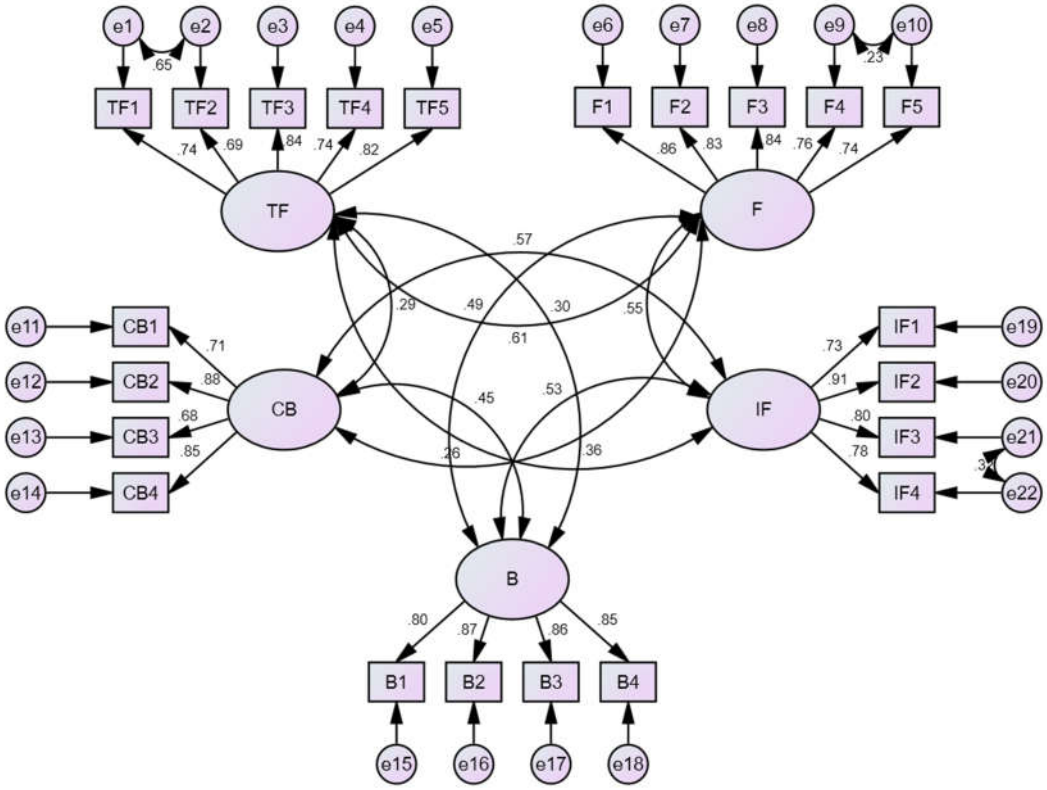
Indices	Value Obtained	Recommended Values of Good Fit	Recommended Values of Acceptable Fit
Normed chi-square (CMIN/df)	3.365	≤3	≤5
Root Mean Square Residuals (RMR)	0.072	≤0.05	≤0.08
Comparative Fit Index (CFI)	0.926	≥0.90	≥0.80
Goodness of Fit Index (GFI)	0.954	≥0.90	≥0.80
Adjusted GFI (AGFI)	0.912	≥0.90	≥0.80
Incremental Fit Index (IFI)	0.926	≥0.90	≥0.80
Tucker Fit Index (TLI)	0.912	≥0.90	≥0.80
Normed Fit Index (NFI)	0.898	≥0.90	≥0.80
Relative Fit Index (RFI)	0.880	≥0.90	≥0.80
Root Mean Square Error of Approximation (RMSEA)	0.077	<0.08	=0.08

Source: Primary Data

The appropriateness of first order CFA (Figure – 4.13) is verified with the help of the important model fitness indices. Here, all the important measures (CFI, IFI and TLI) are above the mentioned limit of good fit with values of greater than 0.90. Further, GFI, AGFI, NFI and RFI are above the mentioned limit of acceptable fit with values of greater than 0.80. Similarly, the value of CMIN/df is 3.365 lies within the limit of mentioned value of good fit of less than 3. Furthermore, the value of RMR (0.072) is within the limit of mentioned value of good fit of less than 0.05 and the value of RMSEA (0.077) is also within the limit of less than 0.08. Therefore, the constructs are accepted to verify the 'Passenger Problems' (PP) of Low-Cost International Airlines.

Figure 4.14

Measurement Model of CFA – Passenger Problems (PP)



Source: Primary Data

Figure- 4.14 is the measurement model used to explain the interrelationship between the constructs and items used to measure the 'Passenger Problems' (PP). Here, five constructs derived from Exploratory Factor Analysis are analyzed with the help of latent variables. The above measurement model comprised five sub-factors of 'Passenger Problems' namely, Ticketing & Flight Fare (TF), Flight(F), Check-in & Boarding (CB), In-flight Service (IF) and Baggage (B). All the factors loadings are greater than 0.50 and hence the constructs are effectively contributing for the Passenger Problems variable. In addition, the results of path estimates and validity and reliability requirements are presented below.

Table 4.21

Validity and Reliability Statistics – Passenger Problems

Constructs	Statements	Factor Loadings	CR $CR = \frac{(\sum \lambda_i)^2}{(\sum \lambda_i)^2 + \sum Var(\varepsilon_i)}$	AVE $AVE = \frac{\sum_{i=1}^{n} \lambda_i^2}{n}$	MSV = sqaure of highest correlation b/w latent constructs
Ticketing & Flight Fare (TF)	TF1	.742	0.878	0.591	0.369
	TF2	.693			
	TF3	.840			
	TF4	.737			
	TF5	.821			
Flight (F)	F1	.858	0.903	0.651	0.369
	F2	.828			
	F3	.837			
	F4	.763			
	F5	.741			
Check-in & Boarding (CB)	CB1	.714	0.865	0.618	0.328
	CB2	.880			
	CB3	.680			
	CB4	.851			
In-flight Service (IF)	IF1	.732	0.883	0.656	0.328
	IF2	.912			
	IF3	.803			
	IF4	.782			
Baggage (B)	B1	.802	0.909	0.714	0.280
	B2	.870			
	B3	.859			
	B4	.846			

Source: Primary Data

Table 4.21 describes the Standardized Factor Loadings, Composite Reliability (CR), Average Variance Extracted (AVE) and Maximum Shared Variance (MSV) of each construct used to measure the 'Passenger Problems' (PP) of Low-Cost International Airlines. All the Standardized Factor Loadings are above 0.60, which indicates all the indicators are reasonably confirms to the constructs.

In order to verify the Convergent Validity, three requirements need to satisfy i.e., the value of Composite Reliability (CR) should be greater than 0.70, the value of Average Variance Extracted (AVE) should be greater than 0.50 and the value of Composite Reliability (CR) should be greater than Average Variance Extracted (AVE). Here, the values of CR and AVE of Ticketing & Flight Fare (TF) = 0.878 & 0.591, Flight (F) = 0.903 & 0.651, Check-in & Boarding (CB) = 0.865 & 0.618, In-flight Service (IF) = 0.883 & 0.656, and Baggage (B) = 0.909 & 0.714 are fulfilled the above mentioned criteria. Hence, the Convergent Validity is achieved.

Moreover, the Discriminant Validity of the scale is verified with the conditions of Average Variance Extracted (AVE) should be greater than Maximum Shared Variance (MSV). Here this condition is fulfilled with the Average Variance Extracted (AVE) of all the constructs is greater than the value of Maximum Shared Variance (MSV). In detail, 0.591>0.369 of Ticketing & Flight Fare, 0.651>0.369 of Flight, 0.618>0.328 of Check-in & Boarding, 0.656>0.328 of In-flight Service, and 0.714>0.280 of Baggage are fulfilled the above specified conditions. Hence, the standards for Discriminant Validity are also verified. The variable 'Passenger Problems' (PP) of Low-Cost International Airlines is validated with all the requirements.

4.11 Test of Normality

Normality test is employed to identify whether the data is normally distributed or not. To test the normality of data, One Sample Kolmogorov- Smirnov (One sample KS) test and Shapiro-Wilk test are applied. But the data is said to be not normal as well the 'p' values are less than 0.05. Hence it is essential to test the Skewness and Kurtosis to check whether the deviation is problematic or not. In order to prove the criteria, the values of Skewness and Kurtosis should be within the range of ± 1 and

the 'z' score of Skewness and Kurtosis should lies within the range of ± 1.96 (Hair, Black, Babin, Anderson, &Tatham,1998). The results regarding different variables (Passenger Choices, Service Quality, Passenger Satisfaction and Passenger Problems) of Low-Cost International Airlines are presented below.

Table 4.22

Normality Result

Variable	Skewness	S. E.	Z Score	Kurtosis	S. E.	Z Score
Passenger Choices (PC)	-0.233	0.121	-1.925	0.468	0.242	1.933
Service Quality (SQ)	0.085	0.121	0.702	-0.277	0.242	-1.144
Passenger Satisfaction (PS)	0.012	0.121	0.099	-0.067	0.242	-0.276
Passenger Problems (PP)	0.158	0.121	1.305	0.097	0.242	0.400

Source: Primary Data

The above table discloses the details regarding the values of Skewness and Kurtosis with its 'z' scores (values of Skewness and Kurtosis divided by its Standard Error) of different variables used to measure Service Quality of Low-Cost International Airlines. As a result, the values of Skewness and Kurtosis come under the required range of ± 1 and the 'z' scores also within the range of ± 1.96. Hence, the proposed assumption is fulfilled for all the variables like Passenger Choices (PC), Service Quality (SQ), Passenger Satisfaction (PS) and Passenger Problems (PP). Hence, the normality is assumed and the researcher has selected Parametric Test assuming Normal Distribution.

4.12 Test of Randomness

In order to check the randomness (random selection of samples from population) of the data, Run Test is applied. Run test of randomness is a statistical test used to test the randomness of the data. It is also called Geary test and it is a non-parametric test. Following hypothesis is formulated and tested accordingly for the test.

H0: The data is randomly distributed

H1: The data is not randomly distributed

Following table presents the result of Run test.

Table 4.23

Result of Randomness

Runs Test				
	Passenger Choices	**Service Quality**	**Passenger Satisfaction**	**Passenger Problems**
Test Value[a]	4.00	3.49	3.48	3.40
Cases < Test Value	172	202	200	200
Cases >= Test Value	233	203	205	205
Total Cases	405	405	405	405
Number of Runs	201	205	199	193
Z	.213	.149	-.445	-1.042
Sig. (2-tailed)	.831	.881	.656	.297
a. Median				

Source: Primary Data

Here the calculated value of 'z' score is within the range of ± 1.96 and the significant values are greater than 0.05. Hence, the null hypothesis is failed to reject at 5% level of significance and conclude that the data is randomly distributed. Therefore, the study assumes the randomness of primary data.

4.13 Tools used for Data Analysis

In this section, various statistical and mathematical tools and techniques used for analysing the collected primary data are explained. As per the assumptions of normality and homogeneity, parametric test was used to analyse the primary data to

accomplish the objectives of the study. The primary data were analysed by applying the tools such as One Sample t-test, Independent Sample 't' test, One-way ANOVA, Levene's test of Homogeneity of Variance, and Tukey HSD Post-hoc test. Descriptive statistics (mean and standard deviation) were also employed to measure the main variables. Percentages were used to describe the demographic and travelling profiles of passengers. Exploratory Factor Analysis, Confirmatory Factor Analysis and Structural Equation Modelling were used to explore the variables, confirm the measurement models and analyse the influencing factors of the variables. The tools used are briefly discussed below:

1. Descriptive Statistics (Mean and Standard Deviation)

The researcher used the descriptive statistics to describe the influence of passenger choices on the selection of Low-Cost International Airlines, the level of service quality, passenger satisfaction and passenger problems. Mean and Standard Deviation were used to summarise and interpret the selected variables.

2. One – Sample 't' test

One – Sample 't' test was used to measure the level of influence of passenger choices on the selection of Low-Cost International Airlines and the levels of service quality, passenger satisfaction and passenger problems of Low-Cost International Airlines.

3. Independent Sample 't'-test

The present study used the Independent Sample 't' test to compare the mean scores of the factors influencing the selection of Low-Cost International Airlines, the levels of service quality, passenger satisfaction and passenger problems across the gender of the respondents.

4. Levene's test of Homogeneity of Variance

The Levene's test was employed to check the equality of the population variance. Before conducting One-way ANOVA, the homogeneity assumption of the population variance was measured with the help of Levene's test.

5. One-way Analysis of Variance

One-way ANOVA test was used in the study to compare the significant mean difference in the factors influencing the selection of Low-Cost International Airlines, the levels of service quality, passenger satisfaction and passenger problems according to the demographic profile and travelling profile of the respondents.

6. Tukey HSD Post-hoc Test for Multiple Comparison

If a significant difference was found among sample groups, the post-hoc analysis was performed in the present study for the multiple comparisons of demographic and travelling profiles of the passengers with regard to the factors influencing the selection of Low-Cost International Airlines, the levels of service quality, passenger satisfaction and passenger problems.

7. Exploratory Factor Analysis (EFA)

Exploratory Factor Analysis (EFA) was applied to examine the factor structure and association among different consructs included in the scale for measuring the passenger choice, service quality, passenger satisfaction and passenger problems of Low-Cost International Airlines.

8. Confirmatory Factor Analysis (CFA)

The Confirmatory Factor Analysis was used in the present study to confirm the factors of passenger choice, service quality, passenger satisfaction and passenger problems. Similarly, the relationship between variables and their constructs is established, and the fitness of the measurement model was verified using the recommended fit indicators.

9. Structural Equation Modeling (SEM)

The Structural Equation Modeling was used in the study to assess the relationship between service quality and passenger satisfaction and to study the influence of passenger problems on service quality and passenger satisfaction. Also, the moderation effect of passenger problem was analyzed by using SEM.

4.14Software used for Data Analysis

Statistical softwares such as Microsoft Excel, SPSS (Statistical Package for Social Sciences) version 25 and AMOS (Analysis of Moment Structures) version 26 were used to analyze the primary data. SPSS was used for conducting comparative analysis, and AMOS for modeling purposes.

4.15 Conclusion

This chapter presented the research design adopted for the study, sources of data, sample design, Service Quality model used, variables identified and conceptual model. It also discussed the instruments used for data collection, reliability and validity of the instruments, normality and randomness tests and tools and software used for data analysis.

CHAPTER 5

PASSENGER CHOICES, SERVICE QUALITY, PASSENGER SATISFACTION AND PASSENGER PROBLEMS OF LOW-COST INTERNATIONAL AIRLINES

5.1 Introduction

In the previous chapter, the theoretical overview of Low-Cost International Airlines is presented in detail. Now, it is quite relevant to investigate the Passenger Choice, Service Quality, Passenger Satisfaction and Passenger Problems of Low-Cost International Airlines. Hence, the present chapter is made an attempt to examine the same from the perspective of passengers of Low-Cost International Airlines.

Here Service Quality is measured by considering 'Interaction Quality, Access Quality, Physical Environment Quality and Outcome Quality' as the dimensions. Further, Interaction Quality is measured by considering 'Conduct (C), Expertise (E), Problem Solving (PS)' as the sub dimensions. Similarly, Access Quality is identified by selecting 'Information (IN) and Convenience (CN)' as the sub dimensions. Likewise, Physical Environment Quality is ascertained 'Comfort (CM), Cleanliness (CL), Tangibles (TA), and Safety & Security (SS)' as the sub dimensions. In the same way, Outcome Quality is recognized 'Valence (V), Waiting Time (W)' as the sub dimensions.

Furthermore, Passenger Satisfaction is measured with the help of six dimensions namely, Tangibles (T), Reliability (R), Responsiveness (RS), Assurance (A), Empathy (E), and Overall Experience (O). Additionally, Passenger Problem is analyzed in the light of five dimensions namely, Ticketing & Flight Fare (TF), Flight (F), Check-in & Boarding (CB), In-flight Services (IF), and Baggage (B).

For the purpose of discussion, the current chapter is divided into five sections, comprised as demographic profile and traveling profile of passengers (section A), Passenger Choices (section B), Service Quality (section C), Passenger Satisfaction (section D) and Passenger Problems (section E). The passenger choices of airlines are compared by considering the demographic profile and traveling profile of passengers as the factor variables. Further, Service Quality, Passenger Satisfaction and Passenger Problems are compared by selecting demographic profiles and traveling profiles of passengers as the independent variables. The sections of this chapter are designed according to the objectives of the study. Following pages are under the format of designed structure accordingly.

5.2 Objectives

1. To examine the factors (choices) influencing the selection of Low- Cost International Airlines.
2. To evaluate the Service Quality of Low-cost International Airlines.
3. To measure the level of Passenger Satisfaction of Low-cost International Airlines.
4. To explore the various problems faced by passengers in Low- Cost International Airlines.
5. To evaluate the extent to which the passenger choices, service quality, passenger satisfaction and passenger problems of Low-Cost International Airlines vary among demographic and travelling profiles of the passengers.

5.3 Hypotheses Formulated and Tested

- $H1_1$: There is not an average (above or below average) influence of passenger choices on the selection of Low-Cost International Airlines.
- $H1_2$: There is not an average (above or below average) level of Service Quality in Low-Cost International Airlines.
- $H1_3$: There is not an average (above or below average) level of passenger satisfaction in Low-Cost International Airlines.
- $H1_4$: There is not an average (above or below average) level of Passenger Problems in Low-Cost International Airlines.
- $H1_5$: There is significant difference in the Passenger Choices, Service Quality, Passenger Satisfaction and Passenger Problems of Low-Cost International Airlines among demographic and travelling profiles of passengers.

5.4 Methodology and Database

In order to fulfill the objectives of the present chapter, primary data are collected from passengers of Low-Cost International Airlines by using pretested structured questionnaire. A total of 405 sample passengers are selected from different airports (TVM, Cochin and Calicut) in Kerala. To describe the Passenger Choice, Service Quality, Passenger Satisfaction and Passenger Problems, Descriptive Statistics (Mean and Standard Deviation) and One-Sample‘t’ test are applied. Furthermore, to check the significant difference in the Passenger Choice, Service Quality, Passenger Satisfaction and Passenger Problems among passengers according to their demographic and traveling profiles, Independent Sample ‘t’ test and One-way ANOVA/ Welch test are employed. Before that, homogeneity assumption of population variance is identified with the help of Levene’s test of Equality of Variance. Moreover, post-hoc analysis (Tukey/ Tamhane’s T2) is used to check the pair-wise comparison of the factor variables. The demographic and traveling profiles are presented by using frequency and percentage analysis.

5.5 Variables Used for the Analysis

Table 5.1

Variables used for the analysis

Construct	Dimensions	Type of Question
Demographic Profiles	Gender, Age in years, Educational Qualification, Occupation, and Annual Income	Categorical Questions (2 and more than 2 options)
Travelling Profiles	Airports, Airlines, No. of times travelled, Purpose of visit, and Booking Channel	Categorical Questions (More than 2 two options)
Passenger Choices	12 statements	5 Point Likert Scale Questions
Service Quality	Conduct, Expertise, Problem Solving, Comfort, Cleanliness, Tangibles, Valence, Waiting Time, Safety & Security, Information and Convenience	5 Point Likert Scale Questions
Passenger Satisfaction	Tangibles, Reliability, Responsiveness, Assurance, Empathy, and Overall Experience	5 Point Likert Scale Questions
Passenger Problems	Ticketing & Flight Fare, Flight, Check-in & Boarding, In-flight Services, and Baggage.	5 Point Likert Scale Questions

Following pages are concerned with the analysis and discussion of the proposed objectives and hypotheses formulated.

Section A

5.6 Demographic Profile of the Passengers

In this study, the passengers are categorized according to their demographic groups of Gender, Age, Educational Qualification, Occupation, and Annual Income. Here, frequency and percentage are used to describe the category of respondents. The results are presented below.

Table 5.2

Demographic Profile of the Passengers

Demographic Variables	Sub groups	Frequency	Percent
Gender	Male	294	72.6
	Female	111	27.4
Age Groups	Less than 21	26	6.4
	21-40	206	50.9
	41-60	156	38.5
	Above 60	17	4.2
Educational Qualification	School Level	56	13.8
	Diploma	47	11.6
	Graduation	156	38.5
	Post-Graduation	94	23.2
	Professional Degree	52	12.8
Occupation	Self-Employed	51	12.6
	Private Sector Employee	190	46.9
	Govt./ Public Sector Employee	30	7.4
	Professionals	57	14.1
	Home Maker	40	9.9
	Student	37	9.1
Annual Income	Up to 5,00,000	209	51.6
	5,00,001 – 15,00,000	143	35.3
	15,00,001 – 25,00,000	39	9.6
	Above 25,00,000	14	3.5

Source: Primary Data

Table 5.2 demonstrates the demographic details of airline passengers. Out of the 405 respondents, 294 are male (72.6%) and 111 are female (27.4%). As much as 50.9% of the respondents are coming under the age group 21-40 and only 4.2% of the respondents are having the age above 60 years.

Regarding the educational qualification, 38.5% of the respondents have graduation and 12.8% of them have acquired the professional degree. Out of 405 airline passengers, 13.8% of them have only school level education, 11.6% of them have diploma and 23.2% of them have post-graduation Degree.

With respect to the occupational status of the respondents, 190 are private sector employees (46.9%), 57 are professionals (14.1%) and 51 are self-employed persons (12.6%). Furthermore, 40 are home makers (9.9%), 37 are students (9.1%) and 30 are govt. /public sector employees (7.4%).

With reference to the annual income, 51.6% respondents have annual income up to Rs 5,00,000 and 35.3% of them have an annual income in between 5,00,001 – 15,00,000. Besides, 9.6% respondents have an annual income in between 15, 00,001 – 25,00,000 and 3.5% 0f them have above 25,00,000 annual income.

5.7 Travelling Profile of the Passengers

In this section travelling profile of the passengers namely, Airports, Airlines, No. of times travelled, purpose of visit and booking channel are mentioned. Here, frequency and percentage analysis are used to describe the details.

Table 5.3

Travelling Profile of the Passengers

Travelling profile	Sub categories	Frequency	Percent
Airport	TVM	135	33.3
	Cochin	135	33.3
	Calicut	135	33.3
Airlines	Air India Express	135	33.3
	Spice Jet	135	33.3
	Indigo	135	33.3
No. of times travelled	3 – 5 times	118	29.1
	6 – 10 times	83	20.5
	11 – 15 times	63	15.6
	More than 15 times	141	34.8
Purpose of visit	Business/ official	38	9.4
	Job	190	46.9
	Leisure/ Tour	23	5.7
	Visit relatives/ friends	143	35.3
	Education	11	2.7
Booking Channel	Airlines Website	192	47.4
	Airlines Sales Office	2	0.5
	Travel Agent	197	48.6
	Airline Mobile Application	14	3.5

Source: Primary Data

Table 5.3 explains the result of travelling profile of airline passengers. Among the 405 samples, equal proportion (135 each) of airline passengers are taken from three international airports in Kerala such as Thiruvananthapuram, Cochin and Calicut. Likewise, equal proportions (135 each) of passengers are selected from the passengers of three Low-Cost International Airlines flying from and to Kerala airports such as Air India Express, SpiceJet and IndiGo.

As per the no. of times travelled, 34.8% respondents have travelled more than 15 times and 29.1% respondents have travelled 3-5 times in Low-Cost International

Airlines. Further, 20.5% and 15.6% of respondents have travelled 6-10 and 11-15 times respectively.

Out of 405, 190 (46.9%) respondents have travelled for the purpose of job and 143 (35.3%) respondents have travelled for visiting relatives/friends. Besides, 38 (9.4%) respondents have travelled for business/official purpose, 23 (5.7%) respondents for leisure/tour and 11 (2.7%) respondents for education purpose.

With regard to the booking channel, 48.6% travelers have booked ticket through travel agents and 47.4% travelers through airline website. Only 0.5% travelers have depended on airline sales office for booking and 3.5% respondents have used airline mobile application for booking the ticket.

Section B

5.8 Passenger Choices

This section of analysis exhibits the Passenger Choices (factors) of Low-cost Airlines and the comparison of Passenger Choices with the demographic and traveling details of passengers. Consequently, it is divided into two sections. The first section deals with the descriptive analysis of Passenger Choices and second section deals with the comparison of Passenger Choices (factors) by considering demographic and traveling details as factor variables. In order to identify the Passenger Choices, Descriptive Statistics (Mean and Standard Deviation) is used. Additionally, to check the level of Passenger Choices, One-Sample 't' test is employed. Besides, to compare the Passenger Choices of low-cost airlines with the traveling details, Independent Sample 't' test, One-way ANOVA/ Welch test is applied. These results are given below.

Section 1

5.8.1 Descriptive Statistics of Passenger Choices of Low-Cost Airlines

Passenger Choices of Low-Cost Airlines is measured with the help of Five-Point Likert scale ranging from 5 for Strongly Agree to 1 for Strongly Disagree. In order

to measure the variable twelve factors are used namely, 'Low price of flight tickets, Better in-flight services, On-board comfort and cleanliness, Safety and security measures taken by the airline, Flights' on-time arrival and departure, Convenient flight schedules, Efficient check-in process and boarding, Easy reservation/cancellation facilities, Call centre facilities, Friendly behaviour and prompt services of airline staff, Reliable and prompt delivery of baggage, and Overall value for money'.

To identify the Passenger Choices, descriptive statistics is used and the result is presented below. Here, Passenger Choices of all factors are identified with the help of mean and standard deviation. Whenever the mean value is greater than 4.5, 3.5, 2.5, and 1.5 is considered as strongly agree, agree, neutral, and disagree scale respectively. On the other hand, whenever the mean value is less than 1.5 is considered as strongly disagree scale. The interpretation of 5-point Likert Scale is done as: 1 = 1.00 – 1.49: very small, 2 = 1.50 – 2.49: small, 3 = 2.50 – 3.49: moderate, 4 = 3.50 – 4.49: large, 5 = 4.50 – 5.00: very large. Accordingly, the descriptive statistics describes the Passenger Choices of each factor by considering the mean and standard deviation.

Table 5.4

Descriptive Statistics of Passenger Choices

Factors	Mean	Std. Deviation
Low price of flight tickets	4.123	0.989
Better in-flight services	3.785	1.046
On-board comfort and cleanliness	3.829	1.021
Safety and security measures taken by the airline	3.992	0.968
Flights' on-time arrival and departure	3.903	1.091
Convenient flight schedules	4.019	0.951
Efficient check-in process and boarding	3.888	0.928
Easy reservation/cancellation facilities	3.809	1.058
Call centre facilities	3.528	1.054
Friendly behaviour and prompt services of airline staff	3.930	0.982
Reliable and prompt delivery of baggage	3.950	0.986
Overall value for money	4.029	1.100

Source: Primary Data

The above Table describes the descriptive statistics (Mean and Standard Deviation) of passenger choices which influences the selection of Low-Cost International Airlines. The mean scores of all items of passenger choices indicate that all factors under study largely influence the passengers' selection of Low-Cost International Airlines. Among these, low price of flight tickets, overall value for money and convenient flight schedules are the most influencing factors with mean scores of 4.123 (SD = 0.989), 4.029 (SD = 1.100) & 4.019 (SD = 0.951). Also, call centre facilities is the least influencing factor with a mean score of 3.528 (SD = 1.054).

5.8.2 One – Sample 't' test for Checking the Level of Passenger Choices

Here in order to check the level of Passenger Choices of Low-Cost Airlines, One-Sample 't' test is applied. The following hypothesis is formulated and tested.

H0: There is an average level of influence of passenger choices on the selection of Low-Cost International Airlines (Mean = 3)

H1: There is not an average level of influence of passenger choices on the selection of Low-Cost International Airlines (Mean ≠ 3)

Table 5.5

One Sample Statistics and Test Result of Passenger Choices

Variable	One-Sample Statistics			One Sample Test (Test Value = 3)		
	N	Mean	Std. Deviation	t	df	Sig. (p) value
Passenger Choices	405	3.899	0.799	22.633**	404	.000

Source: Primary Data
***Significant at 1% level*

Table 5.5 represents the result of One-Sample 't' test applied for testing the influence of passenger choices on choosing the Low-Cost International Airlines. Here the test value denoted as 3, which describes that the influence of passenger choices on choosing the Low-Cost International Airlines is average. The test result clearly mentions that the mean scores of all items of passenger choices are higher

than the test value 3. So, all factors of passenger choices greatly influence the selection of Low-Cost International Airlines. Therefore, the alternate hypothesis is statistically supported at 1% level of significance since the 'p' value is .000.

Section 2

5.8.3 Comparison of Passenger Choices according to Demographic and Traveling Profiles

In this section of analysis, the passenger choices are compared by taking demographic and traveling profiles as factor variables. In order to do the same, gender, age, education, occupation and income are taken as demographic profile variables. Likewise, airports, airlines, purpose of visit and no. of times travelled are taken as traveling profile variables. For this purpose of analysis, Independent Sample't' test, One-way ANOVA/ Welch test, Post-hoc analysis for the significant results are conducted. Besides, Levene's test for Equality of Variance is used to check the homogeneity assumption of the population variance. Following pages are the discussion of the respective analysis.

5.8.3.1 Gender-wise Comparison of Passenger Choices

In this section, passenger choices are compared along with their gender difference. Regarding the same, Independent Sample 't' test is used to explain the mean difference between male and female passengers. Following hypothesis is formulated and tested.

H0: Regarding passenger choices, there is no significant difference in the opinion between male and female passengers.

H1: Regarding passenger choices, there is significant difference in the opinion between male and female passengers.

Table 5.6

Gender- wise Comparison of Passenger Choices of Low-Cost International Airlines

Variable	Gender	Mean	SD	t-test for Equality of Means	
				t	Sig.
Passenger Choices	Male	3.920	.772	.870	.385
	Female	3.843	.869		

Source: Primary Data

The Table 5.6 shows the result of Independent Sample 't' test for checking the mean difference in the passenger choices of Low Cost International Airlines between male and female passengers. There is no significant difference in the passenger choices between male and female as 'p' value is greater than 0.05. Hence the null hypothesis is accepted at 5% level of significance.

5.8.3.2 Age-wise Comparison of Passenger Choices

This section deals with the comparison of passenger choices of low-cost international airlines according to their age groups. In order to do the same, following hypothesis is formulated and tested by applying One-way ANOVA/ Welch test (as per homogeneity assumption of population variance). The Levene's test is applied to check the equality of the population variance.

H0: Regarding passenger choices, there is no significant difference in the opinion among different age group passengers.

H1: Regarding passenger choices, there is significant difference in the opinion among different age group passengers.

Table 5.7

Age-wise Comparison of Passenger Choices of Low-Cost International Airlines

Variable	Descriptive Statistics of Age-wise Comparison				Levene's test of Equality of Variance		One- way ANOVA	
	Less than 21	21-40	41-60	Above 60	Test statistics	Sig. value	Test Statistics	Sig. value
Passenger Choices	3.900 (.725)	3.984 (.805)	3.797 (.767)	2.972 (.990)	2.190	.089	3.073*	.028

Source: Primary Data
**Significant at 5% level*
Parentheses represent standard deviation

From the above Table, the Levene's test exhibits that homogeneity assumption is proved since 'p' values are greater than 0.05 at 5% level of significance. Thus, One-way ANOVA is considered as the suitable statistical test. The Table 5.7 represents the result of One-way ANOVA for checking the significant difference in the passenger choices of Low Cost International Airlines according to their age groups. . There exists significant mean difference in the passenger choices with regard to their age group. Here, the null hypothesis is rejected at 5% level of significance as 'p' value is 0.28.

Table 5.8

Multiple Comparisons of Different Age Group Passengers Regarding Passenger Choices

Dependent Variable: Passenger Choices Tukey HSD			
(I) Age	**(J) Age**	**Mean Difference (I-J)**	**Sig.**
Above 60	Less than 21	**-.92842***	**.012**
	21-40	**-.91225***	**.027**
	41-60	**-.82479***	**.034**

Source: Primary Data
**Significant at 5% level*

Here, Tukey HSD test is applied for checking the multiple comparison of passenger choices across different age groups of the passengers. The test result depicts that there exists significant difference in the passenger choices between above 60 & less than 21, above 60 & 21-40 and above 60 & 41-60 age group passengers.

5.8.3.3 Education-wise Comparison of Passenger Choices

This section displays the analysis regarding the comparison of the passenger choices according to their education background. In order to do the same, following hypothesis is formulated and tested by applying One-way ANOVA/ Welch test (as per homogeneity assumption of population variance). The Levene's test is applied to check the equality of the population variance.

H0: Regarding passenger choices, there is no significant difference in the opinion of passengers from different education background.

H1: Regarding passenger choices, there is significant difference in the opinion of passengers from different education background.

Table 5.9

Education-wise Comparison of Passenger Choices of Low-Cost International Airlines

Variable	Descriptive Statistics of Education-wise Comparison					Levene's test of Equality of Variance		One- way ANOVA	
	School Level	Diploma	Graduation	Post-Graduation	Professional Degree	Test statistics	Sig. value	Test Statistics	Sig. value
Passenger Choices	3.811 (0.624)	4.010 (0.813)	3.919 (0.862)	3.852 (0.785)	3.918 (0.796)	1.741	.140	.507	.731

Source: Primary Data
Parentheses represent standard deviation

The Table 5.9 elucidates the result of One-way ANOVA which is used to check the significant difference in the passenger choices of Low-Cost International Airlines

across their education. Here, One-way ANOVA is applied as the Levene's statistics are statistically not significant at 5% level. Education is not found to be an influencing factor in case of passenger choices. So the null hypothesis is statistically supported as 'p' value is greater than 0.0.5.

5.8.3.4 Occupation-wise Comparison of Passenger Choices

This section displays the analysis regarding the comparison of the passenger choices according to their occupation status. In order to do the same, following hypothesis is formulated and tested by applying One-way ANOVA/ Welch test (as per homogeneity assumption of population variance). The Levene's test is applied to check the equality of the population variance.

H0: Regarding passenger choices, there is no significant difference in the opinion of passengers from different occupation status.

H1: Regarding passenger choices, there is significant difference in the opinion of passengers from different occupation status.

Table 5.10

Occupation-wise Comparison of Passenger Choices of Low-Cost International Airlines

Variable	Descriptive Statistics of Occupation-wise Comparison						Levene's test of Equality of Variance		Welch test	
	Self Employed	Private Sector	Govt./ Public Sector	Professional	Home maker	Student	Test statistics	Sig. value	Test Statistics	Sig. value
Passenger Choices	3.890 (.904)	3.956 (.704)	4.182 (.709)	3.752 (.866)	3.606 (.983)	3.930 (.775)	2.521	.029	2.126	.068

Source: Primary Data
Parentheses represent standard deviation

From the above Table, the result of Levene's test indicates that the population variance is heterogeneous or unequal. Therefore, Welch test is applied for the mean

comparison of passenger choices of Low-Cost International Airlines across their occupation. The result of Welch test reveals that occupation does not possess any significant influence on the passenger choices. So the alternate hypothesis is not statistically supported at 5% level of significance since the 'p' value is greater than 0.05.

5.8.3.5 Income-wise Comparison of Passenger Choices

This section shows the analysis regarding the comparison of the passenger choices according to their annual income. In order to do the same, following hypothesis is formulated and tested by applying One-way ANOVA/ Welch test (as per homogeneity assumption of population variance). The Levene's test is applied to check the equality of the population variance.

H0: Regarding passenger choices, there is no significant difference in the opinion of passengers according to their annual income.

H1: Regarding passenger choices, there is significant difference in the opinion of passengers according to their annual income.

Table 5.11

Income-wise Comparison of Passenger Choices of Low-Cost International Airlines

Dimensions	Descriptive Statistics of Income-wise Comparison				Levene's test of Equality of Variance		One- way ANOVA	
	Up to 5 lakh	5,00,001 – 15 lakh	15,00,001 – 25 lakh	Above 25 lakh	Test statistics	Sig. value	Test Statistics	Sig. value
Passenger Choices	3.924 (0.818)	3.921 (0.762)	3.871 (0.676)	3.381 (0.907)	1.919	.126	2.097	.100

Source: Primary Data
Parentheses represent standard deviation

From the above Table, the Levene's statistic based on comparison of mean indicates that the population variance is homogenous or equal. Hence, One-way ANOVA is suitable for measuring mean difference. The Table 5.11 describes the result of One-

way ANOVA which is employed to check the significant difference in the passenger choices of Low-Cost International Airlines according to their income level. There exists no significant mean difference in the passenger choices across their income. Hence the null hypothesis is accepted at 5% level of significance as 'p' value is greater than 0.05.

5.8.3.6 Airport-wise Comparison of Passenger Choices

This section comprises the analysis regarding the comparison of choices of passengers by considering selected airports in Kerala as the independent variable. In order to do the same, following hypothesis is formulated and tested by using One-way ANOVA/ Welch test (as per homogeneity assumption of population variance). The Levene's test is employed to check the equality of the population variance.

H0: Regarding Passenger Choices, there is no significant difference among selected airports in Kerala.

H1: Regarding Passenger Choices, there is significant difference among selected airports in Kerala.

Table 5.12

Airport-wise Comparison of Passenger Choices of Low-Cost International Airlines

Variable	Descriptive Statistics of Airport-wise Comparison			Levene's test of Equality of Variance		One- way ANOVA test	
	TVM	Cochin	Calicut	Test statistics	Sig. value	Test Statistics	Sig. value
Passenger Choices	3.939 (0.743)	3.863 (0.813)	3.895 (0.842)	0.412	0.662	0.310	0.733

Source: Primary Data
Parentheses represent standard deviation

After proving the homogeneity assumption, one-way ANOVA is applied to compare the mean scores. The above Table explains the result of One-way ANOVA which is employed to check the significant difference in the passengers' opinion for choosing

the Low-Cost International Airlines based on the airport. From the result, it is found that airport is not an influencing factor for the passengers' selection of Low-Cost International Airlines. There is no significant mean difference exists in Airport-wise passenger choices of Low-Cost International Airlines. Thus, the null hypothesis is statistically supported at 5% level of significance.

5.8.3.7 Airline-wise Comparison of Passenger Choices

This section displays the analysis regarding the comparison of passenger choices by considering selected low-cost airlines as the independent variable. In order to do the same, following hypothesis is formulated and tested by employing One-way ANOVA/ Welch test (as per homogeneity assumption of population variance). The Levene's test is used to check the equality of the population variance.

H0: Regarding passenger Choices, there is no significant difference among selected low-cost international airlines in Kerala.

H1: Regarding passenger Choices, there is significant difference among selected low-cost international airlines in Kerala.

Table 5.13

Airlines-wise Comparison of Choices of Passenger of Low-Cost International Airlines

Variable	Descriptive Statistics of Airline-wise Comparison			Levene's test of Equality of Variance		One- way ANOVA/ Welch test	
	Air India Express	SpiceJet	IndiGo	Test statistics	Sig. value	Test Statistics	Sig. value
Passenger Choices	3.867 (0.858)	3.881 (0.791)	3.948 (0.748)	0.840	0.433	0.395	0.674

Source: Primary Data
Parentheses represent standard deviation

From the Table 5.13, the Levene's statistic based on comparison of mean indicates that the population variance is homogenous or equal. Hence, One-way ANOVA is suitable for measuring mean difference. The test statistics (0.395) and significance

value (0.674) of One-way ANOVA test disclose that the null hypothesis is failed to reject at 5% level of significance. So, there is no significant difference in the passengers' opinion on the selection of Low-Cost International Airlines based on the airlines.

5.8.3.8 Comparison of Passenger Choices based on Purpose of Visit

This section reveals the analysis regarding the comparison of choices of passengers based on the purpose of visit. In order to do the same, following hypothesis is formulated and tested by using One-way ANOVA/ Welch test (as per homogeneity assumption of population variance). The Levene's test is employed to check the equality of the population variance.

H0: Regarding passenger Choices, there is no significant difference in the attitude of passengers according to their purpose of visit.

H1: Regarding passenger Choices, there is significant difference in the attitude of passengers according to their purpose of visit.

Table 5.14

Comparison of Passenger Choices based on the Purpose of Visit

Variable	Descriptive Statistics of Purpose of Visit-wise Comparison					Levene's test of Equality of Variance		One- way ANOVA/ Welch test	
	Business/ Official	Job	Leisure. Tour	Visit relatives/ friends	Education	Test statistics	Sig. value	Test Statistics	Sig. value
Passen-ger Choices	3.921 (0.861)	3.844 (0.740)	4.076 (0.798)	3.915 (0.851)	4.197 (0.886)	0.793	0.530	0.908	0.459

Source: Primary Data
Parentheses represent standard deviation

After proving the homogeneity assumption, one-way ANOVA is used to compare mean difference. The result of One-way ANOVA demonstrates that passengers'

opinion on the selection of Low Cost International Airlines has insignificant mean difference with reference to the purpose of visit. The test statistics and 'p' values of the table reveals that the mean differences are statistically insignificant, since 'p' value is greater than 0.05. So the null hypothesis is accepted at 5% level of significance.

5.8.3.9 Comparison of Passenger Choices based on No. of Times Travelled

This section elucidates the analysis regarding the comparison of choices of passengers based on the no. of times travelled by passengers. In order to do the same, following hypothesis is formulated and tested by applying One-way ANOVA/ Welch test (as per homogeneity assumption of population variance). The Levene's test is applied to check the equality of the population variance.

H0: Regarding Passenger Choices, there is no significant difference in the attitude of passengers according to the no. of times travelled.

H1: Regarding Passenger Choices, there is significant difference in the attitude of passengers according to the no. of times travelled.

Table 5.15

Comparison of Passenger Choices based on the No. of Times Travelled

Variable	Descriptive Statistics of No. of Times Travelled-wise Comparison				Levene's test of Equality of Variance		One- way ANOVA/ Welch test	
	3-5 times	6 -10 times	11- 15 times	Above 15 times	Test statistics	Sig. value	Test Statistics	Sig. value
Passenger Choices	4.074 (0.673)	3.868 (0.783)	3.859 (0.881)	3.789 (0.850)	2.585	0.053	2.907*	0.034

Source: Primary Data
**Significant at 5% level*
Parentheses represent standard deviation

From the above Table, the test statistics and significance values of Levene's test disclose that the population variance is homogenous or equal in case of passenger choices as 'p' value is greater than 0.05. So One-way ANOVA is considered for the mean comparison of the opinion of passengers on the selection of Low Cost

International Airlines according to the number of times travelled. The test result shows that significant differences exist in the mean scores of the passengers' opinion on the selection of Low Cost International Airlines with respect to the number of times travelled. . So the alternative hypothesis is accepted at 5% level of significance since 'p' value is less than 0.5.

Table 5.16

Multiple Comparisons of No. of Times Travelled regarding Passenger Choices

Dependent Variable: Passenger Choices Tukey HSD			
(I) Times	**(J) Times**	**Mean Difference (I-J)**	**Sig.**
3-5 times	6-10 times	.20568	.271
	11-15 times	.21436	.309
	More than 15 times	**.28515***	**.022**
*. The mean difference is significant at the 0.05 level.			

Source: Primary Data

Tukey HSD post hoc test is conducted for identifying where the significant difference exists among the groups. The post hoc test result elucidates that with respect to passengers' opinion on the selection of Low Cost International Airlines; significant difference exists only in between passengers who have travelled 3- 5 times & more than 15 times. In this case, passenger choices have a high influence on the opinion of passengers having 3-5 times travel for the selection of Low Cost International Airlines. The mean differences of other pairs are statistically insignificant as the 'p' value is greater than 0.05.

Section C

5.9 Service Quality of Low-Cost International Airlines

This section of analysis explains the service quality of Low-cost International Airlines and the comparison of service quality with the demographic profiles and traveling details of the passengers. Accordingly, it is divided into two sections. The first section deals with the identification of service quality and second section

discusses the comparison of dependent and factor variables. In order to identify the service quality, Descriptive Statistics is used. Furthermore, to check the level of service quality, One-Sample 't' test is employed. Additionally, to compare the service quality of low-cost international airlines with the demographic profiles and traveling details, Independent Sample 't' test, One-way ANOVA/ Welch test is applied. These results are given below.

Section 1

5.9.1 Descriptive Statistics of Service Quality of Low-Cost International Airlines

Service quality of Low-Cost International Airlines is measured with the help of Five-Point Likert scale ranging from 5 for Strongly Agree to 1 for Strongly Disagree. In order to measure the variable different dimensions are used namely, Conduct (C), Expertise (E), Problem Solving (PS), Comfort (CM), Cleanliness (CL), Tangibles (TA), Safety & Security (SS), Valence (V), Waiting Time (W), Information (IN) and Convenience (CN).

To identify the service quality, descriptive statistics is used and the result is presented below. Here, service quality of all factors of each dimension is identified with the help of mean and standard deviation. Whenever the mean value is greater than 4.5, 3.5, 2.5, and 1.5 is considered as strongly agree, agree, neutral, and disagree scale respectively. On the other hand, whenever the mean value is less than 1.5 is considered as strongly disagree scale. The interpretation of 5-point Likert Scale is done as: 1 = 1.00 – 1.49: very poor, 2 = 1.50 – 2.49: poor, 3 = 2.50 – 3.49: moderate, 4 = 3.50 – 4.49: good, 5 = 4.50 – 5.00: very good. Accordingly, the descriptive statistics describe the service quality of each dimension by considering the mean and standard deviation.

Table 5.17

Descriptive Statistics of Service Quality

Dimensions	Factors	Mean	Std. Deviation
Conduct (C)	The airline employees' attitude demonstrates their willingness to help me	3.619	.922
	Cabin Crew are kind and polite to me	3.891	.828
	Check-in & boarding staff behave respectfully and politely with me	3.807	.871
	The employees pay attention to every single traveller	3.622	.942
	The employees give consideration to women, children and the physically challenged passengers	3.800	.958
	Airline ensures clear and precise cabin announcement	3.871	.849
	The employees try their best to provide services to me	3.755	.945
Expertise (EX)	The airline procedures of Check-in and boarding are quick and accurate	3.721	.919
	The airline employees of baggage delivery are quick and accurate	3.755	.910
	The airline employees are competent	3.624	.791
	The employees have knowledge in dealing with passenger queries	3.804	.852
Problem Solving (PS)	The employees have proper skills to handle emergency situation	3.669	.889
	The employees are able to handle my complaints directly and immediately	3.629	.917
	When I have a problem, the airline employees show a sincere interest in solving it	3.661	.912
Comfort (C)	The seat and leg space in the cabin are comfortable	3.084	1.090
	I feel comfortable with the air condition in the cabin	3.538	1.022
	I feel comfortable in flying with this airline	3.459	.928

Cleanliness (CL)	The cabin is tidy and clean	3.777	.864
	The toilet in the cabin is clean	3.676	.918
	The employees have clean and neat appearance	3.916	.860
Tangibles (TA)	The airlines facilities are well designed	3.506	.994
	The interior of the cabin is good	3.501	.961
	In-flight entertainment materials and services are acceptable	3.148	1.107
	The quality of meals and drinks on the flight is good	3.128	1.122
	Food is available in the flight at reasonable price	3.046	1.117
	Airline offers online seat booking facility at low price	3.286	1.053
Safety & Security (SS)	I feel safe in travel with the airline	3.609	.912
	The airline ensures higher privacy and security in online payment	3.674	.865
	The cabin crew describe how to use safety equipment very well and precisely	3.908	.819
	There are noticeable sprinkler systems in the cabin	3.558	.852
Valence (V)	I believe that the airline tries to give me what I want	3.374	.907
	I would say that I feel good about what I receive from airlines	3.350	.887
	I will recommend traveling with this airline to my friends and relatives	3.264	.942
Waiting Time (W)	Airline employees provide services quickly and in the shortest time	3.501	.883
	There is rare delay before or during aircraft flight and the flight schedules are accurately according to the announced time.	3.042	.982
	I wait less time for getting check-in and boarding.	3.387	.936
	Waiting time required for getting luggage is acceptable.	3.400	.963

Information (IN)	The airline tells me the accurate time on which it provides service	3.538	.936
	The airline keeps me well-informed about the services I need	3.403	.910
	The airline provides call centre facilities 24/7	3.137	.816
	The airline website provides suitable and updated information of various services the company offers.	3.538	.885
	The airline informs me about flight delay through SMS/call/email	3.267	.905
Convenience (CN)	The airline provides me with enough flights and convenient flight schedules	3.377	1.003
	The reservation and ticketing systems are convenient	3.627	.921
	The airline's ticket price is reasonable and affordable	3.251	1.164
	There is consistency in airline's ticket prices with given service	3.185	1.135
	I can cancel and reschedule my ticket easily without much cost	3.145	1.134
	The airline's website is efficient and user-friendly	3.540	.957
	Compensation procedure in case of flight delays/cancellation/accidents is proper and convenient	3.150	1.158

Source: Primary Data

Table 5.17 depicts the descriptive statistics (Mean and Standard Deviation) of passenger's opinion about service quality of Low-Cost International Airlines. Mean and Standard Deviation of various variables under eleven variables of SSQAI model of service quality are shown in the above table.

Regarding the conduct, the passengers perceived good level of service quality on all variables. Among these, mean score (3.891) of 'cabin crew are kind and polite to me' is high (SD = .828) as compared to other items. In case of the variable expertise, high level of service quality is perceived by passengers on all items and the service quality on 'the employees have knowledge in dealing with passenger queries' is higher than others which has a mean score of 3.804 (SD = 0.852). However, the

service quality of the three variables under the dimension problem solving is good and they have more or less same mean scores. But, the mean score of the item 'the employees have proper skills to handle emergency situation' is 3.669 (SD = 0.889), which is slightly high as compared the other two.

Relating to the variable comfort, passengers have good opinion on 'I feel comfortable with the air condition in the cabin' with mean score of 3.538 (SD = 1.022). At the same time, the passengers have perceived moderate level of service quality on other two items and the mean score of the item 'the seat and leg space in the cabin are comfortable' is low (3.084) as compared to the other two. With reference to the variable cleanliness, mean score of 3.916 (SD = 0.860) on 'the employees have clean and neat appearance' is high which shows passengers have perceived good level of service quality. Also, the passengers perceived good level of service quality on other two items of the variable cleanliness.

Relating to the variable tangibles, passengers' opinion shows that service quality on 'the airlines facilities are well designed' and 'the interior of the cabin is good' are high with a mean score of 3.506 (SD = 0.94) and 3.501 (SD = .961) respectively. But, the service quality of other four variables is only at moderate level. Among these, the service quality on 'food is available in the flight at reasonable price' is low with mean score of 3.046 (SD = 1.117).

As far as the variable safety and security is concerned, the passengers perceived high level of service quality on all items. The mean score (3.908) of the item 'the cabin crew describe how to use safety equipment very well and precisely' is high and the mean score (3.558) of the item 'there are noticeable sprinkler systems in the cabin' is low as compared to the other items in the variable. As to the variable valence, the service quality of all factors in the variable valence is only at moderate level. The service quality of the element 'I will recommend travelling with this airline to my friends and relatives' is low as compared to other elements, which has a mean of 3.264 (SD = 0.942).

In case of the variable waiting time, the mean score on 'airline employees provide services quickly and in the shortest time' is 3.501 (SD = 0.883) which shows passengers have perceived high level of service quality on this item. But the passengers perceived only moderate level of service quality on other three items in the variable and the item 'there is rare delay before or during aircraft flight and the flight schedules are accurately according to the announced time' has low mean score (3.042).

With reference to the variable information, service quality on the items 'the airline tells me the accurate time on which it provides service' and 'the airline website provides suitable and updated information of various services the company offers' are high with a mean score of 3.538. The service quality of all other items is only at average level and the service quality on the item 'the airline provides call centre facilities 24/7' is low as compared to other items.. Relating to the variable convenience, passengers' response reveals that the service quality on 'the reservation and ticketing systems are convenient' and 'the airline's website is efficient and user-friendly' are high with a mean score of 3.627 9 (SD = 0.921) and 3.540 (SD = 0.957). At the same time, the passengers have perceived moderate level of service quality on other items and the item 'I can cancel and reschedule my ticket easily without much cost' has low mean score of 3.145 (SD = 1.134).

5.9.2 One – Sample 't' test for Checking the Level of Service Quality

Here in order to check the level of Service Quality of Low-Cost Airlines, One-Sample 't' test is applied. The following hypothesis is formulated and tested.

H0: There is an average level of Service Quality of Low-Cost International Airlines (Mean = 3)

H1: There is not an average level of Service Quality o f Low-Cost International Airlines (Mean ≠ 3)

Table 5.18

One Sample Statistics and Test Result of Service Quality

Dimensions of Service Quality	One-Sample Statistics			One Sample Test (Test Value = 3)		
	N	Mean	Std. Deviation	t	df	Sig. (p) value
Conduct (C)	405	3.758	.748	6.546**	404	.000
Expertise (EX)	405	3.726	.759	19.242**	404	.000
Problem Solving (PS)	405	3.653	.847	15.514**	404	.000
Interaction Quality	**405**	**3.712**	**.651**	**13.767****	**404**	**.000**
Comfort (C)	405	3.360	.897	9.583**	404	.000
Cleanliness (CL)	405	3.790	.794	20.017**	404	.000
Tangibles (TA)	405	3.269	.914	5.760**	404	.000
Safety & Security (SS)	405	3.687	.742	18.638**	404	.000
Physical Environmental Quality	**405**	**3.527**	**.836**	**13.499****	**404**	**.000**
Valence (V)	405	3.329	.835	11.952**	404	.000
Waiting Time (W)	405	3.333	.829	10.493**	404	.000
Outcome Quality	**405**	**3.331**	**.832**	**11.222****	**404**	**.000**
Information (IN)	405	3.376	.811	12.819**	404	.000
Convenience (CN)	405	3.325	.940	6.970**	404	.000
Access Quality	**405**	**3.351**	**.875**	**6.744****	**404**	**.000**

Source: Primary Data
***Significant at 1% level*

Table 5.18 shows the result of One-Sample 't' test applied for testing the passengers' opinion on the service quality of Low-Cost International Airlines. Here the test value denoted as 3, which is the average level of service quality in the scale of response. Regarding all the dimensions of service quality, the mean score is higher than the test value. Hence, there is good level of service quality on the Low-Cost International Airlines as perceived by the passengers. Since the 'p' values are less than 0.01, the null hypothesis is not statistically supported at 1% level of

significance and passengers perceived good level of service quality on Low-Cost International Airlines..

Regarding the dimension-wise comparison of service quality of Low-Cost International Airlines, the mean values of Interaction Quality (Mean = 3.712), Physical Environmental Quality (Mean = 3.527), Outcome Quality (Mean = 3.331), and Access Quality (Mean = 3.351) denote that there exists an above average level of service quality. It also proves with the help of significant test statistics of One-Sample 't' test of 13.767, 13.499, 11.222, 6.744 respectively. Since the 'p' is significant at 1% level (<0.01), the null hypothesis is rejected and there is an above average level of interaction quality, physical environmental quality, outcome quality and access quality of Low-Cost International Airlines.

As per Five Point Likert Scale interpretation, there is good level of service quality in case of the variables conduct, expertise, problem solving, cleanliness, and safety & security. But, the service quality of Low -Cost International Airlines is average in case of the variables comfort, tangibles, valence, waiting time, information and convenience. The service quality of the dimensions interaction quality and physical environment quality is good and the service quality of dimensions outcome quality and the access quality is only at moderate level.

Section 2

5.9.3 Comparison of Service Quality with Demographic and Traveling Profiles

Here, the service quality of low-cost airlines is compared with demographic profiles and traveling details of the passengers. In order to do so, Independent Sample 't' test, One-way ANOVA/ Welch test and Post-hoc analysis are conducted. Moreover, Levene's test of equality of variance is employed to check the homogeneity assumption of the population variance.

5.9.3.1 Gender-wise Comparison of Service Quality

This section deals with the comparison of opinion of passengers regarding the Service Quality of low-cost international airlines according to their gender. In order to do the same, following hypothesis is formulated and tested by applying Independent Sample 't' test.

H0: Regarding service quality, there is no significant difference in the opinion between male and female passengers.

H1: Regarding service quality, there is significant difference in the opinion between male and female passengers.

Table 5.19

Gender-wise Comparison of Service Quality of Low-Cost International Airlines

Dimensions	Gender	Mean	SD	t-test for Equality of Means	
				t	Sig.
Conduct (C)	Male	3.674	.640	-1.849	.065
	Female	3.787	.661		
Expertise (EX)	Male	3.712	.747	-.601	.548
	Female	3.763	.794		
Problem Solving (PS)	Male	3.633	.825	-.761	.447
	Female	3.705	.905		
Comfort (C)	Male	3.392	.909	-1.274	.203
	Female	3.319	.859		
Cleanliness (CL)	Male	3.783	.798	-.275	.783
	Female	3.807	.785		
Tangibles (TA)	Male	3.220	.926	-1.709	.088
	Female	3.399	.973		
Safety & Security (SS)	Male	3.670	.700	-.471	.638
	Female	3.718	.846		
Valence (V)	Male	3.266	.815	-1.189	.235
	Female	3.376	.886		
Waiting Time (W)	Male	3.318	.815	-.566	.572
	Female	3.370	.870		
Information (IN)	Male	3.261	.812	-2.264*	.024
	Female	3.564	.734		
Convenience (CN)	Male	3.270	.954	-1.937	.053
	Female	3.472	.887		

Source: Primary Data
**Significant at 5% level*

The Table 5.19 discusses the result of Independent Sample 't' test for checking the mean difference in the passengers' opinion about service quality of Low-Cost International Airlines between male and female passengers. From the above table, it can be observed that both male and female do not possess any significant difference in case of all dimensions of service quality except information as the 'p' values are greater than 0.05. Therefore the null hypothesis is failed to reject at 5% level of significance. Whereas, with respect to the dimension information, it is found that both male and female possess significant difference in the service quality of Low-Cost International Airlines as the 'p' value is less than 0.05 and the alternate hypothesis is accepted at 5% level. Here female passengers have perceived high level of service quality than male passengers.

5.9.3.2 Age-wise Comparison of Service Quality

This section deals with the comparison of opinion of passengers regarding the Service Quality of low-cost international airlines according to the age groups. In order to do the same, following hypothesis is formulated and tested by applying One-way ANOVA/ Welch test (as per homogeneity assumption of population variance). The Levene's test is applied to check the equality of the population variance.

H0: Regarding service quality, there is no significant difference in the opinion among different age group passengers.

H1: Regarding service quality, there is significant difference in the opinion among different age group passengers.

Table 5.20

Age-wise Comparison of Service Quality of Low-Cost International Airlines

Dimensions	Descriptive Statistics of Age-wise Comparison				Levene's test of Equality of Variance		One- way ANOVA/ Welch test	
	Less than 21	21-40	41-60	Above 60	Test statistics	Sig. value	Test Statistics	Sig. value
Conduct	3.357 (.595)	3.330 (.621)	3.024 (.649)	2.857 (.868)	.219	.883	7.905**	.000
Expertise	3. 673 (.666)	3.794 (.823)	3.649 (.664)	3.250 (1.145)	3.011*	.030	1.218	.356
Problem Solving	3.730 (.777)	3.821 (.842)	3.416 (.809)	3.000 (1.000)	.242	.867	7.988**	.000
Comfort	3.384 (.852)	3.547 (.860)	3.273 (.934)	3.000 (1.000)	.345	.793	3.129*	.026
Cleanliness	3.820 (.778)	3.862 (.823)	3.703 (.721)	2.777 (1.575)	1.871	.134	2.905*	.035
Tangibles	3.544 (.931)	3.363 (.959)	3.111 (.884)	2.222 (1.109)	.781	.505	4.284**	.005
Safety & Security	3.682 (.832)	3.775 (.717)	3.572 (.750)	3.333 (.763)	.633	.594	2.530	.057
Valence	3.628 (.881)	3.598 (.843)	3.339 (.792)	3.000 (1.000)	.508	.677	3.556*	.014
Waiting Time	3.596 (.781)	3.504 (.864)	3.309 (.774)	3.166 (1.010)	.860	.462	2.157	.093
Information	3.761 (.585)	3.619 (.834)	3.351 (.760)	2.533 (1.501)	2.402	.067	5.781**	.001
Convenience	3.516 (.763)	3.463 (.940)	3.116 (.920)	2.476 (1.296)	.797	.496	5.495**	.001

Source: Primary Data
**Significant at 5% level*
***Significant at 1% level*
Parentheses represent standard deviation

From the above Table, the Levene's test exhibits that homogeneity assumption is proved in case of all dimensions except 'expertise' since 'p' values are greater than 0.05 at 5% level of significance. Thus, One-way ANOVA is considered as the suitable statistical test. In case of the dimension 'expertise', homogeneity assumption is not proved as 'p' value is 0.03. Therefore, Welch test is employed for the comparison of mean.

The Table 5.20 describes the result of One-way ANOVA/Welch test which is employed to check the significant difference in the opinion of passengers regarding the service quality of Low-Cost International Airlines according to their age group. There is significant mean difference in the opinion of passengers regarding the service quality on conduct, problem solving, tangibles, information and convenience according to their age groups as 'p' values are less than 0.01. Hence the null hypothesis is rejected at 1% level of significance. Likewise, there is significant mean difference exists in the in the opinion of passengers regarding the service quality on comfort, cleanliness and valence according to their age groups as 'p values are .026, .035 & .014 respectively. Hence the null hypothesis is rejected at 5% level of significance as 'p' values are less than 0.05. As per the opinions of passengers above 60 years, the service quality of Low-Cost International Airlines is low as compared to other age groups.

On the other hand, the Table depicts that there is no significant mean difference exists in the service quality level on expertise, safety & security and waiting time as per the age groups of passengers. Here the 'p' values are .356, .057 and .093, which show insignificant difference as 'p' values are greater than 0.05. Hence, the null hypothesis is failed to reject at 5% level of significance.

Table 5.21

Multiple Comparisons of Different Age Group Passengers Regarding Service Quality

Tukey HSD				
Dependent Variable	**(I) Age**	**(J) Age**	**Mean Difference (I-J)**	**Sig.**
Conduct	Less than 21	21-40	-.02662	.997
		41-60	**.30579****	**.000**
		Above 60	**.47338***	**.041**
ProblemSolving	Less than 21	21-40	.09044	.952
		41-60	**.40455****	**.000**
		Above 60	**.52121***	**.020**
Comfort	Less than 21	21-40	.16235	.815
		41-60	.27347	.078
		Above 60	**.54697***	**.016**
Cleanliness	Less than 21	21-40	-.04161	.994
		41-60	.11752	.896
		Above 60	**.44274***	**.034**
Tangibles	Less than 21	21-40	.18124	.784
		41-60	**.43376***	**.025**
		Above 60	**.32265***	**.033**
Valence	Less than 21	21-40	.02972	.998
		41-60	**.58846***	**.045**
		Above 60	**.42821***	**.039**
Information	Less than 21	21-40	.14245	.825
		41-60	**.41026***	**.043**
		Above 60	**.42821***	**.038**
Convenience	Less than 21	21-40	.05350	.992
		41-60	**.40018***	**.044**
		Above 60	**.54029***	**.024**
** significant at the 0.01 level, * significant at the 0.05 level				

Source: Primary Data

Here Tukey HSD post hoc test is applied for checking the pair wise comparison of service quality according to different age groups of the passengers. The post hoc test result reveals that significant difference exists in the opinion of passengers regarding the service quality of Low Cost International Airlines between the age group of less than 21 & 41-60 and less than 21 & above 60 with respect to conduct, problem solving, tangibles, valence, information and convenience. In case of comfort and cleanliness, the above Table reveals that significant difference exists in the service quality among passengers between the age group of less than 21 & above 60. In case of all these variables, passengers above 60 years of age have perceived low level of service quality as compared to other age groups.

5.9.3.3 Education-wise Comparison of Service Quality

This section exhibits the analysis regarding the comparison of the opinion of passengers regarding the service quality of low-cost international airlines according to their education background. In order to do the same, following hypothesis is formulated and tested by applying One-way ANOVA/ Welch test (as per homogeneity assumption of population variance). The Levene's test is applied to check the equality of the population variance.

H0: Regarding service quality, there is no significant difference in the opinion of passengers from different education background.

H1: Regarding service quality, there is significant difference in the opinion of passengers from different education background.

Table 5.22

Education-wise Comparison of Service Quality of Low-Cost International Airlines

Dimensions	Descriptive Statistics of Education-wise Comparison					Levene's test of Equality of Variance		One- way ANOVA/ Welch test	
	School Level	Diploma	Graduation	Post-Graduation	Professional Degree	Test statistics	Sig. value	Test Statistics	Sig. value
Conduct	3.002 (0.623)	3.273 (0.641)	3.283 (0.596)	3.231 (0.652)	3.123 (0.777)	3.324*	.011	2.40	.053
Expertise	3.486 (0.752)	3.792 (0.784)	3.793 (0.734)	3.715 (0.777)	3.745 (0.766)	.721	.578	1.81	.126
Problem Solving	3.494 (0.775)	3.716 (0.851)	3.658 (0.895)	3.734 (0.773)	3.6090 (0.904)	1.339	.255	.807	.521
Comfort	3.303 (0.904)	3.624 (0.766)	3.495 (0.883)	3.379 (0.942)	3.262 (0.934)	.268	.899	1.57	.181
Cleanliness	3.756 (0.703)	3.822 (0.853)	3.826 (0.756)	3.787 (0.783)	3.692 (0.965)	1.740	.140	.325	.861
Tangibles	3.223 (0.902)	3.418 (0.947)	3.242 (0.981)	3.278 (0.887)	3.250 (0.972)	.741	.564	.775	.542
Safety & Security	3.584 (0.618)	3.781 (0.696)	3.732 (0.684)	3.667 (0.802)	3.615 (0.941)	1.726	.143	.365	.833
Valence	3.464 (0.726)	3.560 (0.898)	3.459 (0.881)	3.595 (0.724)	3.403 (0.936)	1.613	.170	.738	.567
Waiting Time	3.379 (0.752)	3.478 (0.926)	3.455 (0.823)	3.518 (0.735)	3.226 (0.980)	2.251	.063	.655	.624
Information	3.375 (0.730)	3.668 (0.835)	3.514 (0.810)	3.561 (0.835)	3.461 (0.831)	.275	.894	1.18	.318
Convenience	3.278 (0.775)	3.507 (0.979)	3.324 (0.959)	3.305 (0.929)	3.252 (1.035)	1.181	.319	.968	.425

Source: Primary Data
Parentheses represent standard deviation

From the above Table, the test statistics and significance values of Levene's test disclose that the population variance is homogenous or equal in case of dimensions expertise, problem solving, comfort, cleanliness, tangibles, safety & security, valence, waiting time, information and convenience as 'p' value is greater than 0.05. So One-way ANOVA is applied for the mean comparison of the opinion of passengers regarding the service quality of low-cost international airlines according to their education background. Whereas, the test statistics (3.324) and significance value (.011) of Levene's test indicate that the population variance is heterogeneous or unequal with regard to the dimension conduct. . Hence Welch test is applied for the mean comparison of the opinion of passengers regarding the service quality of low-cost international airlines according to their education background.

Table 5.22 represents the result of One-way ANOVA/Welch test for the comparison of mean scores of the opinion of passengers regarding the service quality of low-cost international airlines according to their education background. According to the opinion of passengers regarding all dimensions of the service quality of low-cost international airlines, no significant differences exist in the mean scores with respect to their education background. As a result, the null hypothesis is accepted at 5% level of significance since 'p' values of ANOVA/Welch tests are greater than 0.05.

5.9.3.4 Occupation-wise Comparison of Service Quality

This section parades the analysis regarding the comparison of the opinion of passengers regarding the service quality of low-cost international airlines according to their occupation status. In order to do the same, following hypothesis is formulated and tested by applying One-way ANOVA/ Welch test (as per homogeneity assumption of population variance). The Levene's test is applied to check the equality of the population variance.

H0: Regarding service quality, there is no significant difference in the opinion of passengers from different occupation status.

H1: Regarding service quality, there is significant difference in the opinion of passengers from different occupation status.

Table 5.23

Occupation-wise Comparison of Service Quality of Low-Cost International Airlines

Dimensions	Descriptive Statistics of Occupation-wise Comparison						Levene's test of Equality of Variance		One- way ANOVA	
	Self Employed	Private Sector	Govt./ Public Sector	Professional	Home maker	Student	Test statistics	Sig. value	Test Statistics	Sig. value
Conduct	3.282 (.588)	3.213 (.620)	3.457 (.698)	2.985 (.727)	3.189 (.700)	3.270 (.573)	1.004	.415	2.49*	.031
Expertise	3.843 (.830)	3.713 (.775)	3.991 (.585)	3.614 (.659)	3.712 (.896)	3.608 (.652)	1.134	.341	1.422	.215
Problem Solving	3.915 (.799)	3.608 (.851)	4.011 (.713)	3.391 (.847)	3.616 (.968)	3.675 (.709)	1.039	.394	3.35**	.006
Comfort	3.588 (.946)	3.426 (.876)	3.466 (.953)	3.257 (.986)	3.483 (.826)	3.378 (.824)	.736	.597	.801	.550
Cleanliness	3.803 (.835)	3.864 (.695)	4.033 (.651)	3.438 (1.01)	3.750 (.812)	3.774 (.805)	1.351	.136	3.24**	.007
Tangibles	3.245 (1.03)	3.234 (.909)	3.527 (.897)	3.137 (.956)	3.283 (1.03)	3.464 (.860)	1.098	.361	1.28	.269
Safety & Security	3.774 (.745)	3.690 (.650)	3.833 (.929)	3.535 (.861)	3.706 (.769)	3.648 (.795)	1.173	.322	1.054	.386
Valence	3.326 (.969)	3.503 (.793)	3.777 (.728)	3.467 (.742)	3.441 (.976)	3.567 (.888)	1.047	.389	.877	.497
Waiting Time	3.519 (.830)	3.411 (.795)	3.550 (.844)	3.293 (.928)	3.506 (.876)	3.459 (.800)	.212	.957	1.208	.305
Information	3.474 (.914)	3.440 (.817)	3.706 (.960)	3.526 (.740)	3.605 (.789)	3.708 (.582)	1.984	.080	.643	.667
Convenience	3.302 (1.07)	3.263 (.917)	3.514 (.942)	3.323 (.909)	3.285 (1.04)	3.567 (.771)	1.839	.104	1.206	.305

Source: Primary Data
**Significant at 5% level*
***Significant at 1% level*

Parentheses represent standard deviation

Levene's statistic of Homogeneity of Variance is used to prove the assumption. The null hypothesis is failed to reject at 5% level of significance in case of all dimensions of service quality and homogeneity assumption of variance is proved. As 'p' values are greater than 0.05 and the tested result is insignificant, One-way ANOVA can be used to measure mean differences.

Table 5.23 represents the result of One-way ANOVA for the comparison of mean scores of the opinion of passengers regarding the service quality of low-cost international airlines according to their occupation status. From the descriptive statistics, it is clearly understood that the mean scores of the variables conduct, problem solving and cleanliness are different for different level of occupational status. The significant test statistic of One-way ANOVA for problem solving ('p'= .006) and cleanliness ('p'= .007) reveals that there is significant difference in the opinion of passengers regarding the service quality according to their occupation status. So the alternative hypothesis is accepted at 1% level of significance. At the same time, the significant test statistic of One-way ANOVA for conduct ('p'= .031) discloses that there is significant difference in the opinion of passengers regarding the service quality according to their occupation status. Therefore, the null hypothesis is rejected at 5% level of significance.

On the contrary, the insignificant test statistics of One-way ANOVA for expertise ('p'= .215), comfort ('p'= .550), tangibles ('p'= .269), safety & security ('p'= .386), valence ('p'= .497), waiting time ('p'= .305), information ('p'= .667) and convenience ('p'= .305) show that there is no significant difference in the opinion of passengers regarding the service quality according to their occupation status. So the alternate hypothesis is rejected at 5% level of significance.

Table 5.24

Multiple Comparison of Different Occupation Status of Passengers

Tukey HSD				
Dependent Variable	**(I) Occupation**	**(J) Occupation**	**Mean Difference (I-J)**	**Sig.**
Conduct	Govt./ Public Sector Employee	Self-Employed	.17423	.847
		Private Sector Employee	.24361	.386
		Professional	**.47218***	**.015**
		Home Maker	.26786	.515
		Student	.18687	.845
Problem Solving	Professional	Self-Employed	**-.52322***	**.016**
		Private Sector Employee	-.21696	.520
		Govt./ Public Sector Employee	**-.61930***	**.014**
		Home Maker	-.22485	.783
		Student	-.28386	.593
Cleanliness	Professional	Self-Employed	-.36533	.152
		Private Sector Employee	**-.42632****	**.005**
		Govt./ Public Sector Employee	**-.59474***	**.011**
		Home Maker	-.31140	.387
		Student	-.33618	.326
** significant at the 0.01 level, * significant at the 0.05 level.				

Source: Primary Data

Tukey HSD test has done to find out the significant difference among the mean scores of different factor variables. Here, in case of conduct, the service quality

perceived by Govt./ Public sector employee is significantly different from that of professional since 'p' value is .015. With respect to problem solving, the service quality perceived by professional is significantly different from that of self-employed and Govt./ Public sector employee since 'p' values are .016 & .014 respectively. Regarding the variable cleanliness, the service quality perceived by professional is significantly different from that of private sector employee and Govt./ Public sector employee since 'p' values are .005 & .011 respectively. In case of these three variables, the service quality perceived by professional is very low as compared to other occupation groups of passengers.

5.9.3.5 Income-wise Comparison of Service Quality

This section displays the analysis regarding the comparison of the opinion of passengers regarding the service quality of low-cost international airlines according to their annual income. In order to do the same, following hypothesis is formulated and tested by applying One-way ANOVA/ Welch test (as per homogeneity assumption of population variance). The Levene's test is applied to check the equality of the population variance.

H0: Regarding service quality, there is no significant difference in the opinion of passengers according to their annual income.

H1: Regarding service quality, there is significant difference in the opinion of passengers according to their annual income.

Table 5.25

Income-wise Comparison of Service Quality of Low-Cost International Airlines

Dimensions	Descriptive Statistics of Income-wise Comparison				Levene's test of Equality of Variance		One- way ANOVA/ Welch test	
	Up to 5 lakh	5,00,001 – 15 lakh	15,00,001 – 25 lakh	Above 25 lakh	Test statistics	Sig. value	Test Statistics	Sig. value
Conduct	3.250 (0.622)	3.235 (0.652)	3.120 (0.715)	2.622 (0.542)	.868	.458	4.535**	.004
Expertise	3.753 (0.778)	3.741 (0.730)	3.692 (0.803)	3.267 (0.541)	.778	.507	1.844	.139
Problem Solving	3.636 (0.879)	3.720 (0.812)	3.760 (0.708)	2.928 (0..797)	.725	.538	4.033**	.008
Comfort	3.526 (0.833)	3.335 (0.959)	3.401 (0.911)	2.952 (0.959)	1.389	.246	1.698	.176
Cleanli-ness	3.807 (0.816)	3.811 (0.767)	3.863 (0.691)	3.119 (0.769)	.664	.575	3.573*	.014
Tangibles	3.305 (0.949)	3.231 (0.961)	3.397 (0.810)	2.761 (0.866)	1.078	.358	1.783	.150
Safety & Security	3.721 (0.700)	3.645 (0.801)	3.737 (0.732)	3.482 (0.775)	.870	.457	.713	.544
Valence	3.532 (0.782)	3.491 (0.875)	3.504 (0.874)	2.976 (0.991)	.295	.829	1.956	.120
Waiting Time	3.494 (0.803)	3.330 (0.870)	3.634 (0.680)	3.000 (0.965)	2.233	.084	2.194	.058
Information	3.569 (0.762)	3.469 (0.910)	3.625 (0.654)	2.914 (0.611)	3.637*	.013	5.221**	.003
Convenience	3.376 (0.927)	3.298 (0.977)	3.384 (0.843)	2.673 (0.814)	1.087	.354	2.571	.054

Source: Primary Data
**Significant at 5% level*
***Significant at 1% level*
Parentheses represent standard deviation

From the above Table, the Levene's test exhibits that homogeneity assumption is proved in case of all dimensions except the variable information since 'p' values are greater than 0.05 at 5% level of significance. Thus, One-way ANOVA is considered as the suitable statistical test. On the other hand, the Levene's test shows that

homogeneity assumption is not proved in case of the variable information since 'p' value is less than 0.05 at 5% level of significance. So, the population variance is heterogeneous or unequal. Therefore, Welch test is applied for the mean comparison of the opinion of passengers regarding the service quality of low-cost international airlines according to their annual income.

The Table 5.25 represents the result of One-way ANOVA for checking the significant difference in the opinion of passengers regarding the service quality of low-cost international airlines according to their annual income. The Table depicts that the 'p' values obtained for the variables conduct, problem solving and information are less than 0.01. It indicates that there is significant difference in mean scores of passengers' opinion regarding service quality based on their annual income. So the alternate hypothesis is accepted at 1% level of significance. Likewise, the 'p' value obtained for the variable cleanliness is less than 0.05. It reveals that there is significant difference in mean scores of passengers' opinion. So the null hypothesis is rejected at 5% level of significance.

On the other hand, with respect to all other variables such as expertise, comfort, tangibles, safety & security, valence, waiting time and convenience, there is no significant difference in the mean scores of passengers' perception of service quality based on their annual income. So the null hypothesis is accepted at 5% level of significance since 'p' values are greater than 0.05.

Table 5.26

Multiple Comparisons of Different Income Level of Passengers Regarding Service Quality– Tukey HSD post hoc test

Tukey HSD for One-way ANOVA				
Dependent Variable	**(I) Income**	**(J) Income**	**Mean Difference (I-J)**	**Sig.**
Conduct	Above 25,00,000	Up to 5,00,000	**-.62772****	**.002**
		5,00,001 - 15,00,000	**-.61332****	**.004**
		15,00,001 - 25,00,000	-.49843	.062
Problem Solving	Above 25,00,000	Up to 5,00,000	**-.70779***	**.013**
		5,00,001 - 15,00,000	**-.79171****	**.005**
		15,00,001 - 25,00,000	**-.83211****	**.008**
Cleanliness	Above 25,00,000	Up to 5,00,000	**-.68797****	**.009**
		5,00,001 - 15,00,000	**-.69214****	**.010**
		15,00,001 - 25,00,000	**-.74420***	**.014**
** Significant at the 0.01 level, * significant at the 0.05 level.				

Source: Primary Data

Here Tukey HSD post hoc test is conducted for identifying where the significant difference exists among the groups. The test result discloses that in case of passengers' opinion of service quality on conduct, significant difference exists between above 25,00,000 & up to 5,00,000 and above 25,00,000 & 5,00,001 - 15,00,000 annual income groups. Also, the significant difference exists in the passengers' perception of service quality on problem solving and cleanliness among all income groups. As per the opinion of high income (above 25,00,000) group travelers, the service quality of Low Cost Airlines is low in respect of conduct, problem solving and cleanliness as compared to the opinions of other income group travelers.

Table 5.27

Multiple Comparisons of Different Income Level of Passengers Regarding Service Quality – Tamhane T2 post-hoc test

Tamhane for Welch Test				
Dependent Variable	**(I) Income**	**(J) Income**	**Mean Difference (I-J)**	**Sig.**
Information	Above 25,00,000	Up to 5,00,000	**-.65509****	**.009**
		5,00,001 - 15,00,000	**-.55564***	**.036**
		15,00,001 - 25,00,000	**-.71136****	**.007**
** Significant at the 0.01 level, * significant at the 0.05 level.				

Source: Primary Data

Here, multiple comparisons are done with the help of Tamhane T2 post hoc test. The test result discloses that the significant difference exists in the passengers' perception of service quality on information among all income groups. The passengers having above 25,00,000 annual income have perceived low level of service quality on information as compared to other income group passengers.

5.9.3.6Airport-wise Comparison of Service Quality

This section addresses the analysis regarding the comparison of service quality by considering selected airports in Kerala as the independent variable. In order to do the same, following hypothesis is formulated and tested by using One-way ANOVA/ Welch test (as per homogeneity assumption of population variance). The Levene's test is employed to check the equality of the population variance.

H0: Regarding service quality, there is no significant difference among selected airports in Kerala.

H1: Regarding service quality, there is significant difference among selected airports in Kerala.

Table 5.28

Airport-wise Comparison of service quality of Low-Cost International Airlines

Dimensions	Descriptive Statistics of Airport-wise Comparison			Levene's test of Equality of Variance		One- way ANOVA/ Welch test	
	TVM	Cochin	Calicut	Test statistics	Sig. value	Test Statistics	Sig. value
Conduct	3.188 (0.772)	3.168 (0.657)	3.276 (0.629)	.165	.848	1.058	.348
Expertise	3.694 (0.815)	3.685 (0.797)	3.800 (0.707)	.569	.567	.951	.387
Problem Solving	3.609 (0.828)	3.627 (0.867)	3.723 (0.848)	.182	.833	.702	.496
Comfort	3.451 (0.889)	3.323 (0.946)	3.506 (0.849)	.509	.601	1.480	.229
Cleanliness	3.809 (0.771)	3.723 (0.840)	3.837 (0.771)	.766	.466	.752	.472
Tangibles	3.358 (0.903)	3.135 (0.989)	3.314 (0.922)	.849	.429	2.125	.121
Safety & Security	3.633 (0.786)	3.613 (0.762)	3.816 (0.660)	1.403	.247	2.114	.175
Valence	3.4765 (0.892)	3.358 (0.831)	3.654 (0.756)	1.522	.219	1.371	.213
Waiting Time	3.444 (0.817)	3.414 (0.823)	3.438 (0.853)	.317	.728	.048	.953
Information	3.511 (0.789)	3.428 (0.847)	3.611 (0.792)	.978	.377	1.740	.177
Convenience	3.301 (0.936)	3.276 (0.940)	3.398 (0.946)	.009	.991	.640	.528

Source: Primary Data
Parentheses represent standard deviation

From the above Table, the Levene's test exhibits that homogeneity assumption is proved in case of all dimensions since 'p' values are greater than 0.05 at 5% level of significance. Thus, One-way ANOVA is considered as the suitable statistical test.

The Table 5.28 represents the result of One-way ANOVA for checking the significant difference in the opinion of passengers regarding the service quality of Low-Cost International Airlines based on three airports, namely Thiruvananthapuram, Cochin and Calicut. Airport is not found to be an influencing factor in case of all dimensions of service quality such as conduct, expertise, problem solving, comfort, cleanliness, tangibles, safety & security, valence, waiting time, information and convenience as mean differences are insignificant. As a result, the alternate hypothesis is not supported since p values are greater than 0.05.

5.9.3.7 Airline-wise Comparison of Service Quality

This section shows the analysis regarding the comparison of service quality by considering selected low-cost airlines as the independent variable. In order to do the same, following hypothesis is formulated and tested by employing One-way ANOVA/ Welch test (as per homogeneity assumption of population variance). The Levene's test is used to check the equality of the population variance.

H0: Regarding service quality, there is no significant difference among selected low-cost airlines in Kerala.

H1: Regarding service quality, there is significant difference among selected low-cost airlines in Kerala.

Table 5.29

Airlines-wise Comparison of Service Quality of Low-Cost International Airlines

Dimensions	Descriptive Statistics of Airline-wise Comparison			Levene's test of Equality of Variance		One- way ANOVA/ Welch test	
	Air India Express	SpiceJet	IndiGo	Test statistics	Sig. value	Test Statistics	Sig. value
Conduct	3.246 (0.596)	3.117 (0.692)	3.268 (0.646)	1.105	.332	2.156	.117
Expertise	3.485 (0.757)	3.429 (0.718)	3.964 (0.798)	.305	.738	5.677**	.008
Problem Solving	3.760 (0.796)	3.503 (0.823)	3.696 (0.904)	.583	.559	2.394	.135
Comfort	3.363 (0.992)	3.442 (0.885)	3.476 (0.719)	2.872	.058	.567	.567
Cleanliness	3.837 (0.889)	3.721 (0.751)	3.812 (0.734)	.651	.522	.799	.451
Tangibles	3.261 (1.030)	3.230 (0.864)	3.316 (0.928)	2.587	.076	.282	.754
Safety & Security	3.724 (0.763)	3.614 (0.717)	3.724 (0.746)	.170	.844	.974	.378
Valence	3.406 (0.885)	3.469 (0.744)	3.813 (0.875)	1.692	.185	5.109**	.009
Waiting Time	3.381 (0.867)	3.287 (0.845)	3.829 (0.758)	1.398	.248	6.270**	.005
Information	3.240 (0.849)	3.342 (0.832)	3.638 (0.722)	1.944	.144	5.033**	.007
Convenience	3.339 (0.977)	3.263 (0.897)	3.373 (0.947)	.156	.856	.484	.617

Source: Primary Data
***Significant at 1% level*
Parentheses represent standard deviation

Table 5.29 depicts the test result of Levene's test of Homogeneity of Variance for the dimensions of service quality. The result discloses that the 'p' values are greater than 0.05 in case of all dimensions and the alternate hypothesis is rejected at 5% level of significance. Hence, the homogeneity assumption has proved and One-way ANOVA is applied to check the mean differences.

The above Table reveals the result of One-way ANOVA used for the comparison of mean differences of passengers' opinion regarding different dimensions of service quality of three airlines namely Air India express, Spice Jet and IndiGo. The IndiGo passengers experienced a better service quality in terms of expertise, valence, waiting time and information as compared to the passengers of Air India express and SpiceJet. So, there is significant difference in the opinion of passengers regarding the service quality of these three Low-Cost International Airlines in respect of expertise, valence, waiting time and information. Therefore, the null hypothesis is rejected at 1% level of significance in case of expertise, valence, waiting time and information as the 'p' values are .008, .009, .005 and .007 respectively.

On the other hand, there is insignificant difference in the service quality of Air India express, SpiceJet and IndiGo with regard to conduct, problem- solving, comfort, cleanliness, tangibles, safety & security, and convenience as the passengers of these three airlines have perceived more or less same service quality. Since mean differences are statistically insignificant, the alternate hypothesis is rejected at 5% level of significance.

Table 5.30

Multiple Comparisons of Airlines Regarding Service Quality

Tukey HSD				
Dependent Variable	**(I) Airlines**	**(J) Airlines**	**Mean Difference (I-J)**	**Sig.**
Expertise	IndiGo	Air India Express	**.23037***	**.024**
		SpiceJet	**.25519***	**.039**
Valence	IndiGo	Air India Express	**.31741***	**.017**
		SpiceJet	**.32444***	**.011**
Waiting Time	IndiGo	Air India Express	**.27815****	**.008**
		SpiceJet	**.24259***	**.043**
Information	IndiGo	Air India Express	**.30815****	**.006**
		SpiceJet	**.29630***	**.012**
** Significant at the 0.01 level, * significant at the 0.05 level.				

Source: Primary Data

Pair wise comparison of service quality measures indicates that statistical significant difference exists between the perceptions of IndiGo passengers & Air India Express passengers and IndiGo passengers & SpiceJet passengers in case of the dimensions Expertise, Valence, Waiting Time and Information. IndiGo passengers have perceived better service quality than that of Air India Express and SpiceJet passengers. But, insignificant difference exists between the perception of SpiceJet passengers and Air India Express passengers.

5.9.3.8 Comparison of Service quality based on Purpose of Visit

This section demonstrates the analysis regarding the comparison of service quality based on the purpose of visit. In order to do the same, following hypothesis is formulated and tested by using One-way ANOVA/ Welch test (as per homogeneity assumption of population variance). The Levene's test is employed to check the equality of the population variance.

H0: Regarding service quality, there is no significant difference in the opinion of passengers according to their purpose of visit.

H1: Regarding service quality, there is significant difference in the opinion of passengers according to their purpose of visit.

Table 5.31

Comparison of Service Quality based on the Purpose of Visit

Dimensions	Descriptive Statistics of Purpose of Visit-wise Comparison					Levene's test of Equality of Variance		One- way ANOVA/ Welch test	
	Business/ Official	Job	Leisure/ Tour	Visit relatives/ friends	Education	Test statistics	Sig. value	Test Statistics	Sig. value
Conduct	3.169 (0.625)	3.111 (0.609)	3.267 (0.849)	3.315 (0.635)	3.597 (0.817)	2.338	.055	3.18*	.014
Expertise	3.703 (0.772)	3.684 (0.701)	3.869 (0.900)	3.758 (0.795)	3.818 (0.968)	1.116	.349	.461	.764
Problem Solving	3.657 (0.832)	3.538 (0.843)	3.869 (1.028)	3.736 (0.794)	4.090 (1.044)	1.363	.246	2.353	.053
Comfort	3.394 (0.815)	3.357 (0.978)	3.623 (0.866)	3.482 (0.794)	3.606 (1.041)	1.828	.123	.814	.517
Cleanli-ness	3.850 (0.804)	3.694 (0.800)	3.898 (0.884)	3.839 (0.750)	4.363 (0.809)	.599	.663	2.252	.056
Tangibles	3.263 (1.011)	3.150 (0.942)	3.594 (1.098)	3.312 (0.844)	4.121 (1.067)	1.812	.126	3.88**	.004
Safety & Security	3.690 (0.857)	3.607 (0.658)	3.804 (0.794)	3.743 (0.785)	4.090 (0.917)	2.023	.091	1.712	.146
Valence	3.342 (0.947)	3.426 (0.772)	3.840 (1.019)	3.557 (0.821)	3.727 (1.093)	1.643	.163	2.053	.086
Waiting Time	3.493 (0.787)	3.315 (0.808)	3.739 (0.933)	3.572 (0.801)	4.022 (1.114)	1.273	.280	3.34**	.010
Informa-tion	3.584 (0.871)	3.427 (0.765)	3.895 (0.687)	3.725 (0.837)	4.018 (0.935)	1.132	.341	1.737	.151
Conveni-ence	3.139 (1.062)	3.227 (0.941)	3.776 (0.764)	3.414 (0.877)	3.558 (1.270)	3.20*	.013	3.10*	.024

Source: Primary Data
**Significant at 5% level*
***Significant at 1% level*
Parentheses represent standard deviation

In the above Table, Leven's test is used to check the equality of variances of independent variables. The test result shows that the test statistics are insignificant in case of all dimensions except the variable convenience and the population variance is said to be equal or homogenous. So, One-way ANOVA is applied for the mean comparison of passengers' perception regarding service quality dimensions according to their purpose of visit. However, the test statistics (3.20) and 'p' value (.013) of Levene's test in case of convenience disclose that the population variance is heterogeneous or unequal. Hence, Welch test is applied for the mean comparison of passengers' perception.

The Table 5.31 represents the result of mean comparison on the passengers' perception on service quality of Low-Cost International Airlines with reference to the purpose of their travel. Based on purpose of travel, passengers' perception on conduct, tangibles, waiting time and convenience are different. The descriptive statistics of service quality discloses that passengers who have travelled for education purpose have better opinion on service quality of Low-Cost International Airlines than that of passengers who have travelled for other purposes. Hence the null hypothesis is rejected at 1% level of significance as 'p' values are less than 0.01 in case of tangibles and waiting time and at 5% level of significance as 'p' values are less than 0.05 in case of conduct, and convenience.

Besides, with regard to the variables expertise, problem solving, comfort, cleanliness, safety & security, valence and information, there is insignificant difference in the level of passengers' perception on service quality based on their purpose of travel. The descriptive statistics of passengers' perception on service quality of these independent variables show almost the same mean values. Hence, the null hypothesis is failed to reject at 5% level of significance.

Table 5.32

Multiple Comparison of Purpose of Visit of Passengers Regarding Service Quality – Tukey HSD post hoc test

Tukey HSD for One-way ANOVA				
Dependent Variables	**(I) Purpose**	**(J) Purpose**	**Mean Difference (I-J)**	**Sig.**
Conduct	Education	Business/ Official	**.52823***	**.039**
		Job	**.48912***	**.017**
		Leisure/ Tour	**.53301***	**.025**
		Visit relatives/ friends	**.48172***	**.024**
Tangibles	Education	Business/ Official	.85805	.056
		Job	**.97121****	**.007**
		Leisure/ Tour	.52701	.532
		Visit relatives/ friends	**.80886***	**.044**
Waiting Time	Education	Business/ Official	.52931	.327
		Job	**.70694***	**.045**
		Leisure/ Tour	.28360	.880
		Visit relatives/ friends	.54545	.212
** Significant at the 0.01 level, * significant at the 0.05 level.				

Source: Primary Data

Here Tukey HSD post hoc test is conducted for identifying the mean differences among groups. With respect to conduct, the result shows that significant difference exists in the perception of service quality between education & business/official purpose travellers, education & job purpose travellers, education & leisure/tour purpose travellers and education &visit relatives/ friends purpose travelers, in which education purpose travelers have perceived better service quality than that of passengers who have travelled for other purposes. With respect to tangibles, the result clearly indicates that statistical significant difference exists in the perception of service quality between education & job purpose travellers and education &visit

relatives/ friends purpose travelers, in which education purpose travellers have perceived better service quality than that of passengers who have travelled for other purpose. Likewise, statistical significant difference exists in the perception of service quality on waiting time between education & job purpose travelers, in which education purpose travellers have perceived better service quality than that of passengers who have travelled for other purposes. The other pairs are statistically not significant as the p values are greater than 0.05.

Table 5.33

Multiple Comparisons of Purpose of Visit of Passengers Regarding Service Quality – Tamhane T2 post hoc test

Tamhane for Welch test				
Dependent Variable	**(I) Purpose**	**(J) Purpose**	**Mean Difference (I-J)**	**Sig.**
Convenience	Job	Business/ Official	.08872	1.000
		Leisure/ Tour	**-.54858***	**.034**
		Visit relatives/ friends	-.18677	.480
		Education	-.33062	.995
*significant at the 0.05 level.				

Source: Primary Data

Multiple comparison of service quality on convenience is carried out by using Tamhane T2 post hoc test. The test result elucidates that statistical significant difference exists in the perception of service quality between job & leisure/ tour purpose travelers, in which leisure/ tour purpose travellers have perceived better service quality than that of passengers who have travelled for other purposes. The other pairs are statistically not significant as the p values are greater than 0.05.

5.9.3.9 Comparison of Service quality based on No. of Times Travelled

This section explains the analysis regarding the comparison of opinion regarding service quality based on the number of times travelled by passengers. In order to do the same, following hypothesis is formulated and tested by applying One-way

ANOVA/Welch test (as per homogeneity assumption of population variance). The Levene's test is applied to check the equality of the population variance.

H0: Regarding service quality, there is no significant difference in the opinion of passengers according to the number of times travelled by passengers.

H1: Regarding service quality, there is significant difference in the opinion of passengers according to the number of times travelled by passengers.

Table 5.34

Comparison of Service Quality based on the No. of Times Travelled

Dimensions	Descriptive Statistics of the Number of Times Travelled-wise Comparison				Levene's test of Equality of Variance		One- way ANOVA/ Welch test	
	3-5 times	6 -10 times	11- 15 times	Above 15 times	Test statistics	Sig. value	Test Statistics	Sig. value
Conduct	3.411 (0.580)	3.168 (0.557)	3.163 (0.666)	3.089 (0.708)	3.459*	.017	6.209**	.000
Expertise	3.891 (0.673)	3.584 (0.803)	3.682 (0.788)	3.691 (0.772)	1.625	.183	3.049*	.029
Problem Solving	3.901 (0.834)	3.598 (0.845)	3.550 (0.849)	3.524 (0.824)	.969	.407	5.012**	.002
Comfort	3.672 (0.875)	3.526 (0.749)	3.232 (0.930)	3.250 (0.929)	1.291	.277	6.321**	.000
Cleanliness	3.915 (0.741)	3.855 (0.650)	3.761 (0.751)	3.659 (0.911)	3.985**	.008	2.278	.081
Tangibles	3.615 (0.87013)	3.152 (0.965)	3.023 (0.893)	3.158 (0.937)	.352	.788	8.251**	.000
Safety & Security	3.938 (0.630)	3.572 (0.685)	3.424 (0.788)	3.663 (0.784)	.734	.532	8.270**	.000
Valence	3.742 (0.780)	3.465 (0.784)	3.312 (0.791)	3.390 (0.889)	1.592	.191	5.414**	.001
Waiting Time	3.663 (0.742)	3.474 (0.779)	3.277 (0.770)	3.372 (0.905)	.979	.403	4.596**	.004
Information	3.761 (0.876)	3.455 (0.711)	3.390 (0.816)	3.394 (0.880)	1.133	.336	5.383**	.001
Convenience	3.661 (0.865)	3.175 (0.900)	3.099 (0.936)	3.234 (0.959)	.282	.839	7.738**	.000

Source: Primary Data
**Significant at 5% level*
***Significant at 1% level*
Parentheses represent standard deviation

With regard to the service quality on conduct, the test statistics (3.459) and significance value (.017) of Levene's test indicate that the population variance is heterogeneous or unequal. Likewise, in case of variable cleanliness, the test statistics and significance values of Levene's test are 3.985 & .008 respectively, which indicate that the population variance is heterogeneous or unequal. As a result, Welch test is applied for the mean comparison of passengers' opinion on service quality. In case of all other dimensions of service quality, the test result reveals that the population variance is homogenous or equal. And so, One-way ANOVA is applied for the mean comparison of factor variables.

No. of times travelled is found to be an influencing factor with respect to all factors except cleanliness under service quality. It means that there is significant difference in passengers' opinion about service quality of Low-Cost International Airlines in respect of no. of times they have travelled. The descriptive statistics shows that the passengers, who have travelled more than 15 times, have perceived low level of service quality as compared to passengers who have travelled less than 15 times. So, the alternative hypothesis is supported statistically at 1% level of significance in case of conduct, problem solving, comfort, tangibles, safety & security, valence, waiting time, information and convenience and at 5% level of significance with regard to expertise.

Whereas, no. of times travelled does not affect the variable cleanliness of service quality as passengers' opinion does not change significantly as per no. of times they have travelled. Therefore, the null hypothesis is supported statistically as 'p' value is greater than 0.05.

Table 5.35

Multiple Comparisons of the Number of Times Travelled by Passengers Regarding Service Quality – Tukey HSD post hoc test

Tukey HSD for One-way ANOVA				
Dependent Variable	**(I) Times**	**(J) Times**	**Mean Difference (I-J)**	**Sig.**
Expertise	3-5 times	6-10 times	**.30761***	**.024**
		11-15 times	.20941	.285
		More than 15 times	.20046	.145
Problem Solving	3-5 times	6-10 times	.30274	.057
		11-15 times	**.35087***	**.037**
		More than 15 times	**.37631****	**.002**
Comfort	3-5 times	6-10 times	.14621	.652
		11-15 times	**.43951****	**.008**
		More than 15 times	**.42173****	**.001**
Tangibles	3-5 times	6-10 times	**.46321****	**.003**
		11-15 times	**.59201****	**.000**
		More than 15 times	**.45743****	**.000**
Safety and Security	3-5 times	6-10 times	**.36627****	**.003**
		11-15 times	**.51396****	**.000**
		More than 15 times	**.27544***	**.013**
Valence	3-5 times	6-10 times	.27707	.088
		11-15 times	**.43077****	**.005**
		More than 15 times	**.35287****	**.004**
Waiting Time	3-5 times	6-10 times	**.33783***	**.022**
		11-15 times	**.38536***	**.014**
		More than 15 times	**.29080***	**.024**
Information	3-5 times	6-10 times	.28632	.061
		11-15 times	**.37054***	**.016**
		More than 15 times	**.36669****	**.002**
Convenience	3-5 times	6-10 times	**.48546****	**.001**
		11-15 times	**.56124****	**.001**
		More than 15 times	**.42697****	**.001**
** Significant at the 0.01 level, * significant at the 0.05 level.				

Source: Primary Data

From the above Table of pair wise comparison, the post hoc test result elucidates that with respect to passengers' opinion about service quality on expertise, significant difference exists only in between passengers who have flown 3- 5 times & 6 – 10 times. In case of problem solving, comfort, valence and information,

significant difference exists among the passengers who have travelled 3- 5 times & 11 - 15 times and 3- 5 times & more than 15 times. Also, with respect to tangibles, safety & security, waiting time and convenience, significant difference exists among the passengers who have travelled 3- 5 times & 6-10 times, 3- 5 times & 11 - 15 times and 3- 5 times & more than 15 times. In all these cases, passengers having 3-5 times travel have better opinion about service quality of Low Cost International Airlines than the passengers having more than 5 times traveled. In case of other pairs, no statistical significant difference exists as the p values are greater than 0.05.

Table 5.36

Multiple Comparisons of the Number of Times Travelled by Passengers Regarding Service Quality – Tamhane T2 post hoc test

Tamhane T2 Welch test				
Dependent Variable	**(I) Times**	**(J) Times**	**Mean Difference (I-J)**	**Sig.**
Conduct	3-5 times	6-10 times	**.24295***	**.019**
		11-15 times	.14836	.081
		More than 15 times	**.32246****	**.000**
** Significant at the 0.01 level, * significant at the 0.05 level.				

Source: Primary Data

Table 5.36 represents the result of Tamhane T2 post hoc test. The test result discloses that with respect to passengers' opinion about service quality on conduct, significant difference exists among the passengers who have flown 3- 5 times & 6 – 10 times and 3- 5 times & more than 15 times, in which passengers having 3- 5 times travel have perceived better service quality of Low Cost International Airlines than the passengers having more than 5 times travel.

Section C

5.10 Passenger Satisfaction

This section of analysis is comprised as two sections, firstly the assessment of Passengers' Satisfaction of Low-Cost Airlines and finally the comparison of

satisfaction among passengers according to their demographic profile and traveling details.

Section 1

5.10.1 Descriptive Statistics of Passenger Satisfaction

Here, the passengers' satisfaction is measured with the help of five-point Likert scale ranging from 5 to 1. In order to assess the Passenger Satisfaction regarding different dimensions namely, Tangibles (T), Reliability (R), Responsiveness (RS), Assurance (A), Empathy (E), and Overall Experience (O). As per Exploratory and Confirmatory Factor Analysis, these factors are explored and confirmed to contribute for passengers' satisfaction.

Further, to assess the passengers' satisfaction descriptive statistics (Mean & Standard Deviation) is applied. Similarly, to check the level of satisfaction regarding each construct, one-sample t- test is employed. The interpretation of 5-point Likert Scale is done as: 1 = 1.00 – 1.49: very low, 2 = 1.50 – 2.49: low, 3 = 2.50 – 3.49: moderate, 4 = 3.50 – 4.49: high, 5 = 4.50 – 5.00: very high. The results are presented below.

Table 5.37

Descriptive Statistics of Passengers Satisfaction

Dimensions	Factors	Mean	SD
Tangibles	Physical appearance, dress code and attitude of employees	3.73	.946
	Physical appearance and modern facilities of the airline	3.53	.947
	Variety, quality and price of in-flight meals	3.24	1.018
	Level of comfort of aircraft seats and leg space	3.24	1.076
	Cleanliness of the cabin and toilets	3.45	1.000
Reliability	The sincerity and patience of employees in resolving your problems	3.54	.907
	The on-time arrival and departure of airlines	3.12	.999
	The safety measures taken by the airline	3.57	.893

	The airline services which are provided at the promised time	3.27	.968
	The hassle free check –in and boarding by the airlines	3.42	.950
Responsiveness	The refreshment policy of the airline for its customers if the flight is delayed	3.13	1.106
	The promptness and accuracy of baggage delivery	3.36	.966
	The speed in handling requests/complaints of passengers	3.32	1.003
	The communication about when services will be performed	3.43	.999
Assurance	The call centre facilities given by the airline	3.42	.880
	The website updating and information provided by the airline	3.58	.829
	The crew friendliness /courtesy	3.65	.814
	The knowledge of airline staff in dealing with passenger queries	3.68	.819
	The ticket rescheduling and cancellation procedure of the airline	3.40	.908
Empathy	The operating hours and flight schedules of airline	3.51	.916
	The prompt attention taken by the airline staff towards passenger specific needs	3.52	.918
	The consideration given by the airline to women, children and the physically challenged	3.75	.827
	The employees' personal/individual attention towards passengers	3.54	.896
Overall Experience	The overall value for money	3.42	.986
	The overall services provided by the airline	3.20	.845

Source: Primary Data

The above Table presents the descriptive statistics (Mean and Standard Deviation) of passenger's satisfaction regarding Low-Cost International Airlines. In the case of the variable 'tangibles', the passengers' have good level of satisfaction on 'physical appearance, dress code and attitude of employees' with mean score of 3.73 (SD = 0.946) and 'physical appearance and modern facilities of the airline' with mean score of 3.53 (SD = 0.947). But, there is only moderate level of passenger satisfaction on all other factors of tangibles.

Regarding the variable 'reliability', the passengers have high level of satisfaction on 'safety measures of airlines' with mean score of 3.57 (SD= 0.893) and 'the sincerity and patience of employees in resolving your problems' with mean score of 3.54 (SD = 0.907). The passengers are satisfied only at average level on other three elements of reliability and the factor 'the on-time arrival and departure of airlines' has low mean score of 3.12. Concerning the variable 'responsiveness', there is a moderate level of satisfaction on all elements and the Passenger Satisfaction on 'communication about services of airlines' is higher than others with mean score of 3.43 (SD = 0.999).

Relating to the variable 'assurance', there is good level of satisfaction on the factors 'knowledge of airline staffs in dealing with passenger queries', 'the crew friendliness /courtesy' and 'the website updating and information provided by the airline' with mean scores of 3.68, 3.65 and 3.58 respectively.. The passengers are moderately satisfied with other two factors of assurance. As to the variable 'empathy', there is high level of passenger satisfaction on all factors. The passengers' have better satisfaction level on 'the consideration of women, children and physically challenged category of passengers' with mean score of 3.75 (SD = 0.827). Overall, the passengers are moderately satisfied with overall services of the airlines with mean score of 3.20 (SD = 0.845) and the overall value for money they received is good with a mean score of 3.42 (SD = 0.986).

5.10.2 One – Sample 't' test for checking the satisfaction level

Here in order to check the level of passenger's satisfaction on Low-Cost Airlines, One-Sample 't' test is applied. The following hypothesis is formulated and tested.

H0: There is an average level of passenger satisfaction on Low-Cost International Airlines.

H1: There is not an average level of passenger satisfaction on Low-Cost International Airlines.

Table 5.38

One Sample Statistics and Test Result of Passenger Satisfaction

Dimensions of Satisfaction	One-Sample Statistics			One Sample Test (Test Value = 3)		
	N	Mean	Std. Deviation	t	df	Sig. (p) value
Tangibles	405	3.4415	.89213	9.959**	404	.000
Reliability	405	3.3844	.85798	11.606**	404	.000
Responsiveness	405	3.3142	.94146	6.716**	404	.000
Assurance	405	3.5501	.73658	15.030**	404	.000
Empathy	405	3.5840	.78943	14.886**	404	.000
OverallExperience	405	3.3175	.91677	10.804**	404	.000

Source: Primary Data
***Significant at 1% level*

The above Table describes the result of One-Sample 't' test applied for testing the passenger satisfaction on Low-Cost International Airlines. Here the test value denoted as 3, which is the average level of satisfaction in the scale of response. Regarding all the dimensions of satisfaction, the mean score is higher than the test value. Hence, there is good level of satisfaction regarding the Low-Cost International Airlines. Since the 'p' values are less than 0.01, the null hypothesis is rejected at 1% level of significance and hence there exists good level of passenger satisfaction on Low-Cost International Airlines.

As per the 5 point Likert Scale interpretation, passengers have good level of satisfaction on assurance and empathy. But, there is average level of satisfaction on tangibles, reliability, responsiveness and overall experience.

Section 2

5.10.3 Comparison of Passenger Satisfaction with Demographic and Traveling Profiles

Here, the Passenger Satisfaction is compared with demographic profiles and traveling details of the passengers. In order to do so, Independent Sample 't' test,

One-way ANOVA/ Welch test and Post-hoc analysis are applied. Moreover, Levene's test of equality of variance is employed to check the homogeneity assumption of the population variance.

5.10.3.1 Gender-wise Comparison of Passenger Satisfaction

This section deals with the comparison of passenger satisfaction according to the gender of the passengers. In order to do the same, following hypothesis is formulated and tested by applying Independent Sample 't' test.

H0: There is no significant difference in the passenger satisfaction of male and female passengers.

H1: There is significant difference in the passenger satisfaction of male and female passengers.

Table 5.39

Gender-wise Comparison of Passenger Satisfaction of Low-Cost International Airlines

Dimensions	Gender	Mean	SD	t-test for Equality of Means	
				t	Sig.
Tangibles	Male	3.427	0.833	0.452	0.652
	Female	3.477	1.034		
Reliability	Male	3.445	0.849	1.885	0.060
	Female	3.325	0.869		
Responsiveness	Male	3.238	0.926	2.637**	0.009
	Female	3.513	0.954		
Assurance	Male	3.518	0.729	1.414	0.158
	Female	3.634	0.753		
Empathy	Male	3.542	0.766	1.723	0.086
	Female	3.693	0.840		
Overall experience	Male	3.364	0.940	1.175	0.241
	Female	3.485	0.886		

Source: Primary Data
***Significant at 1% level*

The above Table discusses the result of Independent Sample't' test for checking the mean difference in the passenger satisfaction of Low-Cost International Airlines between male and female passengers. The result indicates that both male and female do not possess any significant influence in case of all dimensions of passenger satisfaction except responsiveness as the 'p' values are greater than 0.05. Therefore, the alternate hypothesis is rejected at 5% level of significance. On the other hand, it is observed that both male and female possess significant influence on passenger satisfaction in case of responsiveness as the 'p' value is 0.009. So, the alternate hypothesis is accepted at 5% level of significance. Here, female passengers are more satisfied than male passengers.

5.10.3.2 Age-wise Comparison of Passenger Satisfaction

This section deals with the comparison of passenger satisfaction according to the age of the passengers. In order to do the same, following hypothesis is formulated and tested by applying One-way ANOVA/ Welch test (as per homogeneity assumption of population variance). The Levene's test is applied to check the equality of the population variance.

H0: There is no significant difference in the passenger satisfaction of different age group passengers.

H1: There is significant difference in the passenger satisfaction of different age group passengers.

Table 5.40

Age-wise Comparison of Passenger Satisfaction of Low-Cost International Airlines

Dimensions	Descriptive Statistics of Age-wise Comparison				Levene's test of Equality of Variance		One- way ANOVA/ Welch test	
	Less than 21	21-40	41-60	Above 60	Test statistics	Sig. value	Test Statistics	Sig. value
Tangibles	3.707 (0.901)	3.534 (0.890)	3.275 (0.852)	2.927 (1.747)	1.345	.259	3.767*	.011
Reliability	3.738 (0.699)	3.591 (0.808)	3.328 (0.907)	2.933 (1.677)	2.882*	.036	3.387	.066
Responsiveness	3.721 (0.668)	3.368 (0.948)	3.190 (0.936)	2.250 (1.250)	1.616	.185	4.127**	.007
Assurance	3.438 (0.639)	3.585 (0.756)	3.484 (0.695)	2.733 (1.553)	2.535	.056	2.401	.067
Empathy	3.932 (0.572)	3.612 (0.801)	3.496 (0.767)	3.000 (1.750)	5.022**	.002	3.501*	.041
Overall Experience	4.038 (0.747)	3.522 (0.939)	3.381 (0.889)	3.000 (1.802)	3.121*	.026	4.825*	.027

Source: Primary Data
**Significant at 5% level*
***Significant at 1% level*
Parentheses represent standard deviation

The above Table explains the result of One-way ANOVA/ Welch test, which is employed to check the significant difference in the passengers' satisfaction of Low-Cost International Airlines according to their age groups. Before conducting the test, the homogeneity assumption of the population variance is measured with the help of Levene's test. As per the result, One-way ANOVA or Welch test is applied according to the assumption of either homogeneity or heterogeneity of population variance.

In the case of Passenger Satisfaction on 'tangibles', the test statistics (1.345) and significance value (.259) of Levene's test disclose that the population variance is homogenous or equal. Therefore, One-way ANOVA is applied for the mean comparison of satisfaction level among different age group passengers. Accordingly, the test statistics (3.767) and significance value (.011) of One-way ANOVA test disclose that the null hypothesis is rejected at 1% level of significance. Hence, there exists significant difference in the passenger satisfaction on 'tangibles' among passengers from different age groups. The passengers having above 60 years old have low level of satisfaction on 'tangibles' than others.

Similarly, with respect to the passenger satisfaction on 'reliability', the test statistics (2.882) and significance value (.036) of Levene's test reveal that the population variance is heterogeneous or unequal. Hence, Welch test is applied for the mean comparison of satisfaction level among different age group passengers. Consequently, the test statistics (3.387) and significance value (.066) of Welch test disclose that the null hypothesis is failed to reject at 5% level of significance. Thus, there exists no significant difference in the passenger satisfaction on 'reliability' among passengers from different age groups.

Likewise, regarding the passenger satisfaction on 'responsiveness', the test statistics (1.616) and significance value (.185) of Levene's test disclose that the population variance is homogenous or equal. As a result, One-way ANOVA is applied for the mean comparison of satisfaction level among different age group passengers. So, the test statistics (4.127) and significance value (.007) of One-way ANOVA test disclose that the null hypothesis is rejected at 1% level of significance. Accordingly, there exists significant difference in the passenger satisfaction on 'responsiveness' among passengers from different age groups. The passengers having above 60 years old have low level of satisfaction on 'responsiveness' than others.

Concerning the passenger satisfaction on 'assurance', the test statistics (2.535) and significance value (.056) of Levene's test disclose that the population variance is

homogenous or equal. And so, One-way ANOVA is applied for the mean comparison of satisfaction level among different age group passengers. Thus, the test statistics (2.401) and significance value (.067) of One-way ANOVA test unveil that the null hypothesis is failed to reject at 5% level of significance. Subsequently, there exists no significant difference in the passenger satisfaction on 'assurance' among passengers from different age groups.

With reference to the passenger satisfaction on 'empathy', the test statistics (5.022) and significance value (.002) of Levene's test reveal that the population variance is heterogeneous or unequal. Hence, Welch test is applied for the mean comparison of satisfaction level among different age group passengers. Consequently, the test statistics (3.501) and significance value (.041) of Welch test disclose that the null hypothesis is rejected at 5% level of significance. Consequently, there exists significant difference in the passenger satisfaction on 'empathy' among passengers from different age groups. The passengers having above 60 years old have low level of satisfaction on 'empathy' variable than others.

Relating to the passenger satisfaction on 'overall experience', the test statistics (3.121) and significance value (.026) of Levene's test disclose that the population variance is heterogeneous or unequal. Thus, Welch test is applied for the mean comparison of satisfaction level among different age group passengers. Accordingly, the test statistics (4.825) and significance value (.027) of Welch test disclose that the null hypothesis is rejected at 5% level of significance. As a result, there exists significant difference in the passenger satisfaction on 'overall experience' among passengers from different age groups. The passengers having above 60 years old have low level of satisfaction on 'overall experience' variable than others.

Table 5.41

Multiple Comparisons of Different Age Group of Passengers Regarding Passenger Satisfaction

Dependent Variable	Tests	(I) Age	(J) Age	Mean Difference (I-J)	Sig.
Tangibles	Tukey HSD	Less than 21	21-40	-.17315	.780
			41-60	.60121	.645
			Above 60	**.25890***	**.027**
Responsiveness	Tukey HSD	Less than 21	21-40	.35297	.261
			41-60	**.53045***	**.037**
			Above 60	**1.47115***	**.048**
Empathy	Tamhane	Less than 21	21-40	.32019	.083
			41-60	.11571	.644
			Above 60	**.43590****	**.009**
Overall Experience	Tamhane	Less than 21	21-40	.14132	.593
			41-60	**.65705****	**.002**
			Above 60	**.51573***	**.016**
** Significant at the 0.01 level, * significant at the 0.05 level.					

Source: Primary Data

Here, Tukey HSD and Tamhane's T2 test is applied for checking the multiple comparison of satisfaction level according to different age groups of the passengers. In the first two cases Tukey HSD post hoc test is applied after One-way ANOVA and the result depicts that there exists significant difference in the opinion of less than 21 and above 60 years old age group passengers in case of tangibles. With regard to the variable responsiveness, there exists significant difference in the opinion of passengers between less than 21 & 41-60 age group passengers and less than 21 & above 60 years old age group passengers.

Similarly, Tamhane's T2 test is employed to check the pair-wise comparison of age groups after Welch test. The result also exhibits that there exists significant difference in the opinion of less than 21 and above 60 years old age group passengers regarding 'empathy'. In case of dimension 'overall experience', there exists significant difference in the opinion of passengers between less than 21 & 41-60 age group passengers and less than 21 & above 60 years old age group passengers.

5.10.3.3 Education-wise Comparison of Passenger Satisfaction

This section covers the analysis regarding the comparison of passenger satisfaction according to their education. In order to do the same, following hypothesis is formulated and tested by applying One-way ANOVA/ Welch test (as per homogeneity assumption of population variance). The Levene's test is applied to check the equality of the population variance.

H0: There is no significant difference in the passenger satisfaction according to their education.

H1: There is significant difference in the passenger satisfaction according to their education.

Table 5.42

Education-wise Comparison of Passenger Satisfaction of Low-Cost International Airlines

Dimensions	Descriptive Statistics of Education-wise Comparison					Levene's test of Equality of Variance		One- way ANOVA/ Welch test	
	School Level	Diploma	Graduation	Post-Graduation	Professional Degree	Test statistics	Sig. value	Test Statistics	Sig. value
Tangibles	3.478 (0.750)	3.540 (0.903)	3.438 (0.953)	3.414 (0.864)	3.369 (0.905)	.784	.536	.273	.895
Reliability	3.450 (0.827)	3.489 (0.972)	3.509 (0.878)	3.580 (0.764)	3.350 (0.889)	1.263	.284	.654	.625
Responsiveness	3.492 (0.633)	3.420 (1.037)	3.251 (0.998)	3.420 (0.801)	3.216 (1.003)	2.375	.052	.758	.553
Assurance	3.438 (0.639)	3.585 (0.756)	3.484 (0.695)	2.733 (1.553)	2.733 (1.553)	1.399	.234	.367	.832
Empathy	3.492 (0.633)	3.566 (0.756)	3.532 (0.806)	3.623 (0.670)	3.514 (0.869)	2.979	.059	.358	.839
Overall Experience	3.607 (0.908)	3.297 (0.992)	3.516 (0.979)	3.516 (0.890)	3.471 (0.782)	.760	.552	.775	.542

Source: Primary Data
Parentheses represent standard deviation

From the above Table, it is clear that the Levene's statistics are statistically not significant at 5% level. Therefore, One-way ANOVA is applied for the mean comparison of all factors of satisfaction level among passengers from different education background.

The Table 5.42 elucidates the result of One-way ANOVA which is used to check the significant difference in the passenger satisfaction of Low-Cost International Airlines according to their education. Education is not found to be an influencing factor in case of all dimensions of passenger satisfaction such as tangibles, reliability, responsiveness, assurance, empathy, and overall experience since the significance values are greater than 0.05. So the null hypothesis is statistically supported and there exists insignificant difference in the passengers' satisfaction level according to their education.

5.10.3.4 Occupation-wise Comparison of Passenger Satisfaction

This section discloses the analysis regarding the comparison of passengers' satisfaction according to their occupation. In order to do the same, following hypothesis is formulated and tested by applying One-way ANOVA/ Welch test (as per homogeneity assumption of population variance). The Levene's test is applied to check the equality of the population variance.

H0: There is no significant difference in the passengers' satisfaction according to their occupation.

H1: There is significant difference in the passengers' satisfaction according to their occupation.

Table 5.43

Occupation-wise Comparison of Passenger Satisfaction of Low-Cost International Airlines

Dimensions	Descriptive Statistics of Occupation-wise Comparison						Levene's test of Equality of Variance		One- way ANOVA/ Welch test	
	Self Employed	Private Sector	Govt./ Public Sector	Professional	Home maker	Student	Test statistics	Sig. value	Test Statistics	Sig. value
Tangibles	3.427 (.937)	3.448 (.791)	3.426 (.955)	3.364 (.955)	3.285 (1.09)	3.724 (.887)	2.343	.041	.961	.445
Reliability	3.392 (.848)	3.471 (.864)	3.700 (.787)	3.452 (.820)	3.475 (.964)	3.675 (.857)	.178	.971	.876	.497
Responsiveness	3.230 (.890)	3.260 (.909)	3.316 (1.04)	3.271 (1.08)	3.381 (.993)	3.695 (.741)	1.338	.247	1.49	.191
Assurance	3.521 (.779)	3.502 (.733)	3.800 (.560)	3.505 (.744)	3.660 (.812)	3.583 (.712)	.899	.481	1.10	.357
Empathy	3.642 (.778)	3.550 (.716)	3.750 (.806)	3.447 (.894)	3.531 (1.03)	3.810 (.641)	2.033	.073	1.38	.229
Overall Experience	3.402 (.860)	3.428 (.928)	3.450 (1.04)	3.649 (.901)	3.512 (.943)	3.770 (.909)	.116	.989	1.28	.269

Source: Primary Data
Parentheses represent standard deviation

Table 5.43 shows the result of Levene's test of equality of variance. With regard to the passenger satisfaction on 'tangibles', the test statistics (2.343) and significance value (.041) of Levene's test indicate that the population variance is heterogeneous or unequal. Therefore, Welch test is applied for the mean comparison of satisfaction level among passengers from different occupation status. The Levene's statistics for all other dimensions are statistically insignificant at 5% level and one-way ANOVA is applied in these cases.

The above Table explains the result of One-way ANOVA/ Welch test which is used to check the significant difference in the passengers' satisfaction of Low-Cost International Airlines according to their occupation status. According to the test statistics and significance values, it is clear that there exists no significant difference

in the satisfaction level of passengers in case of all variables according to their occupation status. So, the null hypothesis is failed to reject at 5% level of significance since the 'p' values are greater than 0.05.

5.10.3.5 Income-wise Comparison of Passenger Satisfaction

This section discloses the analysis regarding the comparison of passengers' satisfaction according to their income category. In order to do the same, following hypothesis is formulated and tested by applying One-way ANOVA/ Welch test (as per homogeneity assumption of population variance). The Levene's test is applied to check the equality of the population variance.

H0: There is no significant difference in the passengers' satisfaction according to their annual income.

H1: There is significant difference in the passengers' satisfaction according to their annual income.

Table 5.44

Income-wise Comparison of Passenger Satisfaction of Low-Cost International Airlines

Dimensions	Descriptive Statistics of Income-wise Comparison				Levene's test of Equality of Variance		One- way ANOVA	
	Up to 5 lakhs	5,00,001– 15 lakhs	15,00,001 – 25 lakhs	Above 25 lakhs	Test statistics	Sig. value	Test Statistics	Sig. value
Tangibles	3.511 (0.865)	3.418 (0.928)	3.394 (0.842)	2.771 (0.829)	.297	.828	3.174*	.024
Reliability	3.489 (0.905)	3.520 (0.807)	3.641 (0.721)	2.914 (0.832)	1.107	.346	2.589	.053
Responsiveness	3.361 (0.944)	3.292 (0.930)	3.352 (0.880)	2.273 (1.044)	.903	.440	2.021	.110
Assurance	3.582 (0.730)	3.524 (0.756)	3.676 (0.625)	2.971 (1.553)	.415	.742	3.525*	.015
Empathy	3.626 (0.769)	3.564 (0.793)	3.692 (0.710)	2.839 (0.938)	.720	.540	4.760**	.003
Overall Experience	3.545 (0.943)	3.479 (0.919)	3.500 (0.873)	2.964 (0.795)	.436	.728	1.760	.154

Source: Primary Data
**Significant at 5% level*
***Significant at 1% level*
Parentheses represent standard deviation

From the above Table, the Levene's statistic based on comparison of mean indicates that the population variance is homogenous or equal in case of all dimensions. Hence, One-way ANOVA is suitable for measuring mean difference among all variables.

The Table 5.44 describes the result of One-way ANOVA which is employed to check the significant difference in the passengers' satisfaction of Low-Cost International Airlines according to their income level. There is significant mean difference in the passenger satisfaction on tangibles, assurance and empathy according to their income level as 'p' values are .024, .015 and .003 respectively. Hence the null hypothesis is rejected at 5% level of significance as 'p' values are less than 0.05. The passengers having above 25 lakhs income have low level of satisfaction than that of other income groups.

On the other hand, the Table depicts that there is no significant mean difference exists in the passenger satisfaction on reliability, responsiveness and overall experience according to their income level. Here the 'p' values are .053, .110 and .154, which show insignificant difference as 'p' values are greater than 0.05. Hence, the null hypothesis is failed to reject at 5% level of significance.

Table 5.45

Multiple Comparisons of Income Group of Passengers Regarding Passenger Satisfaction

Dependent Variable	Tests	(I) Income	(J) Income	Mean Difference (I-J)	Sig.
Tangibles	Tukey HSD	Above 25,00,000	Up to 5,00,000	**-.73958***	**.014**
			5,00,001 - 15,00,000	**-.64675***	**.046**
			15,00,001 - 25,00,000	-.62344	.109
Assurance	Tukey HSD	Above 25,00,000	Up to 5,00,000	**-.61135***	**.014**
			5,00,001 - 15,00,000	**-.55305***	**.036**
			15,00,001 - 25,00,000	**-.70549***	**.011**
Empathy	Tukey HSD	Above 25,00,000	Up to 5,00,000	**-.78751****	**.002**
			5,00,001 - 15,00,000	**-.72540****	**.005**
			15,00,001 - 25,00,000	**-.85302****	**.003**
** Significant at the 0.01 level, * significant at the 0.05 level.					

Source: Primary Data

Here Tukey HSD post hoc test is applied for checking the pair wise comparison of satisfaction level according to different income groups of the passengers. The post hoc test result reveals that significant difference exists in the satisfaction level of passengers between all income groups with respect to' assurance' and 'empathy'. In case of 'tangible', the result exhibits that significant difference exists in the satisfaction level of passengers between up to 5,00,000 & above 25,00,000 and 5,00,001 - 15,00,000 & above 25,00,000. In case of these three variables, passengers of above 25, 00,000 income group have low level of satisfaction as compared to other income groups.

5.10.3.6Airport-wise Comparison of Passenger Satisfaction

This section releases the analysis regarding the comparison of passengers' satisfaction by considering selected airports in Kerala as the independent variable. In order to do the same, following hypothesis is formulated and tested by applying One-way ANOVA/ Welch test (as per homogeneity assumption of population variance). The Levene's test is applied to check the equality of the population variance.

H0: There is no significant difference in the passengers' satisfaction according to selected airports in Kerala.

H1: There is significant difference in the passengers' satisfaction according to selected airports in Kerala.

Table 5.46

Airport-wise Comparison of Passenger Satisfaction of Low-Cost International Airlines

Dimensions	Descriptive Statistics of Airport-wise Comparison			Levene's test of Equality of Variance		One- way ANOVA/ Welch test	
	TVM	Cochin	Calicut	Test statistics	Sig. value	Test Statistics	Sig. value
Tangibles	3.403 (0.908)	3.435 (0.892)	3.485 (0.880)	.123	.884	.295	.744
Reliability	3.474 (0.815)	3.440 (0.872)	3.570 (0.885)	.310	.734	.838	.433
Responsiveness	3.281 (0.930)	3.237 (0.959)	3.424 (0.930)	.017	.983	1.458	.234
Assurance	3.555 (0.719)	3.466 (0.783)	3.628 (0.700)	.956	.385	1.633	.197
Empathy	3.487 (0.838)	3.555 (0.763)	3.709 (0.53)	.759	.469	2.831	.060
Overall Experience	3.533 (0.914)	3.455 (0.37)	3.503 (0.933)	.154	.857	.241	.786

Source: Primary Data
Parentheses represent standard deviation

From the above Table, the Levene's test exhibits that homogeneity assumption is proved in case of all dimensions since 'p' values are greater than 0.05 at 5% level of significance. Thus, One-way ANOVA is considered as the suitable statistical test.

The Table 5.46 represents the result of One-way ANOVA for checking the significant difference in the passengers' satisfaction of Low-Cost International Airlines with reference to their airport from/to which they are travelling. There exists no significant mean difference in the satisfaction level of passengers on tangibles, reliability, responsiveness, assurance, empathy and overall experience with reference to their airport which they have selected for travel. Here the 'p' values are.744, .433, .234, .197, .060 and .786 respectively, which shows insignificant mean difference in case of all factor variables. Therefore, the null hypothesis is failed to reject at 5% level of significance as 'p' values are greater than 0.05.

5.10.3.7 Airline-wise Comparison of Passenger Satisfaction

This section announces the analysis regarding the comparison of passengers' satisfaction by considering selected low-cost airlines as the independent variable. In order to do the same, following hypothesis is formulated and tested by applying One-way ANOVA/ Welch test (as per homogeneity assumption of population variance). The Levene's test is applied to check the equality of the population variance.

H0: There is no significant difference in the passengers' satisfaction according to selected low-cost airlines.

H1: There is significant difference in the passengers' satisfaction according to selected low-cost airlines.

Table 5.47

Airlines-wise Comparison of Passenger Satisfaction of Low-Cost International Airlines

Dimensions	Descriptive Statistics of Airline-wise Comparison			Levene's test of Equality of Variance		One- way ANOVA	
	Air India Express	Spice Jet	IndiGo	Test statistics	Sig. value	Test Statistics	Sig. value
Tangibles	3.423 (0.919)	3.388 (0.895)	3.512 (0.862)	.254	.776	.696	.499
Reliability	3.406 (0.878)	3.425 (0.863)	4.152 (0.832)	.563	.570	3.763*	.027
Responsiveness	3.281 (1.012)	3.309 (0.876)	3.751 (0.936)	1.023	.360	3.191*	.038
Assurance	3.570 (0.765)	3.440 (0.714)	3.640 (0.719)	.297	.743	1.585	.077
Empathy	3.607 (0.821)	3.516 (0.715)	3.627 (0.827)	.916	.401	.757	.470
Overall Experience	3.481 (1.006)	3.477 (0.870)	3.853 (0.904)	1.676	.188	3.151*	.040

Source: Primary Data
Parentheses represent standard deviation
**Significant at 5% level*

From the above Table, the Levene's statistic based on comparison of mean indicates that the population variance is homogenous or equal in case of all dimensions. Hence, One-way ANOVA is suitable for measuring mean difference among all variables.

As per the Table 5.47, the 'p' values obtained for the variables reliability, responsiveness, and overall experience are 0.027, 0.038 and 0.040 respectively. It indicates that there is significant difference in the mean scores of passenger satisfaction of reliability, responsiveness and overall experience of IndiGo Airlines compared to Air India Express and SpiceJet. Since the 'p' values are less than 0.05, the null hypothesis is rejected at 5% level of significance. On the other hand, there exists no significant difference in the Passenger Satisfaction of tangibles, assurance

and empathy among Air India Express, Spice Jet and IndiGo with insignificant 'p' values of 0.499, 0.077 and 0.470 respectively.

Table 5.48

Multiple Comparison of Airline Regarding Passenger Satisfaction

Tukey HSD				
Dependent Variable	**(I) Airlines**	**(J) Airlines**	**Mean Difference (I-J)**	**Sig.**
Reliability	IndiGo	Air India Express	.44593*	.045
		SpiceJet	.52741*	.042
Responsiveness	IndiGo	Air India Express	.47037*	.033
		SpiceJet	.44259*	.027
Overall Experience	IndiGo	Air India Express	.55185*	.041
		SpiceJet	.45556*	.035
*significant at the 0.05 level.				

Source: Primary Data

The above Table discusses the multiple comparisons of airlines regarding the passenger satisfaction. It is clear that, IndiGo airline is significantly different from other two airlines regarding the passenger satisfaction on reliability, responsiveness and overall experience with significant mean difference. It means, the passengers have good level of satisfaction on IndiGo airlines than Air India Express and SpiceJet.

5.10.3.8 Comparison of Passenger Satisfaction based on Purpose of Visit

This section deals with the analysis regarding the comparison of passengers' satisfaction based on their purpose of visit. In order to do the same, following hypothesis is formulated and tested by applying One-way ANOVA/ Welch test (as per homogeneity assumption of population variance). The Levene's test is applied to check the equality of the population variance.

H0: There is no significant difference in the passengers' satisfaction according to their purpose of visit.

H1: There is significant difference in the passengers' satisfaction according to their purpose of visit.

Table 5.49

Comparison of Passenger Satisfaction based on their Purpose of Visit

Dimensions	Descriptive Statistics of Purpose of Visit-wise Comparison					Levene's test of Equality of Variance		One- way ANOVA	
	Business/ Official	Job	Leisure/ Tour	Visit relatives/ friends	Education	Test statistics	Sig. value	Test Statistics	Sig. value
Tangibles	3.452 (0.823)	3.343 (0.844)	3.895 (0.81)	3.425 (0.926)	4.463 (0.813)	.495	.740	5.22**	.000
Reliability	3.336 (0.881)	3.416 (0.838)	3.660 (1.025)	3.569 (0.801)	4.072 (1.197)	1.095	.358	2.48	.053
Responsiveness	3.177 (0.827)	3.143 (0.943)	3.597 (0.979)	3.461 (0.895)	4.227 (0.951)	.250	.910	6.03**	.000
Assurance	3.473 (0.638)	3.497 (0.731)	3.765 (0.803)	3.567 (0.730)	4.036 (0.933)	.783	.537	2.072	.082
Empathy	3.519 (0.637)	3.442 (0.795)	3.891 (0.916)	3.687 (0.751)	4.427 (0.753)	1.216	.303	5.39**	.000
Overall Experience	3.276 (0.835)	3.342 (0.940)	3.717 (1.020)	3.667 (0.853)	4.272 (0.958)	.941	.440	5.57**	.000

Source: Primary Data
***Significant at 1% level*
Parentheses represent standard deviation

From the above Table, the Levene's statistics based on comparison of mean indicate that the population variance is homogenous or equal in case of all dimensions. Hence, One-way ANOVA is suitable for measuring mean difference among all variables.

The Table 5.49 elucidates the results of One-way ANOVA for testing mean comparison of the passengers' satisfaction of Low-Cost International Airlines with

regard to their purpose of visit. Based on purpose of visit, satisfaction levels of passengers on tangibles, responsiveness, empathy and overall experience are different. The descriptive statistics of passenger satisfaction discloses that passengers who have travelled for education purpose have more satisfaction than others. Hence the null hypothesis is rejected at 1% level of significance as 'p' values are less than 0.01.

On the contrary, there is insignificant difference in the level of passenger satisfaction on reliability and assurance based on their purpose of travel. The descriptive statistics of passenger satisfaction on reliability and assurance reveal almost the same mean values. Hence, the null hypothesis is failed to reject at 5% level of significance.

Table 5.50

Multiple Comparison of Purpose of Visit of Passengers Regarding the Passenger Satisfaction

Tukey HSD				
Dependent Variable	**(I) Purpose**	**(J) Purpose**	**Mean Difference (I-J)**	**Sig.**
Tangibles	Education	Business/ Official	**.91100***	**.021**
		Job	**1.02048****	**.002**
		Leisure/ Tour	.46798	.589
		Visit relatives/ friends	**.93846****	**.006**
Responsiveness	Education	Business/ Official	**1.04964****	**.008**
		Job	**1.08385****	**.002**
		Leisure/ Tour	.62945	.336
		Visit relatives/ friends	.76573	.061
Empathy	Education	Business/ Official	**.75299***	**.037**
		Job	**.83062****	**.005**
		Leisure/ Tour	.38142	.662
		Visit relatives/ friends	.58566	.112
Overall Experience	Education	Business/ Official	**.99641***	**.012**
		Job	**.93062****	**.009**
		Leisure/ Tour	.55534	.453
		Visit relatives/ friends	.60490	.208
** Significant at the 0.01 level, * significant at the 0.05 level.				

Source: Primary Data

Here Tukey HSD post hoc test is conducted for identifying where the significant difference exists among the groups. The post hoc test result discloses that in the case of satisfaction level of passengers on responsiveness, empathy and overall experience, significant difference exists between education & business/ official purpose travellers and education & job purpose travellers. In case of tangible, the result exhibits that significant difference exists in the Passenger Satisfaction between education & business/official purpose travellers, education & job purpose travellers and education & visit relatives/friends purpose travellers. In all these cases, education purpose travellers have high level of satisfaction as compared to travellers of other purposes. The other pairs are statistically not significant as the p values are greater than 0.05.

5.10.3.9 Comparison of Passenger Satisfaction based on No. of Times Travelled

This section deals with the analysis regarding the comparison of passengers' satisfaction based on the no. of times travelled. In order to do the same, following hypothesis is formulated and tested by applying One-way ANOVA/ Welch test (as per homogeneity assumption of population variance). The Levene's test is applied to check the equality of the population variance.

H0: There is no significant difference in the passengers' satisfaction according to the no. of times travelled.

H1: There is significant difference in the passengers' satisfaction according to the no. of times travelled.

Table 5.51

Comparison of Passenger Satisfaction based on the No. of Times Travelled

Dimensions	Descriptive Statistics of Frequency of Travel-wise Comparison				Levene's test of Equality of Variance		One- way ANOVA/ Welch test	
	3-5 times	6 -10 times	11- 15 times	Above 15 times	Test statistics	Sig. value	Test Statistics	Sig. value
Tangibles	3.703 (0.876)	3.455 (0.700)	3.247 (0.879)	3.300 (0.964)	3.112*	.026	5.486**	.001
Reliability	3.827 (0.716)	3.318 (0.855)	3.263 (0.733)	3.424 (0.941)	4.603**	.004	11.73**	.000
Responsiveness	3.680 (0.840)	3.219 (0.834)	3.011 (0.823)	3.198 (1.042)	3.342*	.019	11.10**	.000
Assurance	3.757 (0.746)	3.477 (0.619)	3.311 (0.720)	3.526 (0.760)	.649	.584	5.858**	.001
Empathy	3.805 (0.690)	3.481 (0.735)	3.337 (0.817)	3.569 (0.844)	1.678	.171	5.816**	.003
Overall Experience	3.618 (0.885)	3.415 (0.942)	3.317 (0.934)	3.524 (0.939)	.468	.705	1.731	.160

Source: Primary Data
**Significant at 5% level*
***Significant at 1% level*
Parentheses represent standard deviation

Levene's test of Homogeneity of Variance is used to verify the similarity of the variances of each group of variables. The result shows that in case of assurance, empathy and overall experience, there is no significant difference in variances at 5% level of significance. As the groups are homogeneous, one way ANOVA is applied for the comparison of mean. Whereas, there exists significant difference in variances at 5% level of significance in case of tangibles, reliability and responsiveness. Since the homogeneity assumption is not proved, Welch test is employed for the comparison of mean.

The Table 5.51 represents the result of mean comparison on the passengers' satisfaction of Low-Cost International Airlines with reference to the no. of times travelled. The level of satisfaction of passengers on tangibles, reliability, responsiveness, assurance and empathy is different. The passengers who have

travelled 3-5 times have more satisfaction than the passengers who have travelled more than five times. The test statistics and 'p' values of the table reveal that the mean differences are statistically significant in case of these variables, since 'p' values are less than 0.05. So the null hypothesis is rejected at 5% level of significance.

Besides the above-mentioned dimensions, the level of satisfaction of passengers on overall experience has insignificant mean difference. It means the passenger satisfaction on overall experience is more or less same irrespective of the no. of times they have travelled as it has almost the same mean values. The test statistic (1.731) and 'p' value (.160) of the variable reveal that the mean differences are statistically insignificant. Hence, the null hypothesis cannot reject at 5% level of significance.

Table 5.52

Multiple Comparisons of No. of Times Travelled by the Passengers

Dependent Variable	Tests	(I) Times	(J) Times	Mean Difference (I-J)	Sig.
Tangibles	Tamhane	3-5 times	6-10 times	.24797	.153
			11-15 times	**.45577****	**.007**
			More than 15 times	**.40268****	**.003**
Reliability	Tamhane	3-5 times	6-10 times	**.50905****	**.000**
			11-15 times	**.56363****	**.000**
			More than 15 times	**.40301****	**.001**
Responsiveness	Tamhane	3-5 times	6-10 times	**.46021****	**.001**
			11-15 times	**.66818****	**.000**
			More than 15 times	**.48150****	**.000**
Assurance	Tukey HSD	3-5 times	6-10 times	**.28052***	**.036**
			11-15 times	**.44652****	**.001**
			More than 15 times	.23139	.052
Empathy	Tukey HSD	3-5 times	6-10 times	**.32316***	**.020**
			11-15 times	**.46778****	**.001**
			More than 15 times	.23594	.072

** Significant at the 0.01 level, * significant at the 0.05 level.

Source: Primary Data

Here Tukey HSD/Tamhane post hoc test is applied to have a pair wise comparison to identify the significant difference among the groups. The post hoc test result elucidates that with respect to satisfaction level of passengers on tangibles, significant difference exists among passengers who have flown 3- 5 times & 11 - 15 times and 3- 5 times & more than 15 times, in which respondents who have travelled 3- 5 times have high satisfaction level than that of passengers who have travelled more than five times. In case of reliability and responsiveness, significant difference exists among the passengers who have travelled 3- 5 times & 6-10 times, 3- 5 times & 11 - 15 times and 3- 5 times & more than 15 times, in which passengers who have travelled 3- 5 times have high satisfaction level than that of passengers who have travelled more than five times. Again, passenger satisfaction on assurance and empathy has significant difference among passengers having 3- 5 times & and 6-10 times travel and 3- 5 times & 11-15 times travel. In this case also, passengers having 3- 5 times travel have more satisfaction than that of others. In case of other pairs, no statistical significant difference exists as the p values are greater than 0.05.

Section D

5.11 Passenger Problems of Low-Cost International Airlines

This section of analysis describes the Passenger Problems of Low-cost International Airlines and the comparison of passenger problems with the demographic profiles and traveling details of the passengers. Accordingly, it is divided into two sections. The first section deals with the descriptive analysis of passenger problems and second section deals with the evaluation of the problems by considering demographic variables and traveling details as factor variables. In order to identify the passenger problems, Descriptive Statistics (Mean and Standard Deviation) is used. Furthermore, to check the level of passenger problems, One-Sample‘t’ test is employed. In addition, to compare the passenger problems of low-cost international airlines with the demographic profiles and traveling details, Independent Sample ‘t’ test, One-way ANOVA/ Welch test is applied. These results are given below.

Section 1

5.11.1 Descriptive Statistics of Passenger Problems

Passenger Problems of Low-Cost International Airlines are measured with the help of Five-Point Likert scale ranging from 5 for Strongly Agree to 1 for Strongly Disagree. In order to measure the variable different dimensions are used namely, Ticketing & Flight Fare (TF), Flight (F), Check-in & Boarding (CB), In-flight Services (IF), and Baggage (B).

To identify the passenger problems, descriptive statistics is used and the result is presented below. Here, passenger problems of all factors of each dimension are identified with the help of mean and standard deviation. Whenever the mean value is greater than 4.5, 3.5, 2.5, and 1.5 is considered as strongly agree, agree, neutral, and disagree scale respectively. On the other hand, whenever the mean value is less than 1.5 is considered as strongly disagree scale. The interpretation of 5-point Likert Scale is done as: 1 = 1.00 – 1.49 : very small, 2 = 1.50 – 2.49 : small, 3 = 2.50 – 3.49 : moderate, 4 = 3.50 – 4.49 :big/major, 5 = 4.50 – 5.00 : very big/critical. Accordingly, the descriptive statistics describe the passenger problems of each dimension by considering the mean and standard deviation.

Table 5.53

Descriptive Statistics of Passenger Problems

Dimensions	Factors	Mean	Std. Deviation
Ticketing & Flight Fare (TF)	There is unreasonable increase in airline's fare	4.167	1.005
	There is inconsistency in airline's fare especially during seasons	4.227	1.006
	I experience much delay in refund of cancelled ticket	3.716	0.947
	The airline imposes hidden charges while booking a ticket	3.582	0.944
	The airline charges high amount for ticket rescheduling and cancellation	3.874	0.931

Flight (F)	The airline reschedules/cancels flights without prior notice	3.886	1.086
	The flight is delayed frequently due to weather conditions/technical fault	3.516	1.001
	The airline doesn't give me proper information about flight delay through SMS/call/email	3.427	1.006
	I missed an event/meeting/job due to cancelled/delayed flight	3.217	1.061
	The airline doesn't provide any refreshment when there is long delay of flight	3.651	1.110
Check-In & Boarding (CB)	The airline hasn't sufficient number of counters for check-in	3.604	0.978
	Check-in and boarding employees are not friendly and helpful	3.345	1.023
	The airline imposes high amount for overweight of baggage and luggage	3.866	1.030
	The employees are unwilling to assist the passengers in solving the problems arises due to passenger error	3.454	1.007
In-Flight Services (IF)	The airline serves poor quality meals and beverages in the cabin at high cost	3.570	1.018
	Crew members are not friendly and helpful	3.185	1.037
	The cabin and toilets in the cabin are dirty	3.155	1.075
	I feel uncomfortable due to non-working of air condition in the aircraft	3.192	1.061
Baggage (B)	There is much delay for getting my luggage after flight	3.377	1.063
	I have an experience of mishandling/missing of my luggage	3.209	1.124
	The airline doesn't give proper compensation for luggage loss	3.355	1.018
	I have lost some items from my luggage after flight	3.084	1.178

Source: Primary Data

Table 5.53 represents the descriptive statistics (Mean and Standard Deviation) of passenger's opinion about the various problems they have encountered while travelling in Low Cost International Airlines. The descriptive statistics reveals that

the passengers have encountered various problems under study during their travel in Low Cost International Airlines

Relating to the variable ticketing & flight fare, the passengers have faced major issues on all elements. Among these, the mean scores of the factors 'there is inconsistency in airline's fare especially during seasons' and 'there is unreasonable increase in airline's fare' are 4.227 (SD = 1.006) & 4.167 (SD = 1.005) respectively, which are high as compared to the other three variables. With regard to the variable flight, the passengers have encountered significant problems on the factors 'the airline reschedules/cancels flights without prior notice', 'the airline doesn't provide any refreshment when there is long delay of flight' and 'the flight is delayed frequently due to weather conditions/technical fault'. The mean score (3.886) of the element 'the airline reschedules/cancels flights without prior notice' is high as compared to other items in the variable. There is only moderate level of problems on the factors 'the airline doesn't give me proper information about flight delay through SMS/call/email' and 'I missed an event/meeting/job due to cancelled/delayed flight' with mean scores 3.427 and 3.217 respectively.

As to the variable check-in & boarding, the high mean scores of the factors 'the airline imposes high amount for overweight of baggage and luggage' and 'the airline hasn't sufficient number of counters for check-in' show that the passengers have experienced big problems during their travel. Whereas, The problem level on 'the employees are unwilling to assist the passengers in solving the problems arises due to passenger error' and 'check-in and boarding employees are not friendly and helpful' is moderate with mean scores 3.454 and 3.345 respectively.

With reference to the variable in-flight services, the mean score of the factor 'the airline serves poor quality meals and beverages in the cabin at high cost' is high (3.570) and there exists major issues on this factor. At the same time, the passengers have encountered moderate problems in case of other three factors. As far as the variable baggage, moderate level of passenger problems exists on all elements. The item 'there is much delay for getting my luggage after flight' has a higher mean

score of 3.377 (SD = 1.063) and the item 'I have lost some items from my luggage after flight' has a lower mean score of 3.084 (SD = 1.178) than others.

5.11.2 One – Sample 't' test for Checking the Level of Passenger Problems

Here in order to check the level of Passenger Problems of Low-Cost Airlines, One-Sample 't' test is applied. The following hypothesis is formulated and tested.

H0: There is an average level of Passenger Problems in Low-Cost Airlines (Mean = 3)

H1: There is not an average level of Passenger Problems in Low-Cost Airlines (Mean ≠ 3)

Table 5.54

One Sample Statistics and Test Result of Passenger Problems

Dimensions of Passenger Problems	One-Sample Statistics			One Sample Test (Test Value = 3)		
	N	Mean	Std. Deviation	t	df	Sig. (p) value
Ticketing & Flight Fare	405	3.913	0.807	22.755**	404	.000
Flight	405	3.539	0.896	10.316**	404	.000
Check-In & Boarding	405	3.567	0.851	13.423**	404	.000
In-Flight Services	405	3.275	0.910	6.099**	404	.000
Baggage	405	3.256	0.970	5.324**	404	.000

Source: Primary Data
***Significant at 1% level*

Table 5.54 indicates the result of One-Sample 't' test applied for testing the passengers' opinion towards the different problems faced while travelling in Low Cost International Airlines. The test value 3 denotes that there is an average level of problems faced by passengers in Low Cost International Airlines. The mean scores of all dimensions of passenger problems are higher than the test value. The result reveals that passengers have experienced significant level of problems regarding all

variables during their travel. The null hypothesis is rejected at 1% level of significance as the 'p' values are less than 0.01.

As per the 5 point Likert Scale interpretation, major passenger problems exist in case of Ticketing & Flight Fare, Flight and Check-In & Boarding. But, moderate level of passenger problems persists in case of In-Flight Services and Baggage.

Section 2

5.11.3 Comparison of Passenger Problems with Demographic and Traveling Profiles

Here, the Passenger Problems of low-cost airlines is compared with demographic and traveling profiles of the passengers. In order to do so, Independent Sample 't' test, One-way ANOVA/ Welch test and Post-hoc analysis are conducted. Moreover, Levene's test of equality of variance is employed to check the homogeneity assumption of the population variance.

5.11.3.1 Gender-wise Comparison of Passenger Problems

This section deals with the comparison of attitude of passengers regarding the problems of low-cost international airlines according to their gender. In order to do the same, following hypothesis is formulated and tested by applying Independent Sample 't' test.

H0: Regarding Passenger Problems, there is no significant difference in the attitude of male and female passengers.

H1: Regarding Passenger Problems, there is significant difference in the attitude of male and female passengers.

Table 5.55

Gender-wise Comparison of Passenger Problems of Low-Cost International Airlines

Dimensions	Gender	Mean	SD	Independent Sample t-test	
				t	Sig.
Ticketing & Flight Fare (TF)	Male	3.900	0.793	0.522	0.602
	Female	3.947	0.847		
Flight (F)	Male	3.541	0.898	0.666	0.506
	Female	3.508	0.893		
Check-In & Boarding (CB)	Male	3.679	0.759	3.878**	0.000
	Female	3.272	1.002		
In-Flight Services (IF)	Male	3.301	0.889	0.933	0.351
	Female	3.207	0.964		
Baggage (B)	Male	3.301	0.957	1.524	0.128
	Female	3.137	1.000		

Source: Primary Data
***Significant at 1% level*

The above Table shows the result of Independent Sample 't' test for checking the mean difference in the passengers' attitude towards passenger problems on Low-Cost Airlines between male and female passengers. As regards the dimension check-in & boarding, there is significant difference in the mean score of passengers' attitude between male and female. In detail, the 't' value of 3.878 is significant at 1% level and the 'p' value is less than 0.01. So, the alternate hypothesis is statistically supported.

On the other hand, the passenger problems on ticketing & flight fare, flight, In-flight services and baggage have almost the same mean scores for male and female. There is no significant difference in the mean scores of these variables between male and female passengers. In this case, the 't' values are not significant and the 'p' values are greater than 0.05. Hence, the null hypothesis is accepted at 5% level of significance.

5.11.3.2 Age-wise Comparison of Passenger Problems

This section deals with the comparison of attitude of passengers regarding the problems of low-cost international airlines according to the age groups. In order to do the same, following hypothesis is formulated and tested by applying One-way ANOVA/ Welch test (as per homogeneity assumption of population variance). The Levene's test is applied to check the equality of the population variance.

H0: Regarding Passenger Problems, there is no significant difference in the attitude of passengers according to their age group.

H1: Regarding Passenger Problems, there is significant difference in the attitude of passengers according to their age group.

Table 5.56

Age-wise Comparison of Passenger Problems of Low-Cost International Airlines

Dimensions	Descriptive Statistics of Age-wise Comparison				Levene's test of Equality of Variance		One- way ANOVA/ Welch test	
	Less than 21	21-40	41-60	Above 60	Test statistics	Sig. value	Test Statistics	Sig. value
Ticketing & Flight Fare	3.723 (0.792)	3.911 (0.830)	3.941 (0.780)	4.266 (0.702)	0.541	.654	0.732	.534
Flight	3.376 (1.020)	3.522 (0.875)	3.367 (0.900)	4.333 (0.611)	0.483	.694	1.942	.122
Check-In &Boarding	3.432 (1.030)	3.604 (0.873)	3.546 (.773)	3.166 (1.626)	2.254	.082	0.608	.610
In-Flight Services	3.019 (1.007)	3.347 (0.914)	3.197 (.874)	3.333 (.577)	0.516	.672	2.925	.074
Baggage	3.182 (0.912)	3.352 (0.973)	3.123 (.964)	3.833 (1.040)	0.231	.875	2.112	.098

Source: Primary Data
Parentheses represent standard deviation

From the above Table, the Levene's test exhibits that homogeneity assumption is proved in case of all dimensions since 'p' values are greater than 0.05 at 5% level of significance. Thus, One-way ANOVA is considered as the suitable statistical test.

The Table 5.56 represents the result of One-way ANOVA for checking the significant difference in the passengers' attitude towards the problems of low-cost international airlines according to their age groups. There exists no significant mean difference in the passenger problems on ticketing & flight fare, flight, check-in & boarding, in-flight services and baggage with regard to their age group. Here the 'p' values are 0.534, 0.122, 0.610, 0.074 and 0.098 respectively, which shows insignificant mean difference in case of all factors. Therefore, the null hypothesis is accepted at 5% level of significance as 'p' values are greater than 0.05.

5.11.3.3 Education-wise Comparison of Passenger Problems

This section exhibits the analysis regarding the comparison of the attitude of passengers regarding the problems of low-cost international airlines according to their education background. In order to do the same, following hypothesis is formulated and tested by applying One-way ANOVA/ Welch test (as per homogeneity assumption of population variance). The Levene's test is applied to check the equality of the population variance.

H0: Regarding Passenger Problems, there is no significant difference in the attitude of passengers according to their education background.

H1: Regarding Passenger Problems, there is significant difference in the attitude of passengers according to their education background.

Table 5.57

Education-wise Comparison of Passenger Problems of Low-Cost International Airlines

Dimensions	Descriptive Statistics of Education-wise Comparison					Levene's test of Equality of Variance		One- way ANOVA/ Welch test	
	School Level	Diploma	Graduation	Post-Graduation	Professional Degree	Test statistics	Sig. value	Test Statistics	Sig. value
Ticketing & Flight Fare	3.560 (0.916	3.846 (0.882)	3.976 (0.728)	3.904 (0.880)	4.180 (0.557)	2.343	.054	4.57**	.001
Flight	3.203 (0.842)	3.497 (0.826)	3.505 (0.941)	3.500 (0.839)	3.492 (0.963)	.802	.524	1.33	.257
Check-In & Boarding	3.455 (0.796)	3.606 (1.003)	3.562 (0.808)	3.571 (0.818)	3.663 (0.958)	1.465	.212	.432	.786
In-Flight Services	3.058 (0.747)	3.356 (0.879)	3.269 (0.941)	3.379 (0.829)	3.201 (1.101)	3.82**	.005	2.00	.097
Baggage	2.959 (0.713)	3.404 (0.981)	3.330 (0.993)	3.295 (1.033)	3.153 (0.977)	4.10**	.003	2.90*	.024

Source: Primary Data
**Significant at 5% level*
***Significant at 1% level*
Parentheses represent standard deviation

The Levene's test of equality of variance shows that the population variance is heterogeneous or unequal in case of in-flight services and baggage. In case of these variables, Welch test is applied for the mean comparison of passengers' attitude towards passenger problems. Whereas, Levene's test disclose that the population variance is homogenous or equal in case of ticketing & flight fare, flight, check-in &boarding. As a result, One-way ANOVA is applied for the mean comparison of these variables.

Table 5.57 describes the result of One-way ANOVA/Welch test with descriptive statistics. From the Table, it is clear that there is a significant mean difference in the

passengers' attitude towards the problems of low-cost international airlines on ticketing & flight fare and baggage based on their educational level. In case of ticketing & flight fare and baggage, passengers having school level education have faced fewer problems than that of other educational group passengers. So the alternate hypothesis is statistically supported at 1% level of significance in case of the variable ticketing & flight fare and at 5% level of significance in case of the variable baggage. Whereas, passengers have faced more or less same degree of problems in case of flight, check-in &boarding and in-flight services and their mean differences are not significant. Hence, the alternate hypothesis is not statistically supported at 5% level of significance.

Table 5.58

Multiple Comparisons of Different Educational Qualification of Passengers Regarding the Problems– Tukey HSD post hoc analysis for One-way ANOVA

Tukey HSD				
Dependent Variable	**(I) Education**	**(J) Education**	**Mean Difference (I-J)**	**Sig.**
Ticketing & Flight Fare	School Level	Diploma	-.28609	.363
		Graduation	**-.41621****	**.007**
		Post-Graduation	-.34354	.079
		Professional Degree	**-.62005****	**.001**
* significant at the 0.01 level.				

Source: Primary Data

From the above Table, the post-hoc test result reveals that as per the mean difference, school level educated passengers are statistically significant from graduate and professional degree categories with regard to their opinion on ticketing & flight fare. Here, school level educated respondents have perceived low level of problems as compared to the passengers having graduation and professional education.

Table 5.59

Multiple Comparisons of Different Educational Qualification of Passengers Regarding the Problems– Tamhane's T2 test for Welch Test

Tamhane				
Dependent Variable	**(I) Education**	**(J) Education**	**Mean Difference (I-J)**	**Sig.**
Baggage	School Level	Diploma	-.44443	.110
		Graduation	**-.37031***	**.033**
		Post-Graduation	-.33539	.186
		Professional Degree	-.19402	.940
* significant at the 0.05 level.				

Source: Primary Data

From the above Table, Tamhane test result describes that significant difference exists in the perception on baggage problems only in between school level and graduate level passengers. School level educated passengers have faced fewer baggage problems than that of other educational group passengers. No significant difference exists in the perception on baggage problems in case of other educational group passengers.

5.11.3.4 Occupation-wise Comparison of Passenger Problems

This section parades the analysis regarding the comparison of the attitude of passengers regarding the problems of low-cost international airlines according to their occupation status. In order to do the same, following hypothesis is formulated and tested by applying One-way ANOVA/ Welch test (as per homogeneity assumption of population variance). The Levene's test is applied to check the equality of the population variance.

H0: Regarding Passenger Problems, there is no significant difference in the attitude of passengers according to their occupation status.

H1: Regarding Passenger Problems, there is significant difference in the attitude of passengers according to their occupation status.

Table 5.60

Occupation-wise Comparison of Passenger Problems of Low-Cost International Airlines

Dimensions	Descriptive Statistics of Occupation-wise Comparison						Levene's test of Equality of Variance		One- way ANOVA/ Welch test	
	Self Employed	Private Sector	Govt./ Public Sector	Professional	Home maker	Student	Test statistics	Sig. value	Test Statistics	Sig. value
Ticketing Flight Fare	3.858 (.835)	3.883 (.807)	4.193 (.574)	3.954 (.780)	4.095 (.816)	3.659 (.906)	0.675	.643	2.009	.076
Flight	3.372 (.890)	3.468 (.819)	3.426 (1.00)	3.649 (1.00)	3.520 (.879)	3.205 (1.01)	0.618	.686	1.251	.284
Check-In & Boarding	3.676 (.663)	3.572 (.784)	3.508 (1.14)	3.649 (.928)	3.518 (.868)	3.371 (1.00)	2.984	.012	.717	.611
In-Flight Services	3.382 (.863)	3.278 (.835)	3.066 (1.08)	3.535 (.941)	3.281 (.980)	2.878 (.953)	1.426	.214	2.85*	.015
Baggage	3.475 (.753)	3.260 (.982)	2.933 (1.14)	3.320 (1.02)	3.306 (1.04)	3.047 (.794)	2.71*	.020	1.859	.107

Source: Primary Data
**Significant at 5% level*
Parentheses represent standard deviation

The homogeneity assumption is not proved in case of the dimensions check-in & boarding and baggage and Welch test is used to measure mean differences. But one-way ANOVA is used in case of all other dimensions since the homogeneity assumption is proved.

Table 5.60 shows the result of One-way ANOVA/ Welch test for the mean comparison of factor variables. With reference to the passengers perception on in-flight service problems, there exists significant mean difference among occupation status as 'p' value is 0.015. Therefore, the null hypothesis is rejected at 5% level of significance. On the other hand, with regard to all other dimensions, there exists no

significant difference in mean scores of passengers' perception on different airline problems. So, the null hypothesis is accepted at 5% level of significance since 'p' values are greater than 0.05.

Table 5.61

Multiple Comparisons of Different Occupation Status of Passengers Regarding the Problems- Tukey HSD post hoc analysis for One-way ANOVA

Tukey HSD				
Dependent Variable	**(I) Occupation**	**(J) Occupation**	**Mean Difference (I-J)**	**Sig.**
In-flight service	Professional	Self-Employed	.15273	.951
		Private Sector Employee	.25614	.413
		Govt./ Public Sector Employee	.46842	.194
		Home Maker	.25384	.747
		Student	**.65671****	**.008**
*significant at the 0.01 level.				

Source: Primary Data

The above Table indicates the result of pair wise comparison of the factor variable in-flight services as per the occupational status of passengers. From the result it is found that significant mean difference in passengers' attitude towards in-flight service problems exists only in between professional respondents and student respondents. Here, student respondents have experienced fewer problems than that of other passengers of different occupational background. In case of all other pairs, there is no significant mean difference with regard to in-flight service problems.

5.11.3.5 Income-wise Comparison of Passenger Problems

This section displays the analysis regarding the comparison of the attitude of passengers regarding the problems of low-cost international airlines according to their annual income. In order to do the same, following hypothesis is formulated and tested by applying One-way ANOVA/ Welch test (as per homogeneity assumption

of population variance). The Levene's test is applied to check the equality of the population variance.

H0: Regarding Passenger Problems, there is no significant difference in the attitude of passengers according to their annual income.

H1: Regarding Passenger Problems, there is significant difference in the attitude of passengers according to their annual income.

Table 5.62

Income-wise Comparison of Passenger Problems of Low-Cost International Airlines

Dimensions	Descriptive Statistics of Income-wise Comparison				Levene's test of Equality of Variance		One- way ANOVA/ Welch test	
	Up to 5 lakh	5,00,001 – 15 lakh	15,00,001 – 25 lakh	Above 25 lakh	Test statistics	Sig. value	Test Statistics	Sig. value
Ticketing & Flight Fare	3.859 (0.850)	4.025 (0.725)	3.841 (0.806)	3.785 (0.909)	1.174	.319	1.450	.228
Flight	3.464 (0.888)	3.471 (0.937)	3.425 (0.765)	3.371 (1.013)	1.404	.241	0.073	.974
Check-In & Boarding	3.513 (0.908)	3.606 (0.785)	3.615 (0.777)	3.857 (0.818)	1.028	.380	0.965	.409
In-Flight Services	3.230 (0.922)	3.326 (0.891)	3.294 (0.908)	3.375 (0.989)	0.557	.644	0.379	.768
Baggage	3.131 (0.991)	3.458 (0.913)	3.250 (0.938)	3.089 (1.063)	0.303	.823	3.408*	.018

Source: Primary Data
**Significant at 5% level*
Parentheses represent standard deviation

From the above Table, it is seen that the Levene's statistics are statistically not significant at 5% level. Thus, One-way ANOVA is considered as the applicable statistical test since the homogeneity assumption is proved.

Table 5.62 demonstrates the result of one way ANOVA for comparing the mean difference of passengers' perception on passenger problems of low-cost international airlines according to their income levels. With regard to the passengers' perception on baggage problems, the mean scores of different income level passengers are significantly different from each other. In this case, passengers having 5, 00,001 – 15 lakhs income have faced more baggage problems than that of other income level passengers. Hence, the null hypothesis is rejected at 5% level of significance as 'p' value is .018.

On the contrary, with respect to the passengers' perception on ticketing & flight fare, flight, check-in &boarding and in-flight services, the mean scores of different income level passengers are more or less same. So the null hypothesis is accepted at 5% level of significance as the mean differences are statistically insignificant.

Table 5.63

Multiple Comparisons of Income Level Regarding the Passenger Problems – Tukey HSD post hoc analysis for One-way ANOVA

Tukey HSD				
Dependent Variable	**(I) Income**	**(J) Income**	**Mean Difference (I-J)**	**Sig.**
Baggage	Up to 5,00,000	5,00,001 - 15,00,000	**-.32646****	**.010**
		15,00,001 - 25,00,000	-.11842	.895
		Above 25,00,000	.04229	.999
* significant at the 0.01 level.				

Source: Primary Data

The pair-wise mean difference among groups is shown in the above Table with the help of Tukey HSD test. The test result indicates that there is significant mean difference in passengers' opinion on baggage problems in between passengers having income up to 5,00,000 &5,00,001 - 15,00,000. Passengers having income 5, 00,001 - 15, 00,000 have experienced more baggage problems than that of other income level passengers.

5.11.3.6 Airport-wise Comparison of Passenger Problems

This section addresses the analysis regarding the comparison of Passenger Problems by considering selected airports in Kerala as the independent variable. In order to do the same, following hypothesis is formulated and tested by using One-way ANOVA/ Welch test (as per homogeneity assumption of population variance). The Levene's test is employed to check the equality of the population variance.

H0: Regarding Passenger Problems, there is no significant difference among selected airports in Kerala.

H1: Regarding Passenger Problems, there is significant difference among selected airports in Kerala.

Table 5.64

Airport-wise Comparison of Passenger Problems of Low-Cost International Airlines

Dimensions	Descriptive Statistics of Airport-wise Comparison			Levene's test of Equality of Variance		One- way ANOVA/ Welch test	
	TVM	Cochin	Calicut	Test statistics	Sig. value	Test Statistics	Sig. value
Ticketing & Flight Fare	4.001 (0.760)	3.908 (0.764)	3.831 (0.889)	0.909	.404	1.509	.222
Flight (F)	3.450 (0.871)	3.432 (0.902)	3.496 (0.921)	0.067	.935	0.181	.835
Check-In & Boarding	3.646 (0.826)	3.546 (0.883)	3.511 (0.844)	1.114	.329	0.916	.401
In-Flight Services	3.318 (0.878)	3.235 (0.941)	3.274 (0.915)	0.171	.843	0.282	.754
Baggage	3.268 (0.930)	3.222 (0.974)	3.279 (1.011)	0.467	.627	0.132	.876

Source: Primary Data
Parentheses represent standard deviation

Levene's test of Homogeneity of Variance reveals that the significant values of all dimensions of passenger problems are greater than 0.05 at 5% level of significance. As a result, One-way ANOVA is the most suitable test for mean comparison.

Table 5.64 shows the result of one way ANOVA for the Airport-wise mean comparison of passengers' opinion on passenger problems of low cost international airlines. Airport is not found to be an influencing factor in case of all dimensions under passenger problems such as ticketing & flight fare, flight, check-in &boarding, in-flight services and baggage as the 'p' values are greater than 0.05. So the null hypothesis is statistically supported.

5.11.3.7 Airline-wise Comparison of Passenger Problems

This section shows the analysis regarding the comparison of Passenger Problems by considering selected low-cost airlines as the independent variable. In order to do the same, following hypothesis is formulated and tested by employing One-way ANOVA/ Welch test (as per homogeneity assumption of population variance). The Levene's test is used to check the equality of the population variance.

H0: Regarding Passenger Problems, there is no significant difference among selected low-cost airlines in Kerala.

H1: Regarding Passenger Problems, there is significant difference among selected low-cost airlines in Kerala.

Table 5.65

Airlines-wise Comparison of Passenger Problems of Low-Cost International Airlines

Dimensions	Descriptive Statistics of Airline-wise Comparison			Levene's test of Equality of Variance		One- way ANOVA	
	Air India Express	SpiceJet	IndiGo	Test statistics	Sig. value	Test Statistics	Sig. value
Ticketing & Flight Fare	3.857 (0.923)	3.976 (0.726)	3.906 (0.760)	1.964	.142	.733	.481
Flight	3.534 (0.977)	3.551 (0.791)	3.094 (0.810)	2.652	.072	4.118**	.008
Check-In & Boarding	3.596 (0.877)	3.577 (0.784)	3.529 (0.893)	1.179	.309	0.220	.803
In-Flight Services	3.540 (1.040)	3.472 (0.842)	3.014 (0.738)	2.354	.075	3.271*	.015
Baggage	3.557 (1.021)	3.513 (0.921)	3.000 (0.865)	2.903	.056	4.094**	.010

Source: Primary Data
***Significant at 1% level*
**Significant at 5% level*
Parentheses represent standard deviation

One way ANOVA is applied in all factor variables since selected sample groups are found to be homogeneous as per Levene's test of Homogeneity of Variance. The above Table discloses the airline-wise comparison of passenger problems by considering Ticketing & Flight Fare, Flight, Check-In & Boarding, In-Flight Services and Baggage as the factor variables. From the descriptive statistics it is clear that, all passengers of Air India Express, Spice jet and IndiGo have faced big problems related with ticketing & flight fare and check-in & boarding with the mean score of greater than 3.5 and no significant mean difference exists in case of these

variables. On the other hand, passengers of IndiGo have faced low level of problems related with flight matters (f = 4.118, p = .008), in-flight services (f = 3.271, p = .015) and baggage (f = 4.094, p = .010) compared with Air India Express and SpiceJet. Since the mean difference is significant at 5% level, the null hypothesis is rejected accordingly.

Table 5.66

Multiple Comparisons of Airlines Regarding Passenger Problems

Tukey HSD				
Dependent Variable	**(I) Airlines**	**(J) Airlines**	**Mean Difference (I-J)**	**Sig.**
Flight	IndiGo	Air India Express	**.54000***	**.029**
		SpiceJet	**.45704***	**.032**
In flight service	IndiGo	Air India Express	**.57407***	**.013**
		SpiceJet	**.54259***	**.025**
Baggage	IndiGo	Air India Express	**.45741***	**.038**
		SpiceJet	**.51296***	**.027**
*significant at the 0.05 level.				

Source: Primary Data

Table 5.66 exhibits the multiple comparison result of airlines regarding the passenger problems by using Tukey HSD post-hoc test. The pair-wise comparison denotes that, IndiGo airlines are significantly different from the Air India Express as well as SpiceJet regarding the passenger problems. It means that the passengers have faced only moderate level of problems while traveling with IndiGo when compared with other two airlines.

5.11.3.8 Comparison of Passenger Problems based on Purpose of Visit

This section demonstrates the analysis regarding the comparison of Passenger Problems based on the purpose of visit. In order to do the same, following hypothesis is formulated and tested by using One-way ANOVA/ Welch test (as per homogeneity assumption of population variance). The Levene's test is employed to check the equality of the population variance.

H0: Regarding Passenger Problems, there is no significant difference in the attitude of passengers according to their purpose of visit.

H1: Regarding Passenger Problems, there is significant difference in the attitude of passengers according to their purpose of visit.

Table 5.67

Comparison of Passenger Problems based on the Purpose of Visit

Dimensions	Descriptive Statistics of Purpose of Visit-wise Comparison					Levene's test of Equality of Variance		One- way ANOVA/ Welch test	
	Business/ Official	Job	Leisure/ Tour	Visit relatives/ friends	Education	Test statistics	Sig. value	Test Statistics	Sig. value
Ticketing & Flight Fare	3.852 (0.839)	3.933 (0.794)	3.730 (0.952)	3.927 (0.755)	3.981 (1.275)	2.157	.073	0.406	.804
Flight	3.405 (0.886)	3.506 (0.887)	3.469 (1.093)	3.383 (0.843)	3.818 (1.300)	2.182	.070	0.862	.487
Check-In &Boarding	3.756 (0.645)	3.585 (0.802)	3.478 (1.084)	3.468 (0.905)	4.090 (0.860)	2.242	.064	2.098	.080
In-Flight Services	3.269 (0.858)	3.346 (0.857)	3.554 (0.962)	3.143 (0.945)	3.227 (1.257)	1.433	.222	1.595	.175
Baggage	3.348 (0.802)	3.238 (0.973)	3.630 (1.010)	3.188 (0.998)	3.363 (0.964)	0.689	.600	1.165	.326

Source: Primary Data
Parentheses represent standard deviation

Here, one way ANOVA is applied in all factor variables since selected sample groups are found to be homogeneous as per Levene's test of Homogeneity of Variance.

Table 5.67 represents the result of one way ANOVA for the mean comparison of passengers' attitude towards passenger problems of low cost international airlines according to their purpose of visit. Purpose of visit does not have a significant

influence on the passengers' opinion on passenger problems with respect to all dimensions. As the mean differences are insignificant and the 'p' values are greater than 0.05, there is no evidence to accept the alternate hypothesis.

5.11.3.9 Comparison of Passenger Problems based on No. of Times Travelled

This section explains the analysis regarding the comparison of attitude regarding Passenger Problems based on the number of times travelled by passengers. In order to do the same, following hypothesis is formulated and tested by applying One-way ANOVA/ Welch test (as per homogeneity assumption of population variance). The Levene's test is applied to check the equality of the population variance.

H0: Regarding Passenger Problems, there is no significant difference in the attitude of passengers according to the number of times travelled by passengers.

H1: Regarding Passenger Problems, there is significant difference in the attitude of passengers according to the number of times travelled by passengers.

Table 5.68

Comparison of Passenger Problems based on the No. of Times Travelled

Dimensions	Descriptive Statistics of the Number of Times Travelled-wise Comparison				Levene's test of Equality of Variance		One- way ANOVA/ Welch test	
	3-5 times	6 -10 times	11- 15 times	Above 15 times	Test statistics	Sig. value	Test Statistics	Sig. value
Ticketing & Flight Fare	3.847 (0.882)	3.850 (0.823)	4.031 (0.694)	3.953 (0.779)	1.628	.182	0.994	.396
Flight	3.545 (0.913)	3.380 (0.834)	3.358 (0.890)	3.479 (0.921)	0.711	.546	0.865	.459
Check-In & Boarding	3.538 (0.998)	3.593 (0.827)	3.559 (0.730)	3.581 (0.787)	3.383*	.018	0.076	.973
In-Flight Services	3.430 (0.968)	3.135 (0.894)	3.269 (0.843)	3.232 (0.889)	1.099	.349	1.907	.128
Baggage	3.362 (1.070)	3.144 (0.835)	3.067 (1.008)	3.319 (0.929)	3.228*	.022	1.807	.147

Source: Primary Data
**Significant at 5% level*
Parentheses represent standard deviation

From the above Table, it is clear that Levene's statistics for all dimensions except check-in & boarding and baggage are statistically insignificant at 5% level. Therefore, one-way ANOVA is considered to be the most suitable statistical test. But, the homogeneity assumption is not proved in case of the variable check-in & boarding and baggage. Here, Welch test is applied for mean comparison.

Table 5.68 depicts the result of mean comparison of passengers' perception towards the passenger problems based on the no. of times they have travelled. The difference in mean scores has checked with the help of test statistics and it is found to be insignificant in case of all variables since 'p' values are greater than 0.05. Hence, the null hypothesis cannot be rejected at 5% level of significance.

5.12 Conclusion

The present chapter deals the analysis of Passenger Choices, Service Quality, Passenger Satisfaction and Passenger Problems of Low-Cost International Airlines. All factors of passenger choices influence the selection of Low-Cost International Airlines. Among these, low price of flight tickets, overall value for money and convenient flight schedules are the most influencing factors for the selection of Low-Cost International Airlines. The service quality of International Low -Cost Airlines is good in case of the variables conduct, expertise, problem solving, cleanliness, safety & security and information. But, there is only moderate level of service quality in case of the variables comfort, tangibles, valence, waiting time and convenience. Overall, the interaction quality and physical environment quality of the airlines are good and the outcome quality and the access quality of the airlines are at moderate level. The passengers have good level of satisfaction on assurance and empathy. But, there is average level of satisfaction on tangibles, reliability, responsiveness and overall experience. Passengers of Low-Cost International Airlines have faced major problems in case of ticketing & flight fare, flight and check-in & boarding. At the same time, they have encountered moderate level of problems in case of in-flight services and baggage.

CHAPTER 6

EMPIRICAL RELATIONSHIP AMONG SERVICE QUALITY, PASSENGER SATISFACTION AND PASSENGER PROBLEMS

6.1 Introduction

In the previous chapter, the passenger choices, service quality, passenger satisfaction and passenger problems of Low-Cost International Airlines are measured and compared with the help of demographic profile and traveling details. Now it is important to analyze the empirical relationship among service quality, passenger satisfaction and passenger problems of Low-Cost International Airlines. In this regard, the present chapter is framed by using Structural Equation Modeling. Here, these three variables are considered as the independent and dependent variables according to the different situations of relationship.

Structural Equation Modeling is a multivariate statistical technique that examines the empirical relationship between dependent and independent variables through measurement models, integrating confirmatory factor analysis and multiple regression to elucidate the linear relationship between latent constructs.

Service quality is measured through four dimensions: Interaction Quality, Physical Environmental Quality, Outcome Quality and Access Quality. Interaction Quality encompasses conduct, expertise, and problem- solving as independent variables. Physical Environmental Quality comprises comfort, cleanliness, tangibles, safety and security. Outcome Quality includes valence and waiting time, while Access Quality covers the information and convenience.

Passenger satisfaction is assessed through a multifaceted approach, incorporating various dimensions such as tangibles, reliability, responsiveness, assurance, empathy and overall experience. Further, passenger problems are identified in the areas of ticketing & flight fare, flight, check-in & boarding, in-flight services and baggage. The empirical/causal relationship among these sub dimensions are analyzed with the help of multiple regression.

The proposed chapter is considered as the concluding session of analysis to establish the causal relationship among the selected variables of the study. In order to identify

the exact relationship of the variables, Full Model of Structural Equation Modeling is applied.

6.2 Objectives

Following objectives are set forth for the analysis of relationship among service quality, passenger satisfaction and passenger problems.

1. To assess the impact of service quality on passenger satisfaction of Low-Cost International Airlines.
2. To check the impact of passenger problems on service quality and passenger satisfaction of Low-cost International Airlines.
3. To test the moderating role of passenger problems on the relationship between service quality and passenger satisfaction of Low-Cost International Airlines.

6.3 Hypotheses

Following hypotheses are formulated according to the objectives framed for testing the causal relationship among the variables.

$H1_1$: The interaction quality has significant impact on passenger satisfaction.

$H1_2$: The physical environment quality has significant impact on passenger satisfaction.

$H1_3$: The outcome quality has significant impact on passenger satisfaction.

$H1_4$: The access quality has significant impact on passenger satisfaction.

$H1_5$: The ticketing and flight related problems have significant impact on service quality.

$H1_6$: The flight related problems have significant impact on service quality.

$H1_7$: The check-in & boarding related problems have significant impact on service quality.

$H1_8$: The in-flight services related problems have significant impact on service quality.

$H1_9$: The baggage related problems have significant impact on service quality.

$H1_{10}$: The ticketing and flight related problems have significant impact on passenger satisfaction.

$H1_{11}$: The flight related problems have significant impact on passenger satisfaction.

$H1_{12}$: The check-in & boarding related problems have significant impact on passenger satisfaction.

$H1_{13}$: The in-flight services related problems have significant impact on passenger satisfaction.

$H1_{14}$: The baggage related problems have significant impact on passenger satisfaction.

$H1_{15}$: The passenger problems significantly moderate the relationship between service quality and passenger satisfaction of Low-Cost International Airlines.

6.4 Methodology and Database

This chapter is based on the analytical research design of the study confined to the causal relationship among service quality, passenger satisfaction and passenger problems. To explore the relationship, Structural Equation Modeling is applied. In the first section, the empirical relationship between service quality dimensions and passenger satisfaction is measured. Further, in the second section, the causal relationship between passenger problems and service quality is analyzed. Similarly, in the third section, the underlying relationship between passenger problems and passenger satisfaction is examined. Furthermore, in the last section, moderating role of passenger problems on the relationship between service quality and passenger

satisfaction is analysed and conceptual model of the study is measured by using moderation analysis.

6.5 Variables Used in the Study

The study proposed following variables: -

Table 6.1

Variables Used

Variables	**Dimensions/ Constructs**
Service Quality	Interaction Quality Physical Environmental Quality Outcome Quality and Access Quality
Passenger Satisfaction	Tangibles Reliability Responsiveness Assurance Empathy and Overall Experience
Passenger Problems	Ticketing and Flight Fare Flight Check-in and Boarding In-flight Services Baggage

Section I

6.6 Relationship between Service Quality and Passenger Satisfaction

In this section of analysis, the empirical relation between the dimensions of service quality and passenger satisfaction is measured. There are four types of dimensions of service quality, which are used as the independent variables namely, Interaction Quality, Physical Environmental Quality, Outcome Quality and Access Quality. Moreover, passenger satisfaction is considered as the dependent variable. In order to

check the relationship, Structural Equation Modeling is employed. The result is presented in the order of proposed model first, and then measurement model, model fit indices and hypothesis testing results. Following hypotheses are formulated and tested.

$H1_1$: The Interaction Quality has significant impact on Passenger Satisfaction.

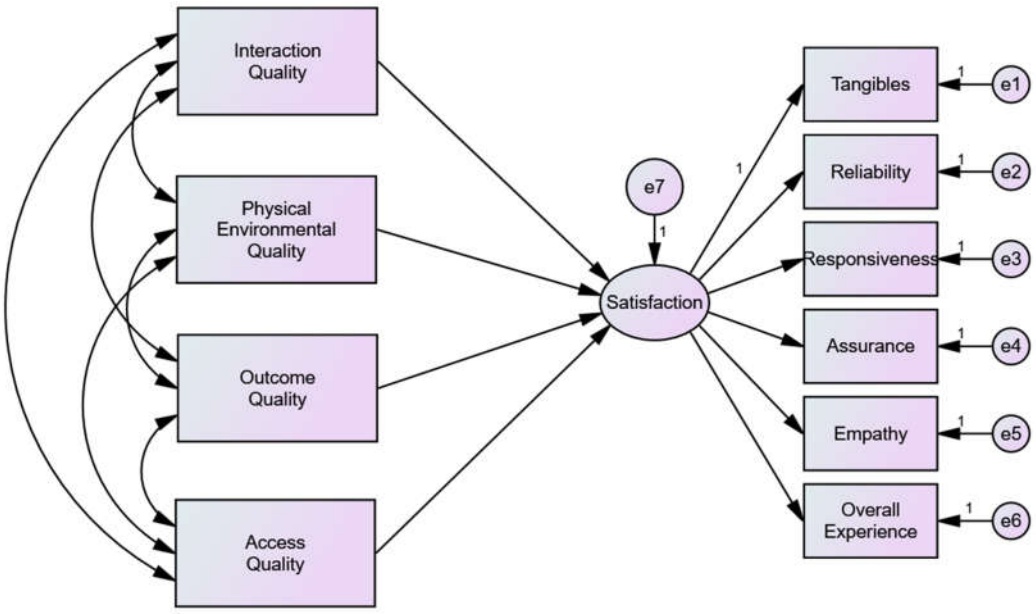
$H1_2$: The Physical Environment Quality has significant impact on Passenger Satisfaction.

$H1_3$: The Outcome Quality has significant impact on Passenger Satisfaction.

$H1_4$: The Access Quality has significant impact on Passenger Satisfaction.

Figure 6.1

Proposed Model – Relationship between Service Quality Dimensions and Passenger Satisfaction



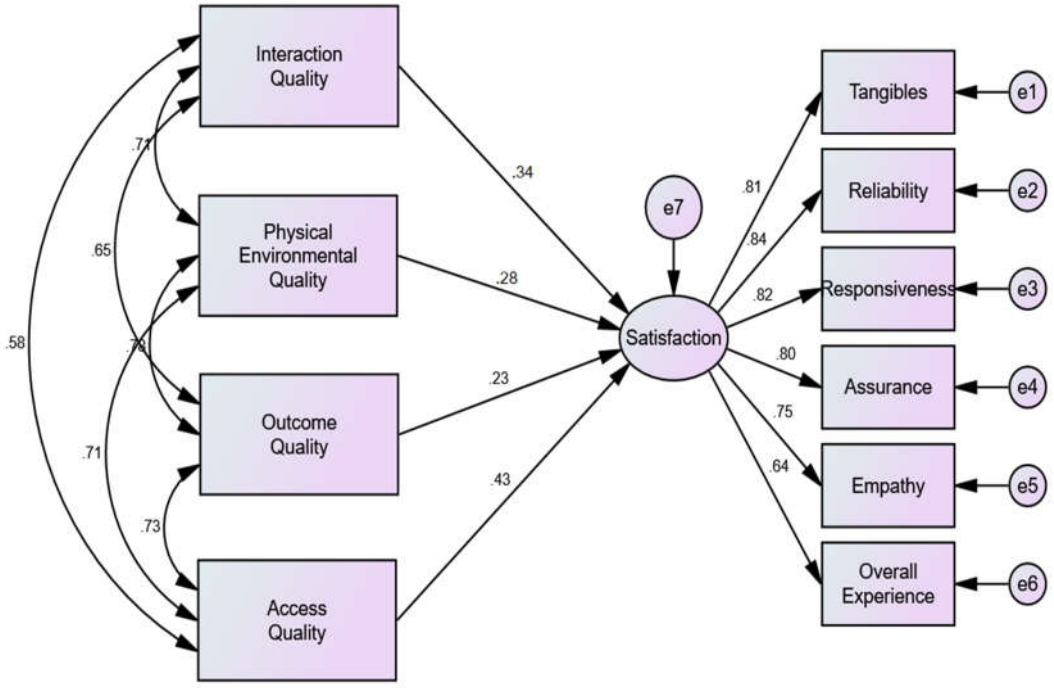
Source: Primary Data

Figure 6.1 shows the proposed model for measuring the empirical relationship between service quality dimensions and passenger satisfaction. On the left side of the model, the service quality dimensions are arranged in the form of observed

variables. Further, on the right side of the model, passenger satisfaction is arranged in the form of unobserved variables with the indicators of tangibles, reliability, responsiveness, assurance, empathy and overall experience. There are different paths connecting between the independent variables and dependent variable. Accordingly, following measurement model shows the path co-efficient and its explanations.

Figure 6.2

Measurement Model – Relationship between Service Quality Dimensions and Passenger Satisfaction



Source: Primary Data

SEM is employed to fitting a model to the data for solving a set of equations. The interrelationship between the variables is measured to understand the dependency between them and the beta-coefficient is interpreted at 5% level of significance. Here, the measurement model (Figure 6.2) is presented with hypothesized path analysis of relationship between service quality dimensions and passenger satisfaction of Low-Cost International Airlines.

Table 6.2

Model Fit Indices – Relationship between Service Quality Dimensions and Passenger Satisfaction

Indices	Value Obtained	Recommended Values of Good Fit	Recommended Values of Acceptable Fit
Normed chi-square (CMIN/df)	3.010	≤3	≤5
Root Mean Square Residuals (RMR)	0.017	≤0.05	≤0.08
Comparative Fit Index (CFI)	0.980	≥0.90	≥0.80
Goodness of Fit Index (GFI)	0.954	≥0.90	≥0.80
Adjusted GFI (AGFI)	0.913	≥0.90	≥0.80
Incremental Fit Index (IFI)	0.980	≥0.90	≥0.80
Tucker Fit Index (TLI)	0.969	≥0.90	≥0.80
Normed Fit Index (NFI)	0.971	≥0.90	≥0.80
Relative Fit Index (RFI)	0.955	≥0.90	≥0.80
Root Mean Square Error of Approximation (RMSEA)	0.071	≤0.08	=0.08

Source: Primary Data

The Model Fit Indices (structural model assessment) like, Goodness of Fit Index (GFI), Tucker Fit Index (TLI), Comparative Fit Index (CFI), Root Mean Square Residuals (RMR), Root Mean Square Error of Approximation (RMSEA), Adjusted GFI (AGFI), Incremental Fit Index (IFI), Normed Fit Index (NFI) and Normed chi-square (CMIN/df) are selected to measure the goodness of fit of the measurement model. In order to obtain the fitness, the values should be within the recommended limit of good fit/acceptable fit. The acceptability of the above model (Figure 6.2) is measured with the help of the above specified modification indices. Here, all the important measures (CFI, GFI, AGFI, IFI, TLI, NFI and RFI) are above the recommended limit of good fit with values of greater than 0.90. Similarly, the value of CMIN/df is 3.010 lies within the limit of recommended value of acceptable fit of

less than 5. Furthermore, the value of RMR (0.017) is within the limit of recommended value of good fit of less than 0.05 and the value of RMSEA (0.071) is also within the limit of good fit. Therefore, the model used to measure the empirical relationship between service quality dimensions and passenger satisfaction of Low-Cost International Airlines is acceptable with good fit indices.

Table 6.3

Hypothesis Testing Result of Relationship between Service Quality Dimensions and Passenger Satisfaction

Hypotheses	Path	Path Co-efficient	p (Sig.) Value	Result
$H1_1$	Interaction Quality → Passenger Satisfaction	0.341**	<0.001	Supported
$H1_2$	Physical Environmental Quality → Passenger Satisfaction	0.276**	<0.001	Supported
$H1_3$	Outcome Quality → Passenger Satisfaction	0.226**	<0.001	Supported
$H1_4$	Access Quality → Passenger Satisfaction	0.426**	<0.001	Supported

Source: Primary Data
*** Significant at 1% level of significance*

Table 6.3 explains the hypotheses formulated for testing the interdependence of the dimensions, path of the model for representing the dependent & independent variables, path co-efficient for explaining the power of observed variables in determining the latent variable, significance value of test result and the result of the hypotheses testing. Generally, the table is the explanation of the measurement model drawn as figure 6.2. In this section, each and all variables are measured separately. Therefore, it can understand the role of independent variables in shaping the changes of dependent variable.

The result reflects that Access Quality (β=0.426, p<0.001) and Interaction Quality (β=0.341, p<0.001) are the prominent factors influencing the Passenger Satisfaction. In addition to this, Physical Environmental Quality (β=0.276, p<0.001) and Outcome Quality (β=0.226, p<0.001) have significant positive effect over Passenger Satisfaction of Low-Cost International Airlines. Since the 'p' values are significant at 1% level of significance; the proposed hypotheses are accepted and all the dimensions of service quality have direct positive relationship with passenger satisfaction. It means, whenever the service quality of Low-Cost International Airlines is increased, satisfaction will also increase in the same direction.

Section II

6.7 Relationship between Problem Factors and Service Quality

In this section of analysis, the causal relationship between the problem factors and service quality of Low-Cost International Airlines is analyzed. There are five factors of passenger problems used as the independent variables namely, Ticketing and Flight Fare, Flight, Check-in and boarding, In-flight services and Baggage. Besides, Service Quality is considered as the dependent variable. So as to check the relationship, Structural Equation Modeling is considered as the statistical technique. The result is presented in the order of proposed model first, and then measurement model, model fit indices and hypothesis testing results. Following hypotheses are formulated and tested.

$H1_5$: The ticketing and flight related problems have significant impact on service quality.

$H1_6$: The flight related problems have significant impact on service quality.

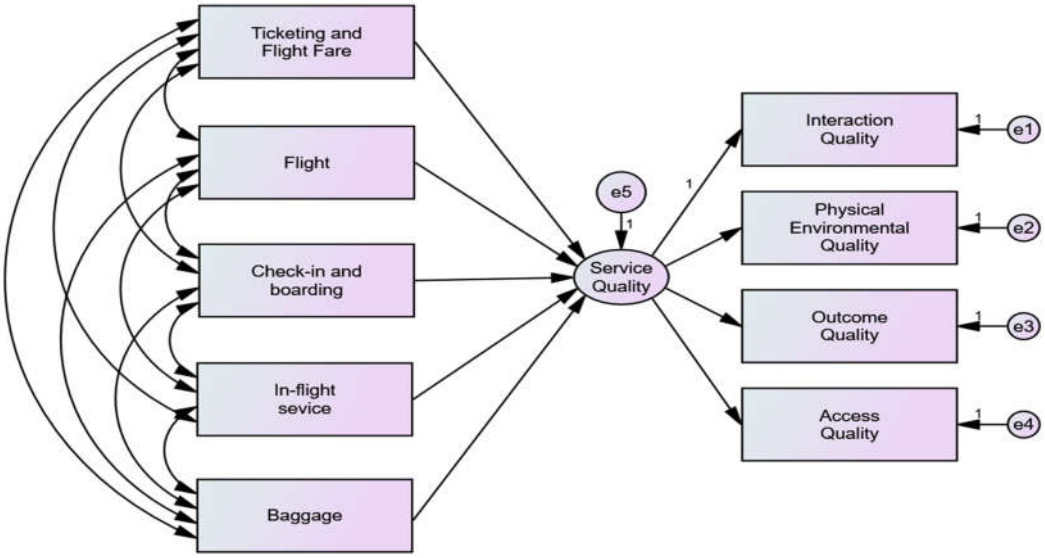
$H1_7$: The check-in & boarding related problems have significant impact on service quality.

$H1_8$: The in-flight services related problems have significant impact on service quality.

$H1_9$: The baggage related problems have significant impact on service quality.

Figure 6.3

Proposed Model – Relationship between Problem Factors and Service Quality

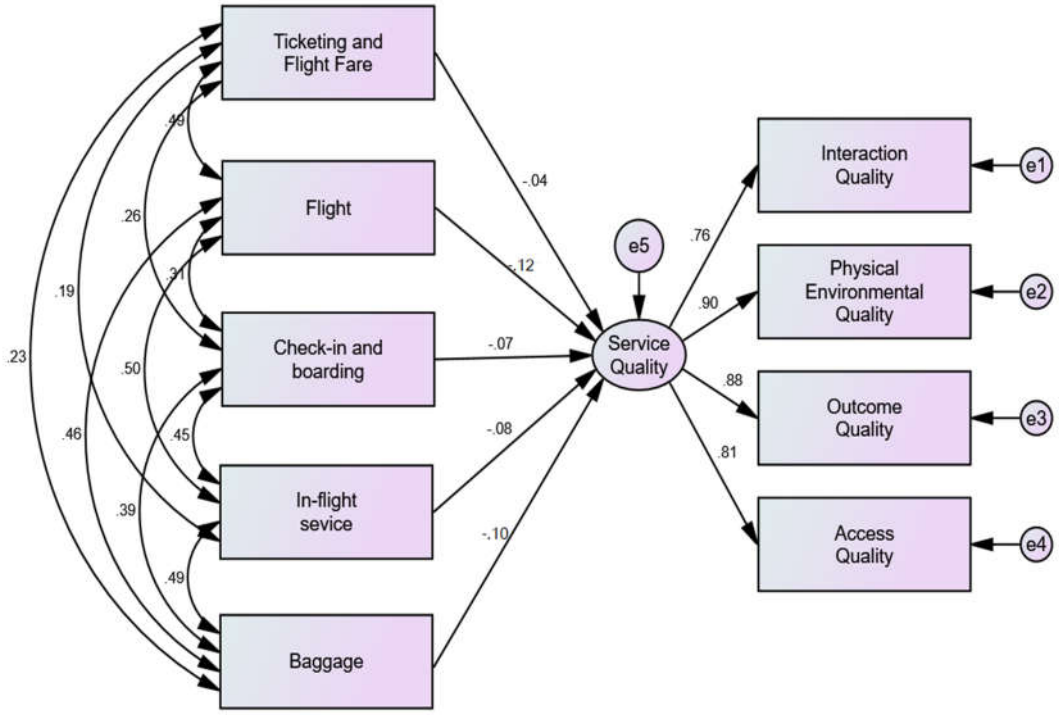


Source: Primary Data

Figure 6.3 presents the proposed model for analyzing the causal relationship between problem factors and service quality. On the left side of the model, the problem factors are arranged as observed variables. Further, on the right side of the model, service quality is shown as unobserved variables with the indicators of interaction quality, physical environmental quality, outcome quality and access quality. There are different paths connecting between the independent variables and dependent variable. Accordingly, following measurement model shows the path co-efficient and its explanations.

Figure 6.4

Measurement Model – Relationship between Problem Factors and Service Quality



Source: Primary Data

SEM is used to fitting a model to the data for solving a set of equations. The causal relationship between the variables is measured to understand the dependency between them and the beta-coefficient is interpreted at 5% level of significance. Here, the measurement model (Figure 6.4) is presented with hypothesized path analysis of relationship between problem factors and service quality of Low-Cost International Airlines.

Table 6.4

Model Fit Indices – Relationship between Problem Factors and Service Quality

Indices	Value Obtained	Recommended Values of Good Fit	Recommended Values of Acceptable Fit
Normed chi-square (CMIN/df)	1.636	≤3	≤5
Root Mean Square Residuals (RMR)	0.010	≤0.05	≤0.08
Comparative Fit Index (CFI)	0.993	≥0.90	≥0.80
Goodness of Fit Index (GFI)	0.985	≥0.90	≥0.80
Adjusted GFI (AGFI)	0.959	≥0.90	≥0.80
Incremental Fit Index (IFI)	0.993	≥0.90	≥0.80
Tucker Fit Index (TLI)	0.985	≥0.90	≥0.80
Normed Fit Index (NFI)	0.983	≥0.90	≥0.80
Relative Fit Index (RFI)	0.963	≥0.90	≥0.80
Root Mean Square Error of Approximation (RMSEA)	0.040	≤0.08	=0.08

Source: Primary Data

The Model Fit Indices (structural model assessment) like, Goodness of Fit Index (GFI), Tucker Fit Index (TLI), Comparative Fit Index (CFI), Root Mean Square Residuals (RMR), Root Mean Square Error of Approximation (RMSEA), Adjusted GFI (AGFI), Incremental Fit Index (IFI), Normed Fit Index (NFI) and Normed chi-square (CMIN/df) are selected to check the goodness of fit of the measurement model. In order to obtain the fitness, the values should be within the recommended limit of good fit/ acceptable fit. The acceptability of the above model (Figure 6.4) is measured with the help of the above specified modification indices. Here, all the important measures (CFI, GFI, AGFI, IFI, TLI, NFI and RFI) are above the recommended limit of good fit with values of greater than 0.90. Similarly, the value of CMIN/df is 1.636 lies within the limit of recommended value of good fit of less than 3. Furthermore, the value of RMR (0.010) is within the limit of recommended value of good fit of less than 0.05 and the value of RMSEA (0.040) is also within the limit of good fit. Therefore, the model used to measure the causal relationship

between problem factors and service quality of Low-Cost International Airlines is acceptable with good fit indices.

Table 6.5

Hypothesis Testing Result of Relationship between Problem Factors and Service Quality

Hypotheses	Path	Path Co-efficient	p (Sig.) Value	Result
$H1_5$	Ticketing and Flight Fare → Service Quality	-0.042**	<0.001	Supported
$H1_6$	Flight → Service Quality	-0.121**	<0.001	Supported
$H1_7$	Check-in and boarding → Service Quality	-0.073**	<0.001	Supported
$H1_8$	In-flight services → Service Quality	-0.081**	<0.001	Supported
$H1_9$	Baggage → Service Quality	-0.104**	<0.001	Supported

Source: Primary Data

Table 6.5 explains the hypotheses formulated for testing the interdependence of the dimensions, path of the model for representing the dependent & independent variables, path co-efficient for explaining the power of observed variables in determining the latent variable, significance value of test result and the result of the hypotheses testing. Generally, the table is the explanation of the measurement model drawn as figure 6.4. In this section, each and all variables are measured separately. Therefore, it can understand the role of independent variables in shaping the changes of dependent variable.

The result replicates that Flight (β=-0.121, $p<0.001$) and Baggage (β=-0.104, $p<0.001$) related problems are the main negatively influencing factors of service quality of Low-Cost International Airlines. Additionally, In-flight services (β=-0.081, $p<0.001$), Check-in and boarding (β=-0.073, $p<0.001$) and Ticketing and Flight Fare (β=-0.042, $p<0.001$) problems have significant negative influence on

Service Quality. Since the 'p' values are significant at 1% level; the proposed hypotheses are accepted and all the problem factors have direct negative relationship with service quality. It means, whenever the problem factors of Low-Cost International Airlines is increased, service quality will decrease in the same direction.

Section III

6.8 Relationship between Problem Factors and Passenger Satisfaction

In this section of analysis, the underlying relationship between the problem factors and passenger satisfaction of Low-Cost International Airlines is examined. There are five factors of passenger problems are used as the independent variables namely, Ticketing and Flight Fare, Flight, Check-in and boarding, In-flight services and Baggage. Besides, passenger satisfaction is considered as the dependent variable. In an attempt to check the relationship, Structural Equation Modeling is considered as the statistical technique. The result is explained in the order of proposed model first, and then measurement model, model fit indices and hypothesis testing results. Following hypotheses are formulated and tested.

$H1_{10}$: The ticketing and flight related problems have significant impact on passenger satisfaction.

$H1_{11}$: The flight related problems have significant impact on passenger satisfaction.

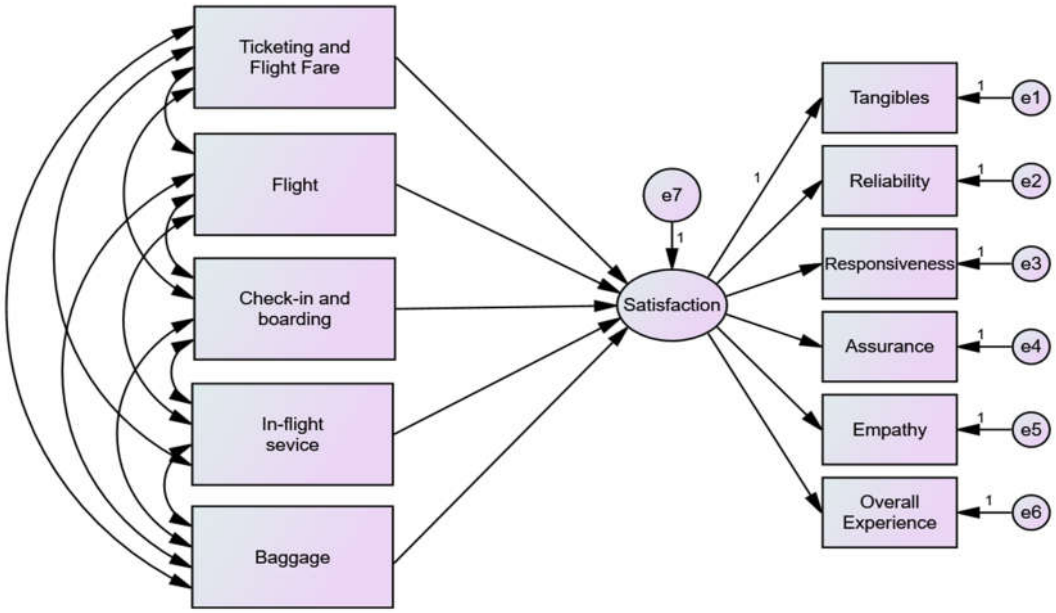
$H1_{12}$: The check-in & boarding related problems have significant impact on passenger satisfaction.

$H1_{13}$: The in-flight services related problems have significant impact on passenger satisfaction.

$H1_{14}$: The baggage related problems have significant impact on passenger satisfaction.

Figure 6.5

Proposed Model – Relationship between Problem Factors and Passenger Satisfaction

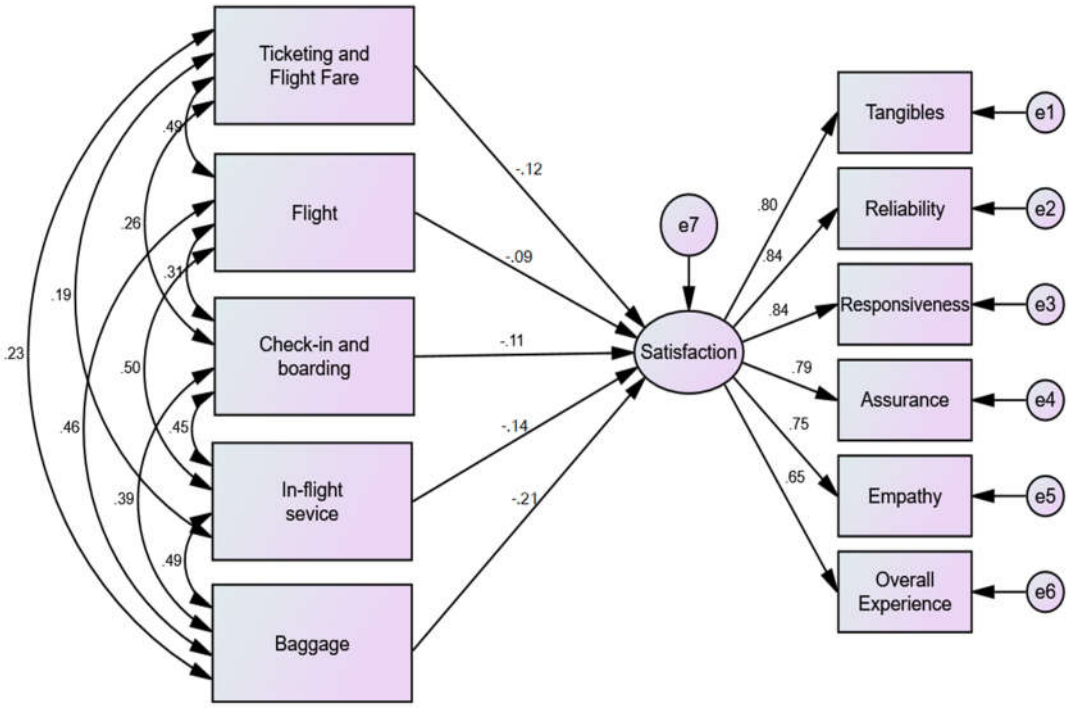


Source: Primary Data

Figure 6.5 exhibits the proposed model for analyzing the underlying relationship between problem factors and passenger satisfaction. On the left side of the model, the problem factors are arranged as observed variables. Further, on the right side of the model, passenger satisfaction is executed as unobserved variables with the indicators of Tangibles, Reliability, Responsiveness, Assurance, Empathy and Overall Experience. There are different paths connecting between the independent variables and dependent variable. Accordingly, following measurement model shows the path co-efficient and its explanations.

Figure 6.6

Measurement Model – Relationship between Problem Factors and Passenger Satisfaction



Source: Primary Data

SEM is used to fitting a model to the data for solving a set of equations. The underlying relationship between the variables is measured to understand the dependency between them and the beta-coefficient is interpreted at 5% level of significance. Here, the measurement model (Figure 6.6) is presented with hypothesized path analysis of relationship between problem factors and passenger satisfaction of Low-Cost International Airlines.

Table 6.6

Model Fit Indices – Relationship between Problem Factors and Passenger Satisfaction

Indices	Value Obtained	Recommended Values of Good Fit	Recommended Values of Acceptable Fit
Normed chi-square (CMIN/df)	2.407	≤3	≤5
Root Mean Square Residuals (RMR)	0.018	≤0.05	≤0.08
Comparative Fit Index (CFI)	0.975	≥0.90	≥0.80
Goodness of Fit Index (GFI)	0.964	≥0.90	≥0.80
Adjusted GFI (AGFI)	0.930	≥0.90	≥0.80
Incremental Fit Index (IFI)	0.975	≥0.90	≥0.80
Tucker Fit Index (TLI)	0.959	≥0.90	≥0.80
Normed Fit Index (NFI)	0.958	≥0.90	≥0.80
Relative Fit Index (RFI)	0.932	≥0.90	≥0.80
Root Mean Square Error of Approximation (RMSEA)	0.059	≤0.08	=0.08

Source: Primary Data

The Model Fit Indices (structural model assessment) like, Goodness of Fit Index (GFI), Tucker Fit Index (TLI), Comparative Fit Index (CFI), Root Mean Square Residuals (RMR), Root Mean Square Error of Approximation (RMSEA), Adjusted GFI (AGFI), Incremental Fit Index (IFI), Normed Fit Index (NFI) and Normed chi-square (CMIN/df) are selected to check the goodness of fit of the measurement model. In order to obtain the fitness, the values should be within the recommended limit of good fit/acceptable fit. The acceptability of the above model (Figure 6.6) is measured with the help of the above specified modification indices. Here, all the important measures (CFI, GFI, AGFI, IFI, TLI, NFI and RFI) are above the recommended limit of good fit with values of greater than 0.90. Similarly, the value of CMIN/df is 2.407 lies within the limit of recommended value of good fit of less than 3. Furthermore, the value of RMR (0.018) is within the limit of recommended value of good fit of less than 0.05 and the value of RMSEA (0.059) is also within the limit of good fit. Therefore, the model used to measure the causal relationship

between problem factors and passenger satisfaction of Low-Cost International Airlines is acceptable with good fit indices.

Table 6.7

Hypothesis Testing Result of Relationship between Problem Factors and Passenger Satisfaction

Hypothesis	Path	Path Co-efficient	p (Sig.) Value	Result
$H1_{10}$	Ticketing and Flight Fare ⟶ Passenger Satisfaction	-0.121**	<0.001	Supported
$H1_{11}$	Flight ⟶ Passenger Satisfaction	-0.092**	<0.001	Supported
$H1_{12}$	Check-in and boarding ⟶ Passenger Satisfaction	-0.113**	<0.001	Supported
$H1_{13}$	In-flight services ⟶ Passenger Satisfaction	-0.144**	<0.001	Supported
$H1_{14}$	Baggage ⟶ Passenger Satisfaction	-0.210**	<0.001	Supported

Source: Primary Data

Table 6.7 elucidates the hypotheses formulated for testing the interdependence of the dimensions, path of the model for representing the dependent & independent variables, path co-efficient for explaining the power of observed variables in determining the latent variable, significance value of test result and the result of the hypotheses testing. Generally, the table is the explanation of the measurement model drawn as figure 6.6. In this section, each and all variables are measured separately. Hence, it can understand the role of independent variables in shaping the changes of dependent variable.

The result displays that Baggage (β=-0.210, p<0.001) and In-flight services (β=-0.144, p<0.001) related problems are the main negatively influencing factors of Passenger Satisfaction of Low-Cost International Airlines. Also, Ticketing and Flight Fare (β=-0.121, p<0.001), Check-in and boarding (β=-0.113, p<0.001) and

Flight (β=-0.092, p<0.001) problems have significant negative influence on Passenger Satisfaction. Since the 'p' values are significant at 1% level of significance; the proposed hypotheses are accepted and all the problem factors have direct negative relationship with passenger satisfaction. It can be said that, whenever the problem factors of Low-Cost International Airlines is increased, passenger satisfaction will decrease in the same direction.

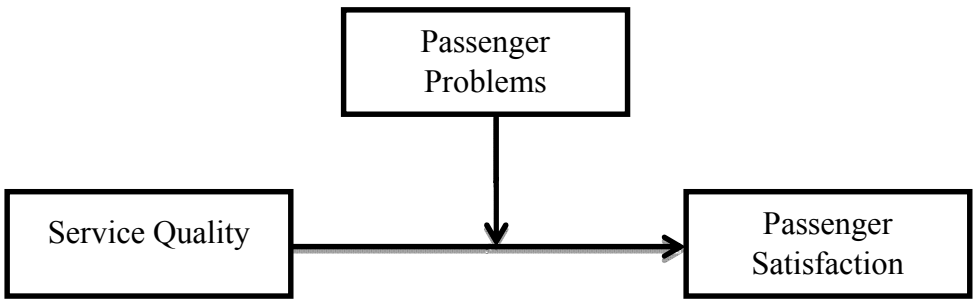
Section IV

6.9 Moderating Role of Passenger Problems

Here, the analysis section deals with the moderating role of passenger problems on the relationship between service quality and passenger satisfaction and the measurement of conceptual model of the study. The study considers service quality, passenger satisfaction and passenger problems as the main variables to understand the perception of passengers regarding Low-Cost International Airlines. Accordingly, following conceptual model is developed to check the interrelationship among these variables.

Figure 6.7

Conceptual Model



In this model, Service Quality is considered as the independent variable (IV), Passenger Problem is identified as the moderating variable (MV) and Passenger Satisfaction is selected as the dependent variable (DV). To prove the relationship

between these variable, the moderation analysis using Structural Equation Modeling is employed.

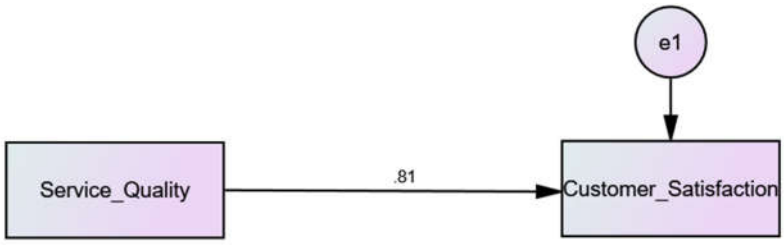
An independent variable's effects on its dependent variable are "moderated" by a moderating variable. The term "moderator" refers to a variable that "interferes" with the relationship between an independent variable and its corresponding dependent variable. This definition is particularly common among social science researchers. Let M represent the moderator variable in the X-Y connection as an example. The effects of X on Y are then "altered" by M in the function of moderation (Zainudin, 2012).

Before moving to the moderating effect of Passenger Problems, the direct effect of Service Quality on Satisfaction is measured with the help of imputed model by considering following hypothesis. The result is presented below.

$H1_{15}$: The service quality has significant impact on passenger satisfaction.

Figure 6.8

The Direct Effect of Service Quality on Satisfaction



Source: Primary Data

The above figure shows the direct effect of service quality on customer satisfaction of Low-Cost International Airlines. It can be seen that the IV has direct positive impact on DV. It means, when service quality goes up by 1 standard deviation, customer satisfaction also goes up by 0.81 standard deviation. It is concluded that, service quality is considered as the significant positive predictor of creating satisfaction among passengers of Low-Cost International Airlines.

Table 6.8

Model Fit Indices – Direct Effect of Service Quality on Satisfaction

Indices	Value Obtained	Recommended Values of Good Fit	Recommended Values of Acceptable Fit
Normed chi-square (CMIN/df)	1.511	≤3	≤5
Root Mean Square Residuals (RMR)	0.023	≤0.05	≤0.08
Comparative Fit Index (CFI)	0.981	≥0.90	≥0.80
Goodness of Fit Index (GFI)	0.977	≥0.90	≥0.80
Adjusted GFI (AGFI)	0.921	≥0.90	≥0.80
Incremental Fit Index (IFI)	0.954	≥0.90	≥0.80
Tucker Fit Index (TLI)	0.963	≥0.90	≥0.80
Normed Fit Index (NFI)	0.946	≥0.90	≥0.80
Relative Fit Index (RFI)	0.925	≥0.90	≥0.80
Root Mean Square Error of Approximation (RMSEA)	0.044	≤0.08	=0.08

Source: Primary Data

The Model Fit Indices (structural model assessment) like, Goodness of Fit Index (GFI), Tucker Fit Index (TLI), Comparative Fit Index (CFI), Root Mean Square Residuals (RMR), Root Mean Square Error of Approximation (RMSEA), Adjusted GFI (AGFI), Incremental Fit Index (IFI), Normed Fit Index (NFI) and Normed chi-square (CMIN/df) are selected to check the goodness of fit of the measurement model. In order to obtain the fitness, the values should be within the recommended limit of good fit/acceptable fit. The acceptability of the above model (Figure 6.8) is measured with the help of the above specified modification indices. Here, all the important measures (CFI, GFI, AGFI, IFI, TLI, NFI and RFI) are above the recommended limit of good fit with values of greater than 0.90. Similarly, the value of CMIN/df is 1.511 lies within the limit of recommended value of good fit of less

than 3. Furthermore, the value of RMR (0.023) is within the limit of recommended value of good fit of less than 0.05 and the value of RMSEA (0.044) is also within the limit of good fit. Therefore, the model used to measure the direct effect of service quality on satisfaction of Low-Cost International Airlines is acceptable with good fit indices.

Table 6.9

Hypothesis Testing Result of Direct Effect of Service Quality on Satisfaction

Hypothesis	Path	Path Co-efficient	p (Sig.) Value	Result
$H1_{15}$	Service Quality ⟶ Passenger Satisfaction	0.810^{**}	<0.001	Supported

Source: Primary Data

Here, the proposed hypothesis is supported at 1% level of significance regarding the direct effect of service quality on satisfaction with beta co-efficient of 0.810. Hence, there is significant positive impact of service quality on passenger satisfaction of Low-Cost International Airlines.

Then, the study evaluates the moderating effect of passenger problems on the effect of service quality and passenger satisfaction. Here, as already said, service quality is an 'X' variable, satisfaction is a 'Y' variable and passenger problem is an 'M' variable. Following hypothesis is formulated and tested in this respect.

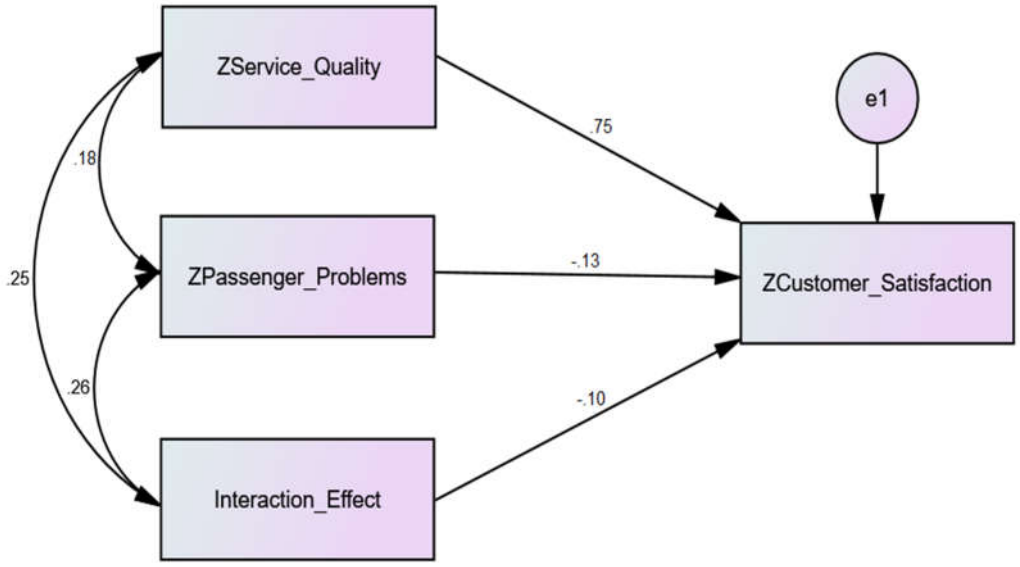
$H1_{16}$: There is significant direct effect of service quality on passenger satisfaction

$H1_{17}$: There is significant direct effect of passenger problems on passenger satisfaction

$H1_{18}$: The interaction between service quality and passenger problems has significant impact on passenger satisfaction

Figure 6.9

The Interaction Effect of Service Quality and Passenger Problem on Satisfaction



Source: Primary Data

Interaction moderation model shows that Service Quality has a positive and significant effect (p = 0.000) on Customer Satisfaction with beta co-efficient of 0.75. Passenger Problems has a negative and significant effect (p = 0.021) on Customer Satisfaction with beta co-efficient of -0.133. Interaction of Service Quality and Passenger Problems has a negative and significant effect (p = 0.036) on Customer Satisfaction with beta co-efficient of -0.101. As a moderator, passenger problems weaken the positive relationship between service quality and passenger satisfaction. The details of the moderation effect from the model are depicted below.

Table 6.10

Significant Results and Moderation Effect

Independent Variable	Moderating Variable	Interaction Term	Moderation Effect
Significant	Significant	Significant	Yes

Table 6.11

Model Fit Indices – Direct Effect of Service Quality on Satisfaction

Indices	Value Obtained	Recommended Values of Good Fit	Recommended Values of Acceptable Fit
Normed chi-square (CMIN/df)	2.313	≤3	≤5
Root Mean Square Residuals (RMR)	0.045	≤0.05	≤0.08
Comparative Fit Index (CFI)	0.911	≥0.90	≥0.80
Goodness of Fit Index (GFI)	0.912	≥0.90	≥0.80
Adjusted GFI (AGFI)	0.901	≥0.90	≥0.80
Incremental Fit Index (IFI)	0.920	≥0.90	≥0.80
Tucker Fit Index (TLI)	0.903	≥0.90	≥0.80
Normed Fit Index (NFI)	0.904	≥0.90	≥0.80
Relative Fit Index (RFI)	0.913	≥0.90	≥0.80
Root Mean Square Error of Approximation (RMSEA)	0.052	≤0.08	=0.08

Source: Primary Data

The Model Fit Indices (structural model assessment) like, Goodness of Fit Index (GFI), Tucker Fit Index (TLI), Comparative Fit Index (CFI), Root Mean Square Residuals (RMR), Root Mean Square Error of Approximation (RMSEA), Adjusted GFI (AGFI), Incremental Fit Index (IFI), Normed Fit Index (NFI) and Normed chi-square (CMIN/df) are selected to check the goodness of fit of the measurement model. In order to obtain the fitness, the values should be within the recommended limit of good fit/acceptable fit. The acceptability of the above model (Figure 6.8) is measured with the help of the above specified modification indices. Here, all the important measures (CFI, GFI, AGFI, IFI, TLI, NFI and RFI) are above the recommended limit of good fit with values of greater than 0.90. Similarly, the value of CMIN/df is 2.313 lies within the limit of recommended value of good fit of less than 3. Furthermore, the value of RMR (0.045) is within the limit of recommended

value of good fit of less than 0.05 and the value of RMSEA (0.052) is also within the limit of good fit. Therefore, the model used to measure the interaction effect of service quality and passenger problems on satisfaction of Low-Cost International Airlines is acceptable with good fit indices.

Table 6.12

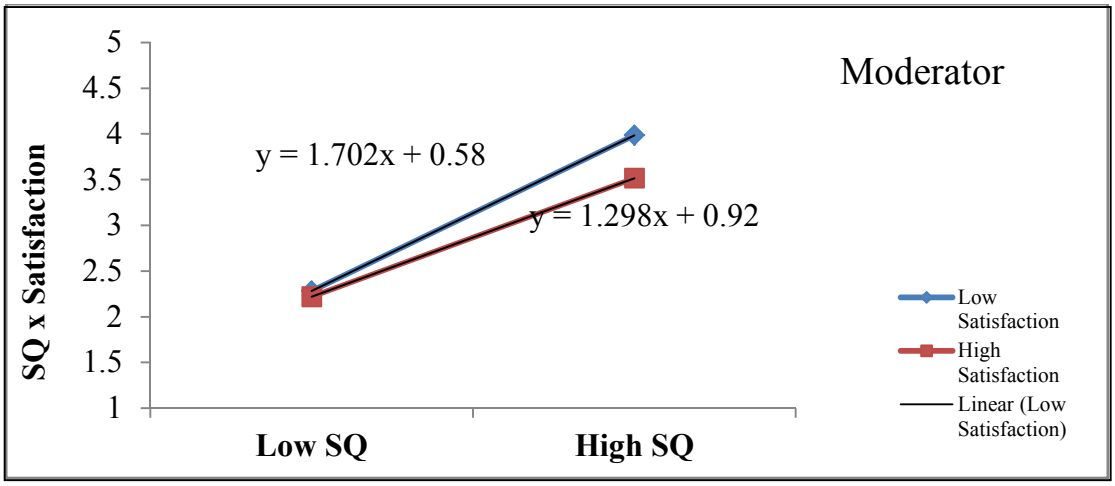
Summary of Moderation Effect

Hypothesis	Path	Path Co-efficient	p (Sig.) Value	Result
$H1_{16}$	Service Quality → Passenger Satisfaction	0.750**	<0.001	Supported
$H1_{17}$	Passenger Problems → Passenger Satisfaction	-0.133*	0.021	Supported
$H1_{18}$	Service Quality x Passenger Problems → Passenger Satisfaction	-0.101*	0.036	Supported

Source: Primary Data

Figure 6.10

Simple Slop Test Plots of Moderation Effect



Source: Primary Data

This Table shows that the strength of the relationship between Service Quality and Passenger Satisfaction is significantly moderated (p = 0.036) by passenger problems. As a moderator, Passenger Problems have moderating effect in the relationship between Service Quality and Passenger Satisfaction by reducing the path co-efficient from 0.81 to 0.75. Therefore, it can be concluded that Passenger Problems have weaker effect on the relationship between Service Quality and Passenger Satisfaction of Low-Cost International Airlines.

6.10 Conclusion

This chapter deals with analysis of the empirical relationship among service quality, passenger satisfaction and passenger problems of Low-Cost International Airlines. Structural Equation Modeling is used to check the the empirical relationship between dependent and independent variables. It is found that all the dimensions of service quality have direct positive relationship with passenger satisfaction. The flight and baggage related problems are the main negatively influencing factors of service quality of Low-Cost International Airlines and all the factors of passenger problems have direct negative relationship with service quality. It is revealed that baggage and in-flight services related problems are the main negatively influencing factors of passenger satisfaction and all the factors of passenger problems have direct negative relationship with passenger satisfaction. It is examined that passenger problems have moderating effect in the relationship between service quality and passenger satisfaction and passenger problems have weaker effect on the relationship between service quality and passenger satisfaction.

CHAPTER 7

SUMMARY OF FINDINGS AND CONCLUSIONS

7.1 Introduction

The service quality plays a significant role in building a competitive edge in the market in case of service industries. There is stiff competition in the low-cost carrier market particularly for international airlines as a result of the privatisation of the airline industry. The LCCs should focus on improving the service quality that helps the airlines to stand out from the competitors. The service quality directly affects the customer satisfaction which is essential for creating customer loyalty and retaining the customers. Therefore, the LCCs should continuously monitor and evaluate the different factors of service quality in order to identify the areas for improvement. Then, they can take proper steps to overcome deficiencies and improve the service quality. The international passengers of LCCs face various problems during international travel. The airline companies should understand the passenger problems and there should be a proper grievance redressal mechanism to address the various problems faced by the passengers. The present research work evaluates the service quality of Low-Cost International Airlines in India. It also assesses the satisfaction level of international passengers of LCCs and the various problems faced by them during their air travel.

The present chapter is concerned with the concluding part of the research work and it includes major findings and conclusions of the study based on the research problem, objectives and hypotheses.

7.2 Summary of Research

The study evaluates the service quality, passenger satisfaction and passenger problems. The research work is both descriptive and analytical in nature. Both primary and secondary data was used in the study. The primary data was collected based on a pretested structured questionnaire. It was collected from the international passengers travelling from and to three international airports in Kerala namely Thiruvananthapuram, Cochin and Calicut. The international passengers of Air India Express, IndiGo and SpiceJet were selected as samples. Purposive sampling method was used to select the sample. A sample size of 405 passengers was taken for the

analysis. The SSQAI model was used in the study to measure the service quality of Low-Cost International Airlines.

Objectives of the Study

1. To examine the factors (choices) influencing the selection of Low- Cost International Airlines.
2. To evaluate the service quality of Low-cost International Airlines.
3. To measure the level of passenger satisfaction of Low-cost International Airlines.
4. To explore the various problems faced by passengers in Low- Cost International Airlines.
5. To evaluate the extent to which the passenger choices, service quality, passenger satisfaction and passenger problems of Low-Cost International Airlines vary among demographic and travelling profiles of the passengers.
6. To assess the impact of service quality on passenger satisfaction of Low-Cost International Airlines.
7. To check the impact of passenger problems on service quality and passenger satisfaction of Low-cost International Airlines.
8. To test the moderating role of passenger problems on the relationship between service quality and passenger satisfaction of Low-cost International Airlines.

Hypotheses

- $H1_1$: There is not an average (above or below average) influence of Passenger Choices on the selection of Low-Cost International Airlines.
- $H1_2$: There is not an average (above or below average) level of Service Quality in Low-Cost International Airlines.

- $H1_3$: There is not an average (above or below average) level of Passenger Satisfaction in Low-Cost International Airlines.
- $H1_4$: There is not an average (above or below average) level of Passenger Problems in Low-Cost International Airlines.
- $H1_5$: There is significant difference in the Passenger Choices, Service Quality, Passenger Satisfaction and Passenger Problems of Low-Cost International Airlines among demographic and travelling profiles of passengers.
- $H1_6$: The Service Quality has significant impact on Passenger Satisfaction of Low-Cost International Airlines.
- $H1_7$: The Passenger Problems have significant impact on Service Quality and Passenger Satisfaction.
- $H1_8$: The Passenger Problems significantly moderate the relationship between Service Quality and Passenger Satisfaction of Low-cost International Airlines.

The collected primary data was analysed by using the tools such as Mean, Standard Deviation, Percentage analysis, Independent Sample 't' test, One-way ANOVA and Tukey HSD Post-hoc test. Confirmatory Factor Analysis and Structural Equation Modeling are used to explore the measurement models and the influencing factors of the variables.

The present chapter is divided into two parts. Section A presents the findings and Section B deals with the conclusions drawn from the findings of the study.

Section A

7.3 Findings of the study

The present research was conducted with an aim to evaluate the service quality of Low-Cost International airlines. The level of passenger satisfaction was measured in relation to the demographic profiles and travelling details of passengers. The various

factors influencing the selection of Low Cost International Airlines had been examined in detail. The various problems faced by the passengers during their travel in Low Cost International Airlines flying to and from the different airports in Kerala were also explored in the study. The major findings which are drawn from the analysis by using the suitable statistical tools are presented under the different heads below:

7.3.1 Demographic and Travelling Profiles of the Passengers

The data revealed that majority of respondents are male and more than 50% of the respondents are coming under the age group 21-40. As much as 38.5% of the respondents are graduates, 46.9% of respondents are private sector employees and 51.6% respondents have annual income up to Rs 5,00,000.

As much as 34.8% respondents have travelled more than 15 times in Low-Cost International Airlines in India and 46.9% respondents have travelled for the purpose of job. With respect to the booking channel, 48.6% travellers have booked ticket through travel agents and 47.4% travellers through airline website.

7.3.2 Passenger Choices of Low-Cost Airlines

While selecting Low Cost International Airlines, the passengers consider various factors which influence their decision about which airline they would like to travel. The important influencing factors are analysed with the help of descriptive statistics. The level of passenger choices is checked by using One-Sample 't' test. The passenger choices of Low-Cost International Airlines is compared with the demographic and travelling details by applying Independent Sample 't' test and One-way ANOVA/ Welch test. The findings from the analysis are:

- The ultimate objective of Low Cost Airlines is to offer airline services with cheap airfare. As such, the most influencing factor for the selection of low-cost international airline is the low price of flight tickets. The other factors such as overall value for money and convenient flight schedules have strong influence on the selection of airlines apart from the low price of flight

tickets. All factors included under passenger choice have a great influence on the Low Cost International Airline selection.

- Among the demographic profile of passengers, only age exerts significant influence on passenger choices of Low-Cost International Airlines, in which passenger choices have less influence on the selection of Low-Cost International Airlines in case of passengers having above 60 years.

- Gender, education, occupation and income level of passengers have insignificant influence on passenger choices of Low-Cost International Airlines.

- From the result, it is clear that the passengers from different international airports in Kerala consider same factors for the selection of Low Cost International Airlines. The factors influencing the selection of Low Cost International Airlines do not change significantly depending on the different international airports in Kerala.

- The factors considered by passengers for the selection of different Low Cost Airlines are more or less same in case of Air India Express, IndiGo and SpiceJet.

- The factors influencing the selection of Low Cost International Airlines do not vary much depending on the purpose of visit of travellers. More or less same factors are considered by all travellers for choosing the airline irrespective of their purpose of visit.

- The influence of various factors on the selection of Low Cost International Airlines has decreased slightly when the number of times travelled by passengers increases. It is observed that the influence of passenger choice on airline selection is significantly different in between the passengers having 3-5 times travel and more than 15 times travel. The passenger choices have a high influence on airline selection of passengers having 3-5 times travel.

7.3.3 Service Quality of Low-Cost International Airlines

The quality of services rendered by Low Cost International Airlines is measured from the customers' perceptions about service quality with the help of descriptive statistics. One Sample't' test is used to assess the level of service quality. In order to compare the service quality with the demographic profiles and travelling details of passengers, Independent Sample T test and ANOVA/ Welch test are applied.

7.3.3.1 Measurement of Service Quality

- In case of the variable conduct, the passengers perceived high level of service quality on the factor 'cabin crew are kind and polite to me' (3.89) as compared to other items. There is good level of service quality on all other items of the variable conduct as per the opinion of the passengers. In overall, the variable conduct has high level of service quality as per the opinions of passengers (3.76).

- With reference to the dimension expertise, all items have good level of service quality as perceived by the passengers. The passengers have better opinion about the employees' knowledge in dealing with passenger queries (3.80) than other factors in the dimension. The overall service quality of the variable expert is good (3.73).

- As per the variable problem solving, the passengers have perceived good level of service quality on all services. The service quality of all items is more or less same and the service quality of 'the employees have proper skills to handle emergency situation' is slightly higher than the other two. The overall service quality of the variable problem solving is at good level (3.65).

- As to the variable comfort, the item 'I feel comfortable with the air condition in the cabin' (3.54) has good level of service quality. But, the passengers perceived a moderate level of service quality on the comfort in flying with

the airline (3.46) and comfort of seat and leg space (3.08). The overall service quality of the variable comfort is only at moderate level (3.36).

- The service quality of all elements under cleanliness is above average and the service quality of employees' clean and neat appearance (3.912) is high as compared to other factors. In aggregate, the service quality of cleanliness is above average.

- Regarding the variable tangibles, the service quality of the factor 'the airlines facilities are well designed' (3.51) is high followed by the factor 'the interior of the cabin is good' (3.50). However, the passengers perceived an average level of service quality on all other items of the variable. The service quality of the factor 'food is available in the flight at reasonable price' is very low as compared to other factors. As a whole, the service quality of tangibles is average (3.27).

- The service quality of all items in the variable safety & security is above average. The service quality on the item 'the cabin crew describe how to use safety equipment very well and precisely' (3.91) is high as compared to the other two items. The overall service quality of safety & security (3.69) is good.

- As far as the variable valence, the service quality of all elements is only at moderate level and the passengers' perception about service quality on the element 'I will recommend travelling with this airline to my friends and relatives' (3.26) is lower than the other two. In aggregate, the service quality of the variable valence (3.33) is only at moderate level.

- In case of the variable waiting time, there is a good level of service quality on the item 'airline employees provide services quickly and in the shortest time' (3.50). But, in case of all other three factors the service quality is only at moderate level. The waiting time required for check-in & boarding and getting luggage is moderately good. The service quality of the item 'there is rare delay before or during aircraft flight and the flight schedules are

accurately according to the announced time' (3.04) is low as compared to other items. The overall service quality of waiting time (3.33) is at average level.

- With regard to the variable information, the airline passengers perceived good level of service quality on the items 'the airline tells me the accurate time on which it provides service' and 'the airline website provides suitable and updated information of various services the company offers'. The service quality of other factors is at average level and the service quality on 'the airline provides call centre facilities 24/7' is low as compared to other items. In overall, the service quality of information (3.38) is average.

- In case of the variable convenience, there is good level of service quality on the factors 'the reservation and ticketing systems are convenient' (3.63) and 'the airline's website is efficient and user-friendly' (3.54). However, the service quality of all other items is average and the item 'I can cancel and reschedule my ticket easily without much cost' (3.15) has lower service quality than the other factors in the variable. The overall service quality of the variable convenience is only at average level.

- It is found out that there is good level of service quality in case of the variables conduct, expertise, problem solving, cleanliness and safety & security and. But, the service quality of Low -Cost International Airlines is average in case of the variables comfort, tangibles, valence, waiting time, information and convenience.

- It is observed that interaction quality and physical environment quality of Low -Cost International Airlines are good and outcome quality and the access quality of Low -Cost International Airlines are only at moderate level.

7.3.3.2 Comparison of Service Quality with Demographic and Travelling Profiles of Passengers

- Among the factors of service quality, it is found that gender exerts an influence only in case of the factor information in which female passengers have perceived higher level of service quality than male passengers. It is drawn that gender does not exert an influence on all other factors of service quality.

- It is observed that age shows significant influence on the service quality of Low-Cost International Airlines in case of conduct, problem solving, comfort, cleanliness, tangibles, valence, information and convenience. In case of conduct, tangibles, valence, information and convenience, the service quality perceived by the passengers having the age group of less than 21 is higher than that of passengers of other age groups. In case of problem solving, comfort and cleanliness, the service quality perceived by the passengers having the age group 21- 40 is higher than that of the passengers of other age groups. But in case of all factors of service quality, passengers having age above 60 have perceived lower level of service quality than that of passengers of other age groups.

- Educational qualification has no significant influence on the service quality of Low-Cost International Airlines in case of all factors of service quality. It is understood that the service quality perceived by all passengers having different educational qualification is more or less same.

- Out of the factors of service quality, occupation of passengers shows an influence in case of conduct, problem solving and cleanliness. The service quality perceived by professional is very low as compared to other occupation groups of passengers. Occupation has no influence on all other factors of service quality.

- It is found out that income exerts an influence in case of conduct, problem solving, cleanliness and information in which the passengers having above 25,00,000 annual income have perceived low level of service quality as compared to other income group passengers.

- It is found out that airport shows insignificant influence in the service quality of Low-Cost International Airlines in case of all factors of service quality. The passengers of all three international airports in Kerala have perceived more or less same service quality in case of all factors.

- Among the factors of service quality, it is observed that airlines exert significant influence on service quality in case of expertise, valence, waiting time and information in which IndiGo passengers have perceived better service quality than the passengers of Air India Express and SpiceJet. There is no significant difference in the service quality perceived by the passengers of IndiGo, Air India Express and SpiceJet in case of all other factors.

- In case of conduct, tangibles and waiting time, there is significant difference in the in the passengers' perception on service quality based on the purpose of travel with which education purpose travellers have perceived better service quality than that of passengers who have travelled for other purposes. In case of convenience, there is significant difference in the passengers' perception on service quality in which leisure/tour purpose travellers have perceived better service quality than that of passengers who have travelled for other purposes. There is no significant difference in the service quality of all other factors based on the purpose of travel.

- Number of times travelled shows significant influence on the service quality perceived by passengers in case of all factors of service quality except cleanliness. In this case, the passengers who have travelled 3-5 times have perceived higher level of service quality than that of the

passengers having more than 5 times travel. In case of cleanliness, there is no significant difference in the service quality based on the purpose of travel.

7.3.4 Passenger Satisfaction

Here the research work has analysed the level of satisfaction of passengers towards the services provided by Low-Cost International Airlines in India. The study has also compared the level of passenger satisfaction with their demographic and travelling details. The analysis and the results reveal the following findings:

7.3.4.1 Measurement of Passenger Satisfaction

- In case of the variable tangibles, passengers are highly satisfied with the factors 'physical appearance, dress code and attitude of employees' & 'physical appearance and modern facilities of the airline'. But, they are moderately satisfied with all other items in the variable. In overall, passengers are moderately satisfied with the variable tangibles.

- With reference to the variable reliability, level of passenger satisfaction is high on the safety measures taken by the airline (3.57) as compared to other factors. Also passengers are highly satisfied with the sincerity and patience of employees in resolving passenger problems. On the other hand, the passenger satisfaction is only at moderate level in case of all other factors. The passenger satisfaction is low in case of the factor 'the on-time arrival and departure of airlines' as compared to other factors. As a whole, the passengers are satisfied only at a moderate level with this variable.

- The passengers are moderately satisfied with all factors of responsiveness. The level of passenger satisfaction is very low (3.13) in case of 'the refreshment policy of the airline for its customers if the flight is delayed' as compared to other factors. The overall passenger satisfaction on responsiveness dimension is average.

- As per the variable assurance, passenger satisfaction level is high (3.68) with the knowledge of airline staff in dealing with passenger queries as compared to other elements in the variable. At the same time, passengers have average level of satisfaction on 'the call centre facilities given by the airline' & 'the ticket rescheduling and cancellation procedure of the airline'. The overall passenger satisfaction level on the variable assurance is good.

- It is found out that there is good level of passenger satisfaction on all factors of the dimension empathy. The passengers are more satisfied with the factor 'the consideration given by the airline to women, children and the physically challenged' (3.75) than other factors.

- There is average level of passenger satisfaction on the overall services of the low-cost international airlines. The passenger satisfaction on overall value for money received by them is moderate. The level of passenger satisfaction is moderate in case of the overall experience from the airlines.

- The passengers have good level of satisfaction on assurance and empathy. But, there is average level of satisfaction on tangibles, reliability and responsiveness. The level of passenger satisfaction is average in case of the overall experience from the airlines.

7.3.4.2 Comparison of Passenger Satisfaction with their Demographic and Travelling Profiles

- There exists significant difference in the satisfaction level of passengers towards responsiveness according to the gender of respondents. Here, female passengers are more satisfied than male passengers. Gender is not an influencing factor in case of all other factors.

- It is found out that age exerts significant influence on passenger satisfaction in case of tangibles, responsiveness, empathy and overall experience in which passengers with less than 21 age have higher level of satisfaction than other age group passengers and the passengers having above 60 years old

have low level of satisfaction. Age doesn't exert significant influence on passenger satisfaction with respect to reliability and assurance.

- It is observed that educational qualifications of passengers have no significant influence on passenger satisfaction in case of all factors.

- There is no significant difference in the satisfaction level of passengers with regard to all factors according to their occupational status.

- Out of the factors of passenger satisfaction, it is understood that income shows significant influence in case of tangibles, assurance and empathy. Here, passengers of above 25,00,000 income group have low level of satisfaction as compared to other income groups. There exists insignificant difference in the satisfaction level of passengers in case of reliability, responsiveness and overall experience according to their income level.

- Airport wise comparison reveals that there exists no significant difference in satisfaction level with respect to all factors.

- Among the factors of passenger satisfaction, it is found out that airline exerts an influence in case of reliability, responsiveness and overall experience in which IndiGo passengers have more satisfaction than Air India Express and SpiceJet passengers. Significant difference is not found in the passenger satisfaction of different airlines in case of tangibles, assurance and empathy.

- Based on purpose of visit, there is significant difference in passenger satisfaction with respect to tangibles, responsiveness, empathy and overall experience. Here, passengers who have travelled for education purpose have more satisfaction than the passengers who have travelled for other purposes.

- It is found that number of times travelled shows significant influence on passenger satisfaction in case of tangibles, reliability, responsiveness, assurance and empathy in which the passengers who have travelled 3-5 times are more satisfied than the passengers who have travelled more than five

times. It is drawn that the overall experience is not significantly changed based on the number of times travelled.

7.3.5 Passenger Problems of Low-Cost International Airlines

Various problems faced by the travellers of Low-Cost International Airlines are analysed under five variables such as ticketing & flight fare, flight, check-in & boarding, in-flight services and baggage. The researcher has employed descriptive statistics for identifying the passenger problems and One Sample 't' test is used to measure the level of passenger problems. Independent Sample T test, ANOVA/ Welch test and Tukey HSD post-hoc test are used for the comparison of passenger problems with the demographic profiles and travelling details of passengers. The major findings drawn from the analysis are given below:

7.3.5.1 Measurement of Passenger Problems

- It is found that passengers have faced significant issues with respect to all factors of ticketing & flight fare. The problems relating to unreasonable increase in airline's fare and inconsistency in airline's fare especially during seasons are bigger than other factors. In overall, ticketing & flight fare of low-cost international airlines are fairly problematic to the travellers.

- As to the variable flight, passengers have faced big problems with regard to the factors 'the airline reschedules/cancels flights without prior notice', 'the airline doesn't provide any refreshment when there is long delay of flight' and 'the flight is delayed frequently due to weather conditions/technical fault'. It is observed that passenger problems are moderate in case of other two factors. As a whole, big issues have been faced by the travellers in the variable flight.

- Relating to the variable check-in & boarding, passengers have encountered major problems on the factors 'the airline imposes high amount for overweight of baggage and luggage' & 'the airline hasn't sufficient number of counters for check-in'. But, they have experienced moderate issues in case

of other two factors. In total, issues with the variable check-in & boarding are significant.

- The passengers have encountered big issues on the variable in-flight services only in case of the item 'the airline serves poor quality meals and beverages in the cabin at high cost'. Moderate issues have been faced by them in case of all other factors. The overall passenger problems of in-flight services are at moderate level.

- The passengers have experienced moderate issues on all factors of the baggage variable. In overall, moderate issues are faced by the passengers on baggage variable.

- It is observed that the passenger problems of Low Cost International Airlines are big in case of Ticketing & Flight Fare, Flight and Check-In & Boarding. But, moderate level of passenger problems persists in case of In-Flight Services and Baggage.

7.3.5.2 Comparison of Passenger Problems with their Demographic and Travelling Profiles

- Among the factors of passenger problems, it is found that gender exerts an influence only in case of check-in & boarding in which male passengers have encountered more problems than female passengers. Besides, gender is not an influencing factor in case of ticketing & flight fare, flight, in-flight services and baggage.

- It is observed that age is not an influencing factor with respect to all variables of passenger problems. It means that passengers with different age groups have encountered more or less same problems during their travel.

- There exists significant difference in the passenger problems with respect to ticketing & flight fare and baggage according to the educational level of passengers. Here, passengers with school level education have faced lesser problems than other educational group passengers. Ticketing & flight fare

factors are more problematic to the travellers having professional degree and baggage factors create more problems to the travellers having diploma.

- Out of the variables of passenger problems, it is understood that occupation shows influence only in case of in-flight services in which professional respondents have experienced biggest problems during their travel. Further, there exists no significant difference in the passenger problems in case of ticketing & flight fare, flight, check-in & boarding and baggage based on the occupation of the passengers.

- Income-wise comparison reveals that there exists significant difference in passenger problems only in case of baggage. Here, passengers having 5,00,001 – 15 lakhs income have faced more baggage problems than that of other income level passengers. Additionally, different income level passengers have perceived more or less same issues with respect to the ticketing & flight fare, flight, check-in &boarding and in-flight services.

- It is found that airport is not an influencing factor with respect to all variables of passenger problems. It means that passengers travelling from three international airports in Kerala have faced more or less same problems in their travel.

- Based on the airlines, there exists significant difference in the passenger problems with regard to flight, in-flight services and baggage. Here, IndiGo passengers have experienced lesser problems than the passengers of Air India Express and SpiceJet. Moreover, passengers of IndiGo, Air India Express and SpiceJet have encountered more or less same issues in case of ticketing & flight fare and check-in &boarding.

- There exists no significant difference in the passenger problems with respect to all factors based on the purpose of visit. More precisely, all passengers irrespective of their purpose of travel have faced more or less similar problems during their air travel.

- It is observed that there exists insignificant difference in the passenger problems in case of all variables based on the number of times travelled. It means that the passengers are facing same issues when they travel more and more in Low-Cost International Airlines.

7.3.6 Relationship between Service Quality and Passenger Satisfaction

The empirical relationship between the dimensions of service quality and passenger satisfaction is measured. Structural Equation Modelling is used to study the relationship of various service quality dimensions such as interaction quality, physical environment quality, outcome quality and access quality with the various dimensions of passenger satisfaction. From the result, it is observed that all dimensions of service quality have a positive impact on the passenger satisfaction of Low-Cost International Airlines. It is found out that access quality is the most influencing factor of passenger satisfaction. Outcome quality is the least influencing factor of the passenger satisfaction. More precisely, passenger satisfaction will increase when the service quality of Low-Cost International Airlines is increased.

7.3.7 Relationship between Passenger Problem and Service Quality

The relationship between the passenger problem and service quality of Low-Cost International Airlines is studied. The relationship of the five factors of passenger problems namely, ticketing & flight fare, flight, check-in & boarding, in-flight services and baggage with the dimensions of service quality are checked through Structural Equation Modeling. The result shows that all dimensions of passenger problems have a negative impact on the service quality of Low-Cost International Airlines and flight and baggage problems are the most negatively influencing factors of service quality. In addition to this, in-flight services, check-in & boarding and ticketing & flight fare problems have significant negative influence on service quality. Among these, ticketing & flight fare is the least influencing factor of service quality. It means that service quality will decrease when the problem factors of Low-Cost International Airlines are increased.

7.3.8 Relationship between Passenger Problems and Passenger Satisfaction

The relationship between the passenger problems and passenger satisfaction of Low-Cost International Airlines is analysed. To check the relationship between the five factors of passenger problems and passenger satisfaction, Structural Equation Modeling is employed. It is understood from the result that baggage problem is the main negatively influencing factor of passenger satisfaction of Low-Cost International Airlines. Besides, in-flight services, ticketing & flight fare, check-in & boarding and flight have significant negative impact on passenger satisfaction. Among these, flight is the least influencing factor of passenger satisfaction. In short, passenger satisfaction will decrease when the problem factors of Low-Cost International Airlines is increased.

7.3.9 Moderating Role of Passenger Problems on the Relationship between Service Quality and Passenger Satisfaction

The study evaluates the moderating effect of passenger problems on the relationship between service quality and passenger satisfaction. Structural Equation Modeling is applied to examine the moderating effect of passenger problems. The result revealed that passenger problems weaken the positive relationship between service quality and passenger satisfaction. As a moderator, passenger problems have moderating effect on the relationship between service quality and passenger satisfaction. It can be concluded that passenger problems have weaker effect on the relationship between service quality and passenger satisfaction of Low-Cost International Airlines.

Section B

7.4 Conclusions

The important conclusions drawn from the aforementioned findings are listed below:

- It is found that the most influencing factor for the selection of low-cost international airline is the low price of flight tickets. All factors of passenger

choice have a great influence on the selection the Low-Cost International Airlines. The factors influencing the selection of Low-Cost International Airlines vary significantly depending on the age of passengers and the number of times travelled by passengers. The passenger choices have more influence on airline selection of passengers having 3-5 times travel.

- It is found out that there is good level of service quality in case of the variables conduct, expertise, problem solving, cleanliness and safety & security. But, the service quality of Low -Cost International Airlines is average in case of the variables comfort, tangibles, valence, waiting time, information and convenience. The interaction quality and physical environment quality of Low-Cost International Airlines are good and outcome quality and the access quality of Low -Cost International Airlines are only at moderate level.

- It is observed that gender shows significant influence on the service quality of Low-Cost International Airlines in case of the factor information. Also, age has significant influence on the service quality of Low-Cost International Airlines in case of conduct, problem solving, comfort, cleanliness, tangibles, valence, information and convenience. Similarly, occupation of passengers shows an influence in case of conduct, problem solving and cleanliness. It is observed that airlines exert significant influence on service quality in case of expertise, valence, waiting time and information in which IndiGo passengers have perceived better service quality than the passengers of Air India Express and SpiceJet. There is significant difference in the passengers' perception on service quality based on the purpose of travel in case of conduct, tangibles and waiting time. Also, number of times travelled shows significant influence on the service quality in case of conduct, expertise, problem solving, comfort, tangibles, safety & security, valence, waiting time, information and convenience.

- The passengers have good level of satisfaction on assurance and empathy. But, there is average level of satisfaction on tangibles, reliability and

responsiveness. The level of passenger satisfaction is average in case of the overall experience from the airlines. It is observed that there exists significant difference in the satisfaction level of passengers towards responsiveness according to the gender of respondents. The age exerts significant influence on passenger satisfaction in case of tangibles, responsiveness, empathy and overall experience. Likewise, income shows significant influence in case of tangibles, assurance and empathy. It is found out that airline exerts an influence in case of reliability, responsiveness and overall experience in which IndiGo passengers have more satisfaction than Air India Express and SpiceJet passengers. Based on purpose of visit, there is significant difference in passenger satisfaction with respect to tangibles, responsiveness, empathy and overall experience. Correspondingly, number of times travelled shows significant influence on passenger satisfaction in case of tangibles, reliability, responsiveness, assurance and empathy.

- It is found that the passenger problems of Low-Cost International Airlines are big in case of Ticketing & Flight Fare, Flight and Check-In & Boarding. But, moderate level of passenger problems persists in case of In-Flight Services and Baggage. It is revealed that that gender exerts an influence only in case of check-in & boarding. There exists significant difference in the passenger problems with respect to ticketing & flight fare and baggage according to their educational level. Similarly, occupation shows influence only in case of in-flight services and income has significant influence on passenger problems in case of baggage. The research shows that there exists significant difference in the passenger problems of different airlines with regard to flight, in-flight services and baggage in which IndiGo passengers have encountered lesser problems than the passengers of Air India Express and SpiceJet.

- It is revealed that all dimensions of service quality have a positive impact on the passenger satisfaction of Low-Cost International Airlines and access quality is the most influencing factor of passenger satisfaction. It is

understood that all passenger problem factors have a negative impact on service quality and flight and baggage problems are the main negatively influencing factors of service quality. The passenger satisfaction is negatively influenced by all factors of passenger problems and baggage and in-flight services problems are the main negatively influencing factors. Also, passenger problems have moderating effect on the relationship between service quality and passenger satisfaction and passenger problems have weaker effect on the relationship between service quality and passenger satisfaction of Low-Cost International Airlines.

CHAPTER 8

RECOMMENDATIONS

8.1 Introduction

This chapter is the concluding part of the research work. It includes recommendations, implications of the study, limitations and scope for further research. Recommendations are developed as per the findings of the study. The implications of the study refer to the potential outcomes that can be inferred from the research findings and how the research findings can be applied in real world settings. It includes both theoretical and practical implications. Practical implications towards airline companies, airline passengers and regulatory authorities are discussed in the chapter. The scope for further research gives to the upcoming researchers new topics in the particular research area.

8.2 Recommendations

The following recommendations are put forth to the Low-Cost International Airlines in India based on the findings of the study.

- The low price of flight tickets is the most influencing factor for the selection of low cost international airline. But, there is unreasonable increase and inconsistency in low-cost airline's fare at international sector especially during seasons. This will adversely affect the international passengers particularly low income group travellers as they have no other option to reach international countries for various purposes. Moreover, the passengers may depend on full cost carriers for international travel. The Ministry of Civil Aviation, Government of India can take regulatory measures to control this unreasonable increase in airline's fare.

- Passengers have the opinion that poor quality meals are provided in the cabin at high price. They can pre-book the food by paying additional charge. More passengers will avail this facility if the airline companies can provide quality food in the cabin at comparatively low price and that will add to the profit of the airline companies.

- Usually, small legroom space is provided in low-cost airlines to accommodate more number of seats. SpiceJet provides extra legroom through Spicemax facility in first few rows of seat by charging extra amount. The other airlines can also follow this strategy to satisfy the passengers who are in need of extra legroom. Also, the interior of the cabin and comfort of the seat should be properly maintained.

- The international passengers struggle a lot due to long delay, undeclared rescheduling and cancelation of flights particularly children, women, sick and aged passengers. The international passengers are required to check-in 3 hour prior to their flight time. Furthermore, some passengers missed an important event/meeting/job due to cancelled/delayed flight. Considering these, the airline companies should take proper steps to reduce rescheduling and cancelation of flights. Also, regulatory authorities can issue guidelines for the compensation given to passengers in case of long delay and cancellation of flights.

- If the flight is cancelled or rescheduled due to weather conditions/technical fault, that should be informed to the passengers as early as possible through SMS/call/email. The airlines should ensure that call centre facilities 24/7 are efficient. More care should be taken by the airline companies in this aspect because the passengers have responded that there is lack of communication about the flight delay/cancellation. Otherwise, customer retention becomes difficult to the companies.

- When there is long delay of flight, the airline companies should provide proper refreshments to the passengers. Also, they should ensure that quality food is supplied to the passengers in required quantity and it helps to increase customer loyalty.

- The number of check-in counters can be increased in order to reduce the waiting time of international passengers that ultimately increase the service quality of Low-Cost International Airlines.

- Frequency of international flights can be increased as international passenger traffic increases year by year. Passengers travelling with family and old aged passengers look for convenient time for air travel. The airline companies can give more convenient flight schedules to the international passengers.

- The airline companies can reduce ticket rescheduling and cancellation fees and also avoid unnecessary delay in refund of cancelled ticket. This will enhance customer trust and satisfaction.

- The airlines can fix slabs for charging fees for overweight of baggage and luggage. They can fix a comparatively low rate for the first three kilograms of overweight and can increase the rates for the next slabs. This will be a great help to international travellers as slight difference may be seen in weighing machines. Furthermore, passengers are ready to remit the fee if it is low and it will actually increase the extra income of the airline companies.

- Proper training should be given to the check-in and boarding employees for the fair dealings with the passengers. They can deal the problems of passengers, which has arisen out of their own fault, with much patience and humanity.

- Luggage handling and delivery should be more efficient in order to avoid mishandling or missing of luggage. Quick response and proper compensation should be given to the passengers if there is any loss of luggage.

- Frequent –flyer programmes can be implemented by the Low-Cost International airlines to create more loyal customers and thereby encourage them to earn reward points. They may use these points for future travel and also for purchasing ancillary services.

- Grievance redressal mechanism of the airlines should be more efficient. The passengers'requests and complaints should be addressed quickly.

8.3 Implications of the study

The implications of the present research work include theoretical implications and practical implications of the study. The practical implications cover implications towards airline companies, airline passengers and regulatory authorities. These implications are briefly discussed below:

8.3.1 Theoretical Implications of the study

The main contribution of the study 'Service quality of Low-Cost International Airlines: A Kerala based study' is that it measured the service quality by using SSQAI model, which is an airline centric model for the comprehensive measurement of service quality with eleven criteria under four dimensions. The model is helpful to measure each and every aspect of airline service quality. The study will help the Indian Low-Cost Airline Companies to identify various aspects of service quality where they have to focus for sustainable growth.

The study identified various problems faced by international passengers of Low-Cost Airlines in India and identified the variables for measuring passenger problems of Low-Cost International Airlines in India. It evaluated various issues encountered by international travellers during pre-flight, flight and after flight. It will help the airline companies to understand the critical issues that would be resolved urgently and also the minor issues that would be eliminated timely for retaining the customers.

Another contribution of the study is the impact of passenger problems on both service quality and passenger satisfaction. The study explored the empirical relationship between service quality, passenger satisfaction and passenger problems. The negative impact of passenger problems on service quality and passenger satisfaction is one of the reason for the dominance of foreign low-cost carriers in India. The study throws light on the reason for the dominance of foreign low-cost carriers in India at international sector.

8.3.2 Practical Implications of the study

A. Airline Companies

The study would benefit the Indian Low- Cost Airlines operating international services. It covers a comprehensive analysis of various aspects of service quality of airlines which would be beneficial to the airline companies to understand the strong and weak areas of service quality. The airline companies can have an understanding about the key areas for improvement and thereby they can redesign their services and improve the service quality for the long term success. Moreover, the study covers a comparative analysis of service quality of IndiGo, Air India Express and SpiceJet. So, these three airline companies can understand their strong and weak areas of service quality. They can also compare their service quality with the competitors and can adopt alternate strategies to sustain in the market. The study sheds light on the demographic factors that influence the service quality of LCCs and also how the travelling profile of passengers affect the service quality of airlines. The study identifies the various factors that influence the selection of low cost carriers. The knowledge about the customer preferences would help the airline companies to design the sales strategies by focusing on these preferences. The airline companies would get a clear picture about the satisfaction level of passengers and their service failures where the customers are dissatisfied. The study throws light on the major problems faced by international passengers of Indian LCCs that would be resolved immediately by the airline companies. They can have a clear idea about moderate as well as minor issues encountered by international passengers that would be addressed properly for long term competitiveness.

B. Airline Passengers

The airline passengers would get an understanding about the level of service quality of Indian Low Cost International Airlines. They can have an idea about which airline company is best with regard to punctuality, reliability, responsiveness etc., that would be beneficial for them for choosing the best airine for their international travel. They can have a clear picture about the service failures that they may face from Indian LCCs. Moreover, they would get a general idea about the various

problems that they may face during international travel and which airline is less problematic in its service delivery.

C. Regulatory Authorities

The study gives an insight into the recurring service failures of Indian International LCCs. This information can help the regulatory authorities to frame and implement more effective policies and regulations to mitigate these issues to the possible extent. Otherwise international passenger traffic in Indian LCCs would be reduced in the near future. It also gives an insight into the various issues faced by international travellers that would be beneficial to the regulatory authorities to reframe the grievance redrressal mechanism to make it more effective. It highlights the main complaint from the part of international passengers is that there is unreasonable hike in the airfare during seasons. This information would be beneficial to the regulatory authorities to think about the restriction that may be imposed on airline companies with regard to this.

8.4 Limitations of the Study

1. Samples drawn are not based on proportion but an equal number of samples are drawn from the selected three international airports in Kerala.
2. The present study is limited to the direct flights of low-cost international airlines not the connection flights.
3. It considers airlines' tangibles and facilities and it does not consider the airport tangibles and facilities.
4. It does not cover the variations in service quality depending on the duration of travel.

8.5 Scope for Further Research

1. Service quality of low-cost international airlines and low-cost domestic airlines in India: a comparative study

2. Service quality of Indian low-cost airlines and foreign low-cost airlines: a comparative study

3. Role of value for money and service quality on behavioural intention: a study of low- cost international airlines

4. The impact of service quality and price on passengers' loyalty towards low-cost international airlines in India

5. Impact of service recovery strategies on passenger satisfaction of low-cost international airlines

6. Structural relationship between service quality and customer relationship management of low-cost international airlines

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APPENDIX

QUESTIONNAIRE

Respected Sir/Madam, I, Rosina Baby V., Ph.D. Research Scholar, P G & Research Department of Commerce & Management Studies, Sri C. Achutha Menon Government College Thrissur, pursuing a study on **"Service Quality of Low-Cost International Airlines in India: A Kerala based study"** as part of my thesis. I will be more obliged if you could respond to the below mentioned questionnaire. I assure that all information provided by you will be kept confidential and used for academic purpose only.

Yours faithfully,

ROSINA BABY V.

I. Demographic & Travelling Profiles

1. Gender: a) Male ☐ b)Female ☐ c)Transgender ☐
2. Age : a) Less than 21 ☐ b) 21-40 ☐
   c) 41-60 ☐ d) Above 60 ☐
3. Highest Educational Qualification:
   a) School Level ☐ b) Diploma ☐ c) Graduation ☐
   d) Post graduation ☐ e) Professional Degree ☐
4. Occupation:
   a) Self-Employed (Own Business) ☐
   b) Private sector Employee ☐
   c) Govt/Public sector Employee ☐
   d) Professional ☐
   e) Home Maker ☐
   f) Student ☐

5. Annual income (in Rs):

   a) Up to 500,000 ☐ b) 500,001-15,00,000 ☐

   c) 15,00,001-25,00,000 ☐ d) Above 25,00,000 ☐

6. From which airport in Kerala do you usually travel

   a) Thiruvanathapuram ☐ b) Cochin ☐ c) Calicut ☐

7. How many times you have flown in Low Cost International Airlines:

   a) 3-5 times ☐ b) 6-10 Times ☐ c) 11-15 Times ☐ d) More than 15 Times ☐

8. Please tick the airlines which you have flown (international):

9. Air India Express ☐ b) Spice Jet ☐ c) Indigo ☐ d) Akasa Air ☐

10. Please tick the airline which you have flown maximum times (international):

    a) Air India Express ☐ b) Spice Jet ☐ c) Indigo ☐ d) Akasa Air ☐

11. Primary purpose of your travel:

a) Business/Official ☐ b) Job ☐ c) Leisure/Tour ☐

d) Visit relatives/friends ☐ e) Education ☐ f) Medical ☐

12. Booking channel:

    a) Airline Website ☐ b) Airline sales office ☐ c) Travel Agent ☐

    d) Airline mobile application ☐ e) Call centre ☐

13. Please tick the airline, on the basis of which you are going to share your experience of travel

    a) Air India Express ☐ b) Spice Jet ☐ c) Indigo ☐

II. Passenger Choices

Please provide tick mark (✓) to the following factors, to the extent of your agreement / disagreement that influence the selection of Low- Cost International Airlines.

(5: Strongly Agree, 4: Agree, 3: Neither Agree nor Disagree, 2: Disagree, 1: Strongly Disagree)

Sl. No.	Statements	5	4	3	2	1
PC1	Low price of flight tickets					
PC2	Better in-flight services					
PC3	On-board comfort and cleanliness					
PC4	Safety and security measures taken by the airline					
PC5	Flights' on-time arrival and departure					
PC6	Convenient flight schedules					
PC7	Efficient check-in process and boarding					
PC8	Easy reservation/cancellation facilities					
PC9	Call centre facilities					
PC10	Friendly behaviour and prompt services of airline staff					
PC11	Reliable and prompt delivery of baggage					
PC12	Overall value for money					

III. Service Quality

Please give your response to the following statements as per your experience with Low- Cost International Airlines in which you have flown mostly:

Please rate the following service quality attributes of Low-Cost International Airlines as per your experience

(5: Strongly Agree, 4: Agree, 3: Neither Agree nor Disagree, 2: Disagree, 1: Strongly Disagree)

Sl. No.	Statements	5	4	3	2	1
C	**CONDUCT**					
C1	The airline employees' attitude demonstrates their willingness to help me					
C2	Cabin Crew are kind and polite to me					
C3	Check-in & boarding staff behave respectfully and politely with me					
C4	The employees pay attention to every single traveller					
C5	The employees give consideration to women, children and the physically challenged passengers					
C6	Airline ensures clear and precise cabin announcement					
C7	The employees try their best to provide services to me					
EX	**EXPERTISE**					
EX1	The airline procedures of Check-in and boarding are quick and accurate					
EX2	The airline employees of baggage delivery are quick and accurate					
EX3	The airline employees are competent					
EX4	The employees have knowledge in dealing with passenger queries					
PS	**PROBLEM SOLVING**					
PS1	The employees have proper skills to handle emergency situation					
PS2	The employees are able to handle my complaints directly and immediately					
PS3	When I have a problem, the airline employees show a sincere interest in solving it					
CM	**COMFORT**					
CM1	The seat and leg space in the cabin are comfortable					
CM2	I feel comfortable with the air condition in the cabin					
CM3	I feel comfortable in flying with this airline					
CL	CLEANLINESS					
CL1	The cabin is tidy and clean					
CL2	The toilet in the cabin is clean					
CL3	The employees have clean and neat appearance					
TA	**TANGIBLES**					
TA1	The airlines facilities are well designed					

TA2	The interior of the cabin is good					
TA3	In-flight entertainment materials and services are acceptable					
TA4	The quality of meals and drinks on the flight is good					
TA5	Food is available in the flight at reasonable price					
TA6	Airline offers online seat booking facility at low price					
SS	**SAFETY & SECURITY**					
SS1	I feel safe in travel with the airline					
SS2	The airline ensures higher privacy and security in online payment					
SS3	The cabin crew describe how to use safety equipment very well and precisely					
SS4	There are noticeable sprinkler systems in the cabin					
V	**VALENCE**					
V1	I believe that the airline tries to give me what I want					
V2	I would say that I feel good about what I receive from airlines					
V3	I will recommend travelling with this airline to my friends and relatives					
W	WAITING TIME					
W1	Airline employees provide services quickly and in the shortest time					
W2	There is rare delay before or during aircraft flight and the flight schedules are accurately according to the announced time.					
W3	I wait less time for getting check-in and boarding.					
W4	Waiting time required for getting luggage is acceptable.					
IN	**INFORMATION**					
IN1	The airline tells me the accurate time on which it provides service					
IN2	The airline keeps me well-informed about the services I need					
IN3	The airline provides call centre facilities 24/7					
IN4	The airline website provides suitable and updated information of various services the company offers.					
IN5	The airline informs me about flight delay through SMS/call/email					

CN	**CONVENIENCE**					
CN1	The airline provides me with enough flights and convenient flight schedules					
CN2	The reservation and ticketing systems are convenient					
CN3	The airline's ticket price is reasonable and affordable					
CN4	There is consistency in airline's ticket prices with given service					
CN5	I can cancel and reschedule my ticket easily without much cost					
CN6	The airline's website is efficient and user-friendly					
CN7	Compensation procedure in case of flight delays/cancellation/accidents is proper and convenient					

IV. Passenger Satisfaction

Please indicate your level of satisfaction with the following questions related to Low-Cost International Airlines

(5: Highly Satisfied, 4: Satisfied, 3: Neither Satisfied nor Dissatisfied, 2: Dissatisfied, 1: Highly Dissatisfied)

S.NO.	***Statements***	***HDS***	***DS***	***N***	***S***	***HS***
	TANGIBLES					
T1	How far you are satisfied with the physical appearance, dress code and attitude of employees of the airline you travelled in?					
T2	How far do the physical appearance and modern facilities of the airline meet your level of satisfaction?					
T3	Are you satisfied with the variety, quality and price of in-flight meals of the airline?					
T4	Are you satisfied with the level comfort of aircraft seats and leg space					
T5	Are you satisfied with the cleanliness of the cabin and toilets?					

	RELIABILITY					
R1	Are you satisfied with the sincerity and patience of employees in resolving your problems?					
R2	Are you satisfied with the on-time arrival and departure of airlines					
R3	How far you are satisfied with the safety measures taken by the airline?					
R4	Are you satisfied with the airline services which are provided at the promised time?					
R5	How do you feel about the hassle free check –in and boarding by the airlines?					
	RESPONSIVENESS					
RS1	What is your opinion about the refreshment policy of the airline for its customers if the flight is delayed?					
RS2	Are you satisfied with the promptness and accuracy of baggage delivery?					
RS3	How far you are satisfied with					
RS4	Are you satisfied with the communication about when services will be performed?					

	ASSURANCE					
A1	Are you satisfied with the call centre facilities given by the airline?					
A2	Are you satisfied with the website updation and information provided by the airline?					
A3	How far are you satisfied with the crew friendliness /courtesy?					
A4	Are you satisfied with the knowledge of airline staff in dealing with passenger queries?					
A5	Are you satisfied with the ticket rescheduling and cancellation procedure of the airline?					

	EMPATHY					
E1	Are you satisfied with operating hours and flight schedules of airline?					
E2	Are you satisfied with the prompt attention taken by the airline staff towards passenger specific needs?					
E3	What is your opinion about the consideration given by the airline to women, children and the physically challenged?					
E4	What is your opinion about the employees' personal/individual attention towards passengers?					
	OVERALL EXPERIENCE					
O1	How far are you satisfied with the overall value for money?					
O2	Are you satisfied with the overall services provided by the airline?					

V. Passenger Problems

Please provide a tick mark (✓) to the following statements, to the extent of your agreement/ disagreement, regarding the problems faced from the Low-Cost International Airlines.

(5: Strongly Agree, 4: Agree, 3: Neither Agree nor Disagree, 2: Disagree, 1: Strongly Disagree)

Sl. No.	**Statements**	**5**	**4**	**3**	**2**	**1**
TF	**TICKETING & FLIGHT FARE**					
TF1	There is unreasonable increase in airline's fare					
TF2	There is inconsistency in airline's fare especially during seasons					
TF3	I experience much delay in refund of cancelled ticket					
TF4	The airline imposes hidden charges while booking a ticket					
TF5	The airline charges high amount for ticket rescheduling and cancellation					

F	**FLIGHT**					
F1	The airline reschedules/cancels flights without prior notice					
F2	The flight is delayed frequently due to weather conditions/technical fault					
F3	The airline doesn't give me proper information about flight delay through SMS/call/email					
F4	I missed an event/meeting/job due to cancelled/delayed flight					
F5	The airline doesn't provide any refreshment when there is long delay of flight					
CB	**CHECK-IN & BOARDING**					
CB1	The airline hasn't sufficient number of counters for check-in					
CB2	Check-in and boarding employees are not friendly and helpful					
CB3	The airline imposes high amount for overweight of baggage and luggage					
CB4	The employees are unwilling to assist the passengers in solving the problems arises due to passenger error					
IF	**IN-FLIGHT SERVICES**					
IF1	The airline serves poor quality meals and beverages in the cabin at high cost					
IF2	Crew members are not friendly and helpful					
IF3	The cabin and toilets in the cabin are dirty					
IF4	I feel uncomfortable due to non-working of air condition in the aircraft					
B	**BAGGAGE**					
B1	There is much delay for getting my luggage after flight					
B2	I have an experience of mishandling/missing of my luggage					
B3	The airline doesn't give proper compensation for luggage loss					
B4	I have lost some items from my luggage after flight					

Thank you for providing your valuable inputs to complete this survey.

Rosina Baby V.